



**ACADEMY OF GLOBAL BUSINESS
RESEARCH AND PRACTICE, USA**



**THE 17TH INTERNATIONAL CONFERENCE OF
THE ACADEMY OF GLOBAL BUSINESS
RESEARCH AND PRACTICE**

**Managing Business & Economic Recovery:
Perspectives in Theory and Practice**

PROCEEDINGS

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Editors

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Mario Hendrique, Luis Ernesto Ocampo Figueroa**

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Mario Henrique Ogasavara, ESPM, Brazil
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PREFACE

The 17th International Conference of the AGBRP

Editors

C. Jayachandran¹, Gouher Ahmed², Silvio Cardinali³ Naseem Abidi⁴, Sivakumar Venkataramany⁵, Mario Hendrique⁶, Luis Ernesto Ocampo Figueroa⁷

The AGBRP (Academy of Global Business Research and Practice) organized its 17th Academy of Global Business Research and Practice, “**Managing Business and Economic Recovery: Perspectives in Theory and Practice**” during December 20-22, 2022, at Metropolitan Hotel Dubai. The AGBRP continue to serve the academia with the following objectives:

- a. to sponsor/co-sponsor symposia and conferences various themes on opportunities and challenges in global economic development;
- b. to provide opportunities to researchers, educators, and students in the global economic development space to network with others with common interests;
- c. to facilitate an interface between publication media and authors in the global economic development field for dissemination of research and further thought development.

The AGBRP had so far organized 7 international research symposiums and 17 major International Business conferences. The 18th AGBRP International Business conference is scheduled to take place in Singapore in January 4-6, 2024.

The 17th International Conference had an excellent response from around 40 different countries with 100 papers on the following themes.

- **Digital Technology & Human Capital, Skills and Employment:**
Digital Technologies across Urban and Rural Communities; Role of digital technology in Agriculture, Manufacturing & Services; Health Care, Education; Tourism & Hospitality Industries, etc.; Models to advance Occupational Skills & Workforce Mobility;
- **Business Policy & Strategy for Inclusive Growth & Development:**
Institutional Leadership, Corporate Governance, Balancing Shareholder & Stakeholder Interests, Global Supply Chain Issues, Impact of Offshoring & Outsourcing on Local economies; Policy Options to Promote Competitiveness of MSMEs;
- **Marketing, Advertising, Branding, Sales, CRM & Consumer Behavior:**
Consumer Behavior, Services Marketing, e-Commerce, Omni-Channel Marketing, Franchising, Branding, Digital Communication, Social Media, Global Tourism & Hospitality, Sports & Games, etc;
- **FINTECH: Innovation and Transformation in Financial Services:** Mobile payment, Fintech Investment, Blockchain and Crypto, Fintech Ecosystem etc.
- **International Trade & FDI, Banking, Taxation & Accounting:**
FDI, M&A, Exchange rates, Taxation, Tax Havens, Banking, Islamic Finance, Transparency & Corruption;

- **Entrepreneurial Ecosystems, Startups & Venture Capital:**
Role of Government, Higher Education Institutions; Technology Parks/Clusters; Incubation & Acceleration Programs; Digital Start-ups; Street Vendors, Self-employment and Subsistence Markets; Social Enterprises & NGOs, Self Help Groups;
- **CSR & Sustainability Development Goals (SDGs):**
Role of Public and Private partnerships; Contextualizing and Implementing the SDGs; Approaches to Measure the Outcomes of the SDGs.

Based on authors' preferences, symposium proceedings include full papers and abstracts.

We sincerely appreciate the 17th International Conference of the Academy of Global Business Research and Practice Organizing Committee and all the sponsors and volunteers to make it a memorable event.

1. Prof. Jayachandran, President AGBRP, USA and from Montclair State University, USA.
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AWARDS

The following research papers of the 17th AGBRP International Conference were judged and given best paper awards in different domains.

MARTIN RAHE OVERALL BEST PAPER AWARD

Strategic Leadership and Cultural Differences in Communication: A Multi-Country Study

Isaac Wanasika, University of Northern Colorado, Monfort Business School,
Tiina Brandt, Haaga-Helia University of Applied Sciences, Helsinki, Finland,
Maarit Laiho, Turku University of Applied Sciences, Finland

Top Management Team Diversity and Firm Performance in Digital Era: The moderating effect of Chief Digitalization Officer appointment.

Simonetta Pattuglia, University of Rome “Tor Vergata”, Italy
Sara Amoroso, University of Rome “Tor Vergata”, Italy

Consumers’ Adoption of Molecular Chinese Medicine (MCM) in Macau: A Value-based approach

Hong Chi Kit & Alessandro Lampo, University of Saint Joseph, Macou

Understanding Consumer Reactions to Fintech AI Algorithms

Devon Johnson, Montclair State University, USA
Sungyong Chun, College of Business and Economics, Dankook University, South Korea,
Sneha Pandey, FIIB, India

Can WTO Membership Boost Intra-African Trade?

Osman Gulseven, Sultan Qaboos University, Oman
Sofiyat Adeola Salam, Sultan Qaboos University, Oman
Amani Abdullah Alhadi, Sultan Qaboos University, Oman

Entrepreneurship Ecosystems in the Emerging Markets: An Empirical Study of Brazil and India Compared to the United States

Sivakumar Venkataramany, Ashland University, USA

How Do Sustainable Development Goals Impact On International Business? Case Of Raízen

Renata L C Rossoni, ESPM, Brazil
Diogo Barbosa Leite, ESPM, Brazil
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Business Policy & Strategy Issues

DXB206

A Critical Review of The Covid-19 Economic Relief Programme for Small Businesses in South Africa

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ABSTRACT

As the COVID-19 pandemic ravages global health systems and taking lives, it is also destroying livelihoods of those remaining. While national lockdowns are instrumental in containing the spread of the Corona virus, these have unfortunately locked people's livelihoods. With each passing day under various levels lockdown, past opportunities that once saw a thriving small and micro enterprises (SME) sector have since become extinct. Such is the case in South Africa where SMEs are among the most affected sectors. As the extension of South Africa's National State of Disaster enters into its third year in 2022, speculation and expert opinion in mainstream media, alike, seem to suggest that many of the affected businesses have since closed permanently. In response the government has since availed a R500 billion rescue package to resuscitate the ailing South African economy. Of this R513 million is dedicated to SMEs under the economic relief programme for small businesses. What remains unclear is whether this intervention is enough and if the imminent collapse of SMEs can be contained with this economic relief programme. Against this background, the purpose of this paper is to critically analyse the COVID-19 economic relief programmes looking into their successes and shortcomings given the South African context and highlighting possible policy gaps.

Keywords: economic relief programme, South Africa, Covid19, small businesses, micro enterprise

DXB209

Innovative Approaches for Healthcare Delivery During Covid-19 Pandemic

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Extended Abstract

The onset of COVID-19 pandemic caught many healthcare facilities off-guard in terms of uncovering problem areas and gaps in their ability to continue offering quality healthcare delivery and access during pandemic conditions.

Purpose:

The purpose of this paper is to analyze the challenges of providing quality healthcare delivery and access during COVID-19 pandemic and to explore innovative processes for overcoming these challenges for offering such services during pandemic conditions.

Research Methodology:

This research investigates and analyzes the challenges to provide quality healthcare delivery and access during such a pandemic and develop innovative processes for overcoming these challenges and offering robust healthcare services. We utilize TRIZ (Russian acronym for “Theory of Inventive Problem Solving”) methodology to identify innovative healthcare delivery solutions.

Findings:

A model for “robust healthcare delivery and access” is proposed that defines stakeholders’ role and responsibilities. The innovative solutions derived through the TRIZ process are applicable to public health policy makers, academic researchers, and healthcare practitioners.

Research Limitations:

Since the TRIZ methodology-based solutions are qualitative in nature, the actual implication of solutions ought to be tested after actual implementation.

Practical Implications:

The parameter mapping for the TRIZ matrix was undertaken in this paper. This methodology when applied to other problem statements renders an organized process for improving total healthcare quality

and innovative healthcare delivery processes. The inventive principles were applied to find solution to contradictions and arrive at a model for robust delivery and access for quality healthcare services that engages all stakeholders efficiently and effectively, during pandemic conditions. The innovative solutions derived through the process are applicable to public health policy makers, academic researchers, and healthcare practitioners.

Social Implications:

The process of providing robust delivery and access for quality healthcare services, as benchmarked by the TRIZ methodology, can have far-reaching implications for social engagement among healthcare providers and customers during both pandemic and non-pandemic conditions.

Keywords –TRIZ, Healthcare delivery, Healthcare access, Inventive solutions, Contradictions, COVID-19, Pandemic.

DXB213

Assessing cultural shifts in the emerging markets

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Extended Abstract

Lately, emerging markets have become the focus of continued research as evidenced from the growing literature base covering a myriad of business issues and practices in the emerging markets (Seth 2011; Mingo et al. 2018). This growing literature base focuses particularly on market liberalization, deregulation, internationalization, financial management and so on (Sharma et al. 2018). Yet, a glaring void in the extant literature is the lack of studies on cultural factors and resulting structural changes in the emerging markets (Feng et al. 2017). A large number of researchers have utilized both Hofstede's (1984) and Schwartz's (1992; 2006) cultural values frameworks in a wide variety of empirical studies (Taras et al. 2012). But there are several limitations on Schwartz's and Hofstede's cultural dimensions (Voronov and Singer 2002). For example, nearly four decades have passed since the publication of seminal work related to international cultural dimensions by Hofstede (1984). Many countries have changed dramatically over the last two decades that casts a doubt on the applicability of cultural dimensions reported in the literature (Craig and Douglas 2006; Inglehart and Baker 2000). The evidence of cultural changes is even more abundant in some of the emerging markets of the world (Deb and Sinha 2016).

Another critical business issue of New Service Development (NSD) or developing service innovation in the context of emerging markets has not attracted much attention in the literature (Biemans et al. 2016; O' Cass and Wetzels 2018). In addition, within the NSD literature most studies suggest that for developing successful new services a firm must interact with their customers (e.g., Alam 2002). As a result, the literature is ripe with the studies linking customer interaction to new product and service success. However, most of these studies are based on the data collected in North America and Europe (e.g., Jaakkola and Hallin 2018; Alam 2006; 2013; Mathing et al. 2004). Based on the foregoing arguments, we conclude that despite the recent advancement of NSD research, relatively little efforts have been expended on studying how the firms interact with their customers for NSD in the emerging markets and how the customers' culture affect the overall NSD process. Against this backdrop the research question for this study is: How do the customers' cultural values and beliefs influence the customer interaction process in NSD in an emerging market and whether the existing knowledge base is robust enough in advancing our understanding of the evolving customers culture?

To answer the above research question, we studied the process of customer interaction during NSD used by the financial service firms in the emerging market of India. We chose financial services for this research because of the high level of innovation in the industry resulting from deregulation and technological advancements (Iheanachor and Umukoro 2022; Alam 2013; Lyons et al. 2007). In addition, customer interaction in NSD is a suitable context for understanding cultural factors because customers' cultural

orientation plays a key role in the way they interact with a service firm and provide input for NSD. We chose India because of its dynamic service industries and a lack of research on NSD conducted in India (Mukherjee et al. 2022; Alam 2013). We chose Business to Business (B2B) services for this research because most studies in the extant literature relate to business to customer services only. Thus, there is a need of more studies in the B2B context (Biemans and Griffin 2018; Homburg et al. 2014).

Literature Review

The multi-disciplinary nature of our research dictates the need to tap into the literature pertaining to marketing, finance, international business, and cultural studies to unearth key research issues related to interaction with the customers for developing new services in the emerging market. These literature bases provided us the key research issues that are worthy of further research. For example, looking at the literature related to cultural issues, it seems apparent that the advances in the measurement of culture (Hofstede 2001; Schwartz and Sagiv 1995) and the globe project (House et al., 2002) have resulted in valuable insights into the culture's relevance to business decision-making. Yet, many firms do not incorporate the cultural aspects in their NSD programs (Alam 2013) and in other business practices (Pick and Eisend 2016). In particular, the roles of culture in the selection of and interaction with customers have not been studied widely in the extant literature. Moreover, as Seth (2011) has argued, the sheer size of the consumers in countries such as India and China have shifted the emerging markets from periphery to the core of global competition. Despite the importance of these powerhouse emerging economies, the extant literature has not studied the process of customer interaction in NSD in emerging market. This gap is serious for research and for firms that need to develop successful new services in the present highly dynamic cultural landscape of many emerging markets of the world. We fill this research gap partially by studying the cultural factors of the service customers and their impact on the process of customer interaction during NSD in one emerging market, India.

Research Methodology

The data were collected over two phases via in depth interview method (Yin 2002). We collected data from 32 firms and within each firm we interviewed two managers who were in charge of the NSD activities in their respective firms. In addition, we interviewed 64 customers that were involved in interaction with the managers during the NSD process. We reviewed several documents to triangulate the data provided by the key respondents. The data triangulation method further enriched the data and enhanced reliability of the research. We conducted an interpretive data analysis that involved reading the transcripts to gain insights into how customers interacted with the service managers. We used different levels of coding and an iterative back and forth process between the emerging categories, literature and archival records to make sense of data and emerging themes related to customer interaction. Using the Nvivo software, we examined important and relevant “quotes” from the respondents. The themes that emerged from the data analysis were grouped into several categories. The purpose of the theme categorization was to look for commonalties and distinct patterns in data.

Findings Discussions and Research Implications

In this research we studied two key business issues: the importance of emerging markets and the significance of cultural changes for NSD and overall marketing practices of firms based in emerging markets. The findings of this research suggest that emerging countries such as India is experiencing a major cultural shift. In fact, a new cultural paradigm is evolving in this emerging market as the traditional view of cultural orientations have changed markedly as detailed below.

First, although Indians are regarded as collectivists, the Indian customers mostly exhibited individualistic characteristics throughout this research process. A large number of customer respondents displayed an individualist orientation as opposed to Hofstede's assertion that Indians are collectivists in nature (i.e., a score of 48 for individualism). In addition, the way of thinking among service customers in India is analytical rather than holistic in nature. These findings are at odds with the arguments put forward by other researchers suggesting that that Indians are both individualistic and collectivistic in their orientation (Kumar and Worm 2004; Sinha & Kanungo 1997). They may be very agreeable on some occasions and make concerted efforts to find common ground, while on other occasions they may be singularly focused on attaining their own goals. Second, in contrary to the general belief about the polychronic nature of the Indian population, the customers exhibited mostly monochronic tendencies because they provided detailed and explicit information about new services which was very helpful in generating innovative new service ideas. Third, by engaging in a direct and explicit manner of communication, the customers also displayed the characteristic of the "low context culture" as opposed to the general beliefs about Indians belonging to "high context culture".

The above surprising findings have practical implications for the financial service firms interested in achieving growth and prosperity by offering new services to the growing number of financial service customers. The key takeaway is that the service managers should directly investigate the cultural factors of their customers and not use Hofstede, Hall and Hall and Schwartz's cultural dimensions as proxy. This article also has theoretical implications for literature related to the cultural factors of the customers. A new and fresh look is warranted on the cultural shifts being experienced by many emerging markets of the world. Hence, more studies on this issue in other emerging markets are needed. Perhaps the time is right to move beyond Hofstede and develop a new paradigm for cultural issues in marketing and business. We hope that our research motivates future researchers to look beyond this paradigm to break new ground with regard to cross cultural investigations.

Keywords: Cultural Factors, Emerging Markets, New Service Development, Customer Interaction

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DXB214

Critical factors of knowledge management to boost the competitiveness of SMEs: the spare parts industry in Guadalajara, Mexico.

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Purpose

The new development structure and competitiveness is based on using the information as raw material and knowledge as a strategic resource (Castells, 2000). Given this, it is necessary to rethink organizational strategies to add greater value to the organization through knowledge management. The objective of this strategy is to recognize, capture, develop, develop, distribute and retain organizational knowledge since the knowledge of organizations has its origin and resides in the people who make it up. Therefore, this strategy helps to obtain competitive advantages to survive in the globalized world (González, Carbonell & Pérez, 2012).

Pardo, Coronel, Bertone, & Thomas (2013) state that knowledge management produces resources for organizations and the so-called "intellectual capital" as an intangible and enduring element for efficient and sustainable management. Through knowledge management, organizations favor individuals to develop in their work by contributing ideas and simultaneously avoid "knowledge leakage" when people leave the organization.

Therefore, the main objective of this study is to determine the factors of knowledge management that improve the competitiveness of SMEs in the spare parts sector of the Guadalajara Metropolitan Area. Moreover, at the same time, as specific objectives, we first present the current situation of SMEs in Mexico and then determine the key factors of knowledge management and competitiveness that affect SMEs.

Methodology

Based on the literature review on the subject of the study, a questionnaire was designed using a Likert-type scale to collect information, and technical data is shown in table 1.

Table 1
Technical data sheet of the research sample

Characteristics	Description
Universe	86 SMEs of the spare parts manufacturing industry
Field of study	Guadalajara Metropolitan Area
Sampling	SMEs with 11 to 250 workers
Data collection method	Personal survey
Type of sampling	Simple random sampling
Sample Size	75 companies
Margin of sampling error	± ± 4% at an aggregate level, for a confidence level of 97% (p=q= 0.5)
Period of fieldwork	September 2021 to February 2022

The following hypotheses are proposed and will be tested by analyzing the results obtained:

- Hypothesis 1: The more staff training, the better knowledge management.
- Hypothesis 2: The better the internal sources, the better the knowledge management.
- Hypothesis 3: The better the external sources, the better the knowledge management.
- Hypothesis 4: The higher the motivation, the better the knowledge management.
- Hypothesis 5: The higher the performance, the better the level of competitiveness.
- Hypothesis 6: The higher the technology, the better the level of competitiveness.
- Hypothesis 7: The higher the costs, the better the level of competitiveness.

Findings

The main results found through the analysis of the information gathered, personnel training is the most significant factor, followed by the possession of patents; in contrast, it was found that the development of the employees' ideas is not constantly supported. Finally, the most relevant item corresponding to external factors is the one that refers to the use of knowledge through public institutions, research centers, and industrial sources.

Regarding the motivation received by the employees, the system of values and cultural promotion among the workers resulted in high value, as well as encouraging managers and employees to transfer their experiences to new collaborators; on the other hand, teamwork is not reflected with great relevance in the sector studied. Therefore, using the ANOVAS analysis, it was determined that hypotheses 1 and 2 were accepted; however, hypotheses 3 and 4 were rejected since the results obtained are not representative of this industry.

Considering the technological factor, the most important item is "Improvement of machinery and equipment", and the second most significant item is "Development of production processes and/or services". Finally, regarding production costs, the most significant item is "Raw material and input costs with our suppliers are low", followed by "Transportation costs with our suppliers are low".

The financial performance find that the most relevant factor, "The loans contracted in the last three years have been at preferential rates", and in the second position of importance, "Our sales have been very good in the last three years", however, the return on investment, does not have a great impact on this industry.

From the relations of the factors and the Competitiveness variable, it accepted hypotheses 5, 6, and 7.

Conclusions

It can conclude that the most relevant factor for knowledge management, according to the results of the study, is the correct management of internal information sources.

It proves that there is greater competitiveness if there is a high level of knowledge management, being an essential component for the SMEs of the spare parts industry, research and development of the same, as an internal source. Also, the SMEs of the spare parts industry constantly use formal consulting practices for training their workers, as they strongly influence knowledge management.

Finally, concerning the central hypothesis of the research, it was concluded that knowledge management increases the competitiveness of SMEs in the spare parts industry in the Guadalajara metropolitan area.

Research Limitations

It should also note that the study was applied to managers of SMEs, which may focus the concept of competitiveness towards a concept of profit generation, i.e., managers pay more attention and importance to these issues, such as high sales and low production costs.

The results shown cannot be definitive since only the managers' approach is considered, lacking the opinion of employees and others involved in the processes of SMEs.

DXB222

Knowledge management and intellectual capital as generators of competitive advantages in smes: qualitative study

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Abstract

Small and medium-sized enterprises (SMEs) contribute to the global economy by being one of the primary sources of employment and capital generation.

The knowledge society is a key factor in this type of organizations since knowledge has become part of the intellectual capital (IC) within companies, so managing it is a key activity, which impacts individually or jointly to processes such as innovation and the generation of competitive advantages (Vázquez, Hernández & Díaz, 2013; Aguilasocho-Montoya, Figueroa-Ríos & Guerra-Galeana, 2014; Díaz-Díaz & De Saá-Pérez, 2014; Spirkova, Caganova & Bawa, 2015; Fernández-Jardón & Martos, 2016; Lee, Foo, Leong & Ooil, 2016; Rumanti, Hidayat & Reynaldo, 2016; Sánchez-Gutiérrez, Mejía-Trejo, Vargas-Barraza & Vázquez-Ávila, 2016).

As SMEs are an important source for the generation of jobs, it is essential to carry out action plans to implement knowledge management (KM) (Hernández et al., 2014; Días & Casas, 2017) since knowledge is constantly changing inside and outside organizations, which requires monitoring (Marzo & Escarpino, 2016); in addition, KM, together with the needs of customers, are indirect but active participants in the strategic design of SMEs. However, it has been found that even when QA implementation methodologies exist (Zavala-Guerrero, Barceló-Valenzuela, Sánchez-Schmitz & Meroño-Cerdan, 2015), SMEs do not become interested in this process (Wee & Chua, 2013), or perceive that managing their knowledge is relevant (Vasudevan & Chawanb, 2014; Larios-Gómez, 2016), or there are even companies that do not even know that they have been applying them (Henry, 2013; Zieba, Bolisani, Paiola & Scarso 2017).

The purpose of the study was to deepen how SMEs manage their knowledge as a potentiator of intellectual capital and what are the competitive advantages that this process generates in them.

The study is qualitative of documentary type, through the analysis of scientific articles in specialized databases such as EBSCO, Web of Knowledge, Science Direct, Redalyc, ProQuest, Jstor, Emerald, and Springer.

The most relevant conclusions are:

Both KM and Intellectual Capital (IC) potentiation as supposed generators of Competitive Advantage (CA) should no longer be considered as additional systems for organizational development but have become a primary part of the skeleton of SMEs, given that knowledge is the most important value of a company that competes in today's economy.

At present, the economics of a knowledge-based model is in an environment of inhospitable change, so SMEs that do not give due importance to knowledge will not be able to generate VC.

As a product of the discussion of this documentary analysis, the following can be pointed out: Through the analysis of the scientific articles on KM, IC, and VCs, coincidences and divergences were observed regarding the various elements each variable should consider in its process.

In KM, it is evident firsthand the various phases considered in such a system. However, there could be a consensus in certain activities that may differ only in name but in the operational refer to the same as they are the search, acquisition, creation, development, refinement, storage and socialization or distribution of knowledge; other researchers add phases such as learning, application, feedback and protection of knowledge (Blázquez, 2013; Aguilera et al., 2014; Otálora, Gutiérrez & López, 2015; Sánchez-Gutiérrez et al., 2016).

A relationship was also found in that the owner and top management are in charge not only of promoting CG but in general, administrative processes such as organizational culture, strategy and control, leadership, conflict management, integration of work teams, reward systems and commitment in workers, which will favor the development of capitals such as organizational, structural and technological (Bueno, 2013; Eze, Goh, Goh & Tan, 2013; Magnier-Watanabe & Benton, 2013; Vázquez et al., 2013; Wee & Chua, 2013; Otálora et al., 2015; Marulanda et al., 2016; Dias & Casas, 2017; Pérez-Soltero et al, 2017; Venkitachalam & Willmott, 2017).

In addition, the importance of human capital management for SMEs was evidenced, and several phases of KM depend on it, such as the creation, transfer and/or socialization, and the effective use of knowledge (Eze et al., 2013); as well as other capitals, such as relational, innovation and entrepreneurship.

On the other hand, although KM and IC are apparently independent entities, it was observed that IC strictly requires a KM process, as well as the fact that knowledge per se is an intangible asset, i.e., these constructs are closely related since when one is referred to, the other is indirectly alluded to.

The limitations were the number of existing articles in the databases that require greater depth and time for analysis; the study provides practical elements to consider in order to link knowledge management and intellectual capital in SMEs and thus achieve competitive advantages.

The originality of the study lies in the contribution of knowledge from the review of literature that can contribute to the implementation of processes within the organizations that allow linking knowledge management and the intellectual capital possessed by the members of the organization in order to achieve competitive advantages and thus generate differentiators in the market and product competitiveness.

DXB223

Assessment centric approach towards strategic framework for reducing employee turnover due to psychological communication barriers in information technology enabled services in India

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Abstract

According to Padma V. “Information Technology (IT) industry in India has got a tremendous boost due to globalization of Indian economy and favorable government policies. IT and IT related professionals are at a constant pressure to deliver services efficiently and have to be cost effective in every sense but as we know after the COVID 19 Pandemic in world, the Employee turnover has increased in multiple times which costs too much”(2015). As we know, Companies which retain valuable employees actually retain the asset of intelligence. So, the purpose of this study is to identify the psychological communication barriers and to suggest a strategic framework of support system to reduce the turnover which is arising due to psychological communication barriers in Information Technology enabled services in India. According to Jiali Ju “The volunteer turnover rate is one of the scales to evaluate the success of company’s retention policies. To understand retention, one needs to understand its relation to many factors which may affect the retention”(2010). So in this study, we develop a strategic framework to retain the employees by opting different strategies to remove socio psychological barriers. Present study is mainly based on primary data. The data are collected through focused group interviews. For the purpose of study, 50 IT workers which include 10 HR heads and 40 Employees from IT companies operating within India are selected. The results in this study helped the IT companies better understand their Socio psychological turnover issue, and the probable actions which employees and employers are demanding from each other. The results have shown multiple strategies IT companies could use for possible strategic decisions to retain the employees. In addition, the human resource department could use the results to modify the current retention policies for retaining valuable employees and work as a support system to reduce turnover. The study provides a basis for further research.

Keywords: Psychological Communication Barrier, Employee Turnover, Information Technology, Employee Retention

Introduction

Psychological Communication Barriers

The psychological barrier of communication is the influence of psychological state of the communicators (sender and receiver) which creates an obstacle for effective communication (Kuttappa, 2020). Psychology is the systematic and technical study regarding how the opinions and feelings of the individuals are influenced by the definite, genuine and implied pressure of other individuals. The

communication processes that take place in the daily lives of the individuals are influenced by the socio-psychological barriers to a major extent. Socio-psychological barriers render a significant contribution in the continuation of impetuous conflicting situations. On the other hand, they also render an important contribution in imposing hindrances in the implementation of the communication processes. In order to achieve personal as well as professional goals, and form amiable terms and relationships with each other, overcoming socio-psychological barriers is indispensable. It is of utmost significance for the individuals to implement the measures and approaches, which are dedicated towards overcoming psychological barriers.

Causes of Psychological Communication barrier

(Businesstopia, "Psychological Barriers to Communication," in Businesstopia, January 6, 2018, <https://www.businesstopia.net/communication/psychological-barriers>)

- 1.) Lack of Attention
- 2.) Poor Retention
- 3.) Distrust
- 4.) Perpetual Distortion
- 5.) Behaviors and Attitude
- 6.) Emotions/mood
- 7.) Closed mind
- 8.) Premature evaluation
- 9.) Status consciousness

Lack of Attention:

The communication will face problems and becomes ineffective, if

- 1.) A person does not want to listen to other people giving advice.
- 2.) A person is preoccupied by the problems of his professional life or personal life, which affects both.

Poor Retention:

Scientific factor reveal that humans have limited ability to remember. Also, it is common knowledge that every person is different from other. Some people can remember 70-80 percent of things while others can remember only 30 percent. Thus, only a part of communication is realized while the other is just lost. This poor retention is major barrier in communication.

Distrust:

Communication is successful when the communicators trust each other. In a business if an officer distrusts his subordinates or doubts their ability then they cannot discuss matters with their subordinates. This distrust becomes a reason for communication barrier.

Perpetual Distortion:

While travelling, the traveller sees many scenes and hears many sounds but he does not accept all of them. Only those sounds and scenes which are related to his knowledge or experience will enter his mind. In a travel a farmer will be interested in watching farms while a nature lover will be interested in trees, plants, birds etc. This perpetual distortion is a communication barrier. If the receiver's background does not match the message he will not be able to accept the message completely.

Behaviors and Attitude:

Attitude is the established way in which we think and feel about things and ideas which also creates a psychological communication barrier. Every person has a different behavior and attitude. If the receiver and sender have same behavior and attitude then the response will be positive. Similarly if there is some change of policy in an organization and it is contrary to the attitude and behavior of the workers then they will give a negative response.

Emotions /Mood:

Anyone who isn't in a good mood is likely to talk less or talk negatively. A preoccupied mind is not good at communicating. For example, when a person is angry, he/she might say things they regret later. Even when listening to someone else speak, an angry person might easily misinterpret the message.

Various other emotions like fear, nervousness, confusion, mistrust and jealousy affect communication process. For example, a person having extreme moods of happiness will laugh at anything at all said to him/her. The same person when sad will cry or get angry at insignificant situations.

Closed mind:

A person who is affected by prejudices and works with a closed mind is very difficult to communicate with such a person can never think that any other person can also give a good idea.

Similarly, when a person is close minded, the person will have fixed opinions on many things which the person believes firmly. The person will interpret any information in a negative way.

Premature evaluation:

Some people are always in a hurry by habit. These kinds of people most likely make quick judgments and jump into conclusions. They do not consider all aspects of the information such as social, cultural, economic, etc., and often end up taking quick and wrong decisions. It is important to hear the whole message to make proper judgments because they are not changed easily after they are once made.

Status consciousness:

The organizational status of the person also affects communication. Senior officers do not like to discuss things with junior officers as they think it will be like begging of them and junior officers do not discuss things with their seniors or they think that the seniors may get unhappy.

Employee Turnover Rate

Employee turnover rate is the percentage of employees who left a company within a certain period of time. An employee turnover rate is usually measured and calculated on a monthly and/or annual basis (<https://www.talentlyft.com/en/blog/article/242/hr-metrics-how-and-why-to-calculate-employee-turnover-rate>).

Voluntary vs. involuntary turnover

Employees can leave a company for a variety of reasons, both voluntary and involuntary.

Voluntary turnover happens when employees willingly leave a company, usually because they go to work in another company.

On the contrary, involuntary turnover happens when it wasn't the employees' decision to leave a company. In other words, involuntary turnover happens when employees are terminated due to poor job performance, absenteeism or violation of workplace policies.

Formula

$$\text{EMPLOYEE TURNOVER RATE} = \frac{\text{Employees who left}}{(\text{Employees at the beginning} + \text{Employees at the end}) / 2} \times 100$$

source: <https://finance-bi.com/blog/power-bi-employee-turnover-rate/>

Reasons of Employee Turnover (Marc Holliday, 2021)

1. Lack of employee purpose
2. Poor compensation
3. Being overworked
4. Bad managers
5. Little to no feedback or recognition
6. Poor work/life balance
7. Boredom
8. No opportunity for growth or development
9. Bad hiring procedures
10. Toxic or negative culture

(<https://www.netsuite.com/portal/resource/articles/human-resources/employee-turnover-causes.shtml>)

REVIEW OF LITERATURE:

liu & Ge, 2021 by collecting and utilizing a unique of career dataset, in this study Researcher propose a novel deep survival analysis approach to predict the turnovers of individual employees across different firms. With extensive experimental evaluations with a real-world dataset, he demonstrate the superior performance of method over several benchmark methods, and further estimate the cost saving for recruiters by using our turnover prediction solution to showcase its practical business value.

Yang et al., 2020 explores how project managers effectively build trust through their communication styles to keep subordinates engaged and committed in work. We developed a research model for understanding the mediating role of trust from a relational view. The effect of leader communication style and its four facets—assertiveness, clarity, supportiveness, and verbal aggressiveness—on subordinate

turnover intention and work engagement is explored. Trust is positively associated with the work engagement of subordinates and has a negative effect on turnover intention. This study contributes to the theory of leadership by implying that trust is a means through which leaders' communication styles influence subordinates' project outcomes.

Haldoraia et al. (2019) study aims to investigate the turnover intentions of hotel employees in the short-, medium-, and long-term using the pull-push-mooring framework. The discussions and implications include how the results are useful to hospitality HR managers and professionals for improving employee retention. The authors also discuss the limitations and directions for future research.

Hee et al., 2018 result shows that there exists moderating effects of emotional intelligence on how employees' Deep Acting and Surface Acting recognize customers' reactions, both positive and negative, that would affect employees' Emotional Exhaustion and Job Satisfaction, and hence, Turnover Intention. The result suggests that employees with better understanding of their own emotions, although they are more likely to recover from emotional exhaustion, experience a greater negative effect when there is a discrepancy between what they feel and how they should act.

Sahoo et al. 2018 results reveal that transformational leadership style directly influences employee intention to leave. Transformational leadership and employer branding is mediated by employee engagement. The leadership relation with psychological attachment is mediated by employer branding. Zeffane and Melhem (2018) examined the impact of trust, job satisfaction and perceived supervisor support on employee turnover intention. Statistical analysis using SMART-PLS confirmed that trust has significant effects on turnover intention. Further analysis (of the indirect effects) revealed that trust mediates the impact of perceived supervisor support on turnover intention. These findings emphasise three key points: 1) while job satisfaction remains an important determinant of employee turnover intentions, feelings of trust/distrust also have a major direct impact; 2) perceptions of positive supervisor support alone do not necessarily reduce the likelihood of turnover intention; 3) unless supervisor support is accompanied by positive feelings of trust, it would not be sufficient to reduce turnover intentions. Implications of these findings for future research and management practice are discussed.

(Nair, Mishaliny Sivadahasan; Salleh, Rohani, 2017) This paper highlights trust as a pertinent antecedent to turnover intention. Turnover intention is observed as the best predictor of actual employee turnover. Employees who have trust in their organization or employer are alleged to have low or no intentions to leave the organization. Despite the relevance of the trust-turnover intention relationship, strongly supported by the Social Exchange Theory, little attention has been given by academicians and practitioners.

Tepper (2017) study reanalyzes data from Tepper's (2000) two-wave study regarding the effects of subordinates' perceptions of supervisory abuse to assess previously unexamined relationships. As predicted, we found that subordinates who more rather than less strongly perceived that they had been abused by supervisors tended to use regulative maintenance tactics with higher frequency. Further, the positive relationship between abusive supervision and subordinates' psychological distress was exacerbated by subordinates' use of regulative maintenance communications, and that relationship was

reduced by subordinates' use of direct maintenance communication. Theoretical and practical implications are discussed.

Ahamad (2017) study examines the effect of performance appraisal politics on employee turnover intention. Past research shows that there is evidence that ratings of performance appraisal had often been manipulated for political purposes and motives. This research focuses on two elements or political motives influencing employee turnover intention: motivational and punishment motive. Results of multiple regression analysis show that punishment motive have more effects towards employee turnover intention compared to motivational motive. The implications and recommendations of the study also were also discussed.

Purba (2016) study investigated the mediating effect of on-the-job embeddedness on the relationship between trust in supervisor and turnover. Survey data were collected among 471 employees of a restaurant chain in Indonesia. Results showed that job embeddedness mediated the relationship between trust in supervisor and turnover intentions. Turnover intentions were positively correlated with actual voluntary turnover 15 months later. The results confirmed that the trustworthiness of supervisors affects the quality of the relationships between supervisors and employees. Hence, low levels of trust must be addressed as soon as possible in order to maintain a healthy environment in which employees are able to develop their job embeddedness.

Kashyap & Rangnekar, 2016 research study investigated the interrelationships among employer brand perception (EBP), trust in leaders (TRT) and turnover intentions (TI). The findings of the study indicate that EBP and subordinate's TRT were negatively associated with TI. The results indicate that the relationship between EBP and TI was not only direct but also indirectly mediated significantly by the subordinate's trust in their leaders.

The purpose of (Abdulelah Ali Al-Tokhais, 2016) study is to examine the relationship between effective communication and multicultural employees' job outcomes in Saudi hospitality and tourism organizations. Mix-methods, non-experimental, and exploratory survey was used in this study. Hotel employees working in Saudi hospitality and tourism organizations were surveyed. The results show that effective communication can predict employees' job satisfaction, job engagement, and turnover intention. The finding of this study suggests that more effort is needed from human resources to encourage and reinforce a change in attitude among managers to promote effective communication.

According to Pang, Kucukusta, Chan, 2014 High turnover rates have long been a problem and costly in many industries. Numerous studies have focused on the reasons for employee turnover; however, most have focused on the hospitality industry but scarce in travel agencies. Thus, this research aimed to examine the situation in travel agencies in Hong Kong. A sample of 200 frontline staff was selected by convenience sampling. The results indicated that five independent variables, namely, general job satisfaction, job hopping, job security, training opportunity and promotion opportunity are significantly related to turnover intention. The managerial implications of these findings and future research directions are also discussed.

(Vaneet Kashyap & Santosh Rangnekar, 2014) The study aimed to examine the impact of the servant leadership style on employee turnover intentions by investigating the sequential mediating effects of employer brand perception and level of trust subordinates have in their leaders. Results of the study were

obtained by analyzing data collected from 253 employees working in Indian organizations.. The study also found that only the servant leadership style followed by leaders was not enough to directly influence the level of trust employees placed in their leaders. A positive and strong employer brand perception emerged as an important mechanism that helped servant leaders gain the trust of their followers. The theoretical and managerial implications are further discussed in the light of these findings.

(Alper Ertürk, 2014) The purpose of this study is to explore the role of high-involvement human resource (HR) practices, perceived organizational support (POS), leader-member exchange (LMX), and organizational trust in lessening turnover intentions of information technology (IT) professionals working in Turkish public organizations. The results indicate that POS fully mediates the relationships from (a) participation in decision making, (b) information sharing, and (c) fair rewards to turnover intentions; and partially mediates the relationship between recognition and turnover intentions. Moreover, it is also found that LMX fully mediates the association between information sharing and turnover intentions; and partially mediates the relationship between recognition and turnover intentions. In addition, it is yielded that trust in organization moderates the relationship between POS and turnover intentions, whereas trust in supervisor moderates the relationship between LMX and turnover intentions.

Mosadeghrad (2013) study was to measure the level of quality of work life (QWL) among hospital employees in Iran. Additionally, it aimed to identify the factors that are critical to employees' QWL. It also aimed to test a theoretical model of the relationship between employees' QWL and their intention to leave the organization. This study empirically examined the relationships between employees' QWL and their turnover intention. Managers can take appropriate actions to improve employees' QWL and subsequently reduce employees' turnover.

Khan, (2013) research paper is to find out the relationship of the factors such as retirement benefits, job security and financial crises affecting the turnover of an employee in an organization. The result also revealed that the retirement benefits have more positive effect on the turnover than the job security .Similarly, financial crises has a moderate effect on the turnover of the employee. These factors were verified by means of Correlation and Regression Tests. Subsequently, the presented problems when faced by the organization proved the major causes of employees' turnover.

Hom, et al., 2012 study reconceptualize employee turnover to promote researchers' understanding and prediction of why employees quit or stay in employing institutions. We propose “proximal withdrawal states” that motivate members to participate or withdraw from organizations as an expanded criterion. These motivational states precede turnover and are derived from 2 overarching dimensions: desired employment status (whether employees want to stay or leave) and perceived volitional control (whether quit or stay decisions are completely up to them or at least partially under external regulation). Focusing on more common subtypes, we explain how they arise from particular motivational forces and profile how they differ by attitudes, behaviors, and turnover speed and destinations.

Robert et al. (2011) conducted a landmark meta-analysis that addressed many questions about the antecedents and effects of the employee's trust in their direct leader and in the organization's leadership. There are still some unanswered research questions. The present study addresses direct-leader trust and organization-leadership trust in the international setting (U.S., Russia, and Poland) while employing a

refined research design that minimizes range restriction. The results show that trust of the firm's CEO and top management is more highly correlated with turnover intentions than is trust of the supervisor. In-group collectivism dimension did not moderate these trust and turnover-intentions relationships.

Burnes, 2006 study was conducted to determine the reasons for the steady rise in voluntary employee turnover, particularly in the US IT industry. The study focused on the potential differences between Generation X IT workers and others. The study found that many employees leave mainly because of distrust between management and employees. To fix this problem and counter voluntary turnover, open two-way communication must flow between IT employees and senior management. Leaders must listen to the concerns of valued employees about new technologies and provide a voice for employees to contribute to the organization's future. Without these improvements, an organization risks considerable costs that it can ill afford in highly competitive business environments

Jamal (2004) study examined the relationship between job stress and employees' performance and withdrawal behavior among nurses (N = 440) in two hospitals in a metropolitan Canadian city on the east coast. Job stressors assessed included role ambiguity, role overload, role conflict, and resource inadequacy. Employees' performance was operationalized in terms of job performance, motivation, and patient care skill. Withdrawal behaviors assessed were absenteeism, tardiness, and anticipated turnover. Multiple regressions, curvilinear correlation coefficients, and canonical correlations were computed to test the nature of the relationship between stressors and the criterion variables of the study.

Synthesis of ROL

Over the period of time it has been observed that employee turnover at workplace has increased due to different problems found in leadership style, distrust, role ambiguity, role overload, role conflict, resource inadequacy, workplace bullying and so on but till now different dimensions of all psychological communication barriers are not covered as the key reasons for Employee turnover.

It is also observed that mainly Quantitative Methods are used to analyze the research. For this closed ended questionnaires are filled and some statistical tools like SMART PLS, PLS SEM, Multiple Regression Analysis, and Correlation & Regression are used to conclude the hypotheses.

It is also observed that most of the studies are done in US, UAE, Hong Kong, Indonesia, Turkey, Canada and India as well. So keeping in view all past and recent research studies, few research gaps are identified for this study.

RESEARCH GAP

Conceptual Gap: After an intense study of employee turnover at workplace, it was found that although since the past decade lot of study has been done on employee turnover due to different reasons in IT industries, but so far not much concrete research work has been done on psychological communication barriers at workplace and its impact on employee turnover. And as we know Information Technology (IT) industry in India has got a tremendous boost due to globalization of Indian economy and favorable

government policies. IT and IT related professionals are at a constant pressure to deliver services efficiently and have to be cost effective and as we know good employee turnover costs too much. This research gap motivated me to work on strategic framework for reducing employee turnover due to Psychological communication barriers in IT industries.

Relevance Gap: After the COVID 19 Pandemic in world, the Employee turnover has increased in multiple times. According to the U.S. Bureau of Labor Statistics, in August 4.3 million Americans quit their jobs. The quits rate, which is measured against total employment, is 2.9% of Americans working population according to the Labor Department’s Job Openings and Labor Turnover Survey. The data collected from Organization for Economic Co-operation and Development (OECD) shows that in 38 member countries, at least 20 million workers not returned to work since the Wuhan virus attack. In china there is shortage of workers in Tech Sector. We are in the middle of the Great Resignation. The “Great Resignation” is a sort of workers’ revolution and uprising against bad bosses and tone-deaf companies that refuse to pay well and take advantage of their staff. Millions began reimagining their life now days. This research gap motivated me to work on strategic framework for reducing employee turnover due to Psychological communication barriers in IT industries.

OBJECTIVES OF STUDY

1. To understand the various causes of employee turnover.
2. To evaluate the psychological barriers and its impact on employee’s intention to leave the job.
3. To suggest a framework of support system to reduce the turnover.

RESEARCH METHODOLOGY:

Hypotheses: The study attempts to test the following Hypotheses:

Null Hypotheses 1

There is no significant association of

- H₁:** Lack of Attention of employer on Employee Turnover.
- H₂:** Poor Retention of employer on employee turnover.
- H₃:** Behaviors & Attitude of employer on employee turnover.
- H₄:** Emotions/Mood of employer on employee turnover.
- H₅:** Prejudices of employer on employee turnover.
- H₆:** Distrust of employer on employee turnover.
- H₇:** Status Consciousness between employer and employee on employee turnover.
- H₈:** Premature evaluation by employer on employee turnover.

Sampling Unit

Present study will be mainly based on primary data. For the purpose of study 50 IT workers which include 10 HR heads and 40 Employees from IT companies operating within India are selected.

Collection Method

Data shall be collected through focused group interviews. This shall cover all the aspect related to employee turnover either voluntary or involuntary. For HR Heads, Personal interviews and Focused Group interviews shall be taken.

Tools and Techniques of analysis

Relevant Qualitative Content analysis would be used for testing the hypotheses.

Content Analysis:

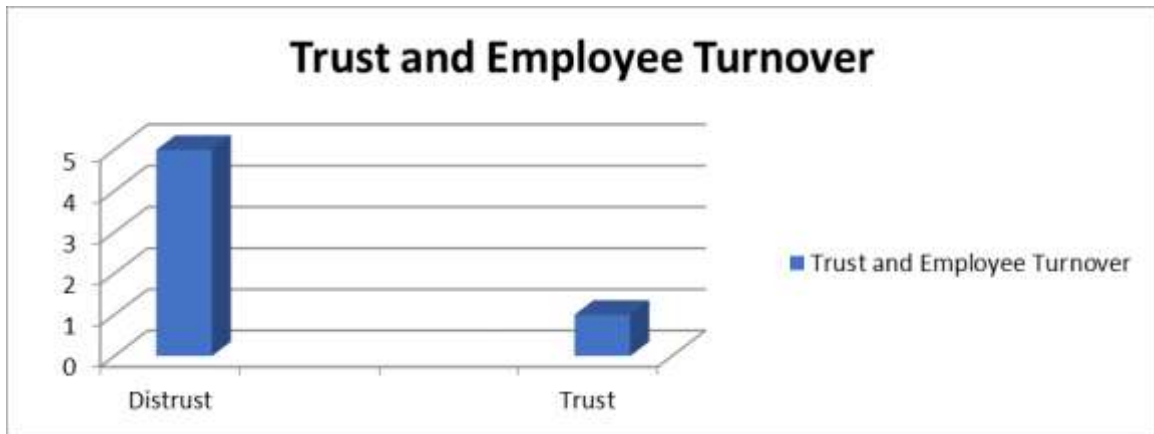


Figure: 1

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Distrust” is positively related to Employee Turnover. As there is no trust between employer and employee, employee turnover increases so fast.

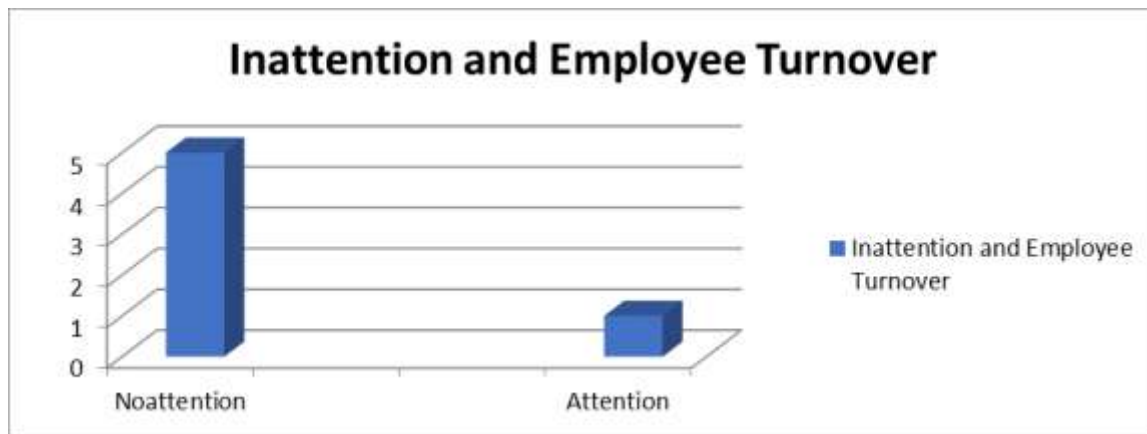


Figure: 2

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Inattention” is positively related to Employee Turnover again. As employers not give proper attention to their employees, employees loose interest in their work and hence leave the organization.



Figure: 3

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Poor Behavior” is positively related to Employee Turnover. As employers or managers do not behave properly with their subordinates, employees start feeling unhappy and demotivated and hence leave the organization.

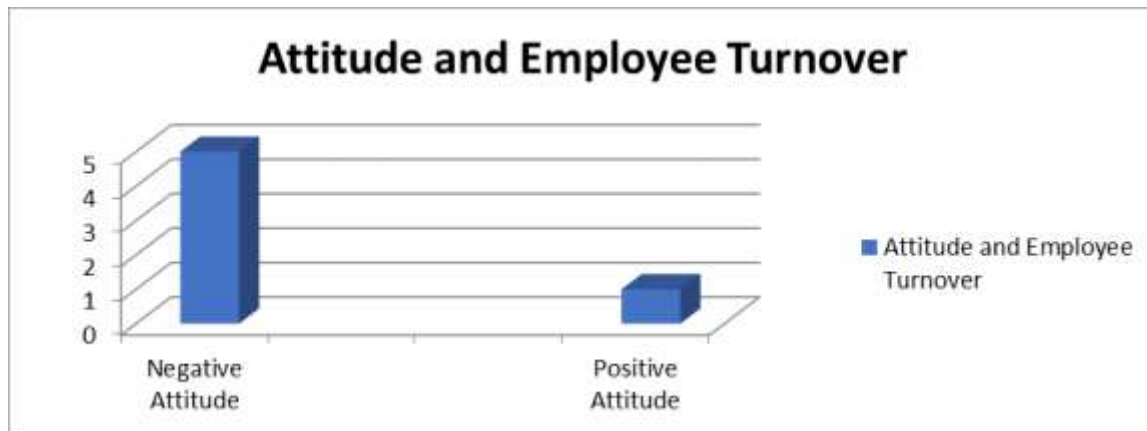


Figure: 4

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Negative Attitude” is positively related to Employee Turnover. As employers have negative attitude towards their employees, employees start feeling demotivated and hence leave the organization.



Figure: 5

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Bad mood of employers” is positively related to Employee Turnover. As employers are not in good mood or they are frustrated due to any reason, they start to put all frustration and anger on their employees and employees take it negative and sometimes leave the organization if it happens continuously.

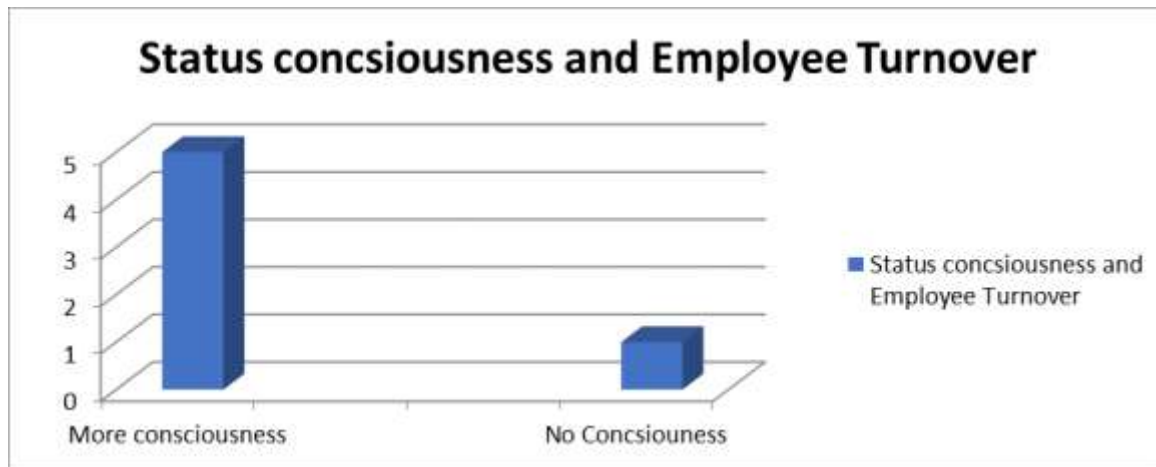


Figure: 6

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Status consciousness” is positively related to Employee Turnover. As more as employees are conscious about the status of employers, they will not feel free to put their words in front of them. This increases the gap between employer and employees and hence sometimes employees leave the organization.

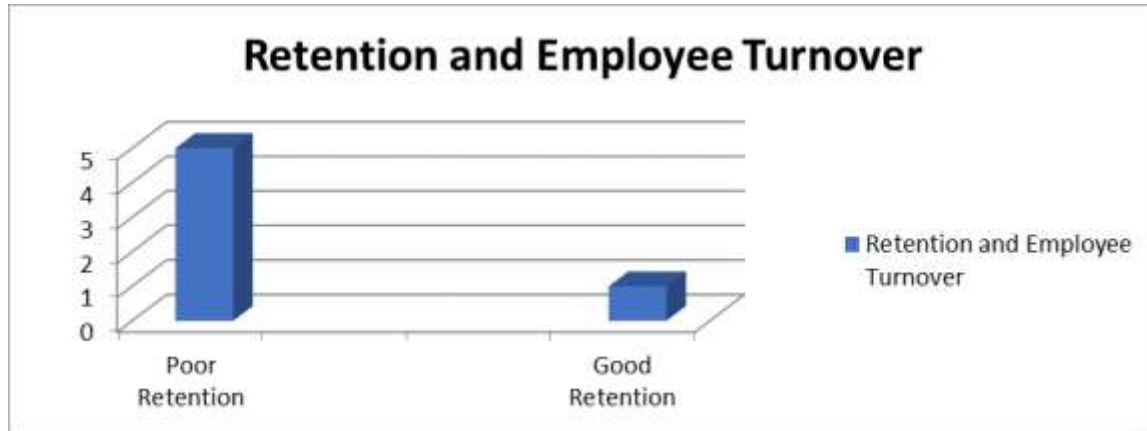


Figure: 7

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Poor Retention” is positively related to Employee Turnover. Sometimes employers are not retaining the thing they committed to employees and this hurts the employees psychologically and they leave the organization in some cases.

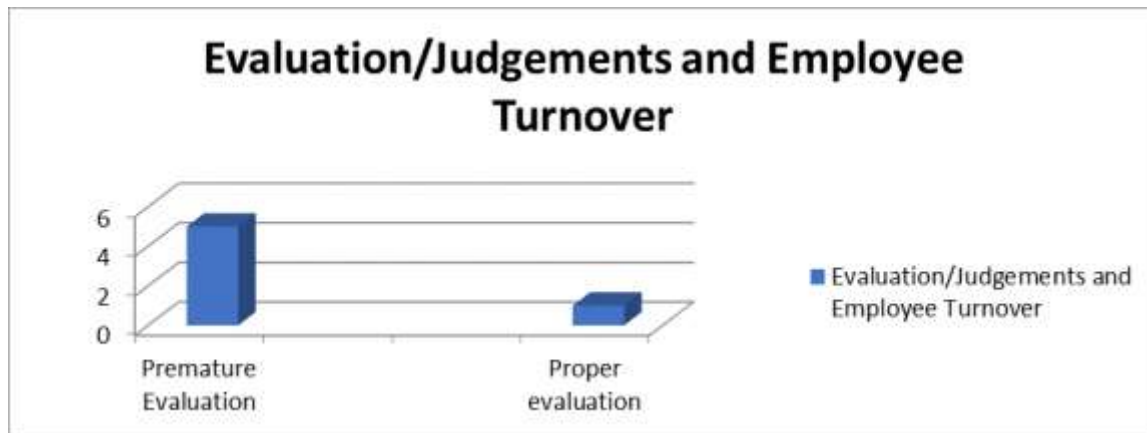


Figure: 8

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Premature Evaluation” is positively related to Employee Turnover. Sometimes employers judge quickly to their employees without listening the full statements and this brings so much disappointments in employees’ mind and they start thinking to leave the organization.

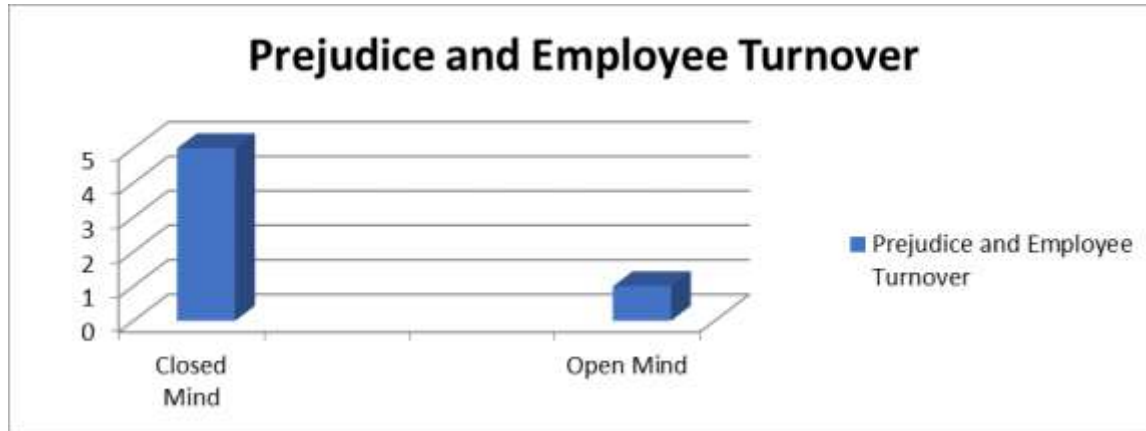


Figure: 9

Interpretation: From the above graph it is observed that one of the psychological communication barriers “Closed mind or Prejudice” is positively related to Employee Turnover. Closed mind employers are not able to hear the employees. such a person can never think that any other person can also give a good idea. This barrier disappoints the employees and hence they leave the organization.

Conclusion and Discussion:

Conclusion:

After the deep study it was analyzed that there is positive relation between all Psychological Communication barriers and employee turnover in IT industry. As there is so much pressure on IT workers, they want to work in such free environment where they are trusted by their managers, they get attention, they feel free to ask about their problems to their boss, they are not pre evaluated and judged quickly by their managers and many more.

Apart from what employees want, managers also want the same from employees in some extent. Any type of negative attitude, toxic behavior can effect on employee engagement and finally on employee turnover.

The study shows that the strategic framework for reducing employee turnover due to psychological communication barrier will increase the employee engagement at workplace and hence reducing the turnover.

Discussion

The workforce is the **success driver** for any organization. In the long haul, companies need profitability & success to thrive and stay relevant in an ever-evolving market. With an evolved **employee-centric culture**, employers need to ensure that they provide an **optimistic work-environment** to retain their top talent.

Fostering good interpersonal communications as a company is challenging the more organization grows. A bigger workforce creates more opportunities for misunderstandings. However, if manager encourage empathy and inclusivity throughout their culture, employees are more likely to adopt similar habits and develop positive relationships with peers.

As individuals, one can strive to listen without judgment, go into situations with an open mind, and be patient with others. When we're more aware of how behavior affects everyone around us, we can significantly improve how we communicate.

No matter the size of your organization, one can encourage teamwork and collaboration with communication tools like team chat apps.. Be sure to choose programs that make it easy to pin topics and get notifications, so employees can quickly get the information they need.

Organizations can start small, such as a tool for peer-to-peer recognition that sits within the same system they use for their day-to-day work.

Findings: Strategies to Overcome Psychological Turnovers

1.) The You-view point:

The You-viewpoint will make sender of the message better informed to use your understanding of the receiver's knowledge to influence the ideas you include and the amount of explanation you give. Moreover, sender will be able to use words the receiver will understand and accept.

The I-viewpoint also called **I-attitude** means the sender composes messages from his or her point of view instead of the receiver's point of view. Poor communicators use the I-viewpoint and choose message content based on their own knowledge, interests, attitudes, and emotional reaction. Only rarely will an I-viewpoint message achieve the goals of business communication.

I- view point	You-view point
I think your report is excellent.	You wrote an excellent report.
You simply do not understand what I am saying.	Perhaps an example will help make the instructions clearer.
We offer three service plans.	Choose the service plan that best meets your needs

By implementing the you-viewpoint, sender will be able to design the message to address the receiver's concerns, needs, and motivations.

Finally, anticipating the receiver's emotional reaction will influence whether sender uses a direct or an indirect approach in his message.

(https://www.ifioque.com/interpersonal-skills/using_the_you-viewpoint)

(Barrier: Behaviour and Attitude & Emotions and mood)

2.) Stay Calm:

The hardest part of working through a communication barrier is keeping one's frustrations in check. Remember, you're not going to get your point across any clearer by seeming annoyed. Stay calm, and most importantly, be patient. Give the conversation that time it needs. (Brandi Gratis, 2004)

(Barrier: Anger, frustration and bad mood)

3.) Provide feedback

We could all learn a lot about our communication styles and skills if we got more feedback from others. Don't be afraid to share constructive criticism when it would genuinely help the other person communicate more productively with others.

(Barrier: Inattention)

4.) Ask, don't assume

When you don't understand someone else's perspective or method, don't assume yours is the right one. Instead of trying to take over or undermine others, be honest and humble. Let them know you're unfamiliar with their approach and genuinely want to know more. If the other person is making a mistake, they're more likely to be receptive to your suggestions after you make an effort to understand them.

(Barrier: Premature evaluation)

5.) Closely monitor toxic employees

Toxic co-workers are those who are overly critical, often blame others, gossip, undermine colleagues and only look out for them. These types of employees can push high achievers out of the organization — a survey by McKinsey revealed trusting colleagues and leaders can have a positive impact on employee engagement, well-being and quality of work with the company. There is a direct link between relationships and turnover, and the old "one bad apple spoils the bunch" metaphor applies here.

(Barrier: Closed mind, selfishness)

6.) Reward and recognize employees

This is an easy turnover reduction strategy to tackle. Simple "thank you" and notes of appreciation — either spoken or written — for the work employees put in every day can go a long way. Giving staff members' new opportunities is another great way to recognize them.

An employee's manager has an outsized impact here. Workers whose manager's feedback left them with positive feelings are significantly more likely to be engaged, and only a small minority of that group is actively looking for a new job.

(Barrier: Inattention)

7.) Pay attention to employee engagement.

It's critical to always keep an eye on employee engagement, because higher employee engagement translates to lower turnover rates. Many of the effort's businesses launched to improve engagement focused on meeting their social and emotional needs. They manifested themselves in a number of different ways — interesting physical spaces, free food, annual company trips and more. But those things have failed to move the engagement needle much. Engagement is influenced by a number of things, but a big factor is the relationship the employee has with his or her manager, which Gallup says accounts for 70% of the variance in employee engagement.

(Barrier: Poor relation with manager, distrust, selfishness)

8.) Don't forget soft skills:

Creativity and the ability to problem solve are crucial skills for just about any employee. Companies should focus on finding candidates that possess creativity, persuasion, adaptability and emotional intelligence.

Certain companies excel at this. Trader Joe's director of recruitment and development said on one of the company's "Inside Trader Joes" podcast that training at the company is not just to create great leaders, it's to create content and material that helps people just be the best version of themselves, regardless of their role or responsibilities.

(Barrier: Behavior and attitude)

9.) Be transparent:

Leaders recognize that better communication with employees is key to increasing retention. Communication could take on forms like town halls, more frequent one-on-one meetings between managers and their team members and employee engagement surveys. A Harvard Business Review study showed that senior leadership continually updating and communicating the business's strategy is an impactful driver of employee engagement and can boost performance.

Some organizations go all-in on transparency, inviting, encouraging and lending tools to facilitate honest, critical assessment of anyone by anyone regardless of title. True transparency requires that people say what they really think and believes in a meritocracy. Employees are more invested in a company when they feel like they have a voice and have a real understanding of what's going on with the business.

(Barrier: Selfishness and distrust)

10.) Focus on onboarding:

Onboarding is often a new employee's first introduction to the culture of an organization. It's tough to recover from a bad onboarding experience. Employees who have negative new hire onboarding experiences are twice as likely to explore new opportunities early on in their tenure.

But small improvements in the process have the ability to leave positive first impressions that last. Indeed, employees are more likely to stay with the company for several years after a good onboarding experience. Better onboarding — and longer onboarding, in particular — leads to faster time to productivity. The best onboarding processes don't park employees in a room for eight hours and call it a day. They pair new employees with mentors and facilitate connections with people in different departments. And they continually check in to see how things are going, providing support and resources along the way.

(Barrier: Status Consciousness, Inattention, closed mind, perpetual distortion)

11.) Encouraging Open Communication

You can foster an environment in which employees are not afraid to voice their opinions. In other words, they need a workplace where they can freely express their ideas and express their concerns.

An “**open-door policy**” is one of the most effective communication strategies to establish a culture of transparency and trust. It shows that you're always available to listen to their views.

(Barrier: Status Consciousness, distrust)

12.) Bonding with Employees

It's no secret that employees don't leave jobs but their managers. A good manager works continuously to nurture their relationship with the team members. Above all, bonding with employees outside work is as important as inside the office.

Team lunches, group treks, excursions are some methods to celebrate employees. Celebrating even their personal achievements- a new house, marriage- will deepen your bond.

(Barrier: inattention, closed mind, status consciousness)

13.) Analyze existing turnover to find issues:

The ability to collect, analyze and act on turnover-related data in real time and compare it to historical trends will be essential to finding, developing and retaining your best employees. Software can break down turnover numbers by quarter and year, voluntary vs. involuntary, business unit, department and geography. It can report on termination root causes, top performer turnover trends and turnover

demographics (breaking down turnover by age, ethnicity, gender, etc.) to reveal trends and insights that can positively influence an organization's talent management strategy.

According to David Luther (2021), it's becoming increasingly important for HR professionals to have data analysis skills so they can evaluate and interpret all this information in a way that can help the business. This includes skills-gap analysis and identifying flight risks.

Research Implication:

We observed from above research that Psychological communication barriers are forcing employees to leave the organization frequently and according to Marcus Buckingham "Employees don't leave companies, they leave bad bosses". So it was important to study the impacts of socio psychological barriers on employee turnover and suggesting the strategic framework for retaining the employees. As well it will help the future research to check whether the strategies framed are working to retain employees or not or which strategy is working best.

The above-mentioned strategies coupled with a **modern resource management tool** can sort your resource related worries and help you retain **valued talent within the firm**.

Companies must Re-evaluate their employee retention strategies periodically. They should take regular feedback and suggestions from employees. That is how they have happy employees who look forward to coming to work every day.

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Does Defense Spending affect Economic Growth in GCC?

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Abstract

This paper examines the Gulf Cooperation Council (GCC) countries' defense spending effect on their economic growth from 2014 to 2020 using quarterly panel data. The fixed effects and panel- autoregressive distributed lag (P-ARDL) estimation procedure was employed. The findings reveal that defense spending is statistically significant and positively related with economic growth in the long run. Population growth rate, government expenditure, inflation rate, and gross capital formation are other significant variables of growth. The results confirm a unidirectional causality running from defense spending to economic growth. Therefore, the study recommends that spending on military expenditure should be encouraged in periods of security threats but should be done with caution to avoid more inflationary pressure on the GDPGR of the region. Secondly, the inflation rate should be maintained within the threshold to influence economic growth positively. Finally, the government should invest in more productive ventures to promote long-term economic growth.

JEL classification: F43, E51, C32

KEYWORDS: Defense spending, economic growth, government expenditure, public investment, GCC.

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1. Introduction

Defense spending, or military expenditure is the total fund allocated by a state or region in order to raise and maintain armed forces and other necessary activities needed for defense purposes (Gokmenoglu et al., 2015; Laniran & Ajala, 2021). Defense spending is a key element of state security. It is a common knowledge that every country budgets for security spending. Considering the limited resources of states and competitive demands from other sectors of the economy, the ability of a nation to cater for the defense obligations is limited (Waszkiewicz, (2020).

Like other government expenditures, military spending has both positive and negative impacts on economic growth of a nation. For instance, military spending contributes to growth positively by providing technical training, education, medical care and public infrastructures like airports, roads and communication networks. These have the potentials of benefiting the private sectors (Khidmat et al., 2018; Laniran & Ajala, 2021). Nevertheless, any budgetary allocation towards security matters pulls resources away from other sectors of the economy, which ordinarily would have been employed to increase the standard of living of the citizens. Foreign reserves are often depleted as a result of importation of ammunitions or military hard-wares from abroad in the case of developing countries that cannot manufacture their own weaponry. This could aggravate the increased debt burden of the state and further impoverish the masses. Security threats and aggressions could crowd out Foreign Direct Investment [FDI], reduce productivity and increase inflation rate (Galvin (2010). These concretize the explanation on the controversial results from various studies on defense spending and economic growth relationship.

The GCC includes six countries: Sultanate of Oman, United Arab Emirates (UAE), Kingdom of Saudi Arabia (KSA), Qatar, Kuwait, and Bahrain. Recent political developments surrounding the GCC countries have led the governments to increase their budgetary allocations toward defense spending. The ongoing civil war in Yemen since 2015 with military intervention led by Saudi Arabia with support from other GCC countries (United Arab Emirates, Qatar, Kuwait, and Bahrain) is one case to note. In addition, the instability, such as the Arab Spring marked by demonstrations across several of the Middle East and the GCC countries, has further encouraged GCC governments to increase their defense spending. Recently, a political demonstration in Lebanon that started in October 2019 with citizens demanding a new political system (Yee, 2019) has triggered much concern among the GCC countries, giving signals for increased defense and security spending. Much of these developments which resulted in increased defense spending are consistent with Pradhan's (2010b) views, who argued that a country's defense spending could be positively influenced by the geographical proximity of other warring countries.

2. Literature Review

The relationship between defense spending and economic growth has been widely debated amongst researchers in the literature. Some earlier empirical studies observed that military spending enhances economic growth by stimulating the labor market, technological innovation, and foreign investment (Khidmat et al., 2018; Smith, 1980; Yildirim, 2006). In

contrast, some studies explored a negative or insignificant relationship between defense spending and economic growth (Galvin, 2010; Huang & Mintz, 1990; Vitali, 2018). Furthermore, researchers found different results because they applied various econometric models and variables to examine the defense spending-growth relationship (Haseeb *et al.*, 2014). Nevertheless, some studies like Dudzeviciute *et al.* (2016); Pradhan, (2010a) and Ram (1995) argued that the reason for the different results on defense spending-growth relationship depends on the nature and economic level of the examined countries.

Some of the studies on the impact of military spending on economic growth of different economies are discussed below.

Laniran & Ajala (2021) examined the impact of military expenditure on economic growth in Nigeria adopting annual time series data between 1981 and 2017. The study employed variables such as military expenditure as a share of government expenditure, the ratio of gross capital formation to GDP and gross school enrolment on autoregressive distributed lag (ARDL) estimating technique environment. The result showed that in the long-run, military expenditure and economic growth are positively and significantly related.

Waszkiewicz (2020) analysed the impact of military expenditure on economic growth in several states in Central Europe. The study employed some variables such as gross domestic product (GDP), inflation rate and military expenditure. Using vector-autoregressive (VAR) estimating technique in the analysis, the study found that there was no long run relationship between military expenditure and economic growth of the countries examined. However, there was short run nexus existing between military expenditure and economic growth in Poland but none exists in Hungary, Czech Republic and Slovakia. The study used VAR estimating technique which was built to examine short run effects of variables on one another. Hence could not determine the long run effects of the independent variables on the dependent variable. This was seen as the limitation to this study.

In an attempt to analyses the causal nexus between defense spending and economic growth in Nigeria, Ofino & Adele (2020) used annual data from 1980 to 2017 with some variables such as RGDP, total military expenditure, interest rate and exchange rate. Toda-Yamamoto (TY) causality technique was employed and the absence of causality between defense spending and economic growth was found. However, the study failed to establish a long run relationship between the variables which is a key procedure in determining the causal relationship between the variables. This probably may bring about a bias in the result of the study.

Khidmat *et al.* (2018) investigated the impact of defense spending on economic growth for 12 emerging economies of South East Asia. The analysis was done using panel data from 1990 to 2015, employing Random and Fixed effect models. The result showed a positive and significant effect of defense spending on the growth of emerging countries.

Vitali (2018) examined the role of military spending on economic growth using Italy data from 1998 to 2017, with the results confirming that the defense expenditure does not significantly affect the Italian economy. It was argued that the related studies of industrialized countries similar to Italy were found to have negative or insignificant defense-economic growth relationships.

Sohail et al. (2018) examined the stationarity properties and long-run relationship between defense spending and economic growth using annual time series data from 1972 to 2016. They concluded that spending on the military, capital investments and openness to trade enhance economic growth in the short and long run, while external debt negatively affects economic growth in the short and long run.

Dudzeviciute et al. (2016) focused on the relationship between defense spending and European Union (EU) countries' economic growth from 2004 to 2013. The authors applied several descriptive statistical indicators and Granger causality test. The study revealed that prospective threats are one of the most important causes of increasing defense expenditure. However, they classified the results based on economic growth among the EU Countries. Moreover, they found that the EU Countries with very high level of economic growth have a prevailing causality direction from military spending to economic enhancement.

Also, Gokmenoglu et al. (2015) conducted Johansen cointegration and Granger causality tests to investigate the long-run relationship between military spending and economic growth for Turkey using 1988 to 2013 data. The results indicated that defense expenditure and economic growth are cointegrated in the long run. However, the findings of the Granger causality test indicated that there is a unidirectional relationship running from economic growth to defense expenditure.

In addition, Edame et al. (2013) studied the relationship between military spending, debt service obligation, and economic growth in the case of Nigeria. Their findings showed that Nigeria specifically spent low in the defense sector, and this is because they need to spend a considerable budget on human capital development rather than on defense. Defense spending was therefore found to be insignificant in affecting economic growth in Nigeria. Furthermore, Duella (2014) investigated the relationship between military spending and economic growth in Algeria for the period 1980 to 2010 using the Johansen cointegration procedure and vector error correction model (VECM). The findings showed a unidirectional causality between the two variables.

Pradhan (2010a) studied the nexus between military spending and economic growth in five South Asian countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) from 1988 to 2007. The result of the analysis revealed a long-run unidirectional causality from growth to military spending in four countries (Singapore, Indonesia, Thailand, and Malaysia). Moreover, it found bidirectional causality in the Philippines.

In addition, Pradhan (2010b) examined the long-run relationship between military expenditure, public debt, and economic growth from 1988 to 2007 for China, India, Nepal, and Pakistan. The result showed bidirectional causal relationship between economic growth and public debt in China and India. Also the study observed a unidirectional causality from military expenditure to economic growth in China and Nepal, unidirectional causality from public debt to defense spending in India, and unidirectional causality from economic growth to public debt in Pakistan.

Galvin (2010) explored the causal relationship between defense expenditure and economic growth for 64 developing countries using cross-sectional data and employing 2SLS and 3SLS estimation procedures. Their findings revealed that military expenditure had inverse effect on the rate of economic growth and the savings-income ratio.

Yildirim (2006) examined the impact of military spending on economic growth for some countries in the Middle East, using panel data between 1989 and 1999. The results showed a positive defense-growth relationship. A study by Kalyoncu and Yucel (2006) applied the cointegration and causality test to explore how defense expenditure affects economic growth in Turkey and Greece. The empirical findings showed a unidirectional causality from economic growth to military spending in Turkey but not in Greece. Nevertheless, cointegration existed between economic growth and defense expenditure in both countries.

3. Data and Methodology

3.1 Data source and scope

This study utilizes quarterly panel data for the six GCC countries (Oman, United Arab Emirates (UAE), Kingdom of Saudi Arabia (KSA), Qatar, Kuwait, and Bahrain) from 2014 to 2020 (that is time, $t = 7 \times 4$ quarters = 28 and number of countries, $i = 6$, therefore the number of observation, $n = 168$). The rationale behind the chosen period was that this period is consistent with political upheavals, civil war, and unrest within the neighbors of GCC countries, which led to the increase in defense expenditure of these countries. Secondly, this period also witnessed a hike in crime rate and insurgency worldwide, especially in GCC countries. The third reason for the chosen period was data availability in these countries. The source of the data is contained in table 1 below.

3.2 Model Specification

This study adopts the augmented Solow model to establish the relationship between defense spending and economic growth of GCC countries. The theory explains that economic growth is a function of labour, capital and technological progress. The augmented Solow model presumes that technological progress can be broken down into two components: the ratio of

military expenditure to GDP and the exogenous technical progress. It should be noted that the disintegration of the technical progress is in line with the literature and conforms to the theory of conditional convergence (Barro & Lee, 2013; Barro et al, 1992). The study also presumes a Cobb Douglas production function for the countries (i) under study at the time (t) (Islam, 1998; Mankiw et al., 1992). The Cobb Douglas production function is therefore stated thus:

$$Y_{it} = A_{it} K_{it}^{\alpha} L_{it}^{\beta} \dots \dots \dots (1)$$

Where Y = output level, K = stock of capital, L = stock of labor, A = technological progress which was disintegrated into the ratio of military expenditure to GDP (MILEX) and exogenous technical progress (A), t = time horizon, i = countries under study. $\beta + \alpha = 1$, which depicts constant returns to scale. Concerning capital, Y_t (total output) is assumed to be subject to decreasing returns to scale. The implication here is that the economy tends to have a constant capital-labor ratio over time. The additional output can only be achieved by increasing capital productivity by attaining a steady state. The study assumed that this mechanism applies to capital productivity and consumption, where one unit of capital produces one unit of output and vice versa. Therefore, obtaining a natural logarithm of equation 1 gives:

$$\ln Y_{it} = \ln A_{it} + \alpha \ln K_{it} + \beta \ln L_{it} \dots (2)$$

Following the studies of Augier et al. (2017) and Kunu et al. (2016), other variables that impact economic growth in the growth model aside from military expenditure include population growth rate, government expenditure, gross capital formation, and inflation. Incorporating these variables into equation 2 gives:

$$GDPGR_{it} = \beta_0 + \beta_1 MILEX_{it} + \beta_2 POPGR_{it} + \beta_3 INFR_{it} + \beta_4 GOVEX_{it} + \beta_5 GCAP_{it} + e_{it} \dots \dots \dots (3)$$

Where $e_{it} = \lambda_i + v_{it} \dots \dots \dots (4)$

Where λ_i unobservable individual country-specific effect, and v_{it} is the remaining error.

Substituting equation (4) into equation (3) gives:

$$GDPGR_{it} = \beta_0 + \beta_1 MILEX_{it} + \beta_3 POPGR_{it} + \beta_4 INFR_{it} + \beta_5 GOVEX_{it} + \beta_6 GCAP_{it} + \lambda_i + \lambda_i + v_{it} \dots\dots\dots (5)$$

The study also specifies equation (3) as ARDL model thus:

$$\begin{aligned} \Delta GDPGR_{it} = & \beta_0 \\ & + \sum_{n1} \beta_1 \Delta GDPGR_{it-i} + \sum_{n2} \beta_2 \Delta MILEX_{it-i} \\ & + \sum_{n3} \beta_3 \Delta POPGR_{it-i} + \sum_{n4} \beta_4 \Delta INFR_{it-i} + \sum_{n5} \beta_5 \Delta GOVEX_{it-i} \\ & + \sum_{n6} \beta_6 \Delta GCAP_{it-i} + \lambda_1 GDPGR_{it-i} + \lambda_2 MILEX_{it-i} + \lambda_3 POPGR_{it-i} \\ & + \lambda_3 INFR_{it-i} + \lambda_4 GOVEX_{it-i} + \lambda_5 GCAP_{it-i} \\ & + \epsilon_{it} \dots\dots\dots (6) \end{aligned}$$

Where β_1, \dots, β_6 = unknown coefficients to be estimated. These depict the model’s short-run changes. $\lambda_1, \dots, \lambda_5$ = long-run coefficients, which explain the long-run relationship among the variable while $t - i$ is the lag. The optimal lag lengths $n = (n1, n2, \dots, n6)$. Δ = first difference operator and ϵ_{it} = the error term.

Table 1: Variables, Labels, and Sources of Data.

Variables	Labels	Sources of data
Gross Domestic Product Growth Rate	GDPGR	World Bank Data Base and International Monetary Fund (IMF) database
Defense Spending (proxy by Military Expenditure as a percentage of GDP)	MILEX	World Bank Data Base and International Monetary Fund (IMF) database
Government Expenditure as a percentage of GDP	GOVEX	World Bank Data Base
Share of gross capital formation as a percentage of GDP	GCAP	Penn World Table
Population Growth Rate	POPGR	Penn World Table
Inflation Rate (Proxy by Consumer Price Index)	INFR	World bank database and IMF (World Economic Outlook)

Source: Authors’ 2022

3.3 Estimation Technique

As part of the empirical analyses, the study employed some pre-tests of data, such as stationarity test. The stationarity test was employed to verify the behaviours of the variables to determine the suitable model and appropriate estimating technique to be adopted for the analysis. This is necessary because the presence of unit roots in variables induce inconsistent and biased results (Baltagi, 2008). The Kao residual cointegration test was conducted to establish the long run relationship among the variables. Sequel to that, the lag length selection criteria was also used to estimate the optimum lag length. The study went on to conduct the fixed effect (FE) and the random effect (RE) estimates. Subsequently, the Hausman (1978) test was conducted to determine whether the fixed effect or the random effect is the most appropriate model in the estimation required in the panel data analysis. The P-ARDL short run and long run estimates were also determined. Finally, the causality test was conducted to ascertain the direction of causality

4. Results and Discussion

4.1 Unit Root Test

The result of the unit root is presented in Table 2 below. The study employed three different alternative methods to ascertain the stationarity properties of the series, namely, Levin, Lin, and Chu t^* , ADF-Fisher Chi-Square, and PP - Fisher Chi-square. This measure was employed to know the two most consistent results for the analysis (see Baum et al., 2007). The results in table 2 depict that some series are stationary at level I(0), while others are stationary after first differencing I(1). This, therefore, suggests the use of panel auto regressive distributed lag (P-ARDL) estimating technique.

Table 2: Unit Root Result

Variables	Levin, Lin, and Chu t^*		ADF-Fisher Chi-Square		PP - Fisher Chi-square		Most Consistent results
	Prob. Value		Prob. Value		Prob. Value		
	Level	FD	Level	FD	Level	FD	
GDPGR	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	I(0)
MILEX	0.043**	0.000***	0.027**	0.000***	0.000***	0.000***	I(0)
GOVEX	0.076*	0.000***	0.380	0.000***	0.307	0.000***	I(1)
POPGR	0.027**	0.000***	0.161	0.000***	0.042**	0.000***	I(0)
GCAP	0.067*	0.000***	0.521	0.000***	0.398	0.000***	I(1)
INFR	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	I(0)

FD = First Differencing. *denotes 10%, **denotes 5% while ***denotes 1% level of significant

Source: Authors' 2022

4.2 Cointegration Test

The long-run cointegration result as depicted by Kao's residual cointegration result in table 3 below with a significant probability value shows that there is a long-run cointegration among the variables. However, there is need to determine the optimum lag length used in the model. Table 4 below shows that the lag length employed in the analysis is three (3) lags, as all the five criteria chose three lags.

Table 3: Kao Residual Cointegration Result

ADF	t-Statistic	Prob.
	-2.559533	0.0052
Residual variance	0.614791	
HAC variance	0.614791	

Source: Authors' 2022

Table 4: Lag Length Result

lag	LogL	LR	FPE	AIC	SC	HQ
0	14.557	NA	3.37e-08	-0.178285	-0.018	-0.113
1	1006.859	1839.892	7.52e-17	-20.10123	-18.979	-19.647
2	1016.640	16.91343	1.31e-16	-19.55501	-17.471	-18.712
3	1036.574	31.97605*	1.87e-16*	-19.22028*	-16.175*	-17.989*
4	1118.985	121.8996	7.41e-17	-20.18718	-16.180	-18.567
5	1418.127	405.0888	3.31e-19	-25.66931	-20.700	-23.661

Source: Authors' 2022

4.4 Fixed and random effect Tests

Table 5 shows the fixed effect and the random results. However, the Hausman test conducted and shown in table 5 above gives a probability value of 0.0000, which is significant. Therefore, suggesting the preference for the fixed-effect model.

Table 5: Fixed and random effect Result

Variables	Fixed effects result				Random effects results			
	Coefficient	S. E.	t-Stat	Prob.	coefficient	S. E.	t-Stat	Prob.
GOVEX	32.443***	8.116	3.997	0.000	-5.089	3.364	-1.512	0.132
INFR	1.113***	0.244	4.557	0.000	1.055***	0.184	5.730	0.000
MILEX	26.946*	14.338	1.879	0.062	32.670***	6.172	5.293	0.000
POPGR	0.166	0.114	1.450	0.149	0.169*	0.085	1.977	0.050
GCAP	25.998**	10.452	2.487	0.014	3.987	2.933	1.359	0.176
C	-15.058***	3.100	-4.856	0.000	-3.104**	1.058	-2.933	0.003
R-Square	0.409				0.208			
F-Stat	9.237				7.248			
Prob(F-stat.)	0.000				0.000			
No. of Obs.	168	168	168	168	168	168	168	168

Note *denotes 10% **denotes 5% while ***denotes 1% level of significant

Source: Authors’ 2022

Regarding the fixed effect result in table 5 above, GOVEX, INFR, MILEX, and GCAP are significant at 1%, 1%, 10%, and 5% levels, respectively. This shows that these variables are related with economic growth. Specifically, the coefficients of GOVEX, INFO, MILEX, and GCAP are 32.4, 1.1, 26.9, and 26.0, respectively. This suggests that these variables are positively related with economic growth. The probability F-statistic value of 0.000 suggests the fitness of the model.

4.5 Hausman Test

Table 6 below shows the Hausman test result. If the probability value of the Hausman test is significant, we reject the null hypothesis in favor of the alternative hypothesis. The implication is that the fixed effect is preferred to the random effect. This result shows that the p-value of the Hausman test is significant, implying that the fixed effect model is the most appropriate for the analysis.

Table 6: Hausman Result

Test Summary	Random Effects - Hausman Test		
	Chi-Square Statistic	Chi-Square d.f	Prob.
CrossSection Random	23.89	5	0.0000

Source: Authors’ 2022

4.6 ARDL Short-run and Long-Run Results

Considering the unit root test above, the study employed the panel ARDL (P-ARDL) estimation technique, as ARDL has proven to conveniently handle mixed series (Pesaran & Chudik, 2013). The P-ARDL is used to establish long-run and short-run relationships among the chosen variables. The long-run and short-run results of the P-ARDL as presented in table 7 shows that all explanatory variables are significant in the long-run but insignificant in the short run, except the past year's inflation rate. MILEX is found to be statistically significant and positively related with the GDPGR in the long run. 1% increase in MILEX will cause GDPGR to increase by 7.03% in the long run. This result is consistent with the studies of Augier et al. (2017), Khidmat et al.(2018), and Sheikh and Chaudhry (2016) that established a positive relationship between military expenditure and economic growth in the countries of their studies. However, it negates the studies of Abu-Bader & Abu-Qarn (2003) and Galvin (2010), who found a negative military expenditure-growth relationship. The study can infer that increased defense spending affects growth through infrastructural and technological development, enhancing private sector productivity. Furthermore, it implies that increased defense spending positively impacts economic growth by encouraging aggregate demand, which triggers an increase in investment, employment, and income in the region. However, defense spending should be done with caution to avoid increase in inflation which already has a negative impact on the growth of the region.

The result shows that POPGR has a positive and statistically significant relationship with GDPGR. This shows that a 1% increase in POPGR translates to a 0.8% increase in GDPGR. This result corroborates the studies of Augier et al. (2017), Huang and Mintz (1990), and McDonald and Eger (2010). However, it does not conform to Kunu et al. (2016) study, which noted that population growth rate is not related with economic growth. This study suggests that population growth influences the labor force positively and thereby increases the productivity of GCC countries.

Interestingly and against extant literature, the result also observed that INFR depicts a positive relationship with GDPGR in the long run. This finding is against a priori expectation which depicts a negative inflation-growth relationship. However, this result is in line with the study of Okoli et al. (2016), who also observed a positive and significant relationship between inflation rate and economic growth in Nigeria. Nevertheless, it is not consistent with Agu & Nyatanga (2020), who noted a negative inflation-growth relationship. The study can infer from this finding that the inflation rate has a threshold that can enhance economic growth. It, therefore, suggests that in GCC countries, the inflation rate is within the threshold that encourages growth. However, in the short- run, immediate past year INFR depicts a negatively significant relationship with GDPGR, conforming to a priori expectation.

Table 7: ARDL SHORT RUN AND LONG RUN ESTIMATES
Dependent Variable: GDPGR

Shot-Run		Long-Run	
Variables	Coefficient	Variables	Coefficient
COINTEQ01	-0.858** [-3.150]	POPGR	0.808*** [5.810]
D(GDPGR(-1))	0.008 [0.064]	MILEX	7.029*** [1.271]
D(POPGR)	-2.330 [-0.598]	INFR	0.660*** [7.804]
D(POPGR(-1))	2.9312 [0.606]	GOVEX	7.852* [1.833]
D(MILEX)	-24.904 [-0.326]	GCAP	-6.589** [-2.089]
D(MILEX(-1))	-50.573 [-1.214]		
D(INFR)	-0.150 [-0.904]		
D(INFR(-1))	-0.635*** [-3.318]		
D(GOVEX)	10.546 [0.397]		
D(GOVEX(-1))	2.181 [0.097]		
D(GCAP)	-18.104 [-0.734]		
D(GCAP(-1))	-12.575 [-0.764]		
C	-0.740392 [-0.819]		

Note: i. *** indicates statistical significance at 1%, ** at 5%, and * at 10% level
 ii. Numbers in parentheses are t-ratios

Source: Author’s Computation, 2022

GOVEX is another crucial variable that significantly affects GDPGR positively. 1% increase in GOVEX induces GDPGR by 7.85%. This result is consistent with Derouen & Heo (2000) and Connolly & Li’s (2016) studies, which also found a positive relationship between government spending and growth. The implication is that when government spends on infrastructural facilities such as roads, health care facilities, and human capital, it positively impacts economic growth by increasing investment, employment, and income.

Finally, the result shows that GCAP has a significant and inverse relationship with GDPGR. 1% increase in GCAP reduces GDPGR by 6.59% in the long run. This result conforms to the studies of Connolly & Li (2016). However, it is contrary to (Augier et al. (2017) studies, which show that GCAP is insignificant. This result may imply that the level of capital investment in the GCC countries is grossly inadequate to sustain economic growth.

Causality Test

In table 8, the causality test result reveals a unidirectional causality running from MILEX to GDPGR, implying that an increase in defense spending will induce increase in economic growth. This is in tandem with the studies of Duella (2014) for the Algerian economy, Dudzeviciute et al. (2016) for EU countries and Pradhan (2010a) for South Asian countries. However, no causality was established in Abu Bader & Abu-Qarn's (2003) study of the economies of Israel, Syria and Egypt.

Table 8: Causality Result

Null Hypothesis:	Obs	F-tatistic	Prob
MILEX does not Granger Cause GDPGR	168	0.0009	0.0002
GDP does not Granger Cause INFO		0.20508	0.8149

Source: Authors' 2022

5. Conclusion and Recommendations

Due to the recent political developments surrounding the GCC countries, there has been an increase in government budgetary allocations in these countries. Severally studies conducted on the defense-growth relationship showed that there are conflicting outcomes. While some studies concluded that defense spending affects the growth of the economy positively other studies found the relationship to be negative. However, there is dearth of research on this subject matter in the GCC counties, hence the rational for embarking on the present study.

The study examined the relationship between defense spending and economic growth of GCC countries using a quarterly data which spanned from 2014 to 2020. The result of the Hausman test suggests that the fixed effect model is the most appropriate for the analysis. The variables employed were found to be mixed series which implies the use of P-ARDL estimating technique.

From the long-run and short-run results of the P-ARDL, the study observed that all the explanatory variables are significant in the long-run but insignificant in the short run except for the past year's inflation rate. MILEX is found to be positively and statistically significant with GDPGR in the long run. This implies that the increase in military spending induces growth in GCC countries in the long run.

The result equally showed that POPGR is statistically significant and directly related with GDPGR. The study can therefore infer that in the long run increase in the population growth rate increases the manpower resources which enhance productivity and growth of the GCC countries. Interestingly and against extant literature, INFR depicts a positive relationship with GDPGR in the long run. GOVEX is another crucial variable that significantly affects GDPGR positively. The implication is that increase in government expenditure results in economic enhancement of GCC countries. Finally, and unexpectedly, the result showed that GCAP has a significant and inverse relationship with GDPGR. The causality test result revealed a unidirectional causality running from MILEX to GDPGR.

In view of the above findings, the study recommends that spending on military expenditure should be encouraged in periods of security threats, as it enhances economic growth through infrastructural and technological facilities. This encourages investment, productivity and income growth in the GCC countries. However, this should be done with caution to avoid increase in inflation rate which already has a negative effect on the GDPGR of the region. In addition, the inflation rate should be maintained within the threshold it can influence economic growth positively. Finally, as capital formation negatively influences growth in the GCC countries, government should invest in more productive ventures. This will promote economic growth in the long run.

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DXB229

The role of perceived quality of academic staff, administrative staff and university facilities on students satisfaction in higher education sectors in Tashkent, Uzbekistan – quantitative study during COVID – 19 pandemic

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Abstract

Due to the increase in the number of higher education sectors in Uzbekistan, the level of student satisfaction has become one of the significant considerations among HE sectors, as the students are the industry's main assets. Attracting, motivating and retaining students is the primary role of the institutions by providing excellent academic and administrative services. In the period of adaptation to the online learning mode due to the COVID – 19 pandemic, the level of student satisfaction is seemed affected. Hence, this research is aimed to identify the effect of the perceived quality of academic staff, administrative staff and university facilities on students' satisfaction in higher education sectors in Tashkent during COVID – 19.

The study is a quantitative and deductive type of research adopted from the philosophy of positivism. The cross-sectional survey was conducted to collect the data from 389 respondents studying at MDIST (Management Development Institute of Singapore in Tashkent) and WIUT (Westminster International University in Tashkent). The survey has been distributed using Google docs, and collected data has been analyzed using SPSS and SmartPLS. The findings illustrate that perceived quality of academic staff and perceived quality of administrative staff has a positive and significant impact on student satisfaction, while perceived quality of university facilities has an insignificant influence on student satisfaction among HE sectors in Tashkent.

The study results provide a better understanding to both HR and top managers on improving the quality of academic and administrative staff. To increase the level of satisfaction, employers need to focus on quality of academic and non-academic staff. As per the researcher's knowledge, this is the first study investigating the role of perceived quality of academic staff, administrative staff and university facilities on students' satisfaction in higher education sectors in Tashkent during COVID – 19.

Keywords:

Perceived quality of academic staff, quality of administrative staff, quality of university facilities, student satisfaction, COVID – 19.

DXB239

Can WTO Membership Boost Intra-African Trade?

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ABSTRACT

This study examines the determinants of trade in goods within African countries using the modified gravity model. The panel data covers the period between 2000 and 2019 for all the 54 countries in Africa. The article contributes to the existing literature on trade determinants in Africa, including distance and economic size in the study of bilateral trade, by augmenting the gravity model with the inclusion of WTO membership. The gravity model is applied using three different methods of estimation: Ordinary Least Squares (OLS), Poisson Pseudo Maximum Likelihood (PPML), and Gamma Pseudo Maximum Likelihood (GPML) models. Our findings show that the GDP of both exporters and importers, their population, the distance between them, common language, colony, and contiguity, and being a WTO member enhance trade volumes within Africa. The study can help formulate a fair trade policy in Africa.

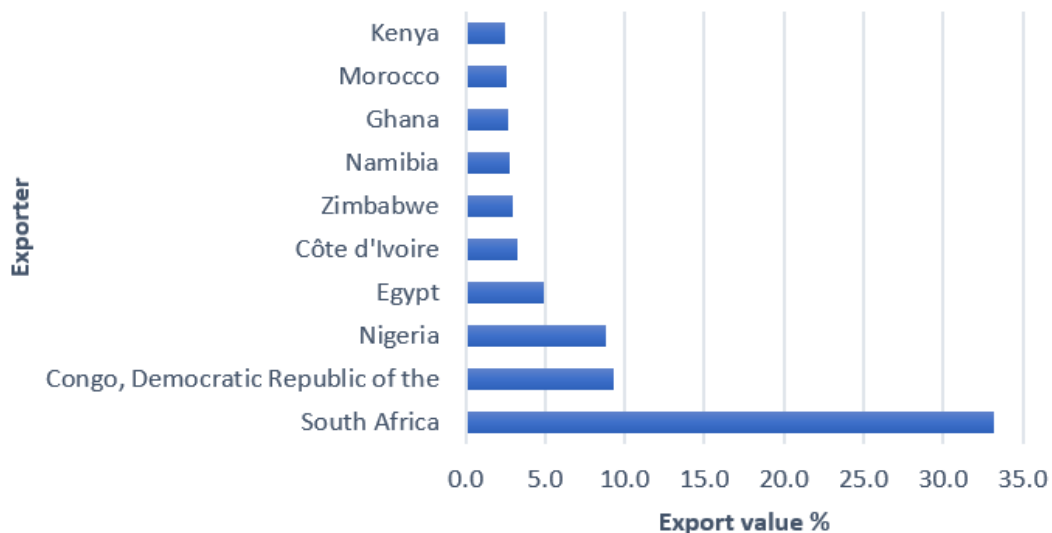
Keywords: *Africa, Trade, Gravity Model, OLS, PPML, GPML*

1. INTRODUCTION

Africa represents the world's second-largest and second-most-populous continents, after Asia in both cases. It owns a large and fast-growing domestic market which offers outstanding opportunities. Presently, Africa accounts for about 3% of the world production and 2.6% of the world trade, although about 16% of the world population is residents there (UNCTAD, 2019). There are wide economic development gaps between Africa and the developed countries, besides inequalities within the African countries. The poverty rate is very high in African countries, which host almost 70% of the world's least-developed countries. Some challenges of African economies are their high reliance on trade in commodity exports leading to export market concentration and debilitated regional production networks. They also have low performance in trade enhancement measures, hindering trade development and the regional economy. This case is exemplified by the low score obtained by the countries in e-commerce, linear shipping communication, and business indicators. The majority of the African countries utilized development policies following independence, including forming Regional Economic Communities (REC). Still, the trade regulations are quite complicated, thereby inhibiting trade among the countries.

On a global scale, international trade is considered a powerful tool to facilitate economic development (Rahman et al., 2019). Pan-African trade can surely drive economic growth in Africa. According to the international trade center in 2021, the top 10 exporters in Africa are South Africa, the Democratic Republic of Congo, Nigeria, Egypt, Cote d'Ivoire, Zimbabwe, Namibia, Ghana, Morocco, and Kenya.

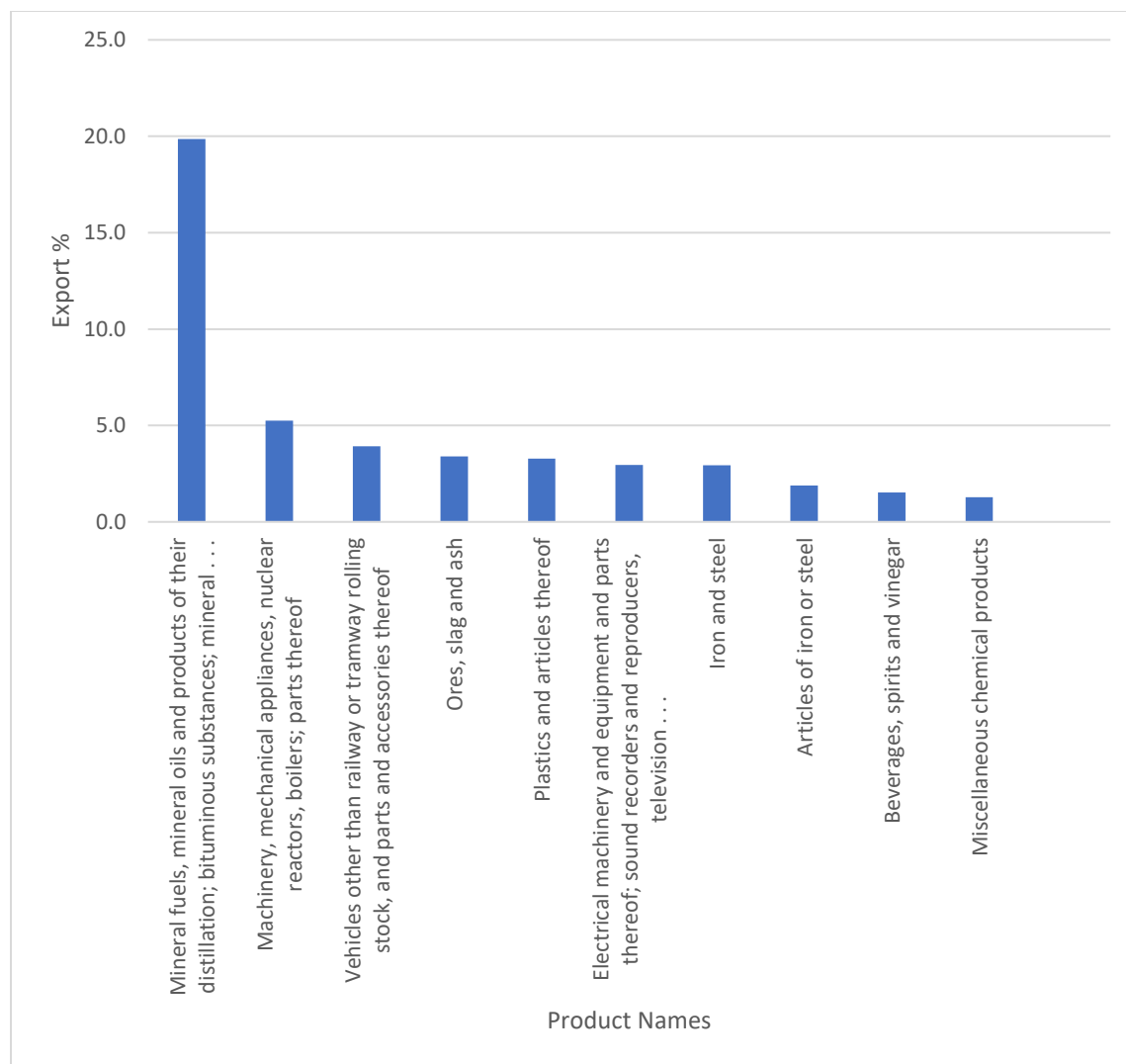
Figure1: Top 10 exporting countries in Africa



Source: Authors calculation from ITC database

Although the total export of Africa export between 2017 and 2021 is approximately \$4 billion, the top 10 exporters accounted for 73.1% of the aggregate. From a regional perspective, Southern Africa constitutes the major exporter (36% out of 73.1%), then followed by West Africa (14.8%), then Middle Africa (9.3%), then Northern Africa (7.5%), and the least comes from east Africa (5.5%).

Figure 2: Africa's Top 10 Export Products between 2017 and 2021



Source: Authors calculation from ITC database

Between 2017 and 2021, African countries exported products within almost 100 different categories. The value of the overall product is approximately \$4 billion (ITC, 2021). Figure 2 reveals that the top 10 products traded within the countries are mineral fuels, mineral oils, and products of their distillation; machinery mechanical appliances, nuclear reactors, boilers; vehicles other than railway or tramway rolling stock; ores, slag, and ash; plastics and article thereof; electrical machinery and equipment and parts thereof; iron and steel; articles of iron or steel, beverages, spirits and vinegar; and miscellaneous chemical products. The top exports were all resource-related such as mineral fuels, which accounted for 20% of the total export by Africa in the five periods.

Raw materials account for a significant portion of the African exports, with few countries dominating the international trade. However, exporting raw materials is not a feasible long-term growth model. The African economies need to diversify their trade portfolio and consider boosting the trade volumes within each other. This research adds to the literature by modelling the trade within Africa using the latest econometric tools, which can help policymakers see the impact of WTO membership in developing their trade. Specifically, we identify the major determinants of trade flow in Africa using a gravity model that includes standard gravity parameters and WTO membership as a binary indicator.

The organization of the study is as follows. Section 1 provides the background of trade flows among the African countries. Section 2 discusses the existing literature on determinants of trade flows in Africa and a review of the gravity model. Section 3 provides the methodology and data used in the study, followed by section 4 presents the result and the discussion of the findings. Section 5 presents the conclusion and policy implication of the study. This research could be very helpful in making strategic decisions to sustain growth in trade among African countries.

2. LITERATURE REVIEW

Classical economists argue that international trade is a crucial driver of economic growth with trade liberalization (Osei et al., 2019). For example, international trade was proposed to serve as a growth promoter by increasing the market size and presenting each country the chance to take good advantage of the return to scale via division of labor and specialization. In this regard, Osei (2019) suggests that every country should intensify its efforts in producing goods in which it possesses an absolute advantage to have an edge in international trade.

Many research projects have been undertaken to study bilateral trade flow using the gravity model, a powerful tool for modelling international trade (Liu & Xin, 2011; Ülengin et al., 2015). **The history of the model can be traced back to Jan Tinbergen (1962) in his effort to suggest policy to enhance international economic growth** (Rasoulinezhad & Kang, 2016). Trade can be expressed in terms of the economic size and distance between the trading countries using Newton's law of gravity. The model is particularly useful in studying how the volume and the direction of international trade are related. The basic form of the model is given below

$$X_{ij} = \beta_0 Y_i^{\beta_1} Y_j^{\beta_2} D_{ij}^{\beta_3} \varepsilon_{ij} \quad (1)$$

β_0 : Constant Coefficient (intercept) not depending on "i" or "j"

X_{ij} : Exports from "i" to "j" (or imports of "j" from "i")

Y_i : Exporter factors (such as GDP)

Y_j : Importer factors (such as GDP)

D_{ij} : geographical distance/trade barriers of exporter "i" to enter / reach market "j"

ε_{ij} : random term

The linear form is written as:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln (GDP_{it}) + \beta_2 \ln (GDP_{jt}) + \beta_3 \ln (DIST_{ijt}) + \varepsilon_{ij} \quad (2)$$

The model conceptualizes that countries with a larger economy trade more, whereas distance representing transportation cost would lower bilateral trade. Several studies have been conducted to establish a theoretical foundation for the gravity model and validate its usefulness in studying bilateral trade. In general, three types of theoretical models exist in international trade: the Ricardian model, the Heckscher–Ohlin (H–O) model, and the intra-industry trade model (Rahman et al., 2019). Gravity condition was deduced from exchange models with item separation and expansion of return to scale.

Trade-in Africa depends on several qualitative factors. For example, some researchers studied the importance of the quality of governance and the degree of familiarity with the emerging structure of rules and norms in describing the difference in bilateral trade patterns (de Groot et al., 2004). The gravity model can be extended to include trade agreements and economic recession on Sino-African imports and exports. Osei et al. (2019) apply this model to estimate the impact of economic growth on trade and they discuss the issue from the perspectives of low and lower-middle countries.

Several studies were carried out to examine the determinants of trade in Africa, focusing on different factors that can affect trade (Mbogela, 2019; Ngouhouo et al., 2021; Osei et al., 2019). A recent research by Guan and Sheong (2020) analyses the determinants of bilateral trade between China and Africa. Their results reveal that the product of GDP has a negative and significant impact on African exports to China and a positive impact on African imports to China; the real

exchange rate impacts African export to China positively and negatively impacts imports. They also find that population has a positive impact on African exports to China and their imports from China, and recession has a positive and significant impact on African imports from China. Mbogela (2019) perform an empirical study on the determinants of trade openness in African economies. The results show that population size, income per capita, and economic location are important variables determining trade in Africa. The contribution of institutions to trade performance was also made, taking sub-Sahara Africa as a case study. The findings show that domestic institution, government effectiveness, regulatory and law quality were relevant to trade performance in the region. In addition, access to the sea, FDI, population growth, GDP, and trade openness were all important determinants of trade (Ngouhouo et al., 2021). Jafari et al. (2011) analysed the determinants of trade among D8 Countries using the gravity model . The authors found a significant relationship between GDP, exchange rate, the population of the exporter, border, and distance. Yunusa (2020) also finds exchange rates to be a significant contributor in trade fluctuations.

Literature commonly states that free trade agreements are boosting factors in improving trade relations between signatories. Thereby they also promote economic development through enhanced trade (Kpombrekou & Wonyra, 2020; Thornton & Goglio, 2002). However, research on the role of WTO membership in enhancing trade is still ambiguous. As many factors are relevant in trade analysis, WTO membership is usually the least to be considered as an impactful measure. Pan African research is also limited as most research is conducted on other regional alliances. In particular, the determinants of trade in goods using gravity model among African countries is very limited. This study applies the modified gravity model to investigate the factors affecting Africa's trade. Thus, this research intends to fill the gap in the literature by analysing the factors impacting intra-African trade.

3. METHODOLOGY

3.1 Data and sources

The study covers all the 54 countries located in the African continent. The trade value measured in USD is used as the dependent variable in the analysis. The gravity model is adopted to examine whether several independent variables can explain African bilateral trade. These variables can be

listed as the GDP of the trading partner, their population, and distance between them and dummy variables such as common language, common colony, common border (contiguity), and common membership in WTO. The panel data from 2000 to 2019 over 20 years was collected from the Centre d'etudes Prospectives et d'informations Internationales (CEPII) database to achieve the study's objectives. Table 1 describes the variables.

Table 1: Variable description and expected parameter signs

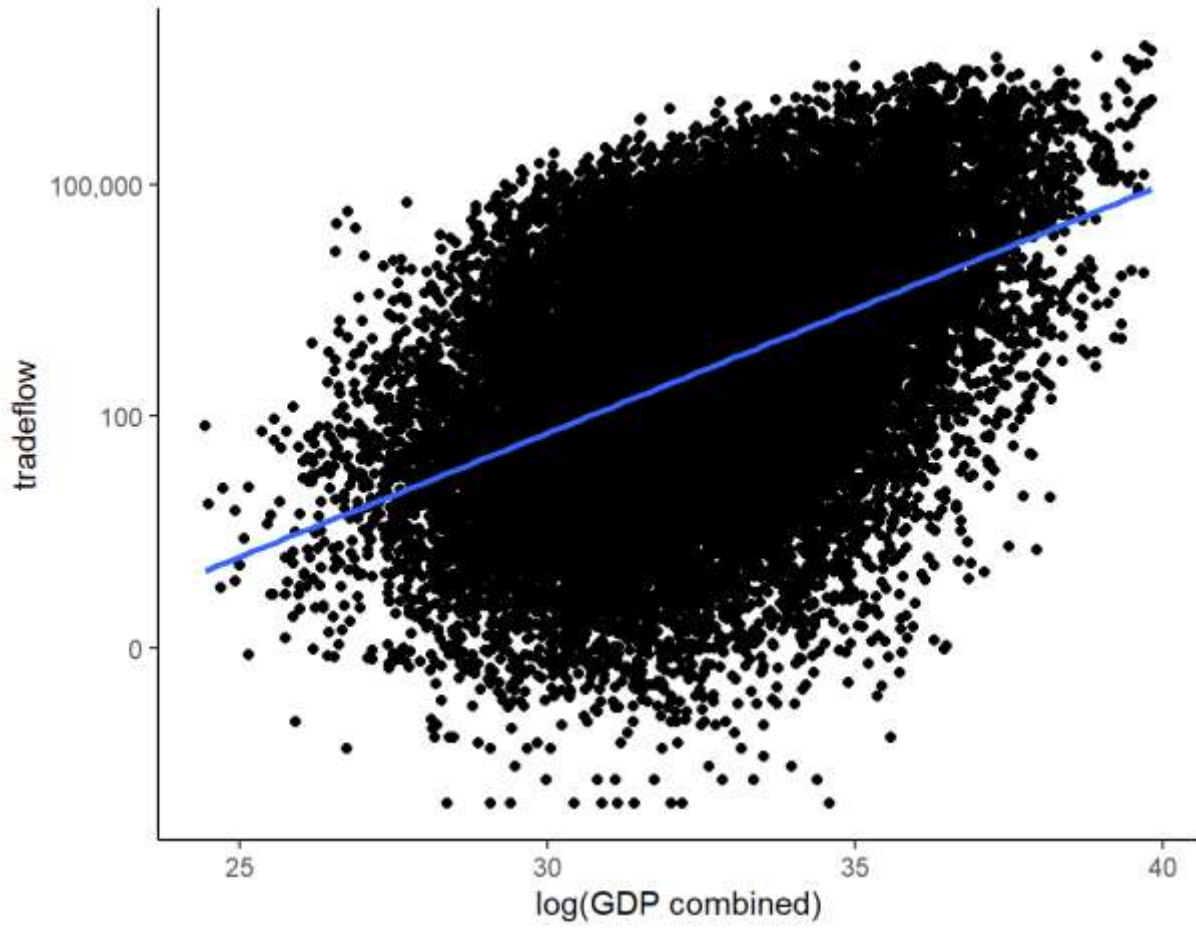
Variable	Description of variable	Expected sign
Trade value	Measures volume of trade in USD (x1000)	
GDP	Gross Domestic Product measured in USD (x1000)	+
Population	A measure of the country's population	+/-
Distance	Distance between the trading countries in kilometers	-
Common language	Dummy variable taking a value one if the trading partners share the same language. Dummy (0/1)	+
Common colony	Dummy variable taking a value one if the trading partners belong to the same colony. Dummy (0/1)	+
contiguity	Dummy variable taking a value one if the trading partners share the same border. Dummy (0/1)	+
WTO	Dummy variable taking a value one if the trading partners belong to the WTO. Dummy (0/1)	+/-

3.2 The relationship between African trade flow and the product of GDP

Figure 3 below depicts the association between trade value and the combined GDP. It is shown that there is a positive relationship between the variable. The trade flow volume is related to the natural logarithms of the combined GDPs. This is consistent with the gravity model assumption.

Figure 3: scatter diagram of trade flow and the product of GDP

Scatter plot and line of best fit for trade versus GDP combined



3.3 Model specification

This study examines the factors that influence trade within Africa by applying the gravity model. The bilateral trade flow between two countries is directly related to their economic size. It is also inversely related to the distance between them. The model can also implement binary variables to see how they impact the trade volume (Rahman et al., 2019). Therefore, this study specifies dummy variables such as common language, common colony, contiguity, and the WTO membership in explaining the bilateral trade volume between countries. Hence the model is specified as follows:

$$\ln X_{od} = \beta_0 + \beta_1 \ln(GDP_o) + \beta_2 \ln(GDP_d) + \beta_3 \ln(Pop_o) + \beta_4 \ln(Pop_d) + \beta_5 distw_{od} + \beta_6 contig_{od} + \beta_7 comlang_off_{od} + \beta_8 comcol_{od} + \beta_9 wto_o + \beta_{10} wto_d + \varepsilon_{ij} \quad (3)$$

Where:

Dependent variable

X_{od} represents the export value of African countries to another country

Independent variables

GDP_o represents the gross domestic product of the exporting (origin) country.

GDP_d represents the gross domestic product of the importing (destination) country.

Pop_o represents the population of the exporting country.

Pop_d represents the population of the importing country.

distw represents the distances between the trading countries.

contig represents dummy, equal 1 if the two countries have a common border.

comlang_off represents dummy, equal 1 if two countries have a common language.

comcol represents dummy, equal 1 if two countries were under the same colonizer.

wto_o represents the exporting country is a member of WTO.

wto_d represents the importing country is a member of WTO.

ε_{ij} represents the error term

β₁, β₂, β₃, β₄, β₅, β₆, β₇, β₈, and β₉ are parameters to be estimated

4. RESULTS

This study used OLS as the base model to compare the results with the PPML and GPML models.

We have chosen PPML and GPML models for actual modelling as the literature indicates that they give more reliable gravity model estimates. PPML and GPML are considered robust general linear

models that eliminate estimation issues in ordinary least square estimates. The PPML uses the quasi-poisson distribution in logarithmic form, whereas GPML uses the gamma distribution. The two estimation techniques are suitable for both cross-sectional and panel data. Both estimation procedures can be used for cross-sectional and panel data. In OLS estimation, the continuous variables (distance, GDP, etc.) and the dependent variable are transformed into logs. In contrast, in the PPML and GPML, the natural logs of the continuous variables are used, and the export values are untransformed.

Both PPML and GPML provide a consistent estimate, unlike OLS and other non-linear methods of estimation (Yotov et al. 2016). This means that the regression coefficients obtained by PPML and GPML models are more robust and free from the problem of autocorrelation, heteroscedasticity, and multicollinearity. Most importantly, unlike OLS, the zero trade flows can be properly estimated using the two models. Nevertheless, we estimate all three models to see the differences in estimation. The results are shown in Table 2, in which columns 1, 2, and 3 provide the OLS, PPML, and GPML estimation results, respectively.

The OLS result shows that the model's explanatory power is 44.4%, as indicated by the value of the coefficient of determination R-Squared. The F-statistics indicate that the overall model is highly significant (1% significance level).

Table 2: Intra-African Trade Model OLS, PPML, and GPML Estimates

	OLS (1)	PPML (2)	GPML (3)
ln_gdp_o	1.24184 (0.01602)***	0.99827 (0.01649)***	1.008923 (0.039879)***
ln_gdp_d	0.69219 (0.01595)***	0.68206 (0.01508)***	0.798265 (0.035723)***
ln_pop_o	-0.30184 (0.01803)***	-0.25569 (0.01957)***	-0.339772 (0.038494)***
ln_pop_d	-0.088701 (0.01791)***	-0.16843 (0.01800)***	-0.177607 (0.030846)***
ln_distw	-1.78383 (0.02960)***	-7.41913 (0.19028)***	-1.720989 (0.051038)***
comlang_off	0.39193 (0.04233)***	0.76989 (0.03147)***	0.164694 (-0.084498)
comcol	0.54346 (0.04636)***	-0.63211 (0.03782)***	-0.031522 (-0.071288)
contig	1.42859 (0.077055)***	0.79656 (0.04303)***	0.674626 (0.078776)***
wto_o	1.36774	1.37517	0.526954

	(0.05043)***	(0.05623)***	(0.148518)***
wto_d	0.57952 (0.04947)***	1.06728 (0.05035)***	0.412988 (0.073528)***
_cons	-9.86294 (0.31166)***	-1.65916 (0.43428)***	-3.291298 (0.666359)***
N = 49950, R2 = 0.444 Standard errors in parentheses. * p<0.10, ** p<.05, *** p<.01			

The results are presented in Table 2. OLS, PPML, and GPML estimations of the gravity model return almost the same results with respect to the signs and significance of the variables. The results of the study indicate that all the coefficients of the variables (Exporter's GDP, Importer's GDP, their population, common language, common colony, contiguity, and WTO membership) are statistically significant at 1% except for the GPML model in which common language and colony are not significant. This indicates that they have an impact on trade in Africa. All the coefficients have the expected signs that support the gravity model expectations. Considering the effect of economic size proxied by real GDP shown in the table, the result suggests a significant positive effect of economic size on trade. For instance, from Table 2, a unit-percentage increase in real GDP of both the exporter and importer, on average, boosts trade by approximately 1.241% (OLS), 0.998% (PPML) and 1.010% (GPML) for exporter; 0.692% (OLS), 0.682% (PPML) and 0.798% (GPML) for importer, holding all other variables constant. The implication is that higher levels of GDP are associated with higher trade flows within African countries. This result is consistent with the theoretical expectations of the gravity model. The results are consistent with Jafari et al. (2011) who found similar values in determinants of the trade flows among D8 countries.

The coefficient of the population of both the importer and exporter was found to have a significant negative impact on trade. The effect of the population on trade is ambiguous. A larger population can lead to higher or lower trade depending on the circumstances. A big country might export less (consume most of its products) or export more, depending on economies of scale (Boughanmi, 2008). Brun (2005) explained this phenomenon using the capital-labor endowment; higher populated countries (given income level) are expected to trade more labor-intensive goods because it reduces the capital-intensive industry's share of national output. A negative coefficient estimate on the importer's population may reflect differences in consumer taste. From Table 2, a unit-percentage increase in the population of both the exporter and importer, on average, decreases trade by approximately 0.302% (OLS), 0.256% (PPML) and 0.340% (GPML) for exporter;

0.089% (OLS), 0.168% (PPML) and 0.178% (GPML) for importer holding all other variables constant. The implication is that higher population levels are associated with lower trade among African countries.

The coefficient of the distance between the trading counties was negative and statistically significant. From Table 2, one unit-percentage increase in the distance between the two trading countries will reduce trade by approximately 1.783% (OLS), 7.419% (PPML), and 1.721% (GPML), holding all other variables constant. The implication is that the greater the distance proxied by transportation cost, the lower the level of interaction and hence trade. This result is consistent with the theoretical expectations of the gravity flow model.

The sign of the common language coefficient is positive and significant except for the GPML result, which was not significant. The common language dummy shows that bilateral trade would increase by 0.391% (OLS) and 0.770% (PPML) when the countries share the same language. This is attributed to the absence of language barriers that facilitate trade flows between countries. If the trading countries share the same language, it will lead to higher trade-in African countries.

The sign and the significance of the common colony dummy depend on the model used. For OLS estimation, this parameter is 0.543 and significant. It was assumed that having a colonial linkage would reduce trade costs that might arise because of cultural disparity. While having a common colonial past used to increase trade in the past, these links have eroded and even reversed in recent years. This is reflected in the PPML model, where this coefficient has a negative sign with a value of -0.632 (column 2) and is statistically significant. The GPML estimation of -0.03 was also negative but insignificant.

The coefficient of the contiguity dummy has the expected positive sign with a value of approximately 1.429 (OLS), 0.797 (PPML), and 0.675 (GPML). This means holding all other variables constant; on average, having a common border would increase trade by 1.429%, 0.797%, and 0.675%, respectively, based on the model specification.

Finally, being a signatory membership of WTO is expected to facilitate trade from both exporter and importer perspectives. The estimation results in Table 2 show that WTO membership, on average, boosts trade by approximately 1.368% (OLS), 1.375% (PPML) and 0.527% (GPML) for

exporters; 0.680% (OLS), 1.060% (PPML) and 0.413% (GPML) for importers compared to those countries that are not WTO members. The implication is obvious. Having a membership status in WTO is associated with higher bilateral trade among African countries. This result is consistent with a similar analysis conducted in the MENA region (Karam & Zaki, 2013).

5. CONCLUSION AND POLICY IMPLICATIONS

This article has investigated several factors as potential determinants of bilateral trade among African countries using the gravity model. To understand these factors affecting trade within African countries, we used three types (OLS, PPML, GPML) of gravity models using panel data of 54 African countries over 20 years from 2000 to 2019. The results show that GDP has a significant and positive effect on African trade. The population has a negative effect on bilateral trade within Africa. The distance has a negative and significant impact on African trade. The binary variables such as common language, common colony, contiguity, and membership in WTO have a positive and significant effect on trade.

Trade is essential for economic development. This research also shows that economic development will also lead to an increase in trade. On the contrary, population growth is found to have a negative impact on trade. This suggests no labor shortage in Africa, but there is a need to provide capital and infrastructure for efficient labor force utilization. Among the binary variables, all are found to impact trade positively. While one cannot change the colonial past or the common language, it might be possible to facilitate trade by reducing cross-border trade limitations. Also, WTO membership can facilitate trade as well. Most African countries are already signatories to WTO, but the few remaining may consider joining it to boost their trade volumes. Like EU, NAFTA, ASEAN, etc., there is a need for an economic or at least a customs union among African countries. This will surely increase Pan African trade, leading to better economic conditions and more jobs in African countries.

Even though this study is appropriate for the purpose, some critical limitations are worth consideration in the future. The findings are responsive to the method of estimation chosen. However, as discussed in this section, PPML and GPML estimations are advantageous over other methods, particularly in treating zero trade flows and problems of endogeneity (Guan & Sheong, 2020). Therefore, these are the most reasonable approaches for estimating the gravity model in this paper. Although other factors not included in the model affect trade in Africa, the factors

considered here in this study include typical factors. Compared with other studies, this study uses the existing trade agreement and studies its aggregate impact on bilateral trade.

On a final note, although trade within the African countries has improved over the years, there is still a need for improvement. African states need to improve their transportation infrastructure, reduce trade costs, improve the structure of technology-based products, and diversify their export portfolio beyond raw materials while developing their exports of products with comparative advantage. African countries need to develop specialization and increase the value-added of their production and exports to catch up with the rest of the world.

Contributors

SS conceived the study, collected the data and wrote the first draft. AA updated the first draft, helped with conceptualizing, visualizations and the computer code. OG has supervised the research wrote the final draft.

Declaration of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendices

Appendix 1: List of African Countries and sub regions

#	Country Name	Sub region
1	Nigeria	Western Africa
2	Ethiopia	Eastern Africa
3	Egypt	Northern Africa
4	DR Congo	Middle Africa
5	Tanzania	Eastern Africa
6	South Africa	Southern Africa
7	Kenya	Eastern Africa
8	Uganda	Eastern Africa
9	Algeria	Northern Africa
10	Sudan	Northern Africa
11	Morocco	Northern Africa
12	Angola	Middle Africa
13	Mozambique	Eastern Africa
14	Ghana	Western Africa
15	Madagascar	Eastern Africa
16	Cameroon	Middle Africa
17	Cote d'Ivoire	Western Africa
18	Niger	Western Africa
19	Burkina Faso	Western Africa
20	Mali	Western Africa
21	Malawi	Eastern Africa
22	Zambia	Eastern Africa
23	Senegal	Western Africa
24	Chad	Middle Africa
25	Somalia	Eastern Africa
26	Zimbabwe	Eastern Africa

27	Guinea	Western Africa
28	Rwanda	Eastern Africa
29	Benin	Western Africa
30	Burundi	Eastern Africa
31	Tunisia	Northern Africa
32	South Sudan	Eastern Africa
33	Togo	Western Africa
34	Sierra Leone	Western Africa
35	Libya	Northern Africa
36	Congo	Middle Africa
37	Liberia	Western Africa
38	Central African Republic	Middle Africa
39	Mauritania	Western Africa
40	Eritrea	Eastern Africa
41	Namibia	Southern Africa
42	Gambia	Western Africa
43	Botswana	Southern Africa
44	Gabon	Middle Africa
45	Lesotho	Southern Africa
46	Guinea-Bissau	Western Africa
47	Equatorial-Guinea	Middle Africa
48	Mauritius	Eastern Africa
49	Eswatini	Southern Africa
50	Djibouti	Eastern Africa
51	Comoros	Eastern Africa
52	Cabo Verde	Western Africa
53	Sao tome & Principe	Middle Africa
54	Seychelles	Eastern Africa

Appendix 2: R code used in the study

```
##### Gravity Model trade determinants in Africa #####
### download Gravity data from CEPII and extract africa data from it####
# First Clear R
rm(list=ls()) # Clear Objects from Workspace
pacman::p_unload() # Unload Packages
dev.off() # Clear All Plots
cat("\014") # Clear Console
getwd() # get working directory
library(haven)
library(tidyverse)
options(scipen=999)
africa<-read.csv("africa.CSV")

# drop missing values for dist, gdp_imp and gdp_exp
africa <- africa[complete.cases(africa[, c("distw", "gdp_o", "gdp_d")]),]
# do not include zero values for trade
africa <- africa[africa$tradedflow_baci != 0, ]

#descriptive statistics
#dataset contains only variables required for descriptive statistics
data <- africa[,c("tradedflow_baci", "gdp_o", "gdp_d", "pop_o", "pop_d", "distw",
"contig", "comlang_off", "comcol", "wto_o", "wto_d")]

library(pastecs)
stat.desc(data)
# data for correlation
data2 <- data[,c("tradedflow_baci", "gdp_o", "gdp_d", "pop_o", "pop_d", "distw")]
# calculate the correlation and not include missing values
library(stats)
correlation <- cor(log(data2), use="na.or.complete")
correlation

#####install.packages("corx") for correlation matrix
library(corx)
xa <- corx(log(data2)[,1:6],triangle = "lower",
stars = c(0.05, 0.01, 0.001))
xa

# install.packages("ggplot2") # package gplot2 is a system for declaratively creating graphics,
based on The Grammar of Graphics

library(ggplot2)
ggplot(africa, aes(x=log(gdp_o * gdp_d),
y=tradedflow_baci)) +
geom_point() + # Use hollow circles
```

```

geom_smooth(method=lm, # Add linear regression line
             se=FALSE) + # Don't add shaded confidence region
theme_classic() + #no background
ggtitle("Scatter plot and line of best fit for trade versus GDP combined") +
theme(plot.title = element_text(hjust = 0.5)) + # put title in the middle
labs(y="tradeflow", x = "log(GDP combined)") + # set names for axes
scale_y_log10(labels = scales::comma)# ln base scale

# OLS estimation
fit1 <- lm(log(tradeflow_baci) ~ log(distw) +
           log(gdp_o) +
           log(gdp_d) +log(pop_o)+log(pop_d)+contig+
           comlang_off+comcol+wto_o+wto_d

           , data = africa)

summary(fit1)

# Poisson estimates of a fixed effects gravity model:
# one of the advantages of PPML is that it can handle zeros
library(gravity)

#change gdp_o and gdp_d into log form
africa$lgdp_o<-log(africa$gdp_o)

africa$lgdp_d<-log(africa$gdp_d)
africa$lpop_o<-log(africa$pop_o)
africa$lpop_d<-log(africa$pop_d)
africa$ldistw<-log(africa$distw)

# Poisson estimates
fit2 <- ppml(
  dependent_variable = "tradeflow_baci",
  distance = "ldistw",
  additional_regressors = c("lgdp_o"
,"lgdp_d","lpop_o","lpop_d","contig","comcol","comlang_off","wto_o","wto_d"),
  robust = T, method = "white1",
  cluster = "distw",
  data = africa
)
summary(fit2)

#OR
# Poisson estimates
fit2 <- ppml(
  dependent_variable = "tradeflow_baci",

```

```

distance = "ldistw",
additional_regressors = c("lgdp_o"
,"lgdp_d","lpop_o","lpop_d","contig","comcol","comlang_off","wto_o","wto_d"),
data = africa
)
summary(fit2)

# Gamma Pseudo maximum likelihood estimates of a fixed effects gravity model:
# one of the advantages of PPML is that it can handle zeros
fit3 <- gpml(
  dependent_variable = "tradeflow_baci",
  distance = "distw",
  additional_regressors = c("lgdp_o"
,"lgdp_d","lpop_o","lpop_d","contig","comcol","comlang_off","wto_o","wto_d"),

  robust = TRUE,
  data = africa
)
fit3

```

DXB240

Critical Review of The Covid-19 Economic Relief Programme for Small Businesses in South Africa

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ABSTRACT

As the COVID-19 pandemic ravages global health systems and taking lives, it is also destroying livelihoods of those remaining. While national lockdowns are instrumental in containing the spread of the Corona virus, these have unfortunately locked people's livelihoods. With each passing day under various levels lockdown, past opportunities that once saw a thriving small and micro enterprises (SME) sector have since become extinct. Such is the case in South Africa where SMEs are among the most affected sectors. As the extension of South Africa's National State of Disaster enters into its third year in 2022, speculation and expert opinion in mainstream media, alike, seem to suggest that many of the affected businesses have since closed permanently. In response the government has since availed a R500 billion rescue package to resuscitate the ailing South African economy. Of this R513 million is dedicated to SMEs under the economic relief programme for small businesses. What remains unclear is whether this intervention is enough and if the imminent collapse of SMEs can be contained with this economic relief programme. Against this background, the purpose of this paper is to critically analyse the COVID-19 economic relief programmes looking into their successes and shortcomings given the South African context and highlighting possible policy gaps.

Keywords: economic relief programme, South Africa, Covid19, small businesses, micro enterprise

DXB246

Business strategy for growth in the context of changes in Business Environment

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ABSTRACT

Enterprise growth is influenced by a number of factors originating in the external and internal business environment. Business strategy is one of the important factors of the internal business environment. For the external environment, we monitor changes associated with a range of factors based on the macro and market environment. The objective of this paper is to investigate the effect of business strategy and changes in external environment in Czech enterprises on enterprise growth. In the research study internal environment (especially business strategy) and external environment (especially changes of external environment) were investigated as a factor influencing the growth of enterprises. The study is based on primary data collected from a recent survey of Czech enterprises between October 2019 and May 2021. These factors in Czech enterprises has been researched with the method of oral questioning and the main instrument was a questionnaire. The relationships of interest are analyzed using appropriate regression techniques.

KEYWORDS: business strategy, enterprise growth, external environment, internal environment, Czech enterprises.

INTRODUCTION

Enterprise growth is influenced by a number of factors originating in the external and internal business environment. Changing conditions and market structures demand that many companies devise new strategies, as they search for a competitive place in their home markets and take advantage of emergent market opportunities. So a company may succeed, its strategy must be consistent with the new environment in which it will operate. The company concept emphasizes that companies must consider both their customers and their competitors when developing a strategy. The globalization of economy offers new opportunities to companies, resulting from their access to bigger markets, scale economies and exposure to best practice management and technology. Recently there has been a spate of interest in the relationship between business strategy and company performance or company growth. But the relationship between business strategy and enterprise growth is still not completely understood. Several studies have suggested that there are strong positive associations between export and company performance and company performance and between innovation and company performance (Altuntas et al. 2018). The earlier study of González-Rodríguez et al. (2018) seemed to suggest that a company's strategies have a significant influence on company performance.

The objective of this paper is to investigate the effect of business strategy and changes in external environment in Czech enterprises on enterprise growth. In the research study internal environment (especially business strategy) and external environment (especially changes of external environment) were investigated as a factor influencing the growth of enterprises. The study is based on primary data collected from a recent survey of Czech enterprises between October 2019 and May 2021. These factors in Czech enterprises has been researched with the method of oral questioning and the main instrument was a questionnaire. The relationships of interest are analyzed using appropriate regression techniques.

The paper is organized into three parts. The first part of the paper outlines selected theories dealing with the relationship between enterprise growth and internal and external business environment. The second part of the paper aims to present and then interpret the results of the survey carried out among Czech entrepreneurial subjects. Finally, the last section provides the conclusion of the research and offers a discussion of the most important implications. The results of the analysis are discussed and further recommendations are provided for managers in the last section.

THEORETICAL FRAMEWORK

The growth of a business entity is influenced by a number of factors derived from the internal and external business environment. The most significant internal factors affecting the growth of the business include the strategy of the business, specifically the business strategy. According to Aaltonen and Ikävalko (2002), the outcome of all of the company's operations and strategies is company performance. Company performance refers to the metrics relating to how a particular request is handled, or the act of performing; of doing something successfully; using knowledge as distinguished from merely possessing it. The success of a business is obtained through a competitive business strategy.

The strategy is a process that can allow an organization to concentrate its resources on optimal opportunities with the objectives of increasing sales and achieving a sustainable competitive advantage (Kotler, 2012). Greenley (1986) noted that strategic planning has potential advantages and intrinsic values that eventually, translate into improved company performance. According to Kotter (1996), the strategy can be used as a means of repositioning and transforming the organization. Porter (1996) has defined strategy as a creation of a unique and vulnerable position of trade-offs in competing, involving a set of activities that neatly fit together, that are simply consistent, reinforce each other and ensure optimization of effort. The essence of optimal strategy making is to build a market position strong enough and an organization capable enough to produce successful performance despite potent competition and internal difficulties. According to Chaffee (1985), the strategy is the determination of the basic long-term goals of the enterprises, and the adoption of courses of action and allocation of resources necessary for carrying out these goals. Business strategy is then used as an umbrella term to denote the broad range of strategic options open to the company, including both organizational and functional management strategy, product/market strategies, and diversification strategies (Barringer and Greening, 1998). It consists of integrated decisions, actions or plans that will help to achieve target goals. A business strategy is a set of fundamental choices which define its long-term objectives, its value proposition to the

market, how it intends to build and sustain a competitive business system and how it organizes itself. If the market in which the company operates is foreign, its business strategy will be an international business strategy that defines the way to compete across the world (Lasserre, 2007).

Studies on the internal factors on the competitive strategy focus on having strong leadership on top, strong management team (Ghosh et al., 2001; Wijewardena and De Zoysa, 2005), entrepreneur (Knight, 2000; Benzing, 2009), management team's international experience (Reuber and Fischer, 1997) and product quality (Wijewardena and De Zoysa, 2005). Other studies are focus on satisfying customers' needs, the ability to develop and sustain technological advantage, the capacity to identify and focus on one or several market niches/regionalization (Ghosh et al 2001), the availability of financial and technological resources, strategic alliances (Hoffmann and Schlosser 2001, Wijewardena and De Zoysa, 2005; Al-Mahrouq, 2010), and competitive strategy (Lavie and Fiegenbaum, 2000; Pertusa-Ortega et al., 2008). A success company continually reinvents strategies to gain better performance and competitive advantages in today's dynamic competition. Thus, the following hypothesis is formulated:

H1: Business strategy is positively related to enterprise growth.

Strategy and strategic decisions involve a change of major kind since an organization operates in the global business environment. In a globally competitive environment, strategic planning is essential for enterprises to develop competitiveness and market potential. Strategic decisions deal with harmonizing organizational resource capabilities with the threats and opportunities. Ritala et al. (2018) examine the diversity of sustainable business models adopted by the companies. To be competitive in the twenty-first century, companies need to continuously improve and perform an excellent standard of the quality of their products. Changes in the external business environment are significant factors affecting the performance and growth of the business. Thus, the following hypothesis is formulated:

Hypothesis 2: Changes of external environment is positively related to enterprise growth.

METHODOLOGY

The analysis is based on the data from a standardized empirical study, which comprises research questions on the management of Czech enterprises. To analyze the management of Czech enterprises, some questions of the impact of strategic management on the business performance of Czech enterprises we asked in the survey. The objective of this paper is to investigate the effect of business strategy and changes in external environment in Czech enterprises on enterprise growth. The ambition is to answer the central research question: "How affect business strategy and changes of external environment achieve business growth"? The research was carried out in the Czech Republic between October 2019 and May 2021.

Sample and Procedure

The strategic management in Czech retail enterprises has been researched with the method of oral questioning, and the main instrument was a questionnaire. The research design is based on the collection of primary data from top managers of selected Czech enterprises. The sample consisted of 352 Czech enterprises which are located in the Czech Republic. The enterprises under research were selected with the method of non-probability purposive sampling, or more precisely by

assumption and occasional selection. The enterprises included in the study are incorporated in the Czech Republic, and all of them are private enterprises.

The structured questionnaire contained two fields of varying degrees of complexity relating to the area of strategic management. The questionnaire consists of closed, semi-closed, and open questions. The questions are based on information offered via personal communication with selected business and university experts, any by former researchers. In some questions, simple and complex scales were used, mostly the Likert-type scale (5 = strongly agree to 1 = strongly disagree). The questionnaire was pre-tested for instrument validity with 20 participants-managers who were asked to respond to the items measuring the theoretical construct. These participants were also asked to identify any ambiguities that may reveal in the questionnaire draft. Based on their feedback, some minor changes in wording were made.

Due to a relatively low response rate in email surveys in the Czech Republic, and because most Czech managers fear that revealing the corporate data is putting their organizations at security risks, it was necessary to make use of a high level of personal involvement consisting of telephone calls, personal distribution of and collecting questionnaires. First, telephone calls were placed to general managers or CEOs of the Czech enterprises to explain the purpose of the study and to request their participation, after those questionnaires were hand-distributed to the general managers and CEOs. Trained research assistants helped the managers and CEOs complete the questionnaire, and explained any items that the respondents wished to have clarified. This procedure resulted in 400 matched questionnaires, of which 10 were eliminated because some responses were incomplete. Thus 352 (a response rate of 88.0 %) questionnaires were used in the subsequent data analysis and statistical processing. The representativeness of the research sample was verified by using the criterion of territorial representation of businesses in the present research. The representativeness of the research sample was also verified by a chi-square test. Based on the level of significance $\alpha = 0.05$, the p-value accounted for 0.125.

Variables and Measurement

The *dependent variable* enterprise growth was measured by subjective ratings. We asked the respondents to evaluate the present enterprise performance and its performance 3 years ago, relative to other enterprises in the same industry, using a five-item, five-point Likert type measure adopted for this study. The question was “The present enterprise strategy can be characterized as successful and fulfilling enterprise objectives, and enabling the achievement of long-term sustainable competitive advantage and had a positive impact on growth over the last 3 years: (1=totally disagree; 5=totally agree)”. The Cronbach’s α of this measure was 0.87. The mean rating by top managers was 4.05, with a standard deviation of 0.919.

The *independents' variables* (business strategy, changes of external environment) were measured by subjective indicators included using a five-item, five-point Likert type measure adopted for this study (1=totally disagree; 5=totally agree).

Guided by current research and empirical evidence, we have included several *control variables*. Among the enterprise-level determinants of performance, the industry level, the enterprise’s size and enterprise age are the widely used demographic characteristics of enterprises. Therefore, we include industry level, enterprise size (which is measured as the natural logarithm of the number

of employees) and enterprise age (in years). Statistical organizations classify enterprises by a wide range of variables such as sales revenues and the number of employees. This research study follows the conventional European idea that the size of enterprises is defined according to EU norms. An enterprise, which has 1 to 9 employees and 2 million euros of turnover per year, is referred to as a microenterprise. An enterprise, which has 10 to 49 employees and at most 10 million euros of turnover per year, is called a small enterprise. An enterprise, which has 50 to 249 employees and at most 50 million euros of turnover per year, is called a medium enterprise. An enterprise, which has more than 250 employees and more than 50 million euros of turnover per year, is called a large enterprise. In line with this, we classify our research sample by the number of employees so that 32.1 % of the sample consists of microenterprises, 23.6 % of small enterprises, 20.7 % of medium-sized enterprises and 23.6 % of large ones. The average enterprise age of the respondents is 25 years. We also work with the industry level of the company: whether the company operates in the manufacturing, service sector, or in retail. We included a dummy variable for industry level following Acquaah and Yasai-Ardekani (2007) because the distinction between manufacturing, services, and retail has a considerable effect on company strategy. There was a wide range of industries that participated in the research: in the sample, there were 31.8 % of companies representing manufacturing, 52.0 % of service companies, and 16.2 % of retail companies.

DATA ANALYSIS

The data obtained from the empirical research on a selected sample of 352 enterprises were processed by SPSS. The analysis began by examining the correlation between variables. All variables were screened to reveal their distribution through Pearson correlation coefficient deviations for the variables Correlations obtained from the Pearson Correlations Matrix indicating intercorrelations among the predictor's variables were low, ranging from 0.115 to 0.229 ($p < 0.05$), thus indicating the independence of the variables used for measuring the predictors. Since the descriptive data revealed a promising variation as well as the correlation among the variables included in the model, the results seem to support the hypotheses.

Table 1: Descriptive Statistics and Pearson Correlations

	mean	SD	1	2	3	4	5
Growth	3.79	0.946	1				
Industry	2.20	0.894	0.047	1			
Age	24.86	30.247	0.004	-0.115*	1		
Size	4786.14	34246.087	0.068	0.025	0.223**	1	
Strategy	4.10	0.818	0.229**	0.086	0.085	0.098	1
External	4.01	2.810	0.151**	-0.072	0.138**	-0.004	0.136*

N=352

Significance level: * $p < 0.05$; ** $p < 0.01$

Source: own research

The second phase of research includes the analytical method: Hierarchical Regression Analysis. We used hierarchical moderated regression analysis (ordinary least-square OLS regression techniques) to test hypotheses.

RESULTS

Hierarchical regression has been used to test the hypotheses with enterprise growth as the dependent variable. We tested the impact of business strategy, and changes of external environment on business growth of Czech enterprises, controlling for industry level, enterprise age, and enterprise size. Before testing the hypotheses, multicollinearity in the dataset we controlled. For this purpose, the VIF values for the independent variables we calculated. In our analysis, the VIF values were all below 1.1, which is a relatively low and acceptable level. Consequently, there is no reason to believe that there is any major multicollinearity in the regression that could lead to misinterpreting or overestimating the final model and its predictive ability. The results of the analyses are presented in Table 2.

We entered the control variables as the first block, Model 1. The regression equation in Model 1 is not statistically significant ($F = 0.785, p > 0.05$). Model 1 in Table 2 shows that none of the selected control variables is not significantly associated with the business success of Czech retail enterprises. The independent variable, business strategy, was entered into the regression as the second block, Model 2. The incremental explanatory prediction on business success was significant in the regression, ΔR^2 was 0.490. The regression equation in Model 2 is statistically significant ($F = 5.114, p < 0.01$). The independent variables explain 56.0 % of the variance in Model 2. The multicollinearity test showed that the VIF of independent variables in the final model ranged from 1.089 to 2.154 and the factor of tolerance range from 0.764 to 0.918. These values indicate no serious problems with multicollinearity. Hypothesis 1 claiming that the business strategy is positively related to enterprise growth was supported.

Table 2: Regression Results for Business Success

	Model 1	Model 2	Model 3
Industry	0.047(0.057)	0.025(0.056)	0.034(0.056)
Age	0.000(0.002)	-0.001(0.002)	-0.0011(0.002)
Size	0.002(0.000)	0.002(0.000)	0.002(0.000)
Strategy H1		0.259(0.061)**	0.239(0.061)**
Changes of External environment H2			0.044(0.018)*
Model R ²	0.070	0.560	0.720
ΔR^2	0.070	0.490	0.160
F	0.785	5.114**	5.376**

^a Unstandardized coefficients are reported, with standard errors in brackets. The changes in R² in Models 2-3 are in comparison with the value of R² in the model to their left.

Value of Durbin-Watson is 1.909

Significance level: *p<0.05; **p<0.01

Source: own research

The independent variable, changes of external environment, is entered into the regression as the third block, Model 3. The incremental explanatory prediction on business success was significant in the regression, ΔR^2 was 0.160. The regression equation in Model 3 is statistically significant (F

= 5.376, $p < 0.01$). The independent variables explain 72.0 % of the variance in Model 3. The multicollinearity test showed that the VIF of independent variables in the final model ranged from 1.180 to 2.355 and the factor of tolerance range from 0.864 to 0.950. These values indicate no serious problems with multicollinearity. Hypothesis 2 claiming that the changes of external environment is positively related to enterprise growth was partially confirmed.

DISCUSSION AND CONCLUSION

Research results showed that enterprise growth is influenced by the established business strategy and also by changes in the external business environment. These results confirmed the conclusions of the studies by González-Rodríguez et al. (2018), Altuntas et al. (2018) and other researchers. These findings suggest that changes in the internal business environment, and especially changes in the external business environment, have a major impact on the growth and success of business enterprises.

It is important to note some of the limitations of the research. The research model can be redesigned by adding some other variables which are taught to antecedents of business strategy and company performance.

Several other implications also emerge from the research study findings. For business researchers, the results suggest that investigation of the decision-making process in a single activity provides the best and multifaceted picture of multinational managerial decisions. The paper contains information on the entrepreneurial activities of Czech enterprises. There appear to be some potential areas for further research work such as performance in the Czech market. The research could be focused on activity located in one region of the world with a good deal of variation regarding market size, growth rates, levels of development, openness, tax rates, and other features.

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Consumers' Adoption of Molecular Chinese Medicine (MCM) in Macau: A Value-based approach

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ABSTRACT

Molecular Chinese Medicine (MCM) is a recent method of manufacturing and dosing prescriptions that brings several advantages when compared with Traditional Chinese Medicine (TCM). For instance, MCM is highly dissoluble, tastes better than the usual decoction, and the active principles are easily absorbed. Also, the manufacturing process is subject to better quality control. In spite of these benefits, consumers' intentions remain unclear due to the novelty of this technique. Therefore, an assessment of individuals' perceptions is relevant since molecular medicine is redefining how scientists understand and treat diseases, and it can be considered a medical innovation. To fill the research gap, the Value-based Acceptance Model (VAM) (Kim et al., 2007) is used to assess the individuals' perceptions of value and intention to accept MCM. Data from a sample of Macau residents are analyzed by means of structural equation modeling (SmartPLS). The results support the use of the model in our context, thus extending the applicability of the VAM to other settings. Except for 'technicality', the constructs of 'usefulness', 'enjoyment', and 'perceived fee' had a significant impact on the overall 'perceived value' of MCM, and in turn on the behavioral intention to use the innovation. To facilitate the diffusion of this dosage method in the marketplace, it is suggested that communications strategies consider the proposed sources of value when promoting MCM. To further explain the adoption process, it is recommended to include additional factors that may affect consumers' intention to adopt the innovation and extend the analysis to the actual usage.

Keywords: Molecular Chinese Medicine (MCM), Traditional Chinese Medicine (TMC), Manufacturing Innovation, Technology Acceptance, Value-based Adoption Model (VAM).

1. INTRODUCTION

For thousands of years, Chinese people have regarded Traditional Chinese Medicine (TCM) as a medical science and cultural heritage with a significant role in improving people's health and quality of life. Classic Chinese medical manuscripts have also been included in the UNESCO Memory of the World, and TCM is recognized as an intangible heritage of mankind (Wang et al., 2021).

In Macau, not only does TCM play a vital role in the public health care system, but it is also one of the industries that have been designated to diversify the local economy and reduce the city's over-dependence on the gaming industry. Consequently, TCM has become increasingly important in Macau's economic sectors.

An ex-Portuguese colony, Macau is a special administrative region (SAR) that is part of China under the "one country two systems" principle. Situated at the mouth of the Pearl River delta, about 60 km southwest of Hong Kong, it includes a peninsula and two islands with a total population of 679,600 over an area of 32.9 km². Following the handover to China (1999) and the opening of casino concessions (2002), the territory positioned gaming as the leading economic activity (Lampo & Lee, 2011). The burst of the pandemic in 2020 and the enduring closure of the city to tourists, however, dramatically emphasized the necessity to diversify the economy and develop new industries. Already in 2009, the Chinese government established the Hengqin district (a special economic zone on Chinese territory that is jointly managed by the Guangdong and Macau administrations) to create conditions for a diversified economy. Among other objectives, the Hengqin district was set to develop Chinese medicine and health-related activities, as well as to become a world-class center for medicinal production (*Master Plan of the Development of the Guangdong-Macao Intensive Cooperation Zone in Hengqin*, 2021). In 2020, an analysis from the Statistics and Census Service (DSEC) valued the sector at approximately 320 million MOP (ca. USD 39.6 million), with a sharp increase of 34.5% over the past five years (*Analysis Report of Statistical Indicator System for Moderate Economic Diversification of Macao 2020*, 2020).

Despite its widespread acceptance, traditional medicine in China is characterized by the low use of technologies and the difficulty in implementing rigorous quality control (Wang et al., 2012; Qin et al., 2017). In recent years, however, Molecular Chinese Medicine (MCM) has been developed as a modern technique for extracting the active principles of traditional medicine (Wang et al., 2012) but the consumers' acceptance and use of these new products have yielded mixed results.

MCM brings several advantages when compared with traditional methods, first among all it's the extreme ease of use. However, it is well-known that new ideas are difficult to accept even when they have obvious advantages (Lampo, 2022), leading to the need for more research in the area. There are in fact few studies on this subject due to the relative novelty of the products. In particular, consumers' perceptions of MCM and their intention to accept related products are still unclear. Therefore, to fill the gap in the literature, this study aims to assess the individuals' perceptions of value and willingness to accept the consumption of molecular medicine. This is done by analyzing data from a sample of Macau residents that had previous experience with traditional Chinese

methods. In addition to further the understanding of acceptance theory, our findings are valuable for global practitioners and marketers wishing to develop more effective communication strategies or seize the opportunities to develop molecular products in a growing market. The next section summarizes the literature regarding traditional Chinese medicine and contextualizes MCM in light of the conceptual model used in our study.

2. LITERATURE REVIEW

Traditional Chinese Medicine (TCM) refers to the holistic approach to diagnosis, pathophysiology, and therapy that is based on over 2000 years of accumulated knowledge and practice (Wang et al., 2021), and it is an integral part of the Asian culture (Xu et al., 2013). TCM originally focused on herbal remedies but has over time evolved into a much broader discipline including also animal and mineral sources (Wang, 2015), as well as applications. For instance, traditional herbal extracts have also been used for the treatment of COVID-19 (Mirzaie et al., 2020).

TCM has several guiding principles that may be considered esoteric and difficult to validate using scientific methodologies (Jiang, 2005). For example, ‘Yin’ and ‘Yang’ are the underlying principles of Chinese philosophy and medicine (NIH, 2012) and represent the natural process of continual change created by opposing forces (Ehling, 2001). Good health is believed to come from a balance of Yin and Yang. TCM defines healthy individuals as having balance within themselves and with their natural environment (Fu et al., 2021). Consequently, an unhealthy condition represents a deviation from that balance and the role of TCM is to restore it.

There are several methods of using TCM. The most common method is time-consuming, and involves boiling a prescription of herbs which results in a generally thick infusion with an unpleasant taste (Li, 2011). Other methods consist of grinding the ingredients in order to obtain a powder or granules. The active ingredients, however, may not be completely released and the solubility of the product is poor (Au et al., 2009). There are also consumption methods based on tablets and syrups, which may lack quality control (Zhou, 2011). These medicines often contain additional chemicals or ingredients to improve the poor absorption of the active principles (Song et al., 2020).

It is argued that the complexity involved in TCM may act as a barrier to its diffusion, which in turn leads to a loss of international recognition (Wang et al., 2012) fueled by the absence of controlled clinical tests that, instead, distinguish western medicine (Fu et al., 2021). According to the U.S. National Institute of Health (NIH), studies of herbal products used in TCM have reported that some Chinese herbal products resulted contaminated with toxic compounds, heavy metals, pesticides, and microorganisms that may cause serious side effects (U.S. Department of Health and Human Services, 2022). As a result, efforts have been devoted to developing a traditional practice that is effective, safe, and quality-controlled.

In this direction, Molecular Chinese Medicine (MCM) is an innovative approach to preparing remedies using advanced and automatic production technologies that determine the molecular

structure of the medicines (Wang et al., 2012). It combines low-temperature extraction of the active principles with key technologies that enable the enrichment of the medical properties.

MCM is characterized by quality control and effectiveness (Feng, 2013) and from the consumers' perspective there is no need to prepare a decoction. Indeed, MCM products are highly soluble and can be mixed with hot or cold water (Lee, 2022). Other benefits include improved taste, easier absorption of active principles, and no residues of additives or pesticides.

Due to the novelty of the product, there is a need to better understand the extent to which individuals value and accept this new idea. According to Rogers (2003), an idea, practice, or object that is perceived as new by individuals is an *innovation*. Molecular Chinese Medicine can therefore be considered an innovation in the field of Chinese medicine due to its pioneering method of dosage. Using acceptance models to study the diffusion of technologies among society is in line with the characterization of MCM as innovation, and the theoretical foundations will be presented in the next session.

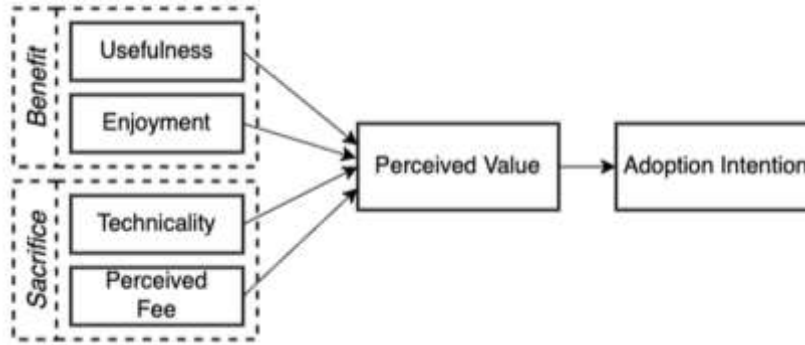
3. CONCEPTUAL MODEL

Over the years several theories and frameworks have emerged to explain the process by which new ideas are embraced at the individual level.

Lampo (2022) noted that among the most recent frameworks to investigate consumers' acceptance of innovations is the Value-based Adoption Model (VAM) (Kim et al., 2007). The VAM is grounded on a cost-benefit paradigm that reflects the decisions that individuals make when evaluating the positive and negative consequences as a result of their consumption choices. Hence, due to the consumer-oriented nature of Chinese medicine, the VAM model is deemed appropriate to study the key factors that influence consumers' perceptions of value. The use of the model also brings an opportunity to assess the performance of the framework in a different context.

The model suggests that the behavioral intention to adopt a new idea is primarily determined by its perceived value, which is an overall estimation of the product under consideration. Then, the consumers' perceptions of value are influenced by two broad categories of perceptions. The first category is “benefits”, which includes the constructs of *usefulness* and *enjoyment*, and relates to the perception of the positive consequences that are caused by adopting the innovation. The second category is “sacrifices”, which includes the constructs of *technicality* and *perceived fee*, and relates to the individuals' opinions regarding monetary and non-monetary costs associated with the new product. The following Figure 1 exemplifies the model, while five related hypotheses are summarized in Table 1.

Figure 1: Value-based Acceptance Model



Value-based Adoption Model based on Kim et al. (2007).

Table 1: Summary of Hypotheses

H1. Usefulness (USF) positively affects consumers' Perceived Value (VAL).
H2. Enjoyment (ENJ) positively affects consumers' Perceived Value (VAL).
H3. Low Technicality (TEC) positively affects consumers' Perceived Value (VAL).
H4. Low Perceived Fee (FEE) positively affects consumers' Perceived Value (VAL).
H5. Perceived Value (VAL) positively affects consumers' Adoption Intention (INT).

Note: Survey items adapted from Kim et al. (2007).

4. METHODOLOGY

The study adopted a descriptive approach (Kolb, 2022), a cross-sectional look at the influence of several variables on the behavioral intention to adopt Molecular Chinese Medicine. A self-administrated survey with established and validated scales adapted from Kim et al (2007) was the most suitable instrument for collecting data. Hence, the survey consisted of questions related to the constructs of perceived usefulness, enjoyment, technicality, fee, and perceived value. Each item was grouped according to its latent variable and assessed using a 5-point Likert scale with anchors ranging from 1 (strongly disagree) to 5 (strongly agree). Demographic variables were also included to record respondents' gender, age, and income.

To facilitate understanding, the survey was initially developed in English and then translated into traditional Chinese using the back-translation technique (Son, 2018). The target population consisted of a convenience sample of Macau residents who had previous experience with traditional Chinese medicine. Participants were recruited from the researchers' network, by using the snowball method (Flick, 2018) to gather insights in a short time. An online survey platform was used to administer the survey. Respondents contributed to the study voluntarily and without incentives. They were informed about the purpose of the research, and that their participation was anonymous and untraceable.

In our study, G*Power (Erdfelder et al., 1996) was used to calculate the required number of observations to achieve a satisfactory power level. Accordingly, taking into account multiple regressions (with settings: .15 effect size, .05 probability error, .80 power, and four constructs pointing to an independent variable), the software indicated 85 cases as the recommended sample size. In total, 100 valid and usable responses were collected, and the findings are illustrated in the following sections.

5. DISCUSSION OF THE RESULTS

SmartPLS v.3.3.9 was used to perform the data analysis. Before running the PLS algorithm, possible issues with the data (e.g., missing values, outliers, non-normality, and multicollinearity) were assessed and found not to be a source of concern. The next sessions report our findings.

5.1 Participants Details

The analysis showed that the respondents were equally divided into males (50%) and females (50%); they were mostly between 25 and 34 years of age (51%), employed (80%), and with an income of MOP 10,001 to 20,000 (USD 1,236 to 2,472) monthly (39%). A significant portion of respondents reported having used MCM at least once in the past (54%).

5.2 Evaluation of PLS-SEM Results

The initial evaluation showed that our model explained 33.4% ($R^2=0.334$) of adoption intention (INT). To interpret the findings correctly, Hair et al. (2022) suggested following a two-step procedure. Firstly, the researcher should determine the relationship between latent constructs and related indicators (i.e., the outer model), and then evaluate the relationships among variables in the structural model (i.e., inner model) (Hair et al., 2022). A number of tests were performed to determine whether the constructs measured the same concept and differed from the other variables in the model. As Table 2 and Table 3 will show, the tests executed on the outer model resulted within acceptable thresholds, thus leading to the conclusion that the outer measurements were successfully evaluated.

Table 2: Constructs Reliability and Validity

Construct	Items	Loadings	Cr’s Alpha	rho_A	C.R.	AVE
Adoption Intention (INT)	INT1	0.949	0.947	0.949	0.966	0.904
	INT2	0.966				
	INT3	0.937				
Enjoyment (ENJ)	ENJ1	0.787	0.902	0.904	0.932	0.775
	ENJ2	0.906				
	ENJ3	0.915				
	ENJ4	0.909				
	FEE1	0.896	0.894	0.906	0.933	0.823

Perceived Fee (FEE)	FEE2	0.926				
	FEE3	0.900				
Perceived Value (VAL)	VAL1	0.749				
	VAL2	0.860	0.860	0.868	0.906	0.706
	VAL3	0.875				
	VAL4	0.872				
Technicality (TEC)	TEC1	0.842				
	TEC2	0.863	0.754	0.761	0.860	0.672
	TEC3	0.750				
Usefulness (USF)	USF1	0.877				
	USF 2	0.747				
	USF 3	0.782	0.847	0.864	0.896	0.685
	USF 4	0.895				

Evaluation criteria: Loadings > 0.70; Cronbach’s Alpha (Cr’s Alpha) > 0.70; rho_A > 0.70; Composite Reliability (C.R) > 0.70; AVE > 0.50 (Hair et al., 2022).

Table 3: Fornell-Larcker Criterion Test

	INT	ENJ	FEE	VAL	TEC	USF
INT	0.951					
ENJ	0.640	0.881				
FEE	0.662	0.716	0.907			
VAL	0.578	0.752	0.745	0.841		
TEC	0.651	0.759	0.649	0.653	0.820	
USF	0.589	0.734	0.616	0.710	0.751	0.828

Evaluating criterion: AVE square root > construct correlations (Hair et al., 2022).

After the evaluation of the outer measurements, the analysis continued with the assessment of the structural, inner model. As mentioned, when considering the key construct INT, our model explained 33.4% of its variance ($R^2=0.334$). If we consider that only VAL is theorized to impact the target variable, this finding is satisfactory. The relationship $VAL \rightarrow INT$ was also strong ($\beta=0.578$) in the structural model. Then, when examining VAL as an endogenous construct, the analysis reported an R^2 of 0.685 (68.5%), which is particularly strong (Hair et al., 2022). The structural relationships $FEE \rightarrow VAL$ ($\beta=0.376$), $ENJ \rightarrow VAL$ ($\beta= 0.298$), and $USF \rightarrow VAL$ ($\beta= 0.279$) were also solid; additionally, the bootstrap routine substantiated the significance of our results. On the other hand, the relationship $TEC \rightarrow VAL$ ($\beta= -0.027$) was reported as not significant at the 5% level and not of the expected sign, a finding that may lead to the exclusion of the TEC construct in future assessments related to TCM and MCM.

Additionally, the Standardized Root Mean Square Residual (SRMR) was assessed as an indication of the approximate fit of the model. By convention, an SRMR value below 0.10 is considered a

good fit (Hair et al., 2022). In our case, the model reported a value below the threshold (SRMR = 0.082), and therefore model fit was successfully established. The PLS-SEM results are shown in Figure 3.

Figure 3. PLS-SEM results

5.3 Predictive Relevance of the Model

For the purposes of determining the predictive accuracy of the PLS paths, the Stone-Geisser Q^2 value was adopted. This metric is a sample reuse technique that in PLS-SEM builds on the blindfolded procedure. Typically, Q^2 values greater than zero for an endogenous construct indicate acceptable accuracy of the paths in the model. However, the smaller the difference between the predicted (Q^2) and the coefficient of determination (R^2), the more accurate is the model. In our case, it was reported a medium to large relevance (Hair et al. 2022) for the target constructs INT and VAL. Since the Q^2 values of these endogenous constructs were significantly greater than 0 and approximated the R^2 values, our model’s predictive relevance was successfully evaluated.

Table 4: Stone-Geisser’s Q^2 Value

Note: SmartPLS output

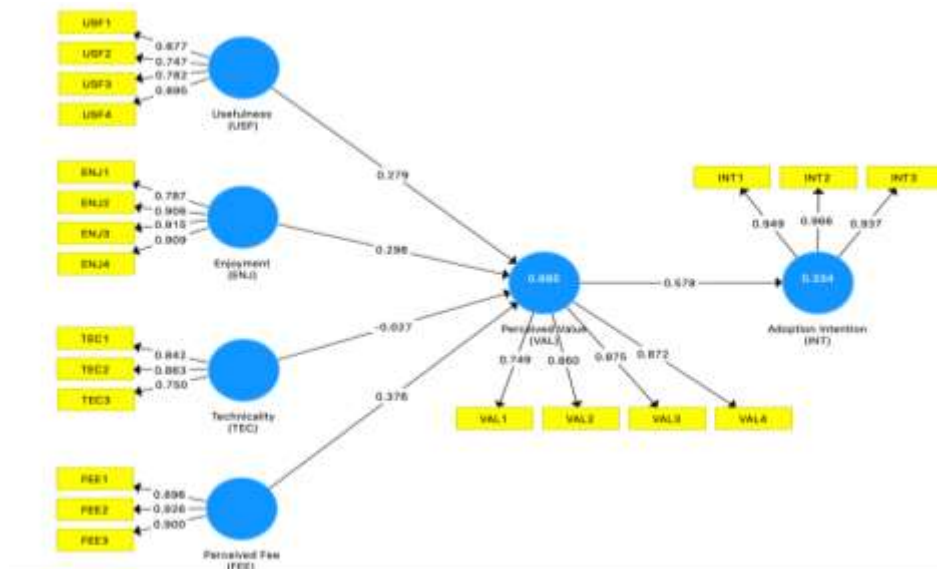
Composite	Q^2	R^2	Predictive Relevance
Adoption Intention (INT)	0.294	0.334	Medium to large
Perceived Value (VAL)	0.470	0.685	Medium to large

Evaluating Criteria: $Q^2 > 0$ (small) 0.25 (medium) 0.50 (large) (Hair et al., 2022).

5.4 Analysis of the Constructs

A closer look at the target variable Intention (INT) (M=3.79, SD=0.87), regarded as the consumers' willingness

to use the product, showed that despite the room for



improvement, respondents expressed their favorable intention towards adopting the medical innovation. The construct of the overall Perceived Value (VAL) (M=3.75, SD=0.92) was also positively assessed by the respondents. This construct is particularly relevant in our model, as VAL is the best predictor of behavioral intention, which can potentially translate into a greater willingness to adopt an innovation. When it comes to the analysis of the benefits, the results of Usefulness (USF) (M=4.08, SD=0.90) and Enjoyment (ENJ) (M=3.76, SD=0.97) showed that the advantages of the innovation were apparent and particularly the utilitarian perception of the product. In terms of sacrifice evaluation, the assessment of the constructs of Technicality (TEC) (M=4.11, SD=0.90) and Perceived Fee (FEE) (M=3.57, SD=0.90) showed that respondents on average did not identify significant negative effects of effort and price on the overall perceived value on the innovation. In particular, TEC scored the highest mean among the constructs in the model, indicating that the product was perceived as very easy to use. The following Table 5 summarizes the results.

Table 5: Mean and Standard Deviation of the Constructs

Construct	Mean	Standard Deviation
Adoption Intention (INT)	3.79	0.87
Perceived Value (VAL)	3.75	0.92
Usefulness (USF)	4.08	0.90
Enjoyment (ENJ)	3.76	0.97
Technicality (TEC)	4.11	0.90
Perceived Fee (FEE)	3.57	0.90

Source: Authors' own table.

5.5 Assessment of the Hypotheses

To evaluate our hypotheses, the standardized path coefficients among latent variables were examined. The construct of Usefulness (USF) ($\beta=0.279$) was positively and significantly correlated to the construct of Perceived Value (VAL), thus leading us to accept hypothesis H1 stating that Usefulness (USF) positively affects consumers' Perceived Value (VAL). Similarly, the factor of Enjoyment (ENJ)($\beta=0.298$) was positively and significantly correlated to the target variable VAL, resulting in the acceptance of hypothesis H2 stating that Enjoyment (ENJ) positively affects consumers' Perceived Value (VAL). On the other hand, the construct of Technicality (TEC) ($\beta= -0.027$) was not supported in our model and exhibited a tendency to correlate negatively with its target construct. This occurrence led us to reject hypothesis H3 stating that low Technicality (TEC) positively affects consumers' Perceived Value (VAL) and to defer a deeper analysis of this factor to subsequent studies. As expected, the construct of Perceived Fee (FEE)($\beta=0.376$) was positively and significantly correlated to the target variable VAL. Consequently, our hypothesis H4, stating that Low Perceived Fee (FEE) positively affects consumers' Perceived Value (VAL) was accepted. Lastly, the bootstrap routine reported a strong

and significant path for the relationship VAL→INT ($\beta= 0.578$), and the related hypothesis H5 stating that Perceived Value (VAL) positively affects consumers' Adoption Intention (INT) was accepted. The following table 6 summarized the assessment of the hypotheses.

Table 6. Assessment of hypotheses

Hypothesis	Path	Coefficient	t-Value	p-Value	Support
H1	USF →VAL	0.279	2.469	0.014	YES
H2	ENJ →VAL	0.298	2.996	0.003	YES
H3	TEC →VAL	-0.027	0.207	0.836	NO
H4	FEE →VAL	0.376	4.504	0.000	YES
H5	VAL →INT	0.578	6.655	0.000	YES

Hypotheses evaluation criteria: t-Value>1.96; p-Value<0.05.

6. CONCLUSION

This study adopted the Value-based Adoption Model (VAM)(Kim et al., 2007) to understand how individuals’ perceived benefits and sacrifices impact the overall value perception of Molecular Chinese Medicine (MCM), and in turn influence the behavioral intention to use the medicaments. The assessment is relevant because molecular medicine is a research area that is transforming the way scientists understand and treat diseases, and can be regarded as a medical innovation. To evaluate the acceptance of this method, a sample of 100 Macau residents with previous exposure to Traditional Chinese Medicine (TCM) was analyzed using structural equation modeling software (SmartPLS).

Even if the full-scale adoption of MCM might be a long way off, respondents expressed positive intentions toward the new method. More precisely, the study showed that our model explained 33.4% of the variance in the target behavioral intention construct. Although other predictors may be needed to increase the explanatory power, this is a satisfactory result considering that the VAM theorizes only one construct (i.e., perceived value) as the sole predictor of intention.

When considering the target construct of perceived value (VAL) of Molecular Chinese Medicine, the analysis reported a variance of 68.5% mostly explained by the three predictors of usefulness (USF), Enjoyment (ENJ), and Perceived Fee (FEE). Although satisfactory, this perception of value is not fully translated into the behavioral intention to use the innovation, as only those respondents that had the greater effect of value derived from the three key predictors, exhibited a greater intention to adopt the innovation. In our study, perceived fee resulted as the strongest predictor of value which suggests the possible price sensitivity of the potential types of customers, followed by enjoyment of use and usefulness of the method. When it comes to the technicality related to molecular medicines, the analysis did not substantiate both the sign and the significance of this predictor. This finding is somehow different from Kim et al. (2007); a possible explanation is that respondents do not perceive any value or barrier in the use of this method, and as a matter of fact the overall technical aspect is negligible. As a result of our research four of the five proposed

hypotheses were accepted. The analysis of the Stone-Geisser (Q^2) values also reported a medium-to-large predictive accuracy of the paths in the model.

In addition to the above results, we also achieved important theoretical contributions. To the authors' knowledge, this is the first study that has assessed the performance of the Value-based Acceptance Model (Kim et al., 2007) in TCM and MCM, fields that are far from the 3G technology context where the model originated. As reported, the construct of technicality did not perform well in our model. Consequently, our research may suggest that this predictor may need to be dropped from similar studies or fields that don't require specific technical skills from users. Our analysis brings relevant managerial contributions as well. When encouraging consumers to adopt Molecular Chinese Medicine, marketers should consider the different sources of value in developing their communications strategies. It is reasonable to assume that the overall perceptions of value are likely to strengthen over time as new products are launched in the marketplace. Therefore, practitioners should take advantage of the key sources of perceived value (i.e., perceived fee, usefulness, and enjoyment) to support the adoption process, and researchers should work to determine the additional factors that may affect consumers' intentions to adopt the innovation.

7. LIMITATIONS AND FUTURE RESEARCH

Our findings provide insights into the perception of value and intention to use Molecular Chinese Medicine, but some limitations should be pointed out. Firstly, the research design opted for convenience sampling assuming that respondents were similar to the overall target population, which may not be the case. The results may also differ in places with different socio-cultural characteristics. Additionally, the study focused on the behavioral intention at a single point in time and did not investigate how the predictors influence the actual consumption of the product. More importantly, the construct of Technicality did not perform as expected in our context, which may require further investigation. A large portion of the variance in use intention could not be explained by the model, and more constructs may be needed to develop the VAM (Kim et al., 2007) and better capture the characteristics of the consumers. Therefore, it is suggested that future research should consider relying on a larger sample, using probability techniques, including additional predictors, and, possibly adopting a longitudinal approach to assess how behavioral intention extends to the actual use of MCM. In this way, future studies may be able to deepen the knowledge of the factors responsible for the value-based acceptance and use of Molecular Chinese Medicine.

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DXB259

Mission statement components as a fundament of quality teaching and learning in business schools.

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ABSTRACT

Higher education institutions in contemporary times are grappling with the dynamic nature of their business environment. Thus dynamism is brought about more particularly by the environmental desire for quality graduates. Exceptional graduates are a factor in quality teaching and learning. The question of quality teaching and learning stems from an appropriate and clear understanding of a mission statement. The paper will address the relationship between the components of a mission statement and quality teaching and learning. The paper will use the survey method and the unit of analysis will be faculty members, students and management of several schools of business. Analysis of the data collected thereof will be done to test the hypothesis on the stated relationship. It is expected that the findings will be of benefit to schools of business seeking to connect their mission statement components leading to quality in both teaching and learning.

Keywords: Mission statement components, Mission outcomes, Strategy, Action plan, Teaching, Learning, Quality, Education.

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Impact of foreign exchange exposure on Foreign Direct Investments in public-private partnership infrastructure projects: the Brazilian case

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ABSTRACT

This study analyzes how exchange rate risk influences FDI applied in PPP infrastructure projects in a developing country. This is exploratory research divided into three essential points: (1) a literature review about FDI, PPP, and exchange risks in infrastructure projects in developing countries, (2) interviews with decision makers who had practical experience with the framework of the researched phenom in the Brazilian context, and (3) analysis of the collected material and information crossing. The findings showed five crucial points related to exchange rate risk in FDI applied in infrastructure projects using PPP in the Brazilian context: 1) financial tools used against exchange rate risks; 2) business environment to perform investments; 3) role of the public and private sector; 4) the motivations and risks considered by investors; and 5) particularities of developing countries and the Brazilian case. This study presents how the exchange rate risks impact the decisions of the economic actors involved in FDI operations applied in PPP infrastructure projects in Brazilian context; and the differences between protection mechanisms used by the public (bidders and government representatives) and private (investors and financiers) sectors against the exchange rate risks in financing operations for PPP infrastructure projects in developing countries.

Keywords: Cambial Risk, FDI, Infrastructure, Public-Private Partnership.

INTRODUCTION

With the globalization expansion decade after decade, it is possible to verify a proportional increase in the transaction volume of foreign direct investment (FDI) between countries, mainly the investments made in developing countries such as Brazil, Argentina, China, India, Mexico, South Africa and so on (Carminati & Fernandes, 2013; Fernandez-Mendez et al., 2019). However, this brings up discussions about the effects, risks and consequences these investments will cause for the financing and the recipient economies (Carminati & Fernandes, 2013; Salomão Neto, 2019).

It is essential to point out that this FDI increase in developing countries occurred for decades in a scenario of almost complete freedom, without any concern with risks and policies to encourage projects to meet the priority economic areas (Carminati & Fernandes, 2013; Salomão Neto, 2019; Santos Filho & Ogasavara, 2022). Moreover, once the foreign capital met the formal registration and tax issues, there were no exchange restrictions to transfer capital, profits, dividends, expenses related to the investment and so on (Carminati & Fernandes, 2013; Santos Filho & Ogasavara, 2022).

Prior, studies have shown positive and negative effects of doing FDI in host countries on portfolio investment flows, exchange rates and stock prices (Globerman & Shapiro, 2002; Ramamurti & Doh, 2004; Chen et al., 2004; Carminati & Fernandes, 2013). In this scenario, the infrastructure sector stands out because it represents a significant and large piece of FDI performed in developing countries (Ramamurti & Doh, 2004; Sawant, 2010). Several studies have shown that the FDI in infrastructure projects, when carried out in a well-planned way, can increase the competitiveness of the host country (Campos Neto, 2014). These investments, whether public or private, have the potential to make the projects more profitable, attractive and efficient (Mirzadeh & Birgisson, 2016). In addition, these FDI may cause a positive impact in the host country both through a direct way (i.e., expansion of supply capacity or production flow) and through an indirect way (i.e., improvement in the total productivity of factors in a given economic segment) (Irwin, 2003; Campos Neto, 2014).

When companies make these investments to turn infrastructure projects viable on foreign countries, the balance of project execution power depends directly and indirectly on the relationship between the financing private and public sectors represented by the host government (Irwin, 2003; Tei & Ferrari, 2018). Front this context, governments tend to adopt public-private partnerships (PPP) to enable the execution of these projects economically and efficiently, maintaining the budget planning and the project governance for themselves (Trebilcock & Rosenstock, 2015; Lember et al., 2019). Therefore, by considering the long-term contractual relationship between the government and the private operator established by the PPP, it is necessary to consider the potential costs, risks and impacts in these transactions both for the foreign private operator and for the host government (Martimort & Straub, 2016; Vecchi & Casalini, 2018; Santos Filho & Ogasavara, 2022).

Based on the above discussion, this study aims to answer the following research question: "How does exchange rate risk influence FDI applied in PPP infrastructure projects in a developing

country?". To answer it, we conducted an exploratory study by collecting primary data followed by document analysis to cross-reference information in the Brazilian context. More specifically, we intend to investigate how the exchange rate risks impact the economic actors' decisions in FDI operations applied in a developing country's PPP projects. Also, we want to check the differences between protection mechanisms used by the public (bidders and government representatives) and private (investors and financiers) sectors against the exchange rate risks in financing operations for PPP infrastructure projects in a developing country.

LITERATURE REVIEW

FDI in infrastructure projects

Conceptually, FDI consists of a package of assets and intermediate products (i.e., capital and technology), accessing other markets or managing and producing techniques provided by a foreign investor to a host country aiming to enable a particular project. The FDI flows characterize by differential return rates determined by the interaction and relationship between the foreign investor and the receptor market (Suh & Khan, 2003; Blanc-Brude, 2014; Ayturk et al., 2016).

Dunning (1993) reported that in infrastructure projects and other modes, the company made investments outside the country of origin (i.e., FDI in the host market). Still, the investor maintains control of the transferred resources. In this operation, the main objective is to enable and execute the infrastructure projects previously agreed upon with the investor and the receiving market. This definition is consistent with the International Monetary Fund (IMF) back in the 1970s. It stated that FDI is an investment performed by a foreign investor aiming to build a lasting partnership with a host government where both actors gain from the transaction, whether currency capital itself, political influence, structural gains or financial resources.

Developing economies have increasingly approached foreign investors, especially from the private sector, to increase the access to financial and technological resources and enable the execution of their infrastructure projects (Allen & Gale, 1991; Doh & Ramamurti, 2003; Ramamurti & Doh, 2004). Interestingly, these economies have started to catch up, both in terms of FDI inflow and outflow, during the past decade, and they crossed the 50% mark of total worldwide FDI inflow for the first time in 2012 (United Nations Conference on Trade and Development [UNCTAD], 2013). A higher inward FDI performance index indicates that developing countries like Brazil, China, and India are receiving more FDI than their relative economic size (Kaur et al., 2016), where FDI plays a crucial role in gross capital formation by addressing the gap between domestic savings and investment. Moreover, FDI can potentially enhance the competitiveness and productivity of domestic firms through the spread of technology and can create new employment opportunities (NCAER, 2009; Kaur et al., 2016; Owusu-Manu et al., 2019). As a result, the governments and these foreign investors establish consortia (i.e., PPP) to act in strategic areas and large infrastructure projects that require high amounts to make their financing viable such as ports, airports, powerplants, railways, highways, telecommunications structures, and so on (Allen & Gale, 1991; Doh & Ramamurti, 2003; Ramamurti & Doh, 2004; Owusu-Manu et al., 2019).

According to Khadaroo and Seetanah (2008) few studies have actually acknowledged the important role of infrastructure in stimulating FDI, citing Loree and Guisinger (1995), Richaud et al. (1999), Morrisset (2000), Sekkat and Veganzones-Varoudakis (2004) and Quazi (2005) as fundamental to understand this role. However, these authors argued that solid institutional infrastructure is a necessary condition for foreign investors to operate successfully because multinationals are in fact profit-seeking entities that seek to minimize the costs of doing business and poor infrastructure or unavailable public inputs on the other hand increase costs. In addition, the greater the supply and distribution links between foreign affiliates and domestic firms, the stronger the domestic firms' capabilities to enhance competitiveness (Owusu-Manu et al., 2019).

PPP in infrastructure projects

The literature does not establish a unitary or universal definition of PPP. However, some definitions or concepts began to emerge based on the models adopted by different countries and their experiences. In this way, it defines PPP as a partnership between the public sector (i.e., host government) and the private sector (i.e., companies/investors) to promote investments and the execution of projects or services in different strategical areas (e.g., transport, energy, telecommunications, urban mobility, fuels and so on) (Cui et al., 2018; Narbaev et al., 2020; Lima et al., 2021; Almeile et al., 2022). In addition, it aims for an efficient allocation of resources, the reduction of risks and, consequently, the execution of the project (Tang et al., 2010; Trebilcock & Rosenstock, 2015; Akomea-Frimpong et al., 2020; Almeile et al., 2022; Osei-Kyei et al., 2022).

The PPP structure can present different configurations, models, and combinations of responsibilities between the public and private sectors (Leviäkangas et al., 2016; Hussain & Siemiatycki, 2018; Akomea-Frimpong et al., 2020; Lima et al., 2021). For example, it is expected the public sector be responsible for political and governance risks. In contrast, the private sector is in charge of the execution, financing and operationalization, taking on the maintenance risks along with the execution of the project. However, as stated above, this balancing of risks may vary according to the demands raised by each side, mainly from requirements and guarantees imposed by the private sector to the public sector (Borges & Neves, 2005; Trebilcock & Rosenstock, 2015; Cui et al., 2018).

PPP tends to present attractive models in countries with a deficit on infrastructure and with a critical situation in public accounts (Wang & Zhao, 2014; Emek, 2015; Reeves, 2015), generally in developing countries (Hussain & Siemiatycki, 2018; Almeile et al., 2022). For instance, PPPs in Brazil follow Federal Law 11,079/2004, which established general rules for bidding and contracting at the National and Subnational (i.e., State and Cities) levels. As a result, the Brazilian infrastructure sector has used the PPP, mainly due to its great demand for projects to meet the basic and strategic needs of the population. In addition, it applies PPPs for large investment projects in a long-term perspective making their execution feasible without compromising the public accounts (Petru, 2014; Martimort & Straub, 2016; Hussain & Siemiatycki, 2018). However, Brazil is only one of developing countries that use the PPP as a resource to solve their infrastructure problems.

Several developing countries worldwide need to construct new transportation systems, roads, and utilities or modernize their old infrastructure to adapt to the changing climate, reduce carbon emissions, and support the growing population (Babatunde & Perera, 2017; Almeile et al., 2022; Jiang et al., 2022). Therefore, it is essential to have a close relationship between the public and the private sectors using PPPs, considering the more significant efficiency of the private sector in financing and carrying out these infrastructure projects (Borges & Neves, 2005; Trebilcock & Rosenstock, 2015). For instance, some scholars showed massive funding gaps among African countries. These nations need to fill out the existing gap by creating a solid financial structure to receive foreign private investors in the infrastructure sector (Famakin et al., 2012; Babatunde & Perera, 2017). Many countries showed a similar scenario in Asia (Faisal & Ridwan, 2012; Hai et al., 2022) and Latin America (Fuentes, 2017; Neto et al., 2018; Lopez & Lee, 2019).

Exchange risks in infrastructure projects performed in developing countries

Infrastructure contracts in developing countries usually have considerable risks divided into the actors involved in the financing operations. However, because devaluations and large depreciations in these countries often occur in the context of macroeconomic and financial upheaval, such risk allocations cannot always be made to work (Gray & Irwin, 2003). Moreover, exchange rate variations tends to affect markets in other ways, as well as there are different ways to assess the risks involved in these operations and make the best decisions and contracts against these risks (Allen & Gale, 1991; Martins et al., 2011).

Indeed, infrastructure projects are affected by many of these risks, primarily due to their relation with foreign investment practices to enable the execution of the planned works (Campos Neto, 2014). For one way, the governments of the countries receiving the resources can absorb these risks in many alternatives, including incorporating risk transfer into agreements, passing entry cost inflation or exchange rate depreciation to prices or third parties through counter-guarantees (Doh & Ramamurti, 2003; Irwin, 2003; Dong et al., 2014). But, at the same time, governments are also a significant source of risk for investors, particularly the risk of non-compliance with specific legal, regulatory or economic commitments, being a common scenario observed in developing countries (Irwin, 2003; Globerman & Shapiro, 2003; Marquis & Raynard, 2015; Donaubaauer et al., 2016). Changes in government compound this risk, as well as the obsolescence of the agreement signed with previous management, political actions by interest groups such as unions, non-governmental organizations, political groups and allies, and so on (Globerman & Shapiro, 2003; Donaubaauer et al., 2016).

Salomão Neto (2019) points out that an alternative to reduce these risks may be fusing techniques that allow at least the coverage of obligations with financing. The same author reported the exchange rate regulation as an example of these techniques. He notes that it authorizes the opening of accounts in foreign currency in the receiving country by the investors that develop infrastructure projects, allowing protection against exchange devaluation when the project generates revenue, which can be immediately converted to foreign currency. This proposal is similar to the Brazilian Federal Law 14,286/2021, known as the new legal framework for the foreign exchange market.

When approved, it made it possible to carry out contracts in dollars between the exporter (receiving/domestic/host market, in this case the Brazilian) and the infrastructure provider (foreign investor).

On the other hand, despite providing more excellent stability and predictability in the cash flows of projects at the national level in developing countries, the literature also reported that these mechanisms could have negative counterparts for instance the possibility of not offering protection for future revenue. Once more, it shows the need for agents who help at least to mitigate these risks, especially in the public sector. Furthermore, this is commonly observed in almost all developing countries (Gray & Irwin, 2003; Tang et al., 2007; Wibowo & Mohamed, 2010; Ameyaw & Chan, 2015).

METHODS AND DATA

Research methodology

This work is an exploratory research, based on a qualitative framework used to answer the research question proposed. As qualitative research based on semi-structure interviews, there are three essential points to be followed: (1) literature review, (2) selecting interviewees with practical experience with the researched phenomenon and (3) content analysis of collected data and examples to understand the phenomenon (Palmer & Bolderston, 2006; Hancock et al., 2007). Additionally, the methodological path had an interpretivist epistemological framework that aims to explore the functionality of organizational themes (Burrell & Morgan, 2017). Based on the investigations of Bianchi (2017), this work presents the methodological path within an epistemological framework, counting on the relevance of the research, type, methodological approach, research method, collection technique and analysis technique.

Data collection

Between July and September of 2022, 6 professionals from 6 different institutions were interviewed in order to map the main perceptions and reflections towards the proposed research theme. The main selection criterion used to choose the work fields and, consequently, the professionals was the established by Cohen (2013), considering their relevance in the Brazilian context or their relevance in the FDI, PPP, financing and exchange risks in infrastructure projects performed in developing countries, focusing in the Brazilian case. The interviewees are identified by E1, E2, E3, E4, E5 and E6 and their respective information's are presented in Table 1. In order to preserve the compliance of companies and interviewees, the names of interviewees and their respective companies are not mentioned in this study.

Table 1. Interviewees information's.

Interviewee	Job position	Company description	Interview duration (minutes: seconds)
E1	Manager of international business	Government (public bank)	24:04

E2	Head of international debt capital markets (International DCM)	Private Investment bank	29:01
E3	Head and membership in the board of heads	Government (public company)	32:15
E4	Membership in the board of heads	Government (regulatory agency)	36:45
E5	Manager of financial operations	Private company of urban mobility and infrastructure management	28:24
E6	Head of large corporate	Private wholesale bank	23:33
Total			2:54:02

The main selection criterion was established according to the scope proposed in this study, where 3 actors were from public sector and 3 actors were from the private sector related to FDI in PPP infrastructure projects in developing countries. The data collection instrument was a research script to semi-structured interviews with 7 questions subdivided into concepts of FDI, PPP and exchange risks on infrastructure projects in Brazilian context. The subdivision of the script aimed to facilitate the categorizing of the answers and analysis of the collected content (Vergne & Vry, 2014).

In addition to interviews, this study used secondary data extracted from business reports, journals and magazines found on the internet and official websites of organizations (Vartanian, 2010). The survey of secondary data made it possible to create a database with the main evidence that confirmed the reports of the interviewees and intersect to enrich the results explored at the time of analysis. The documents analyzed in this work are presented in the table below and are nominated to be presented during the content analysis section.

Data analysis

The data analysis method selected for this research was Content Analysis. This is a method that comprises the systematization and inference of the data collected considering the speeches and reports of the interviewees and is based on the researchers' ability to organize these information's. The research also can use a software for support and thematic organization of the material collected. This method provides thematic understanding from direct communication between the researcher and the researched. The main objective of content analysis is to understand how communications relate to each other and what information can be extracted, in a way that helps the researcher to broaden its perception of the material collected (Mozzato & Grzybovski, 2011). In this study, this method was performed in the follow stages: (1) pre-analysis, (2) material exploration and (3) data processing, inference and interpretation according to the methodology described by Bardin (1977). The material exploration took place with the help of the Atlas TI platform, a software that assists in the organization and categorization of data and qualitative

information in academic research. Through it, the material was categorized and, consequently, provided a better view of the main concepts addressed during the interviews.

ANALYSIS AND DISCUSSION OF RESULTS

From the interviews, we observed some interesting evidences in the interviewees' statements related to the themes proposed. All the interviewed pointed out the following elements as the main influence factors on FDI in infrastructure projects using PPP: 1) financial tools used against exchange rate risks in infrastructure projects that use PPP; 2) business environment to perform FDI in infrastructure projects; 3) role of the public and private sector in PPP for infrastructure projects; 4) the motivations and risks considered by investors; and 5) particularities between developing countries receiving FDI to finance their infrastructure projects using PPP.

Financial tools

The first element, 1) financial tools used against exchange rate risks in infrastructure projects using PPP, is justly related to the tools applied to enable the projects proposed inside the environment found in each business environment, especially thinking in strategies to attract foreign investors to invest in developing countries (Allayannis et al., 2001; Gray & Irwin, 2003; Tang et al., 2007; Wibowo & Mohamed, 2010; Ameyaw & Chan, 2015). Despite the generalist aspect, the interviewees showed us that, inside this study topic, each actor has their well-defined role and their own ways of dealing with these risks. E1, acting in the division of international business of a public bank, reported the proximity of public banks and private companies as a crucial point to identify potential risks and mitigate their dangerous effects.

There are segments in the bank to provide specific services to public and private actors separately. (...) Thinking about tools to protect against exchange risk, the bank offers hedge products related to exchange hedge, exchange protections or exchange rate swaps as a structure where the customer normally exchanges a debt in foreign currency for a debt in real (R\$) thinking about the reality of Brazil, but it works in the exchange of a debt in the index of any currency, for example, dollars for euros. (E1)

This mention of exchange rate swaps is an interesting point, where E1, E3 and E6 emphasizes this practice as a good tool in theory, while at same time affirm be more complicated to apply it in practice, especially in terms greater than 5 years in developing countries like Brazil due to the devalued currency that makes the cost of hedging very high. This difficulty in obtaining long-term financing for infrastructure projects through low-risk foreign investments was also cited by E2 and E3, where the interviewees reported that, in addition to all these risks that are inherent to the project, the investors do not want to bring yet another risk, which is the exchange rate risk. According to Allayannis et al. (2001) and Ogawa et al. (2018), the exchange rate risk management

is an integral part in every firm's decision about foreign currency exposure. Front this, currency risk hedging strategies entail eliminating or reducing this risk, and require understanding of both the ways that the exchange rate risk could affect the operations of economic agents and techniques to deal with the consequent risk implications (Barton et al., 2002).

E3 and E6 emphasize that one of the strategies used is to make multiple short-term contracts to enable long-term concessions (25 to 30 years). At same time, E5 comments on investor uncertainties to invest in long-term contracts within the infrastructure sector in Brazil.

Foreign investors look at Brazil and think: "I want a 30-year project. 20 is a very short time, 5 even less, less than that doesn't exist". Then, we can say that 30 years is a normal period in Brazil. The investor looks at it and says: "great, three decades, what happens in the country in three decades? What were the contracts that started and ended clean, that is, without any problem of justice and without any problem of the contract having ended and being a liability to be resolved, either on the one hand or on the other". And, in reality, this happens very little. Front this, I think that this influences a lot the decision of the investor. (E5)

At the same time, E1, E2 and E6 points out the historical importance of public banks for the financing of infrastructure projects in Brazil. This is a very interesting point in view of this approach allowed Brazil to create a very particular business environment to try to make its infrastructure projects viable. E2 also affirm that this *modus operandi* is not specific to Brazil, but to Latin America as a whole, mentioning countries such as Peru, Panama and Paraguay. The same interviewee also comments that these countries do not have large internal savings and, obviously, become very dependent on attracting foreign capital to make their investments due to the devaluation of their currency. However, a marked difference between these countries in relation to Brazil is that they allow concessionaires to have their revenues linked to the dollar, a modality that is still not very common in Brazil. According to Jorion (1997), Papaionnou (2006) and Ogawa et al. (2018), the growth of the importance of risk management in Brazil and other Latin America countries lies in the volatility of financial variables, among them, we can highlight the exchange rate, interest rate, capital market, and commodity prices. In a same way, factors such as the end of fixed exchange rates, interest rate swings, financial crises, and sudden changes in commodity prices contribute to the increase in market unpredictability (Jorion, 1997).

Brazilian public agents must understand that the investor actually has the resources to invest and is willing to invest, but it is not willing to take the exchange risk. Effectively, he is willing to take the risk of the project and leave its structure linked to the dollar or the euro (...) For this, you have two paths: a) allow your public concessions carrying out activities in Brazil to have tariffs, revenues, linked to the dollar; b) use the development banks as a guarantee agent to allow the exchange of currencies, in this case the swap. (E2)

According to E3, if there are tools such as Project Finance, which is the great advantage, naturally there is more chances to eliminate the uncertainties of the business, occurring a logic of return. This statement is according to the literature that point these tools, especially Project Finance, as financial structures and models used in large-form projects (Sawant, 2010) in order to provide an attractive and controlled business environment, free from various influences in corporate finance (Kumar et al., 2021) and, consequently, reducing the risks to its execution (Rajan Annamalai & Jain, 2013; Byoun & Xu, 2014). However, E5 reported some problems related to the use of these tools.

Tools like project finance are cool "on paper", to write and plan. (...) But, the Brazilian scenario in recent years tends to did not provide a favorable perspective to the investor because, in the end, the investor needs the guarantees of the partner within the PPP, the public sector in this case (...) The lack of these guarantees ends up making the success of the tool unfeasible. (...) I do the project finance abroad and the project sustains the debt and usually still balances some equity, and you don't see that in Brazil today. (E5)

Business environment

During the interviews, E3, E4 and E6 reported that some infrastructure sectors are specialized to attracting and regulating investments to finance projects, especially large projects, have some difficulties in finding efficient tools to combat exchange rate risk and, at the same time, respect the particularities that are found in each project depending on the Brazilian region where it intends to be developed or is being executed. Front this, the second element, 2) business environment to perform FDI in infrastructure projects, is related to the possible guarantees to be provided and the stability of the country's business environment to attract potential investors (Allayannis et al., 2001; Gençay & Selçuk, 2004; Longin, 2005; Ogawa et al., 2018). Front this, E2 pointed out the importance of tools such as Project Finance to enable the financing of large infrastructure projects. At the same time, E2 also states that Brazil lags behind other countries in terms of how it uses these tools and in its own physical infrastructure.

When we look to the Brazilian infrastructure and compare it with the infrastructure of other countries, we see how much Brazil, unfortunately, is still very lacking in its infrastructure sector. This fact may be related to the way of local infrastructure sector use its financial tools where, for example, Project Finance projects outside the Brazil are raised, have their funding, essentially through capital markets, different to Brazilian approach using public banks. (E2)

Considering the scenario presented by Brazil and the actions promoted by the local government to attract foreign investment, E1, E3 and E4 pointed out the country's history in previous years with a more favorable financial scenario and the country's legislative bureaucracy as an important obstacle. E5 also pointed also reported that the risk x return ratio is the first point that a foreign investor considers to invest in a developing country such as Brazil. According to Batista (1996),

Carvalho and Sicsú (2004) and Ogawa et al. (2018), since when the Brazilian real has become the official currency of Brazil, there is a constant work from Brazilian public sector to maintain a stability of this currency and, consequently, make the local market solid and attractive for the financial sector

Brazil had more favorable moments and scenarios for several investments in recent years. Thinking about investment for project finance, specifically using in infrastructure projects, in addition to the unstable political and economic situation in Brazil, we have regulations that put a lot of pressure on foreign investors who come here to work on this kind of project. (...) The public sector should think about its institutional environment, a legal environment that provides security for investors to operate and perhaps some kind of guarantee of income, of return on investment due to the very high risk assumed when investing in a long-term project. (E1)

According to E3, E4 and E5, investors at all moment observe the changes that occur in the main markets with potential for investment in infrastructure projects, including Brazil. The same also comments that, even if they demonstrate very discreetly during conversations and negotiation rounds, investors are always attentive to the movements that the Brazilian public sector has made to facilitate or hinder the attraction of resources for the financing of these projects. According to E5 and E6, the history of projects in similar contexts, the developments that this contract presented along this lifespan and the tools used against the risks are also considered by the foreign investor when its thinks about investing in Brazil.

For infrastructure projects, whether execution or concessions, feasibility only takes place if the public sector is directly interested and mobilized to effectively open markets, auctions and attract investors. (...) In Brazil, the Ministry of Infrastructure and the Ministry of Mines and Energy have a historic role in making these projects viable, whether through auctions, publicity and dissemination, through roadshows in which the project is presented to potential investors the opportunity pipeline and so on (...). The public sector is directly responsible for creating this favorable business environment. (E6)

Role of public sector and private sectors

The third element, 3) role of the public and private sector in PPP for infrastructure projects, is related the role of each constituent element of the PPP, public and private actors in the case, their particularities (specific characteristics of each institution) and the type of risk in question (Tang et al., 2010; Trebilcock & Rosenstock, 2015; Leviäkangas et al., 2016; Hussain & Siemiatycki, 2018). This is a point very commented for all interviewees. For E1, E3 and E4, it is essential a balance in duties and rights between the public and private sectors so that the project can be economically viable and risks are reduced.

The direct participation of the public sector through a public company or the own government trying to participate as a capitalist in large infrastructure projects are currently unfeasible practices (...). This has reduced over time and today, basically, public agents tend to work with private investments, which are at the forefront of this type of business. (...) Today, private investment, whether internal or external, is the model to make these projects viable and follow through. (E3)

E1, E2, E4 and E6 mentioned throughout their interviews that one of the fundamental roles that the government should play is to create legal tools that try to improve its institutional environment and make it more favorable to investors. According to E4, even though they are not the most efficient or ideal mechanisms compared to other countries or success cases, the Brazilian legislation and legal frameworks that have been published in recent years have presented more positives than negatives points. Front this, E2 commented on the measures that have been tried and are being taken by the government, such as the new exchange rate framework, to improve this institutional environment.

I see these legal instruments very positively; they are really paths in the right direction for the development of the Brazilian infrastructure sector. (...) We need to follow the world standard, a standard that is already adopted by our neighbors such as Paraguay, Chile, Peru and Colombia, which already have within their legal frameworks the possibility of you making public concessions in dollar, for example. (...) Several sectors already have a legal provision within this new exchange law, where large projects can be negotiated with exporting companies in foreign currency, so you remove from the exporter's view the risk of having a very sudden variation in the exchange rate. (E2)

However, E4 presented a very important caveat about these laws and legal frameworks.

Just creating new laws and legal frameworks is not enough. (...) To succeed in executing its infrastructure projects, the public sector also needs to structure itself, modernize its arrangements, make long-term projections (...). The Brazilian government is completely used to program contracts, to agreements with a letter of intent. (...) If you observe, there is no goal, no indicator, no financial commitment, no more robust mechanisms aimed at the most economic and financial part, redemption rituals, organization related to the end of the contract, it is all very opened (...). Front this, the Brazilian public sector also needs to structure itself and incorporate these practices into its daily life, bringing the best possible practices that are in use around the world for modeling and structuring its contracts. (E4)

According to E5, every regulatory framework or legal tool helps. The difficult occur in convince the investor without having a solid juridical framework. E6 also affirmed that changes in regulatory frameworks have the potential to impact investors' perception of risk, as long as they

have very well-defined, clear and long-term rules that bring security to investors when making their investments. According to Carvalho and Sicsú (2004) and Akhtekhane and Mohammadi (2012), the high volatility of a business environment with low control of the public sector causes an increase in uncertainties, reducing the predictability of financial costs. In this way, it can be inferred that the public sector is the main agent caused of uncertainties at the same time that it can eliminate these uncertainties using legal mechanisms.

It is important to mention that E3 and E5 defined the role of the public sector in attracting foreign investment for infrastructure projects as a regulatory framework and public policy maker. According to E4, the role of the public sector is to provide transparency in the rules to be followed within the PPP, to provide some kind of subsidy and reliability so that the investor feels security in depositing its capital in that project. E5 identify differences between the three environments where the public sector presents itself in Brazil, and that each one relates differently to the investment market.

I see the federal regulatory division as very well structured, with trained technicians, with relatively independent agencies, a technically structured process. (...) In the state division, you have some public agencies that are well regarded at the beginning of the concession process, and that drops as the years go by. (...) The state government interferes too much, often unnecessarily, creating uncertainties. (...) The municipal division is the most difficult of all. (...) The level of government interference at the municipal division, even because of the more intimate nature of the projects, is greater than at the state division, which also generates more uncertainty for the investor (...) (E5)

E5 also commented that public sector as regulator must balance three fronts: the granting authority, which is the one who gives that area to be explored; the concessionaire, the investor who is there to provide a service and has to be charged and, in exchange for that, receive a fair and correct remuneration; and the population, the user, the society. In a same way, E4 representing a vision from the public sector reinforced this regulatory role of the public sector and its importance to provide a reliable and safe environment to attract private investors, pointed out that there is naturally a demand from the private sector to collaborate and create partnerships with the public sector, especially when updated legal frameworks and quality public policies with little bureaucracy emerge. In contrast, E5 presenting a vision of the private sector pointed out that despite the fact that there is, in fact, an almost constant demand from the private sector to invest in infrastructure projects in emerging countries like Brazil, the risks derived from the unstable local market and political scenario, mainly the exchange rate risk, always leave the fearful investor at the time of choosing to invest or not in that project.

Motivations and risks to investors

The forth element, 4) the motivations and risks considered by investors, is related to contracts, operation risks and the tools used to attract investments to enable infrastructure projects execution

(Allayannis & Ofek, 2001; Martins et al., 2011; Dong et al., 2014; Hull, 2016). Considering the contracts, the roles that each actor must perform within their premises and the risks involved in the infrastructure projects they regulate, E2, E3 and E4 point out that the resolution of investment unevenness issues and exposure to exchange risk over the course of the time passes from the macroeconomic monetary regulation of the Central Bank, and how it will manage the exchange administration in relation to these oscillations that exist in the local economy, passing through the sectorial regulation, and as the interpreter of the contract, the regulatory agency, for example, will evaluate within that risk matrix what this investment responsibility backed by foreign currency represents, whether or not this is in the binary area, whether this would be a trivial payment risk or not.

Normally, the contracts have been open, presenting very little regulation depending on the area of activity. In this scenario, the public sector, within its attributions, is responsible for making this regulation using its technical staff. (...) This is a problem because regulation is a key point to attract capital or investment. (...) Investors assess the stability of the investment environment based on the organization of the contracts that are carried out in it. (E4)

In this sense, E2, E4 and E5 pointed out the insecurity regarding the guarantees related to tariff revisions, the readjustments that must be carried out throughout the contract, are the main risk pointed out by investors when carrying out investments related to infrastructure projects. In other words, should be there must be clarity in the rules and the role of the public sector in providing guarantees for the performance of the contract will be fulfilled, in addition to norms to cover all major possible scenarios (entries, adjustments, indemnities, changes, exits, indemnities and other pertinent points).

E4 and E5 also reported it is clear that, with the investment made and the guarantees defined, exchange rate variation and risk become the main risks or reasons for insecurity on the part of investors, mainly because they come from markets with strong currency and inject their resources into markets with weaker currency and a scenario surrounded by uncertainties, something quite common in Latin America. In fact, Gençay and Selçuk (2004) still argue that developing economies are much more subject to change in the short term, and therefore, the probability distributions of their returns and estimated parameters are also likely to change with some frequency. In addition, developing markets are more subject to financial swings.

According to E6, the current foreign investor, such as the Chinese for example, has a more long-term view, something over 15 years. Then, it is an investor who is more susceptible to being complacent with political risks, economic risks, presenting a greater horizon of visibility, understanding that in the long term this environment tends to become less volatile.

European, American or Chinese investors expect faster and safe returns, and the economic and political stability of a country with a view to reducing risks is a major factor in their decision to invest. (...) In a recent meeting with some bankers, they gave me two different views on investment

opportunities in the Brazilian market: a more pessimistic, mainly related to political instability and a sudden recession in the global market; and another, more optimistic, related to the expectation of government moves to create guarantees and a safer environment for investments. (E6)

All interviewees reported that Brazil is a country with good opportunities for the infrastructure sector, and great capacity to attract foreign investment to make projects in this sector viable, especially from European, American and Chinese investors. This fact is mainly attributed to deficiencies in this sector that need robust projects that are able to meet the needs of the population and the different sectors of the economy, that is, there is a lot of infrastructure space for growth and, consequently, for profitable investments.

Brazil has a good business environment for very profitable infrastructure projects that need a safe regulatory environment and an appropriate return within the investor's expectations. (E6)

Particularities of developing countries and the Brazilian case

Finally, the fifth element 5) particularities between developing countries receiving FDI to finance their infrastructure projects using PPP is related to the particularities of the business environment in Brazil and the differences between the Brazilian business environment and other developing countries receiving foreign investment to finance their infrastructure projects. According to E2 and E6, in a macroeconomic context, there are not many differences between the situations found in Brazil and other Latin American countries, for example, with regard to attracting foreign investments, the risks involved in these operations, the mechanisms used to combat these risks and the investors' uncertainties about these markets.

Observing at Latin America, the business environment in Brazil is not so different from other countries (...). However, there are countries that have a proportional infrastructure and/or political stability better than the Brazilian one, such as Chile and Uruguay, in addition to others that have a favorable geographic location, such as Mexico, which is close to the USA and Canada. (...) These factors favor the choice by these countries to finance their projects to the detriment of Brazil. (E6)

In this sense, E2 and E5, E6 reported that another point that needs adjustments is the fact that the Brazilian model for financing infrastructure projects is based on successful cases around the world, leaving aside the studies and construction of models designed specifically for the Brazilian environment. The Brazilian model at many times seems to be another copy of something that has worked around the world. E5 points out that studying a successful model, such as the Peruvian or the Chilean, is something very valid and really necessary to understand how these countries prospered in their infrastructure projects. But these models must be studied and understood for the construction of their own models, and not just copied without understanding the particularities of

the environment in question. This is something very important to be analyzed considering that within Brazil there are variations in scenarios, with environments more favorable to certain models than others, as described by E5.

On the other hand, something very important that was reported by E4 is the need for stability and homogeneity in the rules for the construction of contracts related to investments in infrastructure projects. According to E3 and E4, the developed countries, such as the USA, UK, Germany, France, Spain or Portugal, are well advanced in this regard, presenting models that suit all realities found in their national territory. It is a fact that Brazil has particularities due to its continental geographic dimension, but this kind of standardized regulation is necessary to provide a more stable environment within its domestic market.

To understand how investment and concession models work in developed countries, it is necessary to understand the dynamics between the public and private sectors in these countries. (...) It is necessary to understand how regulation is carried out by the public sector and how the private sector operates, what are its rights and duties. (...) In Europe, the dynamics of investments between countries is easier, where is common the private sector from one country operate infrastructure projects or a concession in a neighboring country. (...) Of course, the fact that almost all countries operate in the same currency, and this is a strong currency, facilitates this investment dynamic. (E3)

E1 reinforces this reasoning in its comment.

The regulatory environment in developed countries is even more consolidated by the experience these countries have with long-term infrastructure projects. Thinking about the financial market, these are countries with strong currencies, with convertible currencies. Then, the exchange rate risk is mitigated. It is much easier when you are investing and have the return in the same currency, or in currencies whose parity is closer, when you are trading two strong currencies. This makes it a lot easier when we talk about developed countries, and they offer solutions with much longer timeframes. (E1)

Kittiakarasakun and Tse (2011) argue that financial models used by developed markets, for example the G7, are often not applicable to emerging markets. This could occur because, often, developing countries impose restrictions on the free flow of capital. The difference in markets is reflected in the tails of probability distributions of returns, which especially for emerging markets, tend to be non-normal. In fact, Longin (2005) argues that distribution tails are different in emerging markets.

CONCLUSIONS

From the results obtained in this study, we identify the five crucial points related to exchange rate risk in FDI applied in infrastructure projects using PPP in the Brazilian context: 1) financial tools

used against exchange rate risks; 2) business environment to perform investments; 3) role of the public and private sector; 4) the motivations and risks considered by investors; and 5) particularities of developing countries and the Brazilian case. These points expressed the market imperfections of the infrastructure sector and the practical effects observed to FDI in projects using PPP in Brazil.

Front this, it was observed that financial tools such as Project Finance or Swap are used to compensate the instabilities found in the business environment, whether against currency, operational or legal risks; or to increase the duration of the contract and, consequently, the investment. In addition, it became evident that there must be a very clarity on the role of the public sector as a provider and regulatory agent of a favorable and solid business environment for receiving foreign private investments, as well as there is a need for these public institutions to present guarantees and legal mechanisms that protect the contracts to be signed. Investors at all moment observe the changes that occur in the main markets with potential for investment in infrastructure projects. Moreover, all interviewees reported that Brazil is a country with good opportunities for the infrastructure sector, and great capacity to attract foreign investment to make projects in this sector viable, especially from European, American and Chinese investors. The Brazilian infrastructure sector may seek opportunities depending on their opening, taking aggressive moves whenever they are available; and providing a safe and attractive environment for investors.

Considering the above and suggesting points for future studies, we observed the need to investigate models or tools created only thinking in the Brazilian business environment that could to attract these investors. These should be created especially for the Brazilian business environment and presenting rules and a general approach that allow their implementation in all Brazilian regions. In this sense, it is recommended to avoid simple and direct copies of successful models applied in other country without the certain of its efficiency in the local context such as commented by the interviewees.

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DXB282

The impact of SARS-COV-2. A Macro Review of the Challenges in Economic Sectors of United Arab Emirates

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ABSTRACT

COVID 19 has led to widespread fear and apprehension internationally, which greatly affected the global economy. Social distancing, self-isolation, travel bans flight cancellations, negated hotel bookings, and the cancellation of local as well as international events have led to a reduction in the workforce in almost all economic sectors- thus adversely affecting trade, manufacturing, tourism and other industries. Despite the global challenge, the United Arab Emirates has been witnessed to handle the situation diligently and at faster pace through integration of technologies and regulatory interventions. This study reviews the socioeconomic implications of Covid-19 pandemic in the United Arab Emirates that lead to escalate the position in terms of safety and Human Development Index (HDI).

DXB251

The effect of congruity between ‘the CEO mindset and the company’s profile regarding responsible business strategy’ and SDGs on challenging business decisions: choosing the right acquirer

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Considering the case study of Ben & Jerry’s ice cream acquisition by Unilever, we developed a theoretical proposition that explains the choice of the acquirer to sell a company on the basis of the idealistic mindset of Ben & Jerry’s CEOs.

Background: the dilemma of Ben & Jerry’s CEOs

Ben & Jerry’s ice cream company at the time of its acquisition (in the year 2000) was well known for their responsible business strategy and concern for the environment. After Ben & Jerry’s sale was announced, two main contenders were identified for prospective acquisition – venture-capital group ‘Meadowbrook Lane Capital’ and Unilever. The former group of buyers (i.e., Meadowbrook Lane Capital) was associated with environmentally responsible business strategies, whereas the latter (i.e., Unilever) was less so. The bid from the former group of buyers was much lower (~\$38 per share) than Unilever’s (~\$49 per share). This presented a dilemma for Ben & Jerry’s CEOs – Ben Cohen and Jerry Greenfield. Should business responsibility profile of those companies be considered for the sale or not? The end of the story, as you may know is that Ben & Jerry’s company was sold to Unilever. Was this a rational decision considering the responsible business objectives of Ben & Jerry’s company?

We use concepts such as ‘congruity’, ‘control’ and the conflict between ‘idealism’ and ‘pragmatism’ in order to reflect on the congruity between the CEO mindset and the firm’s responsible business strategies with sustainable development goals of the United Nations (SDGs). ‘Congruity’ in this study refers to the extent in which one object (e.g., CEO mindset, firm’s responsible business strategies) matches the SDGs. ‘Control’ represents the control of the CEO over the SME’s responsible business strategy, especially in the context of achieving high congruity

with SDGs. We base our proposition on ‘ethics theory of utility’ that in brief justifies actions or strategies based on how outcomes are beneficial to society. This highlights the importance of CSR or altruistic activities of SMEs. Therefore, the question arises to what extent do SMEs’ CEOs sustain their altruistic orientations when faced with business challenges?

The current economic and political situation reinforced by the Covid-19 pandemic has created several challenges to businesses, especially to SMEs (Chatwani et al., 2022; Seetharaman, 2020). A number of research problems have been identified (Verma & Gustafsson, 2020) and SMEs, as a result of limited resources, are fighting to stay afloat and break-even (De Mattos & Salciuviene, 2019). Moreover, millions of employees worldwide have faced unemployment (Mayhew & Anand, 2020; Coibion et al., 2020). Food banks are running out of supplies due to less donations (the Grocer, 2021) which could be linked to less altruistic orientations of donors. Although governments’ actions attempt to minimize this problem, NGOs and CSR activities of companies can contribute to speed up the recovery of SMEs (Khan, 2020).

We define altruism as a motivation representing ‘an idealistic behaviour of manager-entrepreneurs [that turns] them into benefactors of environmental and social causes’ (Salciuviene & De Mattos, 2022). In other words, altruism defines the willingness of individuals to engage in objectives to the benefit of others (Piliavin & Charng, 1990; Wuthnow, 1993). Altruism has been researched previously (Furnham et al., 2014; Kanungo & Conger, 1993; Piliavin & Charng, 1990; Wuthnow, 1993). However, research on altruism of business leaders when facing business challenges is scarce. In this paper, we attempt to understand the mindsets of Ben & Jerry’s CEOs, which reflect a dilemma which was introduced at the start of the paper that can be encountered in the mindset of organizations’ leaders.

Possible decisions of the CEOs before the acquisition

The first most obvious reason to select Unilever as the acquirer may be associated with the higher financial reward – Unilever paid more and the CEO responsible business’ ideals were ‘thrown out of the window’.

However, an alternative explanation, although more complex, might realistically clarify the mindset of Ben & Jerry’s CEOs to choose this outcome. Let’s consider two points in time: (1) one year before the acquisition and (2) around the time of the acquisition. At point (1), Ben & Jerry’s CEOs had full control of operations and therefore, they could follow a strategy of high congruity between the responsible business objectives of their company and SDGs. This reflects their personal profile that are characterised by high congruity between their business responsibility vision and the intended outcomes of SDGs. We can assume that their profile or mindset did not change at point (2). Why would they then sell their company to another company with lower business responsibility standards?

We propose that in order to keep consistency with their mindset, Ben & Jerry's CEOs pragmatically need to be in control of resources. Drawing on the 'ethics theory of utility', we posit that the more resources they control, the more likely their responsible business vision will be accomplished, justifying their actions. Thus, rather than choosing an option where responsible business is likely to continue (but cannot be controlled), they have chosen an option that made more resources available to invest in other business activities after the acquisition allowing them to follow their SDG-led vision.

The research further introduces future research directions with regard to the CEO altruistic orientation, specifically, the following research questions could be explored in future research: What is the influence of altruistic orientations of CEOs or senior management teams on business decisions? How does a crisis situation (e.g., pandemic) affect the CEO's altruistic orientation in the context of SMEs with a high responsible business profile? What personal strategies will CEOs follow in order to achieve their responsible business objectives congruent with SDGs?

Digital Technology & HR Issues

DXB202

Strategic Leadership and Cultural Differences in Communication: A Multi-Country Study

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Abstract: For expatriate employees to adapt to different cultures, it is important to understand cultural differences and how these differences affect leadership processes in different countries. Communication plays a significant role in the implementation of leadership in different cultures. The purpose of this paper was to investigate the effects of culture and interactions with various leadership and communication attributes. Our study was based on three countries: Finland, Indonesia and United States. The sample consisted of 162 respondents from the three countries. Transformational leadership and coaching were measured using a survey instrument with six dimensions. Communication was measured with six dimensions that included emotional intelligence, clear dialog, insecure, impatient, dominating and avoiding. SPSS Statistics 28.0 and Hayes PROCESS macro were used to test the moderating effect of communication style on the relationship between culture and transformational leadership. Results indicated several statistically significant results between countries in both communication and leadership styles. Our findings indicate that cultural factors impact leadership and communication.

Keywords: Culture; Communication; Transformational Leadership; Finland; Indonesia; USA.

1.0 Introduction

Interactions with people of different cultures is common in the working place, neighborhoods, social settings and classrooms. Within organizations, such interactions are the norm of conducting business effectively. Many international organizational teams have diverse membership from different national cultures, often spanning different continents. On a broader level, intercultural communication permeates all aspects of human life, leading Hall (1977) to conclude that culture is communication and communication is culture. Communication activates culture as a continuous process (Dai, 2010). Once cultural habits, principles, values, and attitudes are formed, they are communicated to each member of the culture (Dai and Chen, 2015). The heart of the culture is language, religion, values, traditions, and customs (Porter & Nohria, 2018). In line with previous cultural studies, Triandis' definition of culture emphasizes that it is a set of human-made objective and subjective elements which has been become common pattern during the history via communication with the people in the same areas (Triandis, 1994). When people from different cultures try to communicate, difficulties may arise due to idiosyncratic values, beliefs, communication styles, expectations, norms, and behaviors. These difficulties can be effectively managed by individuals with communication competence. Communication competence is the ability to identify and choose among available communicative behaviors to successfully accomplish goals during an interaction within a certain context or situation (Dai, 2010). According to Kedrowicz (2016), interculturality consists of the interactions between cultures that are flowing and evolving, which provide connections, relationships, negotiations and growth among culturally different individuals. Interculturality penetrates cultural boundaries, increases cultural awareness, and facilitates the proper development of intercultural relations. Interculturality requires proper, insightful and competent communication (Dai 2010; 2015). Communication is complex and involves controlling, informing, persuading and relating to others. In leadership positions the higher you go the more the complexity and nuances of communicating. Followers increasingly pay more attention to verbal and nonverbal cues, especially in modern organizations that are characterized by constant communication. The leaders' work is communicating and the higher you go the more there is communication with in-groups and out-groups (Porter & Nohria, 2018). Leaders serve as key channels for communicating values and strategic changes and motivating followers within the organization. For example, Schnurr (2008) notes that, "Communication not only constitutes one of the crucial aspects of leadership performance, but leadership can productively be viewed as a communication process" (p. 1), and some say leadership equates to communication (De Vries, Bakker-Pieper, & Oostenveld, 2010).

This study focuses on the communication and transformational leadership and coaching leadership style in different cultures in order to explore cultural differences in organizational behavior. The knowhow is helpful for expatriates and especially in leadership and management positions to modify their leadership behavior in culturally effective. The research questions are as follows:

- Are there country differences in case of the transformational leadership and coaching leadership style?

- Are there mediating effects of the communication style, culture and leadership?

2.0 Background Theories

2.1 Transformational leadership and coaching leadership style

Transformational leaders have been found to be more effective communicators than other types of leaders (Berson & Avolio, 2004) and the theory of transformational leadership has been proven to be effective for over 40 years of research. The foundation of transformational leadership theory was laid out by Burns (1978), and over the years the topic has been advanced through thousands of studies (see meta-analyses by Crede et al., 2019; Dumrum et al., 2013; Harms and Crede, 2010). Recent studies have focused on impact of transformational leadership on organizational performance (Noruzy et al., 2013; Wang et al., 2011), leadership performance (Boer et al. 2016; Deinert et al. 2015), followers' satisfaction (Cummings et al. 2010; 1990), optimism and engagement (Tims et al., 2011), and performance (Bass and Riggio 2006; Ng 2016). Transformational leaders have huge positive impact on organizations in all these measurements.

Quite close to transformational leadership is coaching leadership style, and leaders can simultaneously use both transformational and coaching to complement each other. Coaching style means that leaders are not providing answers but helping followers to think independently, when asking the questions about the current situations. The term is usually connected to sports, but it is becoming popular in organizations as well.

2.2 Hofstede's cultural dimensions

The description of Hofstede's culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 1994) implies that cultural norms are manifested in individuals' values, norms, cognitions, motivations, beliefs and behaviors.

2.11 Power Distance

Power Distance (PDI) expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. Societies exhibiting a large degree of PDI accept a hierarchical order, control and obedience to those with power. Everybody has a place that needs no further justification. Individuals from high power distance cultures accept power as part of society. Superiors consider their subordinates to be different from themselves and vice versa. People in those countries believe that power and authority are facts of life (Hofstede, 1994).

2.1.2 Individualism

Individualism (IDV) refers to societies that prefer a social framework in which individuals are expected to take care of themselves and their immediate families. On the other hand, collectivist societies take care of the larger extended family in exchange for loyalty. Collectivism here is not to be understood in a political sense. It does not refer to the power of the state over the individual but to the power of the group. For these societies, instead of “I”, there is “we” group (our family, our school, our society, our ingroup), that is distinct from other people in society who belong to “they” groups, of which there are many. The ingroup offers protection and identity. In return lifelong loyalty is given to one’s ingroup, and breaking that loyalty is one the worst things a person can do. In individualist societies everyone is expected to look after herself or himself and his or her immediate family. People from individualist countries place great importance on individuality and self-reliance. Evidently, also work should be organized in such a way that employee’s self-interest and the employer’s interest coincide (Hofstede, 1994).

2.1.3 Uncertainty avoidance

Uncertainty avoidance (UA) dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. High UA implies that the society exhibits strong beliefs and norms of behavior and is uncomfortable with new ideas and the unknown situations. Human societies have developed different ways to mitigate anxiety. For example, technology offers tools that help to avoid uncertainties caused by nature. Religion is a way for accepting the uncertainties, including perceived supernatural forces that one cannot defend oneself against. Laws and rules try to prevent uncertainties in the behavior of other people [9]. In uncertainty avoiding countries there are many formal and informal laws, internal rules and regulations controlling the rights and duties and work processes. Sometimes the need for laws and rules lead to dysfunctional behaviors, for example the waiter cannot change the meal in the menu, because it cannot be changed in the ordering system. Countries with weaker UA have more relaxed attitude towards problems and issues can be solved without formal laws (Hofstede, 1994).

2.1.4 Masculinity

Masculinity (MAS) represents a preference for achievement, heroism, assertiveness, and material rewards for success. MAS has also been associated with traditional male values such as compensation, recognition and career advancement [10]. The masculinity (and femininity) index measures how society views assertiveness, competitiveness, and toughness versus modesty, tenderness, and compassion. The two terms are derived from what nations consider important in life: masculine attributes include financial success, recognition, advancement, and challenge. On the other hand, feminine attributes include cooperation, nurturing and employment security. MAS index values were computed separately for women and men for each country. The results show that in the most feminine or tender countries, both women and men expressed similar tender and nurturing values. In more masculine countries, both women and men became more masculine. However, men became more masculine than women on higher values of the dimension [9]. Masculine countries try to resolve conflicts by fighting, while feminine countries by

compromise and negotiation. The masculine manager is assertive, decisive and aggressive, maybe macho. Manager makes the decision alone without involving group discussions in the process. In feminine cultures the manager is less visible, intuitive rather than decisive, and used to seeking consensus (Hofstede, 1994).

2.1.5 Long-Term Orientation

This dimension was not originally found in Hofstede's IBM results, but after being discovered by Michael Bond and his research group in 1987, it has joined in Hofstede's studies as well [9]. A difference in a country's orientation can affect business. A short-term orientation is concerned with the bottom line, control systems, respecting tradition, preserving face, and fulfilling social obligations. The East Asian respondents emphasized face-saving and tradition-respecting consciously. Excessive respect for tradition hinders innovation. Western countries scored relatively higher on short-term orientation because they are used to look for rapid economic growth as well as consume rather than save money (Hofstede, 1994).

2.1.6 Indulgence

The sixth and the last dimension is called indulgence versus restraint. It measures happiness and life satisfaction, aspects that correlated quite well together, although exceptions were found. The dimension was found by Misho Minkov after reanalyzing the results of the World Values Survey. Indulgence measures about subjective feeling of wellbeing (i.e., happiness), feeling of life control, and importance of leisure. Opposite is restraint which measures pessimism, cynicism, being careful about trusting people (Hofstede, 2010).

Global Leadership and Organizational Behavior Effectiveness Research Program (GLOBE Studies)

The GLOBE Studies were designed to address some of the weaknesses and criticisms of Hofstede's research. In the GLOBE studies, societies were clustered into ten different groups to provide a "convenient way of summarizing intercultural similarities as well as intercultural differences" Related to this study USA belongs to Anglo, Indonesia to Southern Asia, Finland to Nordic Europe and Russia to Eastern Europe groups (Gupta and Hanges, 2004). The Globe study has the following dimensions (House et al., 2004). *Performance orientation* measures encouraging and rewarding of members of accomplishments. *Uncertainty avoidance* describes how much members want to avoid uncertainty by relying on for example social norms, rituals. *Humane orientation* is the degree to which an organization or society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others. *Institutional collectivism* is the degree to which organizations encourage of collective distribution of material and behavior. *In-Group collectivism* is the degree to which individuals in organizations or societies engage and support team-oriented behaviors. *Assertiveness* is the degree to which an organization or society are assertive, confrontational, and aggressive in social relationships.

Gender egalitarianism is the degree to which an organization or a society minimizes gender role differences while promoting gender equality. *Future orientation* is encouragement in future-oriented behaviors such as planning. *Power distance* describes thinking that members expect and agree that power should be concentrated at higher levels.

The researchers found that there was wide variation in the values and practices relevant to the nine core dimensions across the 10 cultural groupings. However, some universally endorsed leadership qualities appeared in the GLOBE study including being trustworthy, just, and honest; having foresight and planning; being positive, dynamic, encouraging, motivating, and building confidence; and being communicative, informed, a coordinator, and a team integrator (House et al., 2004). Cultural dimensions that are most likely to show affect communication are power distance (PD), UA, humane orientation (HO), and assertiveness (AS).

Recent studies have found interrelationships between national culture and communication (Leonardi and Rodriguez-Lluesma, 2013; Martin and Nakayama, 2013; Park et al., 2012; Smith, 2011). A study by Woestenkuehler et al. (2015) indicated significant influences of PD, HO, UA, and AS on various communication variables. Our study advances the knowledge by identifying similarities and differences in communication style between four national cultures that are culturally, linguistically and spatially isolated from each other.

3.0 Relevant Countries and Cultural Differences

Finland has 5,5 million population. GDP per capita is 43 500 USD. Largest sector of the economy is service sector, followed by the manufacturing and refining. Finnish people are sometimes regarded as slow in interaction and more closed than Anglo-Saxon cultures. Finns are also regarded as certain, serious and reliable (Chhokar, Brodbeck and House, 2007). According to Hofstede's findings (see Fig. 1) Finland's national culture is characterized by high individualism, UA, and indulgence. There is low PD and MAS and moderate long-term orientation. GLOBE studies found that Finland had high values of performance orientation, future orientation and HO. The society reflected low AS and PD (GLOBE, 2020).

Indonesia's population is 268 million; it is the 4th largest country in the world after China, India and United States. GDP per capita is 4 450 USD. Indonesia has the largest economy in Southeast Asia and is considered one of the most important emerging market economies in the world (Statista, 2020). Indonesia is a collectivist country with a strong hierarchy in all relationships. This means that for example leaders have a paternalistic status, and they are expected to put group interest ahead of individual interest. Indonesian employees do not consider working for the organization, but they are working for the leader (Iranwanto, 2009). According to Hofstede's findings (Fig. 1), Indonesia had high PD and long-term orientation. It had moderately high MAS and UA. According to GLOBE studies, Indonesia reflected relatively high values of AS, future orientation, and collectivism. There was relatively low

gender egalitarianism (GLOBE Project, 2020).

USA has a population of 330 million, and its GDP per capita is 65 100 USD. Largest sector of the economy is the service sector. Culturally contingent values in the US include the right to pursue liberty, personal wealth, and a longingness for something greater than individual narrow interests. This combination of values can also be detected in the characteristics of successful leaders that stress an entrepreneurial mindset, passion, ambition, and courage, as well as a sense of communal responsibility (Chokkar and Brodbeck, 2007). USA reflected high values of individualism, MAS and indulgence of Hofstede’s values (Fig. 1). There was relatively low PD and long-term orientation. GLOBE studies indicated high performance orientation, HO and in-group collectivism. On the other hand, there was low PD (GLOBE Project, 2020).

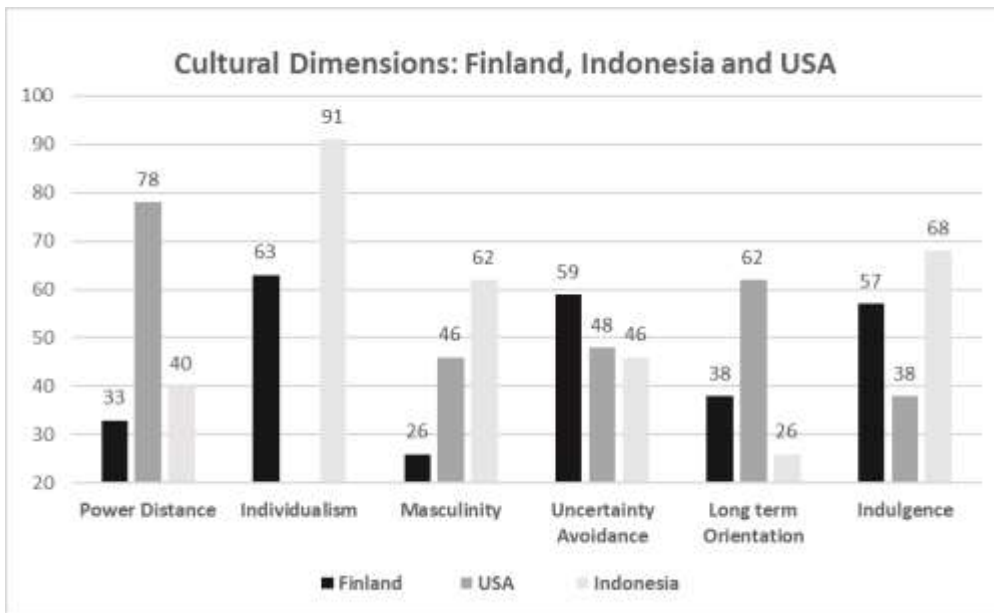


Fig. 1: Hofstede’s Cultural Dimensions: Finland, Indonesia and USA

Source: <https://www.hofstede-insights.com/fi/product/compare-countries/>

4.0 Methodology

4.1 Sample and Procedure

To test the proposed model, questionnaire survey method using structured questions was adopted. Two questionnaires were used to collect the data. The dataset consists of 162 valid cases. USA and Indonesia are represented by 61 respondents (38 percent) each. The remaining 40 respondents (25 percent) are from Finland. Most of the respondents (55 percent) were male. Biographic data were not included in the survey.

4.2 Measurement

Transformational leadership. Transformational leadership was measured with seven items; an example item being, “I give a lot of appreciation and support to team members.” Responses were given on a 7-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). The Cronbach’s alpha was .890. *Coaching leadership.* A 7-item scale was used as a measure of coaching leadership. The respondents rated their leadership style on a 7-point scale ranging from “strongly disagree” (1) to “strongly agree” (7). *Communication style.* The communication style questionnaire with established scales had been previously used in leadership studies (Brandt Uusi-Kakkuri, 2016). It measures communication with 34 items with Likert scale of 1-7. Communication styles included were emotional intelligence, clear dialog, insecure, impatient, dominating and avoiding. Our measurement constructs showed high reliability, as the Cronbach’s alphas for each scale exceeded the generally accepted level of 0.7.

Control Variables We used gender as control variable. For the statistical analysis gender was dummy-coded.

4.3 Analysis Strategy

The analysis of the data was conducted using SPSS Statistics 28.0. Hierarchical regression analysis was used to investigate the hypothesized model. Hayes (2013) PROCESS macro version 4.1 (model 4) was utilized to test the mediating effect of communication style on the relationship between nationality and 1) transformational leadership and 2) coaching leadership. We extracted 5.000 bootstrap samples to obtain the 95 percent bias-corrected confidence intervals (CI) and to examine the statistical significance of the proposed model.

5.0 Results

5.1 Descriptive Statistics

Table 1 shows the means, standard deviations, and correlations between the study variables. The relationship between communication style and transformational leadership was positive and statistically significant ($r = .658$) with regards emotional intelligence, but not the other dimensions. In addition, the relationships between communication style and coaching leadership was positive and statistically significant ($r = .677$) with respect to emotional intelligence. Table 2 shows the mean values for transformational leadership and coaching by country. The comparison of mean values shows that the highest levels of transformational leadership are found among Finnish leaders and the lowest among Indonesian leaders. The USA is between the two countries.

5.2 Testing the model

Table 3 shows the results of the hierarchical regression analysis predicting transformational and coaching leadership. The results indicate that emotionally intelligent (Model 3: $\beta = .829$, $p < 0.001$) and dominant (Model 3: $\beta = .169$, $p < 0.001$) communication styles have positive relationships with

coaching leadership. In addition, Finnish leaders exercise more coaching leadership than leaders in other countries (Model 3: $\beta = -.170$, $p < 0.01$). The results also depict that that emotionally intelligent communication style has a positive relationship with transformational leadership (Model 3: $\beta = .744$, $p < 0.001$) after controlling for gender. Nationality has no statistically significant relationship with transformational leadership.

The results of the mediation analysis are presented in Tables 4 and 5. The results depicted in Table 4 show that emotionally intelligent communication style mediates the relationship between nationality and coaching leadership when comparing Finland and USA (effect = -0.3071, boot SE = 0,1274, 95 percent bootstrap CI = [-0.5495, -0.0559]), and, Finland and Indonesia (effect = -0.9356, boot SE = 0,2009, 95 percent bootstrap CI = [-1.3565, -0.5651]). Similarly, dominant communication style mediates the relationship between nationality and coaching leadership when comparing Finland and USA (effect = 0.0997, boot SE = 0,0508, 95 percent bootstrap CI = [0.0182, 0.2132]), and Finland and Indonesia (effect = 0.1053, boot SE = 0,0531, 95 percent bootstrap CI = [0.0203, 0.2246]).

With regards to transformational leadership, findings shown in table 5 indicate that emotionally intelligent communication style mediates the relationship between nationality and transformational leadership when comparing Finland and USA (effect = -0.2468, boot SE = 0,1155, 95 percent bootstrap CI = [-0.4703, -0.0142]), and Finland and Indonesia (effect = -0.8089, boot SE = 0,1826, 95 percent bootstrap CI = [-1.1817, -0.4674]).

6.0 Conclusion

According to these results the culture impacts communication style and communication style is closely related to transformational leadership style. Culture has an impact on two communication styles, emotionally intelligent and dominant style. Both communication styles are correlated with coaching leadership style. Emotionally intelligent communication style is connected to transformational and coaching leadership style.

Finnish leaders use more coaching leadership style than Indonesia and USA. According to Hofstede's dimensions, Finnish people are far lower in power distance, masculinity and have higher uncertainty avoidance than Indonesian and US nationals. These qualities tend to enhance discussions and mutual agreements, and usually Finnish people dislike hierarchy and dominant leadership. Also coaching style is becoming very common style for leaders in Finland.

Our results indicate the relevance of specific communication styles with and cultures. Our results also reinforce widely acknowledged relevance of emotional intelligence in aspects of effective communication and leadership.

The global society is characterized by significant cross-cultural communication, real time flow of information and global travel. These interactions have led cross-cultural scholars to hypothesize cultural convergence on certain cultural attributes, and a less central role of culture on communication styles. Our findings indicate that communication style is a distinct and idiosyncratic cultural artifact that continues to represent our cultural identities. The results are somewhat surprising for younger generations whose lives have been shaped by globalization, homogeneous external environments, education and information. Thus, despite globalization, national culture continues to influence managerial behaviors.

Our results have managerial and practical implications for organizations. Despite the march towards globalization, national culture continues to have a significant effect on managerial artifacts. There is a need for leadership coaches such as mentors and supervisors to be aware of how they communicate to their proteges and also enhance their communication skills in order to be more effective. Our results provide a foundation for cross-cultural leadership development that is relevant to expatriates. Country-specific matrices for effective leadership-communication styles can be developed from these findings. Emotional intelligence continues to be relevant. Clearly, individuals with emotional intelligence are more effective as leaders across all cultures. The question of whether emotional intelligence is culturally-contingent is interesting and deserves more attention in future studies.

Culture is a crucial factor for expatriates, the wrong kind of communication and leadership style can have negative outcomes for whole team. More studies are needed from this field to explore more cultural differences in communication and leadership. Subordinates' opinions of their foreign leaders would offer new insights in this field.

Table 1. Mean, standard deviation, and correlation for the scale variables.

Variable	M	SD	Gender	USA	Indonesia	COM-EI	COM-CD	COM-INS	COM-IMP	COM-D	COM-A	TF
1. Gender ^a			–									
2. USA ^b			-.073	–								
3. Indonesia ^c			-.239**	–	–							
					.604**							
4. COM-EI	5.01	1.15	.217**	-.005	-.325**	–						
5. COM-CD	4.04	1.29	-.191*	.094	.299**	.010	–					
6. COM-INS	3.40	1.36	.055	.108	.094	-.053	.461**	–				
7. COM-IMP	3.17	1.23	-.019	-.060	.067	.070	.323**	.311**	–			
8. COM-D	3.10	1.30	-.163*	.071	.135	.036	.347**	.210**	.383**	–		
9. COM-A	3.62	1.73	.079	-.017	.009	.098	.348**	.356**	.245**	.232**	–	
10. TF	5.13	1.26	.235**	.015	-.200	.658**	.039	-.013	.080	.030	.018	–
11. CL	5.08	1.24	.128	-.179*	-.121	.677**	-.028	-.046	.029	.134	.038	.726**

COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; TF: transformational leadership; CL: coaching leadership.

* $p < .05$; ** $p < .01$; *** $p < .001$. ^a (0=male, 1=female), ^b (0=other countries, 1=USA), ^c (0=other countries, 1=Indonesia).

Table 2. Mean values for transformational leadership and coaching by country.

Country		Transformational leadership	
		Mean	SD
Finland	Mean	5,6227	5,7393
	SD	,75911	,55836
USA	Mean	5,2857	5,0562
	SD	,84676	,81327
Indonesia	Mean	4,6815	4,6862
	SD	1,62409	1,68059

Table 3. Results of hierarchical regression analyses predicting coaching and transformational leadership.

Variable/ parameter	Coaching leadership			Transformational leadership		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Gender ^a	.189*	.083	-.030	.262***	.189*	.081
USA ^b		-.235*	-.170**		-.056	.007
Indonesia ^c		-	-.065		-.285**	-.006
COM-EI			.829***			.744***
COM-CD			-.005			.070
COM-INS			.052			.010
COM-IMP			-.077			.029
COM-D			.169***			.023
COM-A			-.042			-.062
R ²	.036	.116	.743	.069	.128	.630
ΔR ²	.036	.080	.627	.069	.059	.502
F	5.827*	6.791**	48.098**	11.569**	7.569***	28.181***
ΔF	5.827*	7.050**	60.925**	11.569**	5.256**	33.696***

COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding.

* $p < .05$; ** $p < .01$; *** $p < .001$. ^a (0=male, 1=female), ^b (0=other countries, 1=USA), ^c (0=other countries, 1=Indonesia).

Table 4. Results of the bootstrap for the indirect effects of nationality on coaching leadership via communication style.

Indirect effect	Effect	Boot SE	Boot LL 95 percent CI	Boot UL 95 percent CI
FIN vs. USA => COM-EI => TF	-.3071	.1274	-.5495	-.0559
FIN vs. IND => COM-EI => TF	-.9356	.2009	-1.3565	-.5651
FIN vs. USA => COM-CD => TF	-.0051	.0811	-.1717	.1513
FIN vs. IND => COM-CD => CL	-.0060	.0961	-.1994	.1786
FIN vs. USA => COM-INS => CL	.0411	.0473	-.0368	.1534

FIN vs. IND => COM-INS => CL	.0394	.0467	-.0325	.1523
FIN vs. USA => COM-IMP => CL	.0071	.0232	-.0369	.0620
FIN vs. IND => COM-IMP => CL	-.0024	.0229	-.0495	.0494
FIN vs. USA => COM-D => CL	.0997	.0508	.0182	.2132
FIN vs. IND => COM-D => CL	.1053	.0531	.0203	.2246
FIN vs. USA => COM-A => CL	-.0021	.0184	-.0445	.0353
FIN vs. IND => COM-A => CL	-.0046	.0186	-.0487	.0308

CI: confidence interval; COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; LL: lower limit; UL: upper limit; CL: coaching leadership.
Gender was controlled for.

Table 5. Results of the bootstrap for the indirect effects of nationality on transformational leadership via communication style.

Indirect effect	Effect	Boot SE	Boot LL 95 percent CI	Boot UL 95 percent CI
FIN vs. USA => COM-EI => TF	-.2468	.1155	-.4703	-.0142
FIN vs. IND => COM-EI => TF	-.8089	.1826	-1.1817	-.4674
FIN vs. USA => COM-CD => TF	.0710	.0608	-.1154	.2729
FIN vs. IND => COM-CD => TF	.0846	.1139	-.1375	.3189
FIN vs. USA => COM-INS => TF	.0085	.0608	-.1025	.1436
FIN vs. IND => COM-INS => TF	.0082	.0586	-.0932	.1456
FIN vs. USA => COM-IMP => TF	-.0042	.0178	-.0493	.0269
FIN vs. IND => COM-IMP => TF	-.0008	.0164	-.0332	.0381
FIN vs. USA => COM-D => TF	.0128	.0370	-.0604	.0939

FIN vs. IND => COM-D => TF	.0135	.0395	-.0591	.1058
FIN vs. USA => COM-A => TF	-.0026	.0250	-.0530	.0561
FIN vs. IND => COM-A => TF	-.0061	.0261	-.0613	.0533

CI: confidence interval; COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; LL: lower limit; UL: upper limit; TF: transformational leadership.

Gender was controlled for.

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**Exploring Leadership within a Gendered C Suite Framework in the UAE:
An Oil and Gas Case Study Investigation**

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ABSTRACT

Gender has become more than just a trait of individuals, it is a system of social practices as well. Global attention has continued to be paid to women's leadership roles and to that end, this study explores leadership within an oil and Gas Company in the UAE to find out the role that gender might play in appointing employees in leadership positions. The paper starts by a literature review from various articles exploring gendered leadership. Data collection was carried out using semi-structured interviews with 8 company leaders. Three main themes arose based on the responses collected. The categories included gender gap and extent of measures that were tolerable, ethical issues with regards to appointments and the effect of opportunity for career progression on motivation. The findings and recommendations of this paper provide useful information about gender representation in leadership positions in an oil and gas company in the UAE and the issue that can arise from the aggressive push towards female empowerment.

INTRODUCTION

As companies expand internationally, attracting and retaining competent talent is a challenge. According to recent conversations in business, it appears there is a lack of talent at the top of the corporate ladder (Henry-Campbell, 2019). Even though Government-sponsored programs and initiatives have increased the participation of women in decision making at the top levels of organizations (Singh, 2019). Al-Mutawa (2020) shows that although women's role in Emirati society has grown to great proportions, their perceptions of gender roles have very much been entrenched by a long history of tradition and culture. A lot of initiatives have been put in place to empower women in the cultural, social, and economic spheres in the UAE (Al Khayyal, 2020, October).

Therefore, the aim of this paper is to closely explore leadership within an oil and Gas Company in the UAE to find out the role that gender might play in appointing employees in leadership positions. It is important to look at previous literature regarding this topic, which will be done through three key objectives. First to investigate a possible gender gap in leadership positions within the company to find out the link, if any, between gender and appointments in leadership positions. Then examine ethics within the company to find out the link, if any, between ethics and appointment of employees in leadership positions. And finally, to investigate employee

motivation within the company to find out the link, if any, between motivation, and gendered leadership.

A qualitative research approach was selected for this research due to its suitability to a case study. 8 of the company leaders were interviewed after exploring literature relating to the three main objectives of the research. Grounded theory was used to analyse the data which showed that company leaders understand the motive behind a gender-balanced approach if it doesn't negatively impact their chances of career growth. The paper findings provide useful insights into representation of women in leadership positions in an oil company in the UAE, along with issues that may arise from the push to empower women.

In The next section, the paper explores literature on female representation in C Suite positions as well as ethics and motivation relation to gendered leadership.

LITERATURE REVIEW

Examining gender in leadership positions: A C Suite investigation

Leadership is the ability to achieve goals that benefit the organizations and the employees. The concept of good leadership has shifted recently from who the leader is to what the leader does (Opoku & William, 2018). The C-Suite is a popular term referring to top company executives with titles beginning with the letter C (Munson, 2018).

In recent years more and more women are featured in success stories in business, and their visibility seems to indicate that are making progress occupying senior managerial positions (Brock, 2021). However, despite the significant increase in female representation in corporate governance bodies, the percentage of female representation at the top of organizations, C-Suite, remains low. Women still face challenges, including lack of adequate career growth opportunities, family responsibilities, and lower salaries (Fenoy-Castaño, 2021) among others.

Even though Government-sponsored programs, like enforcing quotas for female representation have resulted in positive changes for organizations and have proven to be effective in increasing women's leadership, women have not yet reached the level of equal participation in leadership as their male counterparts (Singh, 2019). Additionally, due to their lack of belief in the educational system, women in senior positions developed their leadership skills primarily through work instead of through formal education (Brock, 2021). They also avoid relying on luck or convenience, instead women greatly rely on their job-related skills to advance to senior positions (Ottsen, 2019). Women are more likely to obtain leadership roles in a conflict setting which requires collective qualities than in non-crisis situations (Kulich, Komarraju & Aelenei, 2021). It is also argued that the gender of CEOs, may have an impact on business outcomes, though it is unclear to what extent financial outcomes may change as a result of the appointment of a female CEO in a diverse organization (Adams, 2016).

Further, the lack of balance at top positions of organization can be attributed to gender inequality which can be defined as uneven distribution of paid work, educational levels, health, and political decision-making powers between men and women (de Looze, 2019). Gender inequality persists in

society and in the workplace. Many countries are making it a priority to combat gender inequality through education and regulations that enforce gender equality (Reis & Menezes, 2020).

Kabene, (2017) explored the link between females in senior positions and various indexes such as corruption, and happiness identified that countries with the highest degree of gender inequality and corruption provide fewer opportunities for women to become leaders. Moreover, those same countries seem happier, suggesting that where inequality and corruption coexist, there is a sense of discontent. Another important factor to consider when discussing inequality is education. Alemayehu, (2021) argues there is a lack of support towards policies that empower women, as well as, encouraging women's participation in leadership through education. Adel, (2021) note that countries that lag in female representation in political positions are those with the highest inequality in education. He, however, suggests that along with governmental policies towards more female empowerment, it is essential that women in these countries develop self-advocacy methods and support groups to fight for their rights and to resist dominant sociocultural ideologies. In addition to policies and regulations, lack of role-models, mentors, encouragement, and support all play a part in female under representation in senior leadership positions in those countries (Mbepera, 2017). A solution to that end could be creating collaborative partnerships among international organisations, governments, businesses, and people of diverse backgrounds to ensure effective implementation of policies aiming at empowering women (Hatano, 2021). While inequality is prevalent in education, it is not limited to it. In healthcare for example women make up more than 75 % of the work force in many countries, yet their presence at the top is lacking (Dhatt, 2017). Women are underrepresented in surgical education at the highest levels, which negatively affects female medical students' desire to pursue careers in surgery (Feldman, 2020). Additionally, at the top 50 US medical schools, only 24% of the directors are women (Dumitra, 2020).

Organista (2020) study on the experiences of both genders in positions of sport leadership in Poland suggests that there might be a lack of understanding of the concept of gender, as well as gender role stereotyping. In 1995, and according to the glass ceiling commission, inequality is not the only reason for women being misrepresented, other broad categories of barriers can be attributed as part of the problem. For instance: government, society, business institutions, and business structural barriers among others. However, and almost three decades later, the increase in globalisation has led to a more democratic and collaborative form of leadership being the most successful. Which can be argued that it comes naturally to women (Reddy, Adhikari, Chitranshi, 2017) Female employees aspiring to lead need to embrace this advantage. Next, we will have a look at ethics and how it relates to gendered leadership.

Examining ethics in relation to gendered leadership

'Ethics' are defined a value that helps us decide the ethical way of doing things (Fine, & Rush, 2018). The discussion about leadership authenticity clearly shows the importance of 'ethics' as a positive component of leadership. However, it often falls in the same discussion about what makes a leader 'effective'. For example, it is presented as a virtue to conduct oneself like a consistent person, a principled person, and a true person, but virtues that get in the way of pragmatism,

competence, and credibility in the workplace are undesirable in a competitive environment (Izzat-White, 2019). So even though followers want their leaders to be ethical or visionary in some instances, there are other times, when followers desire more assertive traits from their leaders such as hostility, anger, and aggression - in group conflict for example (Van Vugt, & von Rueden, 2020). Furthermore, leadership ethics are often described as combining empathy with cooperation in a way that "humanizes" the workplace. This is largely associated with feminine characteristics. And Women's leadership is a subject of gendered stereotypes that derive largely from their differences from men (Pullen, & Vachhani, 2021). In that regard, Miller, Kark, & Zohar (2019) study on the role ethics in decision making identified that while the reasoning behind decisions that men and women managers make in moral dilemmas can be different, there is no clear difference in what they classify as a moral or ethical dilemma. There is only a small difference between male and females' leaders, when ethical leadership is concerned (Garfiel, 2019).

However, Uschi (2020) argues that leadership behaviour is strongly influenced by gender as there is some evidence that stereotypically feminine leadership traits, such as teamwork, emotional management, and shared leadership can play a significant role in leadership. Kulich, (2021) also states it's important to note that there are gendered norms that determine the types of employment available to men and women, and the types of roles that are acceptable and feasible (Ros, 2018). For example, it is possible that a cunning, deceptive leader may use gendered tactics that may eventually disadvantage women (Lu, 2017). It is also suggested that leadership policies implemented by women in organizations differ from those of men in the sense that they are more supportive of women and children (Jackson, 2017). Interestingly, it is argued that when working with female CEOs and subordinates, boards with a female majority generate greater financial results (Périlleux Anais, & Ariane, 2022). At the same time, increasing the diversity of teams, as well as conventional leadership training programs have increased benefits for female leaders by making it ethically easier to make decisions (Wilson, Lee, Ford, & Harding, 2021). Finally, the paper examines literature on the impact gendered leadership have on motivation.

Examining motivation and the role of gendered leadership

It is commonly accepted that recruitment processes, when it comes to hiring for senior positions, rely mainly on merit and the qualities that a candidate possess without involving other factors like gender norms. However, as research shows that's not always the case (Nielsen 2015). Plans for the future are actually shaped by gender norms. For instance, leadership development could be a part of those plans (Ottsen and Berntsen, 2015). Women in leadership positions and those aspiring to these roles have been advised to think like men in order to be successful (Jackson, 2017). Furthermore, CEOs, regardless of gender, are motivated by their social role as leaders. Successful leadership is traditionally thought to necessitate a predominance of agentic (independent) rather than collective characteristics (Brueckner, Bosak, & Lang, 2021). However, and despite of the apparent differences of specific agentic and communal (collective) traits, female leaders find ways to reconcile them and make them work. Women leaders were able to achieve high performance,

organize people around a shared goal, align interests, and establish leader-follower connections because of these communal traits (Zheng, Surgevil, & Kark, 2018). Also, Leadership styles are effective based on the context in which they are used, regardless of gender. However, Transformational leadership traits seem to be valued and practiced more frequently by women in senior positions than transactional leadership traits (Nash, Davies, & Moore, 2017). It can also be argued that leadership approaches between men and women may sometimes differ due to their inherit biological characteristics (Badura & Yan, 2018) For example, Women who describe themselves as highly communal or highly agentic are viewed to be more approachable leaders when compared with their male counterparts by their subordinates (Saint-Michel 2018). Interestingly, Périlleux Anaïs, & Ariane (2022) argue that female workers benefit from female leadership, by becoming more motivated and productive, and in turn making their organizations more effective. In work environments where women have a greater proportion of female supervisors, they report better gender equity (Cannings, & Goldberg 2010), family support, and a smaller pay gap (Shin 2012).

METHODOLOGY

A researcher's methodology refers to how he or she conducts research. It is the method through which he chooses to respond to a specific question. (Jonker, 2010). In qualitative research, methodology refers to a thorough strategy that aligns concept and practice. (Kramer-Kile, 2012). In this chapter the researcher states the aim and objectives of the study as well as identifying the approach, Strategy and Philosophy of the research.

Research Aim

The aim of this study is to explore leadership within an oil and gas company in order to find out the role that gender might play in appointing employees in leadership positions.

Research Objectives

1. To investigate a possible gender gap in leadership positions within the company and establish a link, if any, between gender and appointments in leadership positions.
2. To examine ethics within the company and establish the link, if any, between ethics and appointments of employees in leadership positions.
3. To investigate employee motivation within the company and establish the link, if any, between motivation and gendered leadership.

Research Approach

A qualitative research approach was selected for this research due to its suitability to a case study. Qualitative research involves the collection and analysis of non-numerical data to help researchers comprehend concepts, opinions, or experiences. In Qualitative research as the research

unfolds in a natural setting, the researcher gains a level of information from high involvement in the actual experience (Williams, 2007). It also enables the investigation of a case with an open mind and seeks to answer the questions “why” and “how”, while putting into consideration a variety of perspectives (Williams, 2007).

Additionally, a qualitative approach is appropriate in tackling a wide range of issues due to its open-ended inquiry nature, which also assists in identifying and analyzing behaviors. However, the shortcoming of qualitative research is that it is not objectively verifiable; it requires highly skilled interviewers to yield the most accurate outcomes. Finally, it is a time-consuming and tedious exercise (Busetto, Wick & Gumbinger, 2020). Since the author of this study is working in the same organization and have a daily interaction with the respondents, certain number of leaders in the company expressed their desire to have a deep interactive discussion on the topic. So a qualitative approach was deemed to be suitable.

Research Strategy

A Case Study was selected as the most suitable strategy since it complements qualitative research well. Feagin, (1991) defines case studies as research that examines multiple aspects of a single phenomenon in depth through qualitative methods. The flexibility offered by case studies is rare to find in other forms qualitative approaches. Yin, (2003) suggest that case studies should have clear boundaries to prevent it from getting too broad and therefore unnecessary complex. A case study can be defined as an in-depth study of a person, a group of people, or a case within a real-world context that is intended to generalize over several scenarios (Hyett, Kenny & Dickson-Swift, 2014). This simply means that a case study can be more specific and detailed in addressing a certain common subject. It is worth noting that the case study has found widespread utility by scholars and researchers who have an interest in qualitative research. The way case studies are tailored is that they tend to focus on qualitative data by interacting with data collection techniques such as interviews and observations. On some occasions, a case study is also used to collect quantitative data. Qualitative researchers who have gathered experience in various disciplines have identified case study research as a self-sufficient qualitative approach (Hyett, Kenny & Dickson-Swift, 2014). As it happens that the author and respondents of this research work in the same organization and under the same circumstances, applying a case study as a strategy gave the author the chance to delve deeply into understanding the aim of the study with fair amount of freedom and a substantial understanding of the organization. Daily interaction in the company under investigation allowed for a free and natural discussion with the leaders of the company regarding the research aim and objectives.

Research Philosophy

The philosophy that guided this research is interpretivism. Generally, interpretivism refers to theories that inform us on how we can acquire knowledge of the world by using the interpretations and meanings human beings attribute to their actions as a loose reference. Therefore, interpretivism incorporates human interest into a study. Practically, interpretive

researchers are guided by the assumption that access to reality, whether given or socially construed, is solely achieved through social elements such as language, shared meanings, and consciousness. (Scauso, 2020). In application, the interpretive approach emphasizes the significance of the researcher as a social agent who is obligated to acknowledge differences between people. In addition, Interpretivism studies center their focus on meaning and may utilize multiple methods if they communicate various perspectives of the subject. Ideally, this way of thinking advocates for qualitative analysis over quantitative analysis. The main shortcoming associated with this philosophy is its subjective nature which makes a researcher's view to be biased. On the other hand, the instruments provided by the interpretivism philosophy have enabled qualitative researchers to achieve great depth and detail while studying ethical and leadership issues in organizations, as well as cross-cultural differences (Scauso, 2020).

The author in this case has substantial personal interest in the outcome of the research due to the fact of him been an employee of the organization been studied. Having experienced the conditions under which the respondents are living, the author will be better able to interpret the data using interpretivism. Also having been a witness to the company gender policy and balance for 13 years as an employee in various positions, a deep dive into the gender interactions of the company was of personal interest.

RESEARCH DESIGN

Creating a research design is a way of answering the research question and controlling variability. Dulock, (1993). Research design principles necessary for a thorough understanding of the data are discussed in research design (Myers, 2013). In this chapter the sampling framework, population and method will be discussed.

Sampling Framework

Essentially, a sampling frame is used to draw the boundary or scope of the research. This is in terms of the members of the population who qualify to be included in a given sample or cases which possess the necessary merits to be included in the study sample. Sampling allows researchers to assess how well their chosen sample represents the population and be confident that it does (Silverman, 2005). The sampling in this case was to get the best results possible, the leaders of the organization were chosen to be interviewed. Excluding the CEO who declined to be interviewed the entire leadership team of the company consisting of 3 VPs and 5 managers were included.

Sampling Population

In the process of researching a specific issue affecting a certain population, it is hardly possible to collect data from each person, this is where sampling comes in. Population in research refers to the entire group from which a researcher intends to conclude about whereas the sample refers to the particular group of persons whom the researcher will collect data from (Gill, 2020). The sampling population for this study was limited to 8 leaders, as they were the total leadership team in the company besides the CEO who declined to be interviewed. 5 males, and 3 females.

Their positions were as follows: 3 vice presidents and 5 managers, two of the vice presidents were females. All the leaders interviewed here are working in the same organization as the author of the study.

Sampling Method

The ability to understand complex human issues better is of greater importance than the generalizability of the results for qualitative research (Marshall, 1996). Typically, qualitative researchers are obligated to decide on sampling techniques that equip them with a deeper comprehension of the subject in question (Suri, Harsh 2011). In this study, the researcher shall adopt non-probability sampling due to its compatibility with qualitative research. Non-probability sampling can be defined as a technique whereby the researcher relies on subjective judgment rather than random selection to select samples for research. Unlike in probability sampling, in non-probability sampling, not all members of a population have the same chance of being selected (Williams, 2007).

Within the qualitative paradigm, there are various models of non-probability sampling, these are convenience sampling, consecutive sampling, quota sampling, purposive sampling, and snowball sampling (Gill, 2020). In this study, a purposive sampling technique was employed. Known as selective sampling, this technique is widely used by qualitative researchers to recruit participants who have the capability to provide in-depth and detailed information about the subject at hand. As such the respondents of this study were the 8 leaders of the company. Those leaders are thought to have the best relatable knowledge of the research objectives having been part of the company for no less than 5 years, witnessing the company transformation towards a more gender diverse work environment.

Primary Data

Primary data is a type of data that is collected directly from main sources via instruments such as interviews, questionnaires, surveys, etc. In research, this is regarded as the most accurate kind of data (Gill, 2020). In this study, the researcher selected 8 leaders in charge of various departments at the company to serve as primary sources. The respondents were subjected to an interview in which a set of open-ended questions were asked. The questions prepared by the researcher were aimed at establishing facts in the following objective areas: gender and appointments, ethics and appointments, and motivation and appointments. Since primary data is directly obtained from an individual, it can attain high levels of validity, authenticity, and reliability. Gill (2020) states that the process of collecting primary data may also be expensive, tedious, and time-consuming. However, in this study the presence of the researcher in the same organization negates most of these negatives.

Secondary Data

Secondary data is essentially data that has been originally collected by third parties other than the author of this study. The common sources of secondary data include published printed literature such as books, journals, newspapers, published electronic sources such as websites,

journals, weblogs, and public records (Gill, 2020). In this study, the researcher adopted the analysis of existing literature relevant to the subject under investigation. Articles regarding the impact of gendered leadership on ethics and motivation in a gender diverse organization, as well as the gap in leadership representation and its causes have been discussed.

Ethical Consideration

In a qualitative research, ethical scrutiny has a particular importance due to the in-depth nature of the research process. Also, at all stages of a qualitative study, it is important to consider ethical issues to find the right balance between the potential risks of research and the likely benefits (Arifin, 2018). There are rules in place that require researchers to guarantee that participants are adequately informed about the investigation's goal (Bell, 2005). This study strongly observed confidentiality of all participants. Consent was sought from all participants to engage in the data collection process. The researcher has taken cautionary measures to ensure the data sources attain the highest standards of integrity, accuracy, relevance, timeliness, and completeness. In research, the quality of a dataset is mainly determined by the process of collection rather than the data itself. The researcher was also careful not to break any law during the research process. Finally, and most importantly, the researcher put concrete measures to ensure that no information could be traced back to the participants. To achieve this, pseudonyms were used when necessary.

DATA ANALYSIS AND DISCUSSION

The results have been presented using Corbin and Strauss' model, which included grounded theory. Grounded theory is a research approach used, in general, to develop theories about a phenomenon using a set of systematic procedures for collecting and analyzing qualitative data. As a result of time restrictions, grounded theory could only be used for data analysis rather than for data collection. In order to code the data, open coding, axial coding, and selective coding were used.

The establishment of categories and subcategories was based on the various codes that were produced by reviewing Study participant's responses to semi-structured interviews using open-ended questions to explore a possible gender gap in leadership positions within the company, to examine ethics within the company and establish the link, if any, between ethics and appointments of employees in leadership positions, and to investigate employee motivation within the company. With the aim of exploring leadership within the company to find out the role that gender might play in appointing employees in leadership positions.

Open coding

In the first step, the interviews with employees of the company were transcribed. The 2nd step was to initially code the data through open coding. Concepts are labeled, categories are defined, and dimensions are analyzed using Open Coding. To identify different parts of the data for further analysis, different labels or 'codes' are added to the data (Khandkar, 2009). In this paper for

example, when an interviewee talks about chances for career progress or career development the code ‘career development’ was used.

Axial coding

Next is axial coding. In order to establish relationships among these codes, the number of codes needs to be reduced and they must be gathered together in an order to explore the themes or axes that emerged. In this paper the themes developed are: 1) gender gap 2) ethical issues 3) opportunity, and motivation. The last step is selective coding. In a nutshell, selective coding refers to a method by which categories are interrelated and thus form the basis of the grounded theory. (Moghaddam, 2006).

When quoted, the participants will be referred to in the following manner (P 1) for the 1st respondent, (P 2) for the 2nd respondent (P 3) for the 3rd respondent etc. All the respondents demonstrated a clear understanding of gender equality, ethical practice in the workplace and motivation.

Gender gap in leadership positions within the company with regards to gender doesn’t exist

Based on the responses leaders provided with regards to presence of gender gap in the organization, it was found that while respondents acknowledge the presence of gap in gender representation in the country, they see that the company have come a long way in addressing that issue.

“I believe that there is a small gender gap in the company, but I think it has to do with what the company is trying to abide by the direction that that the country is going towards in terms of gender quality” (P 1)

This quote from one of the managers clearly shows that while he accepts the presence of a gender gap he also relies on and understand that the company is working towards addressing the issue. However, that view is not shared by everyone interviewed. According to the literature reviewed gender inequality in leadership positions in organizations around the world still present. Fenoy-Castaño, (2021) states that not only the percentage of female representation at the top of organizations, C-Suite, remains low, they are still faced with numerous challenges like lower salaries and lack of career growth. Even though women have proven that strong credentials and skills are important to their advancement into middle level management, they have not been as helpful to them achieving executive positions. (Li, 2001) Males still hold most leadership positions and still have a higher chance of reaching those positions

“I don’t believe that there is any gender gap between men and women. In my company, I don’t believe there is a gender divide. Everyone, in my opinion, is treated equally. And everyone is given the same chances. There may be minor variations and representations” (P 2).

“I don’t believe a gender gap exists at my company” (P 3).

Here again the respondents didn’t believe in the presence of a gender gap in the company. This seems to be the main theme throughout the interviews. There is a general consent that the company

has no gap in terms of gender and that any minor representation divide is being actively addressed. This is also strengthened by the policies that the country has put in place in support of gender quality according to the respondents.

Garstka, (2019) suggests that senior positions are underrepresented for women, although the productivity of both men and women in leadership is similar. Furthermore, despite the push by governments around the world towards a more equal workforce, and despite considerable progress, women are still not able to compete on an equal basis with men in leadership (Singh, 2019).

However, the findings of this case study show a different pattern developing, in contrast to the literature, at least in the UAE and in the company in question, there is no such gap in leadership in terms of female representation. Furthermore, and females are presented with high chance of career progression and are on equal terms when pay is concerned. On the contrary, there is a feeling of favoritism in terms of appointments in higher leadership positions towards females.

There is no Ethical issues with regards to appointments of employees in leadership positions

Based on the male respondents' comments there is a sense of favoritism with regards to appointments to new positions or promotions within the company.

“When it comes to promoting or appointment, I think that there is a slight fear for favoritism towards females which can be unhealthy at some point” (P 5)

Most of the respondents agreed that when it comes to appointments of new employees there is a clear tendency towards employing females. But that wasn't classified as an ethical concern according to them. Garfiel (2019) states that in terms of ethical leadership, there is only a small difference between male and female leaders. Which again can explain why the issue of female leadership in the company is not of ethical concern.

“I think there is a little bit bias towards females in the company in terms of chances. I think they do have a certain advantage simply because of being female, I think it's also has to do with what the company is trying to do, because the country is moving in a more equal direction for both genders” (P 7)

There seems to be an understanding that this is a part of the general trend towards women empowerment in the whole country. The Female-centric leadership has promoted gender balance in the organization as exemplified by the high number of female appointments to leadership positions in the recent past. It's no surprise that Policies supporting social and economic development are the main sources of women empowerment in the UAE (Shaya, 2017).

However, this feeling was not shared by all respondents. All females interviewed and the higher-ranking male had a different view on the matter. They see that there is no ethical issue in the company with regards to gender.

“I believe that the general atmosphere in the company is very healthy, you work hard, and you get awarded based on that “(P 8)

Most participants have cited their acknowledgment of that fact. They reveal that the recruitment policy of the company is tailored to favor the female gender. The apparent understanding and tolerating of this policy can be due to the way female leaders in the company have adapted their styles of leadership to suit their positions. For example, while followers generally desire their leaders to have ethical or lenient traits in some instances, they also desire more assertive traits from them at other times, such aggression (Van Vugt, & von Rueden, 2020).

Gendered leadership has no bearing on motivation within the company

Looking at the responses with regards to motivation, there was no correlation found between the gender of leader and the willing to perform.

“I don't mind working under any boss whether female or female or male. I would prefer to be working under a male boss if possible. But I don't really mind working under any female boss.” (P 2)

All respondents with no exception stated that they prefer to work a leader who is of the same gender. As for the difference in their opinion between male and female leaders, female respondents stated that a female boss is more approachable. While the male managers didn't necessarily show a lack of desire in working with a female boss.

Based on the responses regarding motivation, pay package an access to career progression seemed to be the key driver, regardless of the gender situation.

“So I think the salary is my main motivation to go to work. Of course, some factors may play a part but I think my motivation towards a higher position also works that direction” (P 1)

(Aarum, 2011) states that Leadership behaviors are influenced independently by demographic characteristics, explaining similarities in leadership behavior. So the fact that all the leaders in this case are from the same demographic background could explain why there is no noticeable difference in motivation with regards to following a different gender. Another explanation as to why female leadership has no negative impact on male followers motivation can be that leadership by women in higher positions is driven by a strong desire to make the world a better place and a devotion to helping others (Nakitende, 2019).

Overall Theory

In conclusion following the open and axial coding processes it suggested by the findings that: While company leaders understand the motive behind the CEO's effort towards a more gender-balanced approach, it shouldn't have an adverse effect on their chances of career advancement. The views provided by the participants regarding the relationship between gender and appointments into leadership positions are an accurate representation of the state of women's leadership in the UAE. The UAE represents a paradigm shift in matters of gender equality and women empowerment in the Middle East region. According to a report published in 2021, the UAE has

been ranked as a leading contributor to gender parity in the Middle East (UAE Embassy in Washington, 2022). The fact the CEO of the company in question is a woman is no surprise as women have grown their influence in every sphere of Emirati society. This growth, however, has in this case at hand started creating a reverse gender inequality.

The revelation made by the participants attributing the feminist recruitment policy to an attempt to comply with a government directive on gender equality as excessive. The female CEO may be so zealous about women's empowerment that the company policies have been skewed to the disadvantage of male employees. In truth, the CEO seems to be cognizant of the many year's women have lagged and are seeking to close the gap between women and leadership, maybe the approach is too radical, but the intention is clear. Furthermore, the findings here show a clear desire from all leaders to work with bosses from the same gender. However, having a boss of a different gender has no bearing on motivation if they are presented with equal opportunities to progress their careers.

CONCLUSION

Given the current changing and evolving landscape of leadership in the UAE and around the world it was necessary to have a closer look into an organization with diverse leaders and explore the different dynamics in play. To that end, this study has investigated the leadership dynamics in an organization headed by a female CEO in the UAE with the aim of exploring leadership the company in order to find out the role that gender might play in appointing employees in leadership positions. The three main objectives of the paper were investigate a possible gender gap in leadership positions, to examine ethics within the company with regards to gender and investigate employee motivation in relation to gendered leadership. The researcher employed the use of both primary and secondary data to gather information. Primary data was sourced from company employees through interviews whereas secondary data was extracted from a review of relevant literature. A case study was strategized with a qualitative approach deemed to be the most suitable. 8 leaders of the company were interviewed, the interviews were transcribed and analysed using grounded theory.

The findings of this study established three key facts related to the three objectives: there is a correlation between gender gap and appointments into leadership positions; there is no a correlation between ethics and gendered leadership, and there is a no relationship between motivation at the workplace and gendered leadership. To put these results into context, As long as there is no negative repercussion on their chances of career advancement, the leaders of the company understand the CEO's efforts towards a more gender balanced approach. The researcher has supplied real-life data concerning the subjects. And recommended measures that can be adopted to remedy the problem.

RECOMMENDATIONS AND IMPLICATIONS

The policy of hiring and promoting should be purely based on merit. The executive powers of the CEO can for example be regulated by the board of directors of to prevent discrimination against male employees. Botelho, (2017) revealed that local investors and regulators, generally perceive a company as more legitimate if the CEO's powers are regulated by a strong board to prevent the abuse of office. However, the case can be reversed in the case of multinationals whereby the perceptions of foreign customer's matter. In this case checks and balances between the board and the CEO on matters of managerial appointments would be highly beneficial.

The leadership (Board of Directors) should conduct a consultation meeting with the CEO to establish the challenges she faces while working with employees. The leadership can also adopt the findings of this report and compare the participant's views with those given by the CEO and initiate a Consensus Taskforce. According to Botelho, (2017) the ability to monitor the way one engages with their staff such as moods, attitudes, and body language is key. Since the issues at hand are internal, the implementation program of the measures proposed should be conducted by the company leadership led by the board of directors. The leadership should initiate a policy adjustment on various issues as proposed, these are gender policy, managerial appointments policy, and a consensus task force to promote a positive working relationship. The board of directors should be mandated to monitor the implementation progress.

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APPENDIX

INTERVIEW QUESTIONS

Objective 1

- i. What is your understanding of gender equality? Why? Why not?
- ii. Is there a gender gap at your organization? Why? Why not?
- iii. In respect to gender, how can you describe the recruitment pattern at your company? Why is this?
- iv. Is the gender policy at your company equal? Why? Why not?

Objective 2

- i. What is your understanding of ethical practice? Why is this?
- ii. Are there any ethical issues at your company? If yes, what are they?
- iii. In respect to leadership practice, is there any correlation between gender and ethics at your company? Why? Why not
- iv. Is the appointment and promotion policy adopted by the company CEO ethical? Why? Why not?

Objective 3

- i. What motivates you to work? Why?
- ii. Under which gender leadership would you prefer to work? Male or Female? Why
- iii. What are your observations about male and female bosses? Why?

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**Predictive Power of Self-Efficacy, Training Content on Job Performance:
Moderating Role of Training Effectiveness. An empirical approach in Oman
Higher education sector**

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ABSTRACT

This research aimed to examine the impact of self-efficacy, familiarity with training content on employee's job performance, and further test how training effectiveness moderate the relationship between these factors and employees job performance. Data were collected from 184 academic and administrative staff who attended a training program. The study found that self-efficacy, familiarity with the content of the training will result to high employee's job performance. The result further confirms the importance of training effectiveness subsequently affects their reactions to job performance. Other contextual determinants such as workplace environment remain unexplored. Future study can further examine the interactive effects of these variables on employee's job performance. It is important that managers provide training-related information, like content complexity and employee increase self-efficacy before actual training program. Because the more employees are familiar with the training content the more self-efficacy they will generate, and the more effective the training program the better employees job performance. The findings have showed that both individual and environmental factors affect training outcomes.

Keywords: Self-efficacy, Training effectiveness, training content, job performance, Higher education.

INTRODUCTION

Organisations spend significant amounts of resources on training to improve employees' knowledge, skill as well as attitude (Aguinis & Kraiger, 2009; Miller, 2012). Globally, organizations spend billions of dollars on training its employees (Abd Rahman, Ng, Sambasivan, & Wong, 2013). A study by the Association for Talent Development, organizations expend approximately \$1,299 per employee on direct training which is equal to nearly 4.5% of payroll (ATD, 2018). Training alone is not enough to achieve higher organizational effectiveness since not all the knowledge acquired during the training is appropriately transferred and utilized to the organization. That is transfer of knowledge obtained during the training must effectively occur to achieve complete advantage (Dirani, 2012). Organizations can reap the advantages from these investments in terms of outcomes like higher productivity as well as improved business performance (Rigolizzo & Zhu, 2020; Tharenou et al., 2007) on the condition that training is effective. Nevertheless, there are serious concerns concerning the limited proof on whether the training acquired is truly transmitted back

to, as well as used on, the job or not (Baldwin et al., 2017). The effectiveness of such investments is not evident and not more than ten percent of these expenditures, result in transfer to the job (Holton & Baldwin, 2000; Kupritz, 2002; Al-Qahtani, 2011; Collins & Kim, 2010), which call for validation of these significant investments (Al-Otaibi, 2008; Al-Qahtani, 2011; Collins & Kim, 2010). While majority of organizations have significantly increased investment in training, suffice to say that traditional training cannot guarantee the sustainability of any organization's competitive advantage (Akther, & Rahman, 2021). Employees effort will be waste if organizations do not evaluate the effectiveness of their training programs (Akther, & Rahman, 2021). Yet many organizations invest in their human resources without examining how their investment in training effectively promotes attainment of organizational goals (Khan, 2011). Besides, management training is predominantly vulnerable to challenging training effectiveness. Yet only few studies have examined training effectiveness, and they indicated that training effectiveness represents a significant element in enhancing employee creativity (Somsing & Belbaly, 2017), promote innovation (Carbery & Garavan, 2005), assist in developing competitive advantage (Birdthistle, 2006) and ultimately ease organizational change (Carbery & Garavan, 2005; Scheeres and Rhodes, 2006). Interestingly, majority of these empirical studies on training effectiveness have focused more on direct relationship and much empirical evidence are generally positive and are on individual-related factors than on the organisation-related outcome. our knowledge of why and when training results in greater outcomes remains limited, and researchers, therefore, called for more focus to moderating factors (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). Ward et al. (2006) suggested that training effectiveness must be assessed to understand its value and influence.

Notwithstanding the afore-mentioned argument, there is little to explain on the moderation role of training effectiveness. Though past research used self-efficacy as the subjects to examine training effectiveness, we are completely blind to the moderating role of training effectiveness between self-efficacy and job performance in the Sultanate of Oman Higher education sector. Bernardino and Curado, (2020) suggested for a study that will examine rtraining program's effectiveness with regards to the job performance of trainers. The Sultanate of Oman prioritize human capital as one of the major achievement goals in her vision 2040. However, there is limited focus to whether and why training of administrative staff can be less effective than training of academic staff. Following the discussion, the fundamental question addressed in the present study is: Can the training given to employees be effectiveness? This research discusses the direct role of self-efficacy on job performance and the moderating role of training effectiveness on job performance in the Oman higher education institution. These variables are interpreted through training effectiveness, in relation to the theory of planned behaviour (TPB) as well as the social learning theory.

LITERATURE REVIEW

Self-efficacy

Self-efficacy is a significant concept that is subject to social learning theory. It relates to the belief in one's abilities to organize as well as perform the courses of action required to accomplish a given achievement (Bandura, 1997; Wood & Bandura, 1989).

The concept can be group into two comparable but different constructs such as, general self-efficacy as well as task self-efficacy. General self-efficacy can be defined as assessment of an individual fundamental capability to complete general job requirements effectively. On the other hand, task self-efficacy is the estimate of an individual specific capability to accomplish task requirements effectively (Stajkovic & Luthans, 1998). Both general as well as task self-efficacy are associated to job performance (Judge and Bono, 2001). Yukl, (1999), argued that the self-efficacy promote trust in a leader resulting to the commitment of followers towards the leader and the organization. People learn based on the observation of others whom they consider to be trustworthy as well as knowledgeable (Bandura, 1986). Self-efficacy has been found to have significant impact on work-related behaviours (Sadri & Robertson, 1993; Stajkovic and Luthans, 1998), successful task performance (Judge & Bono, 2001), and the initiation, strength, and persistence of behaviour” (Paglis, 2010). Wang and Hsu (2014) argued that self-efficacy is essential for both task and role performance. Mathieu, Martineau, and Tannenbaum, (1993) found the importance of self-efficacy for improving effectiveness of training. Gist (1989) established a significant positive effect of self-efficacy on training performance in an innovative, problem-solving task. It has also be found to have an indirect linked with individual perceptions about expectations that roles encompass (Burke & Stets, 2009), and affect the preferences that individuals make concerning tasks, goals, as well as roles they perform (Razek & Coyner, 2014). Trainees with high self-efficacy enhances training effectiveness and in turn will generate high job performance. In the present study, we hypothesized that self-efficacy positively impacts job performance. That is, trainees with higher self-efficacy will show more training effectiveness than those with lower self-efficacy which in turn increase sustainable job performance.

Familiarity with the Training Content

Training content plays an important role in the effectiveness of training to avoid the bias and perception of the trainee about the training program before the training occurs. It refers to the concepts, theories, and principles that are taught and learned in a particular course, instead of related skills. It involves trainer’s communication, clear instructions of trainer and the practical application of the training (Ghosh, et al., 2011). Training program can be improved by designing the content to fit different training requirements (Schraeder, 2009). Hence, for training to effective and accomplished the objectives, the content remains a significant factor for human resource development (Ghosh, et al., 2011). Harris et al. (2014) found that trainers with a good teaching style stimulate trainees to improve job demand, provide important feedback and monitor job performance. Therefore, organizations can prepare trainers to make use of different instructional styles to adjust to learner needs and content (Harris, et al., 2014). These strategies give chances to keep trainees responsible in transferring training (Burke & Saks, 2009).

Training Effectiveness

Research on the effectiveness of organizational training has been a subject of significant discussion over the past decades. The “bottom line” for any training program is the effectiveness of the training, because effectiveness is important in deciding the return on investment (Holton & Baldwin, 2000). Hence many studies have indicated interest to examine different factors that can conceivably improve training effectiveness (Al-Swidi and Yahya, 2017; Chiaburu & Tekleab, 2005; Kodwani, 2017; Nikandrou et al., 2009; Sitzmann & Weinhardt, 2019). Blumenfeld and Holland (1971) defined training effectiveness as the “quality of the accountability demonstrated, particularly with the demonstration of the training” back to the job, which is nothing but the transfer of training at the workplace. Training effectiveness is an approach to ascertain the degree to which training affects a trainee's knowledge, skills as well as behaviour. That is, the level to which the training goals are accomplished. It is assessed by evaluating some training as well as transfer outcomes. To be effective in training, trainees are required to bring to work environment the knowledge, skills, behaviour as well as attitudes they have acquired during the training (Velada & Caetano, 2007; Vermeulen & Admiraal, 2009). The major goal of any training program is to have a positive effect on employees’ new knowledge, skills and ability, behaviour, or attitude. Effectiveness of training programs change employee creativity (Somsing & Belbaly, 2017), foster innovation (Carbery & Garavan, 2005), assist in building competitive advantage (Tomkinson, 2004; Birdthistle, 2006) and eventually smoothing organizational change (Carbery & Garavan, 2005; Scheeres & Rhodes, 2006). Effective training will result to a higher employee job performance and satisfaction, increases team morale, as well as increases return on investment. In a study, Manna and Biswas (2018) argued that training effectiveness affect pre-training, training, and post-training outcomes. Occasionally, an absent-minded trainee can over-evaluate or under-evaluate a training program (Manna and Biswas, 2018). A training system comprises of different stages and directs to substantial employee individuality and personality changes, which influence job performance. Noe and Wilk, (1993) argued that attitudes toward training affect training effectiveness. Hence, different training stages will consider some elements which can impact training effectiveness.

METHODS

The study sample was drawn from a pool comprising 184 academic and administrative staff working with private higher education institutions in Sultanate of Oman. The average age of participants was 34 years old, comprising 38% male and 62% female. The participants were guaranteed of the confidentiality of their responses. The participants were part of the training program provided by the higher education institute in the Sultanate of Oman. The survey was conducted to collect the data in-person. Though, seven responses were removed because of incomplete information, subsequently the respondents were decreased to 177. Therefore, for analytical reasons the final sample size is 177 responses. The average tenure of job in the higher education institution was six years.

Measures

Participants showed their level of agreement with each item using a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Three items were

utilized to measure trainees’ familiarity with the training contents. Self-efficacy was measured with eight items adapted from Noe and Wilk (1993). Training effectiveness was measured with five items adapted from Xiao (1996) and Facticeau et al. (1995). Employee job performance was measured six items from Jelinek, Ahearne, Mathieu, and Schillewaert’s (2006).

Survey procedure

The institution organizes a string of training programs for the employees during the year. The training program comprised of four three-hour sessions which take place in three days. We focus on academic and administrative staff that partage in the three days period of the training by batches. The contents of all the training program were the same. The same training program was conducted by different trainers. The participants were guaranteed of their privacy and confidentiality of their responses. We first administer questionnaires prior the beginning of the training program in the first stage in a classroom environment without the presence of the trainer. The first survey measured self-efficacy and training content. The second stage was administered at the end of the training program. The data for training effectiveness and job performance was collected by the end of the training program.

RESULTS

Multiple regression analyses were conducted to test the hypotheses for the independent variables (self-efficacy and training familiarity with the content of the training) on the dependent variable high job performance. The result of the two independent regression analyses is showed in Tables 1 and 2. Self-efficacy and familiarity with the training content was significantly correlated with high job performance. The multiple regression analysis results are presented at the significant level of $p < 0.05$. The total variance explained was 0.452. Therefore, the regression model adequately fits the data and significantly explained 46.8% of the variation in higher job performance (R square 46.8%, $p < 0.05$). That is, the nine independent variables explained 46.8% of the variance in high job performance. The overall regression model was significant (Sig. F change =0.000, R square = 0.468, $p < 0.000$). The results are illustrated in Table 1.

Table 1: Multiple Regression Analysis Summaries for High job performance

Variables	Standard error	βeta	t. value	Sig.
Familiarity with the training content	.042	.209	1.964	.032**
Self-efficacy	.037	.295	3.079	000***
R square				0.468
Sig. F change				0.000***
F Value				19.293

* $P < 0.10$, ** < 0.05 , *** $p < 0.001$, Sig =Significant

Table 4.2 Hierarchical Regression Result for Moderating Effect of training effectiveness on self-efficacy, familiarity with training content and high job performance.

Variables in the Model	Model 1 Independent variable	Model 2 Moderating variable	Model 3 Interaction variable
Self-efficacy	0.013*	0.019	0.015**
Familiarity with the training content	0.000***	0.006	0.023**
F change	19.293	4.107	7.032
Sig. F change	0.000	0.014	0.003
R square	0.468	0.471	0.496
Adjusted R square	0.451	0.455	0.462
R square change	0.017	0.016	0.034

*P<0.10, **<0.05, ***p<0.001, Sig =Significant

DISCUSSION

Prior studies examined the antecedents of self-efficacy or training effectiveness has mostly pay attention to the direct individual relationship. Considering the heavy investment organizations exerted on training programs, it is essential to examine the effectiveness of such an investment. To fill this gap, this study investigates the moderating effect of training effectiveness on the relationship between self-efficacy, training content and employees high job performance within the Sultanate of Oman higher education institution. We had two important results from this research. First, as we hypothesized, self-efficacy and training content promotes high job performance. As indicated by the results, employees with high self-efficacy and familiarize with the content of the training will be effective in training than those with low self-efficacy and who do not have knowledge of the content of the training. Secondly training effectiveness moderate these effects. As indicated by the results, the effectiveness of training facilitates these relationships.

Specifically found that training effectiveness moderate the relationship between self-efficacy and training content and consequently influenced employees higher job performance, while most prior research only highlighted the impact of either self-efficacy or training effectiveness on employee's job outcomes. Therefore, it is recommended that self-efficacy plays a critical role in the effectiveness of training. Because it does not only translate into training effectiveness but also enhances the achievement of sustainable trainees' outcomes. In a training context, self-efficacy can inspire trainee readiness to be successful in a training program and to put to wield strength toward the training and the ability to transfer the knowledge acquired in the training program into the job. Therefore, trainee cannot reap the complete benefit of training without self-efficacy. Even though training is well-design based on employee's needs, they may fail to benefit from training because of lack of self-efficacy. This indicated that the characteristics of the trainees such as the attitude of the trainee is critical to the effectiveness of the training program.

Secondly, the results of the present research also showed that trainees' familiarity with the training content significantly affect training effectiveness and subsequently higher job performance. That is, the more trainees' familiarity with the training contents, the more effective of the training program, and the greater the job outcome. Hence, it is necessary to provide trainee with the necessary information to enhance trainees' familiarity with the training contents. Trainees need to have knowledge about the content of the training, this will help them to take the right training program, do the needed preparation prior to going into training, as well as to encourage them to put more efforts for the training. Similar research by Kodwani (2017) also argued that having knowledge prior to the training decreases trainee's anxiety level. Failure to provide information before the training will be seen as a harmful indicator regarding the value of the training. Therefore, training effectiveness and self-efficacy can increase sustainable training outcomes.

This study advances knowledge that training effectiveness serves as an important mechanism explaining the relationship between self-efficacy and high job performance. The result simply suggests that training effectiveness will be necessary to enhance high job performance. This is consistent with the finding by Whysall et al., (2019) that training effectiveness significantly affect the overall job performance of the employees. That is, training effectiveness can offset for poor quality outcome in terms of increasing employee job performance. Employees training can be unsuccessful and fail to yield the desired result if the outcome of the training is not effective.

Trainee Self -Efficacy as well as training Effectiveness perhaps contribute to the job performance of the employees. The present study will help the higher education institution in enforcing training-related policies. Both the administrative and academic employees of higher education institution most importantly those who intend to build their career in academic field will also be mindful of filling up the gaps by assessing their training requirements. Because effectiveness of training has become a universal issue. The result of this study can give higher education institutions a competitive edge to improve employee skills as well as increase the ability to uphold stakeholders' commitment by measuring training effectiveness. As such, both private and public higher education institutions will as well develop some strategic policies to enhance employee knowledge as well as skill, increase employee integrity to minimize academic dishonesty in daily activities and retaining high performing employees. To achieve knowledge application and problem-solving, higher education institutions should practice periodically evaluate the effectiveness of their overall training program both the training outcomes, training environment as well as the quality of the trainers.

Implications

The result of the study has some practical implication. Studies has revealed that self-efficacy is trainable (Karl et al., 1993). This suggest that the more employees are trained to believe in their capability to learn, the better their willingness to achieve knowledge and the more they gain control of the program. Particularly, to improve trainees' effectiveness, organizational managers should offer training-related information. The findings will help stakeholders make decision on the suitable level of training effectiveness as well as resulting and would lead to the deployment of ideal training quality to meet job performance challenges. Such effort will also result in

valuable knowledge exchange between HR managers practices and various departmental heads. The present research will encourage higher education institution to evaluate the training effectiveness as a component of improving the whole training system. The research unique contribution to the body of knowledge is by assessing the moderating effect of training effectiveness on the relationship between self-efficacy and job performance. Organization management must concentrate on providing support as well as establish an effective training system that can accelerate the adoption to the digital age. Decision makers in higher education institution must also take action to develop new training course for their employees as well as set up strategies to constantly enhance the training system.

Limitations and future research

The limitations of the present research as well as recommendations for future study can be address in the light of the following discussion. There are a few limitations that the present study can take into consideration to achieve effective research. Because of the limited time it was not an easy task to examine all the higher education institution in the Sultanate of Oman to examine the training effectiveness and job performance. Only private colleges are involved in this study which is quite different from the Public higher education institutions. Employees in Ten higher education institution may not represent the entire higher institution. Thus, the results related to the entire higher education institution will have limitations and this research may possibly not be consistent over time. The study sample is made of younger employees who are in their early career stage. The selected subjects yielded high internal validity. Perhaps, there may be incomplete responses in the questionnaire because the researcher did interview the respondents. We gather data from a representative subset of one specific period. Therefore, longitudinal research can be conducted particularly on before, during and after training. Future, research can focus on other sectors to recognize how training effectiveness can moderate other factors and higher job performance.

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**Open Data implementation in Mexico, Central and South American region
based on scientific production**

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Abstract

The rising interest in Open Data, fostered by the proliferation of public policies on open government, has promoted methodological models that allow the reuse of those data in social and business initiatives that enable inclusive development. The interest of this scientific article focuses on the review of the development of Open Data in Latin American countries that, due to their geographical location, have similarities in multiple areas: Brazil, Colombia, Mexico, Ecuador, Chile, Argentina, Peru, Venezuela, Cuba, Uruguay, Costa Rica, Paraguay, Bolivia, Panama, Puerto Rico, Trinidad and Tobago, Cayman Islands, Haiti, Jamaica, Dominican Republic, French Guiana, Nicaragua and Suriname; from the scientific production that shows 664 documents of the recognized repository Scopus. The semantic analysis of co-occurrence of terms in the bibliography was carried out with the VOSviewer tool based on more than five occurrences for each term from the key words extracted. The results from the graphic evidence generated shows that, the work of scientists on the theme has focused mainly on the semantic web, open government, transparency, information systems, data mining and big data, from which it is possible to identify a strong contribution of research related to governance rather than other initiatives. In conclusion, Open Data is maturing as a field of scientific knowledge at a global level, due to its connection with the development of information technologies and the diversity of work areas. In Latin America there is still no complexity in terms of the diversity of studies and it still preserves its centrality.

Keywords

Open Data, Data Science, Latin America, Mexico, Central America, South America, Scientometrics

Introduction

This paper studies the theoretical-temporal development of Open Data in the American geographic region comprising Mexico, Central America-Caribbean and South America, which shares multiple cultural, political and commercial similarities, among others; with the purpose of identifying through the data of the scientific production of the area, the constructs with which it has been connected over time.

Open Data, which is also known as Open Government Data (OGD), encompasses all repositories of information intended for public access that are made available to any citizen, mainly public or governmental institutions (Janssen, 2012; Srimuang et al., 2017), although private or business organizations may also do so (Chapman et al., 2022). The goal of all these Open Data, is that people can reuse them to formulate innovative initiatives that promote social development (Diamantini et al., 2021).

Open Data emerged from Open Government initiatives that were driven by movements for transparency and accountability that, since about the 1950s, have been encouraged in developed countries (Csáki, 2019), until consolidating in the first explicit initiative of the movement propitiated in May 2009 by the U.S. government: data.gov and followed by others (Janssen, 2012).

Since then, Open Data has developed, according to the perspectives raised from the scientific production taken into account for this study, into platforms for: generate public policies in governments and democratic institutions (Carbonaro, 2021; Przeybilovicz & Cunha, 2018), support processes related to agriculture (Aydin & Aydin, 2020), incentivize businesses, their marketing process and operations (Ahmadi Zeleti, 2014; Zeleti & Ojo, 2017), contribute in the development of educational platforms (Paneque et al. , 2023), to mention in a limited way only a few areas.

The bibliographic information repository Scopus (Elsevier B.V., n.d.) has established itself as one of the references in the provision of transcendental scientific works due to its relevance and rigor. This data source will allow the construction of a review on the scientific work in the Latin region of the southernmost countries of the American continent, with the purpose of identifying the development of Open Data in this geographic region that shares multiple cultural characteristics.

Open data in Mexico

Although Mexico is not the Latin American country that represents the largest number of scientific papers on the subject of Open Data, according to the bibliographic records in the Scopus database, the nation contributes 68 documents (at the time of this study) to the regional collection. For this study, this territory is observed individually since it is the only Latin American country in the North American region.

The first document whose author is of Mexican origin appears in the records of this database in 2002, which indicates that its publication date is the year indicated above. This document corresponds to Lopez-Ortega (2002) and studies an open information system for the exchange of manufacturing data, and although it does not properly focus on Open Data as they are now known, it addresses the needs of the moment in terms of opening information for reuse in terms of systems that work with data for decision making (operation). Henceforth, the scientific production in the repository for the country, remains with similar approaches until 2012, where the work of Alvarez et al., (2012) studied a semantic processing platform of Open Data from public sources on tenders in Europe.

Likewise, works are shown mainly on the use of Open Data for governance, transparency and open government (González et al., 2014; Mercado-Lara & Gil-Garcia, 2014); climate change and standards for the use of information for scientific purposes (Álvarez-Carranza & Lazcano-Hernández, 2019; Coria et al., 2015); systems for educational resources (Vallejo-Figueroa et al., 2018); Smart Cities (Estrada et al., 2019); among other approaches that, as a whole, can be observed later in this work.

Open data in Central America and the Caribbean

The Central American region contributes with 31 scientific documents on Open Data inside the Scopus platform: Costa Rica (12), Cuba (11), Panama (2), Puerto Rico (2), Cayman Islands (1), Haiti (1), Jamaica (1), Dominican Republic (1) and Nicaragua (1). In this zone where nations converge geographically with the Caribbean Sea, the highest rates of social backwardness are present, with mostly impoverished nations, authoritarian governments, low rates of development,

education and opportunities (Horton, 2012). In addition, the historical characteristics of each of these countries, which have diverse cultural influences derived from their roots as colonies of developed powers, make their integration more complex.

However, research in Scopus in the field of Open Data has occurred regardless of the limitations, highlighting as a whole works on: Foundations for the establishment of government open data portals (Lopez, 2020; Ramos-Lopera et al., 2018, p.), transparency and access to information (Rodriguez-Arias & Cortes-Morales, 2019), education (Mangul et al., 2019; Munguia Molina et al., 2019), among others. Graphic representations of this group of regional documents are shown later in this study.

Open Data in South America

The last and most important territory (in terms of the volume of scientific papers according to Scopus) covered by this study is composed of: Brazil, Colombia, Ecuador, Chile, Argentina, Peru, Uruguay, Venezuela, Paraguay, Bolivia, Trinidad and Tobago, French Guiana and Suriname. The area in question, known as South America, represents at the time of this work, 580 documents in the Scopus repository, where the production of 343 documents in Brazil alone stands out, followed closely by Colombia (86) and Ecuador (55).

Based on the filtering of results from the Scopus platform, the oldest document in this group of documents based on keywords is authored by Mena-Chalco & Junior in 2009, studied an open-source scientific knowledge extraction system called "Lattes". The papers that follow are fully focused on the study of Open Data bases and their reuse.

Most of the papers focus on computational sciences (440), followed by social sciences (138), mathematics (96), engineering (82), earth sciences (35), environment (31), business, management and accounting (26), among other areas. The most outstanding papers by citation level are about: dataset analysis (Silberzahn et al., 2018), gravitational wave observation databases (Rich Abbott et al., 2021), natural products databases (van Santen et al., 2019), among other major topics, which are clarified once the methodology is applied later in this paper.

Methodology

This paper employs a qualitative methodology of semantic analysis of data co-occurrence through graphical representations of data (networks, temporality and density) using VOSviewer software (Petrovich, 2022; van Eck & Waltman, 2010, 2014). This will allow visualizing the topics on which scientific studies on Open Data have been carried out in Latin America, which will allow, in the first instance, to make comparisons in relation to the global framework and, in the future, to propose hypotheses for the strengthening of work in the field and the consolidation of regional leadership.

A Latin American framework of scientific production of Open Data is studied in depth, consisting of 664 documents found in a search for documents whose keywords coincided with "Open Data", from which an analysis was made of 4,418 keywords from them, of which only 219 keywords with more than five occurrences were plotted, the most significant ones.

Results

The findings from the co-occurrence graphing performed by VOSviewer are presented, first, by region, followed by the general framework of all Latin America and ending with the visual representation of the general framework of documents in Scopus. Each graph is accompanied by an interpretation of its content in context.



Figure 1. Cluster group of semantic networks from Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" in Mexico as of October 21, 2022. Elaborated using VOSviewer.

In the first group of graphs corresponding to Mexico, it becomes evident the focus of the scientific papers collected by Scopus in this country towards governance, mainly in connection with the public sector, with works aimed at the topics of open government, e-government and transparency.

Although in the previous theoretical foundation it is documented that research involving other variables has been carried out, the prevalence is less than five papers (See Figure 1).

In the case of the graphs representing the occurrence of keywords in scientific research in the region of Central America and the Caribbean, shown in Figure 2, the data demonstrate the low contribution in terms of documents from this group of countries, limited only to the appearance of the variable "Open Data" and its connection terms, although this, as demonstrated in the theoretical foundation of this work, does not imply that other variables have not been used in the works compiled by Scopus in this area.



Figure 2. Cluster group of semantic networks from Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" in the Central America-Caribbean region as of October 21, 2022. Elaborated using VOSviewer.

The last analysis of the Latin American sectors (see Figure 3) shows a greater richness in terms of the presence of variables from the works compiled by Scopus. Here, the most important variables from which the work in South America is developed are graphically evidenced: open government, e-government, semantic web, data mining, smart cities, machine learning, among others.

The evolution of the topics over time can also be seen in a decisive way, where the work has been enriched from the semantic web and open government, mainly, to machine learning and sustainable development. The structure of the graph shows an enormous interrelation of the elements and the growing interest in recent years in variables related to machine learning (see Figure 3).

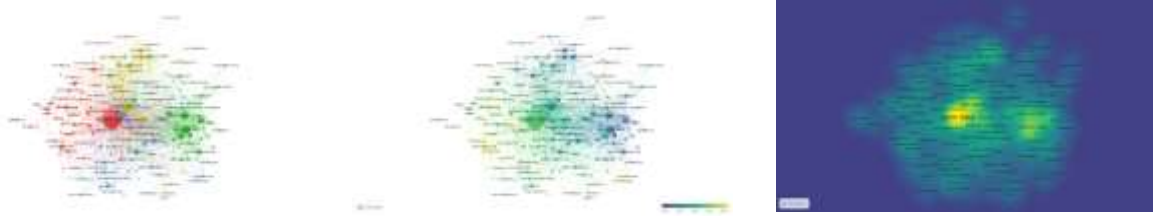


Figure 3. Cluster group of semantic networks from Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" in the South American region as of October 21, 2022. Elaborated using VOSviewer.

Figure 4 represents the general state of the knowledge networks that form the variables with which the scientific production in Latin America is connected, based on the Scopus repository on Open Data, in which two large clusters can be visualized, one relating the study variable to both government and the semantic web, and a third as yet undefined axis, where those of smart cities and machine learning stand out.

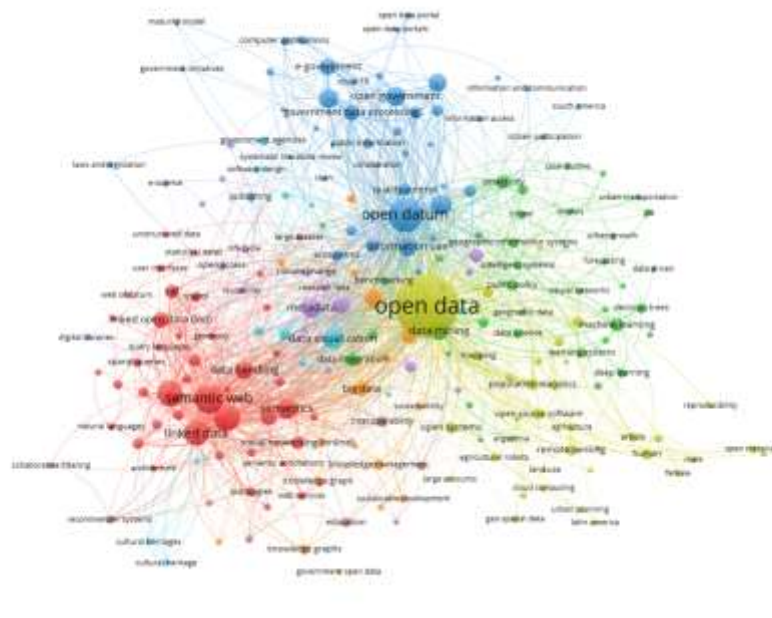


Figure 4. Clusters of semantic networks from Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" in Latin America as of October 21, 2022. Elaborated using VOSviewer.

In terms of temporality, the total data set represented in Figure 5 does not show significant differences with respect to the South American group previously reviewed; however, the clusters

colored in yellow stand out due to their dispersion of the thematic clusters that have traditionally been worked on in terms of Open Data.

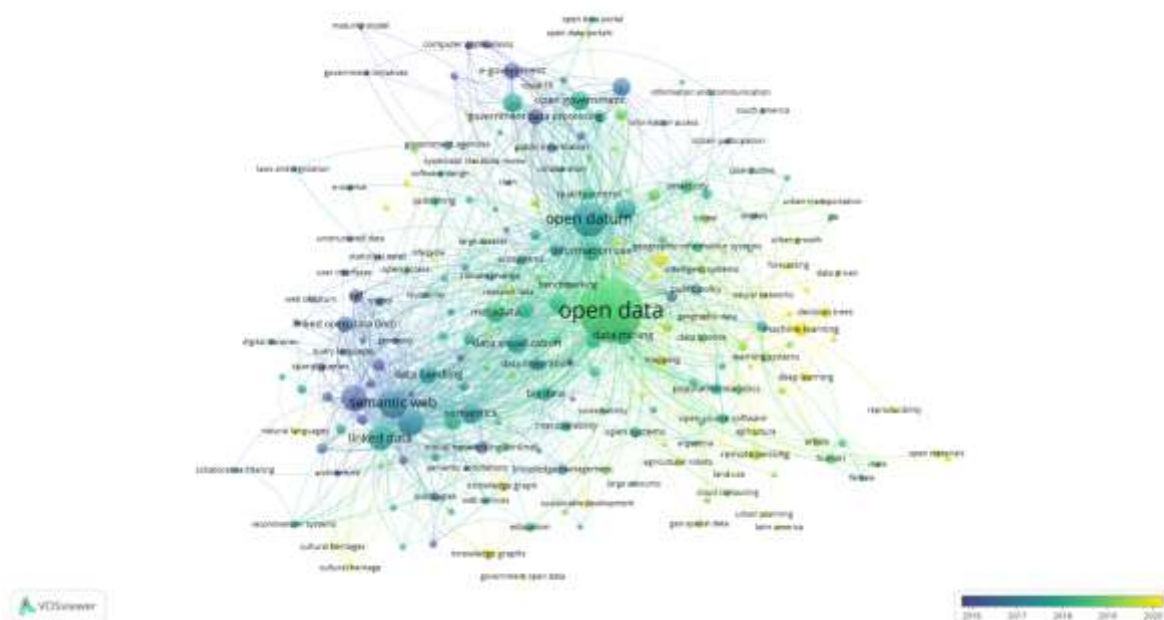


Figure 5. Clusters of semantic networks colored according to time of publication from Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" in Latin America as of October 21, 2022. Elaborated using VOSviewer.

Finally, the large global framework of Open Data according to scientific production in Scopus shows as clusters of main variables those related to: open government, transparency, databases and knowledge management, in addition to a greater diversity of variables on which the subject is studied.

Stand out as recent works (see Figure 6) from the graphical representation: blockchain, studies of the pandemic by COVID-19, knowledge management and open science, without clusters of dominant variables to a greater extent than others with an equal number of important topics.

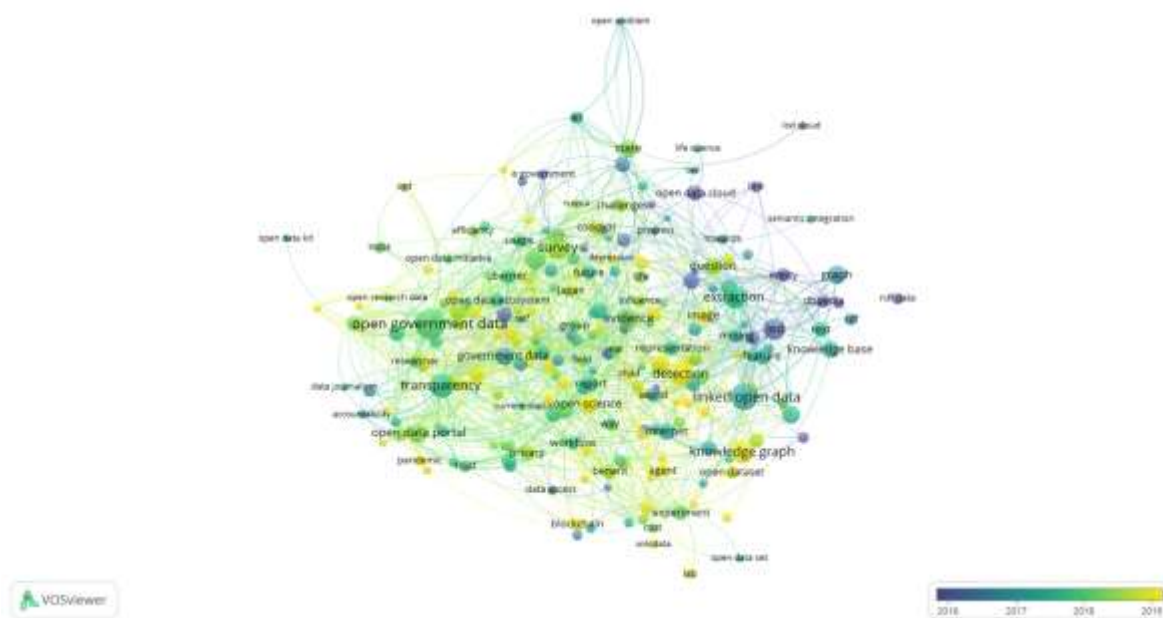


Figure 6. Clusters of semantic networks colored according to time of publication from all Scopus bibliographic records based on keywords with at least five occurrences of the term "Open Data" as of October 21, 2022. Elaborated using VOSviewer.

Discussion

Once the outlines of the data clusters on scientific papers have been plotted, it is possible to conjecture about them, and for this work we first discuss the disintegration of the elements in order to take a close look at each of the sub-zones involved in the study framework. Subsequently, we worked on the findings in the whole of Latin America and, finally, we discuss the comparative of the subset of this dissertation with the great universe of Open Data.

The motivations initially exposed for studying in smaller data sets the scientific works related to Latin America collected by Scopus, become a matter of debate for this exercise, since in addition to showing the similarities in the pace of the topics around the subject of study (with the exception of Central America and the Caribbean), they confirm the gaps in terms of relevance that Open Data have for local science.

The results also reaffirm concordance in terms of interests for the study of Open Data in Latin America, which explains the presence of the large variables (see Figure 4). In turn, the dispersion in the graph with data in recent times (see Figure 5), yellow color, defines the convergence of new

variables as a diversifying trend of the study, without the preponderance of any one in particular (although the term "machine learning" stands out).

Brazil draws attention, since it constitutes the bulk of the interest in studying Open Data with respect to the rest of Latin America, due to its superior scope with more than 50% of all production, in addition to positioning itself in the global framework within the 20 countries that contribute with more documents to the Scopus repository. Of course, the social and economic development of each country and region determines the depth with which the subject is studied, which can be correlated with the numbers with which less developed countries contribute in terms of scientific production.

In contrast, the global framework for the study of Open Data shows an early maturity, since it can be observed in the temporal evolution of the clusters, significant volumes of scientific work in new variables (see Figure 6). This scenario barely seems to be taking off in Latin America according to the graph mentioned above.

Conclusions

The exploration of science through the use of qualitative techniques in semantics makes possible the examination of large amounts of data exposing their natural connections, in such a way that enriches the perspectives despite the rigorousness of other existing techniques. This study is valuable due to the necessary retrospective look it offers on the scientific production on Open Data in the Latin American region.

It also concludes that Open Data may be having an early maturity due to its relatively recent emergence (2009) and its great momentum and thematic diversification in recent years. This can be understood by the nature of the connection of Open Data with information technologies and the enormous progress of technologies interrelated with the Internet.

It is also an early warning on the way to make more accessible all the information that can serve as material for reprocessing and value generation, not only as a responsibility of governments, but also as a resource of collective interest for social empowerment and the elimination of inequality gaps.

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DXB221

Early detection of behavioral conflict in an employee & an in-depth study on mental health first-aiders

Abstract

This paper focuses on a detailed review based analysis of early detection of behavioral conflict in newly recruited personnel in post pandemic world. The onset of pandemic, hybrid working, work from home, health and relationship issues have created massive impact on human behavior spurting many instances for unhappiness at the workplace and ill demeanor. There are many studies that confirm in the rise of issues related with mental wellbeing. The common of all are frustration, depression, anxiety & work-life imbalance. It is also seen that young recruitees are misbehaving and unhappiness is continuously increasing at work-place. Depression & anxiety have gone up by 25% according to World Health Organisation. Economic costs associated with depression & anxieties are estimated to be in the trillions of dollars annually due to lost productivity. Improvements in productivity & health result in a return of \$4 for every dollar invested in scaled-up treatment for common mental disorders.

The research methodology for the present paper is qualitative in nature. The geographical area & sample is restricted to different organizations in India.

The main aim of the paper is to find out how behavioral conflict may be detected at the initial stage and the mechanism for conflict management. There is a significant contribution being recognized for mental health first aiders who can be a great support for the people struggling with mental barriers, organization cultures as well as HR leaders who are supposed to provide a bridge between systems and people management. The paper will focus through behavioral interviews, conflict resolution mechanisms and therapeutic suggestions.

DXB226

Uncivil behaviour and individual experiences at Finland

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ABSTRACT

Uncivil behavior at the working place may lead to extra costs to company in the long run. Such costs are often difficult to notice, intervene and remedy. Uncivil behavior diminishes well-being and job satisfaction at individual level and decreases productivity and turnover at organizational level. This study focuses on individual experiences and behavior when facing uncivil behavior. A group of 207 working individuals were asked to complete the questionnaire by thinking about one person who behaved in an uncivil way at work. Factor analysis identified seven different types of behavior: The uncivil person A) think they have special leadership skills B) concentrates on his/her looks C) wants to be the center of attention D) manipulate others, E) has a very strong will F) is very self-sufficient G) acts in a shameless way. Respondents also evaluating their own traits and behavior.

The results indicated that strong will, willingness to lead and attention seeking got the highest ratings concerning uncivil behavior in Finland. Respondents who feel insecure around uncivil people tend to avoid such (uncivil) people. People who avoid uncivil individuals tend to think that uncivil people have a lot of narcissistic traits. Respondents who easily notice social games and use of power in social situations have met a lot of people with narcissistic traits and they think that uncivil people have a lot of narcissistic traits. Interestingly, when respondents appraised themselves as having narcissistic traits, there was no correlation with uncivil people. The results are discussed in terms of how uncivil behavior is interpreted in Finland and how to control and prevent this kind of damaging workplace behavior.

INTRODUCTION

Workplaces without shared organisational values or attentive leaders can become places where uncivil behaviour flourishes and spreads, causing negative outcomes, including work withdrawal and taxing individuals' mental health (Bunk and Magley, 2013). A survey conducted by Cortina *et al.* (2001) found that up to 71% of the 1,162 employees in the U.S. Eighth Circuit federal court system reported that they had experienced such behaviours over a period of five years. Due to uncivil behaviour's low intensity, it easily goes unnoticed or is easily ignored.

Common uncivil behaviours include ignoring co-workers or making demeaning comments about co-workers or subordinates (Cortina *et al.*, 2001). Examples of uncivil behaviour include sarcasm, critical remarks, disparaging tones, hostile stares and the “silent treatment” (Lim *et al.*, 2008). Difficult behaviour practiced by difficult persons or narcissists is defined as ‘low-intensity deviant behaviour with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviours are characteristically rude and discourteous, displaying a lack of regard for others’ (Anderson and Pearson, 1999: 457). Consequently, the uncivil or disruptive behaviour is always upsetting to the milieu and arouses strong emotions in all involved (Myers, 2008). Uncivil behaviour may be precursor to more intense, aggressive acts that may be construed as workplace bullying (Andersson & Pearson, 1999) and other forms of destructive behaviour such as open conflict in the workplace, workplace violence, workplace aggression and workplace harassment (Johnson & Indvik, 2001). Uncivil behaviour is harmful because it shapes the organization’s culture in negative way. If tolerated, uncivil behaviour is then accepted by everyone (Andersson & Pearson, 1999; Loh & Loi, 2018).

While there are numerous studies of narcissistic leaders and their uncivil behaviour, few are quantitative perspective and from eye of the beholder – and their reactions. This study focuses on the individual experiences when facing uncivil behaviour. Uncivil behavior is tested using quantitative data from a Finnish sample.

EARLIER RESEARCH

2.1 Uncivil behaviour

The phenomenon of uncivil behaviour has been studied in different fields, e.g., industry, health care, and higher education (Stecker and Stecker, 2014). Studies describe uncivil behaviour as a **specific type of workplace deviance** (Andersson and Pearson, 1999), usually experienced as workplace mistreatment (Sliter *et al.*, 2012) but distinguished from aggression (Ferguson, 2012). It is a **kind of psychological harassment and emotional aggression** that disrupts the workplace norm of mutual respect (Cortina *et al.*, 2013; Felblinger, 2008) and is harmful to employees as well as organisations (Zhou *et al.*, 2015). **It is defined** as low-intensity deviant behaviour with ambiguous intent to harm the target in violation of workplace norms mandating mutual respect (Andersson & Pearson, 1999; Pearson *et al.*, 2000). Low-intensity behaviour means that uncivil acts are less intense and do not carry transparent intent (Ferguson, 2012).

According to Andersson and Pearson (1999), incivility is a minor form of mistreatment but can significantly impact an employee’s attitudes and behaviours towards an organisation. Workplace incivility has been found to be associated with **numerous negative effects**, including increased absenteeism (Sliter *et al.*, 2012), higher turnover (Johnson, 2001), poor mental health (Laschinger *et al.*, 2013) decreased productivity (Pearson *et al.*, 2000), turnover intentions (Alola *et al.*, 2018) and negative effects on employees’ psychological and physical health (Lim *et al.*, 2008). Even with an absence of clear intent to harm, incivility may be detrimental to targets, witnesses and co-

workers, adversely impacting the organisation if this behaviour is not addressed (Pearson et al., 2001).

Reasons for uncivil behaviours are varied; they include professional jealousy; unclear, amplified, competing, and/or overly demanding work expectations; low salaries and salary compression; the need to adopt new technologies; stressful, volatile work settings; competition for scarce resources; and the pursuit of professional advancement (Clark, 2013; Clark et al., 2013).

Narcissistic people have a specific tendency to harm workplace norms and studies **of narcissistic leaders** indicate that they inflict damage on others, for example, through bullying and coercion (Aasland *et al.*, 2008). Narcissists have a strong propensity for self-enhancement (Rhodewalt *et al.*, 2006; Zuckerman and O’Loughlin, 2006) and a sense of entitlement (Davis *et al.*, 2008; Reidy *et al.*, 2008). Furthermore, narcissistic leaders use all the resources available to them to attract the admiration of others as a way of confirming their feelings of superiority (Higgs, 2009; Maccoby, 2007).

METHODS AND SAMPLE

Data

The data was collected during 2019-2020. The questionnaire instruments were sent to respondents who have taken courses at the Open University and University of Applied Sciences, Finland. A total of 214 respondents completed the questionnaire, indicating a response rate of 30%. All participants had a professional background in business and possessed work experience. The minimum age of respondents was 30 years. The topic under the exploration was sensitive, personal, potentially emotional and difficult for the respondents. Therefore, it was expected that data collected in the questionnaires would be more appropriate, with the subjects remaining anonymous and distant, leading to more straightforward and honest answers.

Questionnaire and methods

Questionnaire consisted of two parts:

- 1) uncivil persons’ behaviour and qualities with 39 items with Likert-scale 1-5. The respondents were asked to evaluate the one uncivil person from the current working place or from his/her working history.
- 2) respondents’ own traits and also responses on the uncivil behaviour with eight items (Likert-scale 1-5).

The uncivil persons behaviour -questionnaire was analysed in SPSS-Program with principal component analyses (Varimax) to identify uncivil behaviour dimensions.

Dimensions were as follows:

- Willingness to lead, 10 items, Cronbach alpha: 0,917, items e.g.:

- S/he sees him/herself as a good leader
- S/he would like to have authorship to others
- Focus on own appearance, 5 items, Cronbach alpha: 0,868, items e.g.:
 - S/he likes to show of his/her body
 - S/he seems to like his/her own looks
- Attention seeking, 4 items, Cronbach alpha: 0,829, items e.g.:
 - S/he seems to enjoy when being at center of attention
 - S/he thinks that everyone wants to listen his/her stories
- Manipulating, 4 items, Cronbach alpha: 0,732, items e.g.:
 - S/he seems to have natural capability to impact on others
 - S/he is good with manipulating others
- Strong will, 2 items, Cronbach alpha: 0,724, items e.g.:
 - S/he is not happy until s/he has gotten what want wanted
- Self-Sufficiency 3 items, Cronbach alpha: 0,557, items e.g.:
 - S/he looks always like s/he knows what to do
- Insolence 2 items, Cronbach alpha: 0,443, items e.g.:
 - S/he dares to behave in any way s/he wants

For the results, Pearson correlation analyses and ANOVA were used.

RESULTS

4.1 General overview

The respondents rated Strong will as the most occurring behaviour of uncivil persons (see Table 1), secondly highest was Willingness to lead and third was Attention seeking. The smallest ratings given were for Insolence and Focusing on own appearance.

Table 1. Uncivil behaviour means (Likert scale 1-5)

Uncivil behavior dimensions	Mean (std)
Willingness to lead	4,10 (0,726) (2.)
Focus on own appearance	2,67 (0,965) (7.)
Attention seeking	3,98 (0,862) (3.)
Manipulating	3,48 (0,800) (5.)

Strong will	4,47 (0,694) (1.)
Self-sufficiency	3,68 (0,878) (4.)
Insolence	2,82 (0,524) (6.)
Total – Uncivil behavior	3,60 (0,486)

Table 2 shows respondents’ own qualities and behaviour. The highest rating for respondents was Trying to avoid uncivil person (mean 4,37) and Felt themselves insecure with their company (mean 3,21). Most respondents also thought that they easily notice social games and use of power in social situations (mean 4,02) and a few of them regarded themselves as having narcissistic traits (mean 2,47).

Table 2. Own behaviour and qualities (Likert scale 1-5)

Own behaviour when facing uncivil behaviour	Mean (std.)
Trying to avoid him/her	4,37 (1,003)
Feeling myself insecure	3,21 (1,340)
Own qualities	
I have myself narcissistic traits	2,47 (1,097)
I notice easily social games and use of power	4,02 (0,890)

Table 3 shows correlations between appraisals of narcissism, own behaviour and qualities with uncivil behaviour. All other dimensions correlated with narcissistic traits than Self-sufficiency. Respondents who appraised that they have met a lot of narcissistic people tend to regard Willingness to Lead, Focus on own appearance, Strong will and Insolence as uncivil behaviour.

Avoiding uncivil behaviour related to persons with Willingness to lead, Attention seeking, Strong will and Insolence. Those who Felt insecure were those who experienced uncivil behaviour as Manipulating, Strong willed or Self-sufficient. Both Avoidant behaviour and Insecure feeling were correlated with Overall uncivil behaviour. Those respondents who appraised of having themselves as Narcissistic traits were not correlated with any uncivil behaviour dimensions. Respondents who

felt that they easily Notice social games and use of power in social situations were especially correlated with Willingness to lead, Strong will and Insolence.

Table 3. Pearson correlations between appraisals of narcissism, own behaviour and qualities with uncivil behaviour dimensions

The person with uncivil behaviour	Has a lot of narcissic traits	I have met a lot of people with narcissic traits	I avoid those kind of people	I feel myself insecure with those kind of people	I have also narcissic traits	I easily notice social games and use of power
Willingness to lead	0,538**	0,184**	0,348**	0,095	-0,074	0,244**
Focus on own appearance	0,212**	0,198**	0,032	0,105	-0,022	0,017
Attention seeking	0,475**	0,126	0,274**	0,057	-0,064	0,126
Manipulating	0,325**	0,127	0,77	0,339**	-0,058	0,065
Strong will	0,407**	0,145*	0,313**	0,159*	-0,103	0,207**
Self-sufficiency	0,119	-0,015	0,08	0,305**	-0,070	-0,043
Insolence	0,293**	0,138*	0,398**	0,105	-0,093	0,155*
Overall Uncivil Behaviour	0,556**	0,184**	0,294**	0,207**	-0,106	0,133

Table 4 reports the results indicating own qualities and behaviour as well as narcissic traits with person of uncivil behaviour. Respondents who Feel themselves insecure with uncivil people tend to Avoid those. Avoiding people tend to think that uncivil people have a lot of Narcissic traits. Respondents who easily Notice social games and use of power in social situations have met a lot of people with Narcissic traits and they think that uncivil people have a lot of Narcissic traits. If respondent thought having Narcissic traits themselves, correlation did not occur with any of the items.

Table 4. Pearson correlations between appraisals of narcissism, own behaviour and qualities

	The uncivil person has a lot of narcissistic traits	I have met a lot of people with narcissistic traits	I avoid uncivil persons that I describe here	I feel myself unsecure with those kind of people	I am having also narcissistic traits	I easily notice social games and use of power
Has a lot of narcissistic traits	1					
I have met a lot of people with narcissistic traits	0,213**	1				
I avoid uncivil persons that I describe here	0,441**	0,806	1			
I feel myself unsecure with uncivil people	0,127	0,097	0,209*	1		
I am having also narcissistic traits	-0,044	0,119	-0,069	-0,012	1	
I easily notice social games and use of power	0,225**	0,310**	0,087	0,100	-0,014	1

DISCUSSION

Among Finnish respondents, Strong will was the most occurring behaviour of uncivil persons, second highest was Willingness to lead and third was Attention seeking. The least prevalent uncivil behaviour in Finland was acting in an Insolent way and Focusing on own appearance. It seems that Finnish nationals tend to get anxiety around people with strong will, people who want to be in positions of being in charge, and the center of the attention. Individuals who do not give room to others, and do not consider others' opinions are perceived to break the rules of Finnish working life. It is not common to observe uncivil persons as focusing on their looks or behaving in a shameless way. Such uncivil behaviour is not so obvious.

People regard uncivil behaviour as an outcome of narcissic personality because all other dimensions correlated with narcissic traits than self-sufficiency.

Avoidance of uncivil behaviour was connected with behaviour of Willingness to lead, Attention seeking, Strong will and Insolence. Feeling insecure were those who experienced uncivil behaviour as Manipulating, Strong willed or Self-sufficient. It would have thought that avoidant and feeling unsecure behaviour would have same tendencies with correlations but here the unsecure feeling was associated with manipulating, strong willed and self-sufficient people. Manipulating behaviours can cause confusion due to unclear communication and possible misleading due to own interests.

Those respondents who reported having narcissistic traits were not correlated with uncivil behaviour dimensions. It seems that narcissistic people do not pay attention, especially to some dimensions of uncivil behaviours.

Respondents who felt that they easily notice social games and use of power in social situations were especially correlated with Willingness to lead, Strong will and Insolence. People who notice the social surroundings easily tend to appraise uncivil behaviour mostly as willingness to take charge, strong willingness and insolence. Other uncivil behaviour dimensions did not have this kind of attention from them.

Respondents who feel insecure with uncivil people tend to avoid those. People who avoid uncivil persons tend to think that uncivil people have a lot of narcissistic traits. Respondents who easily notice social games and use of power in social situations have met a lot of people with narcissistic traits and they think that uncivil people have a lot of narcissistic traits.

Interestingly, respondents who perceived themselves as having narcissistic traits did not have correlation with any of the items. These respondents did not correlate with trying to avoid uncivil persons or feeling insecure around them. They did not either appraise those as narcissistic or had not met narcissistic behaving people. People that regard themselves as narcissistic do not suffer or have as much anxiety of uncivil behaviour compared to the rest.

Creating secure a workplace would require uncivil behaviour patterns to be recognized and discussed in the workplace. Uncivil behaviour should not be rewarded – meaning for example, that persons who want power for the sake of should not be given that power. Sociograms be one way to find potential uncivil and disturbing behaviour at the workplace and thus identify potential workplace disruptions at an early stage.

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DXB233

Top Management Team Diversity and Firm Performance in Digital Era: The moderating effect of Chief Digitalization Officer appointment

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Abstract

The paper sheds a light on impactful diversity dimensions of upper echelons across German companies and their impact on the appointment of Chief Digitalization/Information Officer during the turbulent years of internet of things and digitalization in the second decade of twenty-first century. The study consists of literature review on diversity across senior management of German firms in an era characterized with global business technological digital disruption. Study results show that top management team diversity positively affects the appointment of Chief Digitalization/Information Officer. Also, the paper results show that firms with incumbent Chief Digital Officer in their top management team tend to be more intact with the digital era than those firms, which have not appointed any Chief Digitalization Officer.

Key words: Top management team, diversity, chief digitalization officer, digital era

Introduction

For many top managers it is quite comfortable and reasonable if they come from different professional backgrounds and they contribute into finding ad hoc solutions and making strategic decisions by bringing in various knowledge, previous experience and perspectives (Velinov & Gueldenberg, 2016). However, in the business reality, this is not very common practice. Previous studies by Carpenter & Sanders (2004) on upper echelons failed to provide consistent evidence for the positive effects of diversity. Also, other body of research by Finkelstein & Hambrick, (1996) and Isugi (2019) bring evidence that diversity is not always profitable for the companies. For example, studies by Lyon & Dess (1999) bring ambiguous results on diversity positive role in driving firm success due to the critical role of top team strategic decision-making and leadership. Other authors suggest that the link between TMT diversity and organization performance is not linear but curvilinear (Richard, O. C., Barnett, T., Dwyer, S., & Chadwick, K, 2004; Lee & Chae, 2017).

Literature Review

Body of research on upper echelons suggests that the impact of diversity is dependable on the conditions under which the senior management operates, with homogeneous TMTs performing better in predictable environments, while the heterogeneous managerial elites being more

profitable in environments comprising of high ambidexterity and uncertainty (Cooper, Patel & Thatcher, 2014).

Another study by McMohon (2010) suggests that the low number of empirical studies for the positive impact of diversity is that in the framework of upper echelons theory, diversity is researched as a stigmatized construct regardless of the specifics of its dimensions to which it is statistically and theoretically implied. In the literature review often studies on diversity make no mitigation from theoretical perspective between various diversity dimensions, such as gender, nationality, dominant function diversity, firm tenure, etc. Majority of diversity pillars in the upper echelons framework are anticipated to steer the same results, to offer similar advantages, and to lead into the same negative consequences. Jackson (2004) suggested that while in the theoretical framework diversity is presented as a general construct, it is crucial to decompose the construct to the level of separate attributes. Similarly, Hambrick, Humphrey & Gupta (2015) argue that the heterogeneity assumption when implied to the upper echelons research naturally leads to questions what particularly heterogeneity dimensions are meaningful and how they affect TMT strategic decisions.

The conception of multi-dimensional group diversity (Trezza, 2008) not only mitigates the spectrum of diversity dimensions but it shifts the assumption that diversity dimensions are independent of each other as well. The contemporary approach to empirically examination and discussion of results on different diversity dimensions are shown in a few studies. They are based on the concept that the impact of each diversity dimension is independent of the presence of other diversity aspects (Jackson & Joshi, 2004; Roberson, 2019).

Body of empirical research shows that each diversity dimension in the organizations are interdependent with other diversity dimensions (Pelled, Eisenhardt & Xin, 1999; Stahl, Maznevski, Voigt & Jonsen, 2006). For example, it is plausible that the level of adaptation to which a foreign executive will be integrated in and contribute to a top management team will be dependable on the length of international experience and mindset of his/her peers.

According to Resource dependence theory, board members' international experience is one of the key factors for acquiring exposure and knowledge of international managerial best practices and emerging business strategies (O'Rourke, 2003; Sanders and Tuschke, 2007; Al Mamun and Seaver, 2021). Higher ratio of executives and non-executive members with international experience positively influences companies' access to essential resources, such as advice regarding international best practices (Heyden et al., 2015; Al Mamun and Seaver, 2021; Tihanyi et al., 2014). Previous studies on TMTs show that firms with internationally experienced TMT members are capable of better implementing and promoting international business policies (Hillman et al., 2000; Hillman et al., 2009; Al Mamun and Seaver, 2021), including diversity and inclusion practices. Promoting diversity and inclusion across the firm liaisons better stakeholder engagement and offers corporations a managerial competitive advantage to their competitors (Hasan et al.,

2018), which leads to reducing the cost of capital, strengthening market position and enhancing profitability (Shahbaz et al., 2020). Foreign directors can bring their cultural values and perspectives on companies' role in society and stakeholder view of business into communication in boards (Syed/Ozbilgin, 2009). Foreign board members are also more focused on shaping visions and more sustainable-oriented business (Harjoto et al., 2018). These foreign board members' presence brings new different views, experiences, or access to networks (Beji et al., 2021). Harjoto et al. (2018) published one of the few studies focused on the link between nationality diversity and firm performance. They find that TMT nationality diversity leads to higher firm performance.

Body of research on TMT's influence on corporate strategy has been conducted using Hambrick and Mason's (1984) upper echelon theory that argues firm outcomes, non-market strategies and firm performance are the result of the reflections of the TMT perceptions and cognitive fundamentals of influential agents in the organization (Abatecola & Cristofaro, 2018). The main argument is that the theoretical model is not the only motive beyond strategic decisions in organizations (Hambrick and Mason 1984), but rather, strategic decisions are the outcome of both the current status and the dimensions of top management team members in the firm. Moreover, Hambrick & Mason (1984) suggest that while top managers make strategic decision, they are exposed to continuous incentives, their cognitive fundamentals and perception sift out and give misleading perception to the decision maker, which subsequently affect their strategic choice. Thus, TMT characteristics such as cognitions, mindset, rational behind strategic decisions and perceptions are challenging to be observed and measured. This is the main reason why TMT members' demographic characteristics have been investigated rather than psychological aspects for the purpose of upper echelons theory development (Hambrick & Mason 1984; Jiang, F., Ananthram & Li, 2018).

Upper Echelon Theory

Based on upper echelon theory, many previous studies have theoretically and empirically tested the impact of individual characteristics of senior managers in the ongoing process of making strategic decisions (Talke et al. 2011). The outcomes of the latter studies are serving as a support that TMT demographic diversity has an impact on decision making. Similarly, studies on upper echelon theory have recently have revealed more dimensions among top managers, which research the management enlists in the same framework as TMTs (Finkelstein & Hambrick 1990; Hassan & Marimuthu 2018). Furthermore, in terms of top management teams, previous studies argue that top managers' strategic preferences are affected by their perceptions and gained professional experience with company strategy (Zhu, Hu & Shen, 2020). After year 2000 there are several studies, which have applied agency and the upper echelon theories to explain the TMT's role in strategy planning and execution and their study results showed that both TMT position and TMT demography characteristics are essential factors in affecting strategy formation and execution. Contrary, study by Oduor & Kilika (2018) has examined the TMT demographic diversity and its impact on decision making processes in the top management and the study has proposed future research venue for measuring the level of heterogeneity among TMT members.

Generally, the theory of upper echelons advocates both objective situations and TMT characteristics, such as individuals' values, mentality, perceptions and psychological cognitive fundamentals affect the strategic decision-making process and influence organization performance. Research on TMT diversity stems from the strategy literature and is normally linked to studies of strategy execution and board leadership, that is predominantly contextualized within the upper echelons concept of the organization (Hambrick and Mason 1984). As the paper sheds a light on TMT characteristics (management and supervisory boards of directors within German firms with two-tier corporate structure) and its impact on firm performance in period of intensive industries digitalization, upper echelon theory is considered to contribute to the understanding of the influence of TMT diversity dimensions such as TMT gender diversity, TMT age diversity, TMT Nationality diversity, etc. on firm performance. Similarly, in regards to the TMT gender diversity impact on firm performance, the real contribution of a female team member to firm performance could depend on the level of her similarity to male counterparts in TMT as of level of education, career length, nationality, social status, professional networking and international experience, etc. (Dezso&Ross, 2012).

Research Model

The starting point of the paper is the goal to empirically test the influence of the top management team diversity on organization performance in digital era, which has started after year 2000. In the paper it has been conducted extensive literature review on upper echelon theory and in the paper data collection were conducted on top managers from selected German multinational corporations (MNCs). Similarly, there are set three paper's goals in order to logically investigate the phenomenon of emerging dimensions in top management team. Firstly, the need to examine TMT diversity as a critical and emerging phenomenon, which takes place not only in firms from emerging and developed markets, but it an issue for the business and society as well. Furthermore, TMT diversity needs to be researched as heterogeneous factor for the firm prosperity and success as TMT diversity is more than simply discovering the influence of main TMT characteristics such as age, gender, function background, education level, etc. Secondly, by discovering the impact of upper echelons diversity on organization performance, it is critical to realize its antecedents. Thirdly, study on upper echelons is inevitably multilevel/hierarchical by nature as different stakeholders are involved such as TMT members, firms, and other participants from the internal and external business environment. Therefore, mapping out how TMT characteristics refer upper echelon theory and analytically examining their impact on firm business success are imperial for writing the paper.

The paper's research questions are the following:

1. How Chief Information/Digitalization/Technology Officer if available affect the relationship between TMT diversity and firm performance across German firms?
2. How the emerging role of Chief Digitalization officer and TMT diversity dimensions contribute to the development of upper echelons theory?

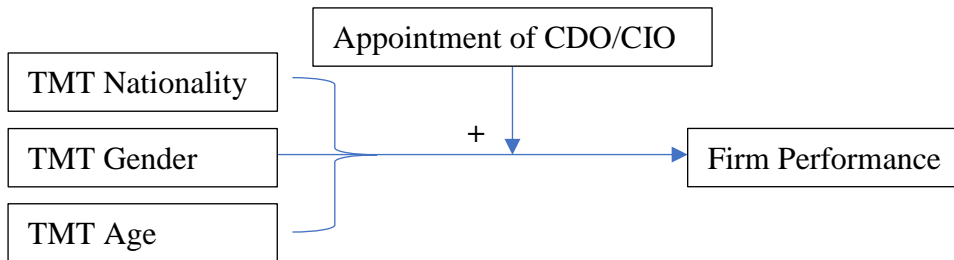
For the purpose of the study, there were developed three hypotheses as follows (Exhibit 1):

Hypothesis 1: The presence of CIO or CDO moderates positively the relationship between TMT Nationality and Firm Performance

Hypothesis 2: The presence of CIO or CDO moderates positively the relationship between TMT Gender and Firm Performance.

Hypothesis 3: The presence of CIO or CDO moderate positively the relationship between TMT Age and Firm Performance

Exhibit 1: Research Model



Source: own elaboration

Top Management Team Digitalization

Since the start of the 21st century, an emerging number of automatization and robotization have penetrated in wide varieties of business by introducing digitalization processes, which served as springboards for the multinational corporations to emphasize on creating competitive advantage through disruptive innovation and strategic shifts to developed and emerging global markets (Butollo, 2020; Dobrzanski, Bobowski, Chrysostome, Velinov, & Strouhal, 2021). The digitalization era (year 2001-ongoing) is characterized by the emerging role of hardware, middleware and software along with disruptive global supply chain and unbundled networking via internet and global mobile technologies. Therefore, digitalization goes much further innovative disruptions in increasing the quality of physical and information technology infrastructure, as well as the demanded technical digitalized processes during “Fourth Industrial Revolution” (Petrillo, De Felice, Cioffi, & Zomparelli, 2018).

The Digital era is characterized with swift and unpredictable digital transformation and thus multinational firms are putting much efforts to drive artificial intelligence and digitalization throughout all levels of management (Holmund, 2017).

Methodology and Empirical part

The data collection covers the 100 largest stock-listed companies by market capitalization on 31st December 2016 in Germany (see the list of firms in the appendix). The eligibility criteria are applied in order to avoid the inclusion of companies that are not operative or have very small actual business operations. It is also important that the companies in the sample are deemed to be capable of making independent strategic decisions (in particular that the companies in our sample have a potential charter to move into foreign markets without being restricted by the interests of a parent company or any other affiliated company). There were collected 1944 top management team members from the hundred German corporations. In the beginning of the paper during the first phase the data collection were gathered at the end of year 2016 from secondary information sources such as multinational firms' annual reports, Eurostat and databases LinkedIn, XING, Munzinger.com, Wirtschaft Knopf and Thomson Reuters.

The paper considers executives and non-executive directors into account, because these senior managers make top firm decisions and align the strategic directions. The non-executive directors are responsible for monitoring and advising the TMT. Without underestimating the importance of this role, executive directors are seen as having a larger influence on the actions of a firm (Cannella, Park & Lee, 2008; Marimuthu & Kolandaisamy, 2009). Therefore, non-executive directors are excluded.

Additionally, data on Chief Information/Digitalization/Technology Officer (CIO/CDO/CTO) and TMT profiles were collected directly from the annual reports of the respective companies. Statistical operationalization in STATA IC 16.1 was applied after the collection of secondary data. In terms of empirical part of the paper was applied correlation matrix with the selected variables from the hypotheses above, random-effects regression on CIO/CDO/CTO existence on boards and firm performance.

Control variable

Existence (Appointment) of Chief Information/Digitalization/Technology Officer

Over time the role of the Chief Digitalization Officer (CDO) has been increasingly covered by media outlets, academia and practitioner-oriented journals (e.g., Honegsberg et al., 2019; Tumbas et al. 2017). Therefore, organizations might have got the impression that shareholders will encourage them as an organization pioneering digital initiatives and driving digital innovation if they create the position of the CDO. Similarly, the appointment of a CDO might express a new management trend in the 21st century across varieties of industries, which is defined as a relatively transitory collective belief that a management approach leading into rational management progress (Abrahamson 1996, p. 257). Korhonen (2015) suggests in case that organizations appoint CIO/CDO/CTOs to please shareholders, the creation of the new position is likely to not be the

product of an overall digital transformation strategy and occur without considering the underlying organizational conditions (e.g., existence of CIO position, CDO’s role profile). As a result, multinational firms may not benefit from such an appointment and, in turn, shareholders will not perceive the appointment of a CDO as a positive strategic move anymore. In the table 1 all the variables are presented with detailed explanations.

Table 1: Descriptions of variables

Variable - Description
(Dependent) Company Performance - Ratio of Foreign Sales to Total Sales
(Control) Appointment of CIO/CDO/CTO in TMT
(Independent) TMT Members Gender (Independent) - Absolute number of executive and non-executive in TMT
TMT Members Age

Source: own elaboration

Results and Discussion

When looking at the presence of CIO or CDO in the TMT of the selected firms we notice that around 50% of the firms have orientation towards firm digitalization. The descriptive statistics of the TMT indicate that its nationality diversity has a mean of .85, although it is crucial to underline that this variable was measured at country level rather than at a regional level. The average number of different nationalities represented in the TMT is of fifteen members and the typical TMT has approximately 10.78 members. Of these, 91% are male executives (see table 2 below).

Table 2: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
TMT Gender	1,944	.9093718	.2871536	0	1
TMT Age	1,184	66.44848	8.933343	44	91
CDO/CIO	1,944	.5555556	.4970318	0	1
Firm performance	1,944	.6296862	.1577076	.23	.9

Source: Own elaboration in STATA Software

As in the literature, this study argues that TMT diversity influences a firm’s success (Aboramadan, 2020). Our findings confirm that TMT and international experience diversity affect further firm performance (see table 3).

Table 3: Multivariate correlation

Firm Performance	Coef.	Std.Err.	t	P> t 	[95% Conf. Interval]
TMTGender	.0185612	.0343232	-0.54	-.0859471	.0488247
TMTAge	-.0000205	.0015439	-0.01	-.0030517	.0030107
CIO/CDO/CTO	-.002087	.0109419	-0.19	-.023569	.0193949
_cons	.4594897	.0758548	6.06	.310566	.6084133

Significance if $p < 0,05$

Source: own elaboration through STATA software, 2022

Firstly, the control variable CIO/CDO was introduced in order to observe its effects on the dependent variable of firm performance. Afterwards the independent variable and then the interaction terms were added one at a time with the purpose of observing their additional explanatory power (see Table 4). Accordingly, we run a total of one model. The model tests the hypotheses with the control variable of CIO/CDO existence in the TMT in all three hypotheses. The models assesses the hypotheses by using the Hierarchical Linear Modelling (Carpenter, 2004) and subsequently checking for the individual effects on the dependent variable.

Although previous research examined links between the TMT and certain performance variables, to the author’s best knowledge, there are no studies that have addressed the relationship between the TMT diversity dimensions such as education level, career length, team tenure, company tenure and TMT nationality diversity and a firm’s performance through the moderating role of TMT size and CIO/CDO/CTO appointment in the TMT. Therefore, this method of measuring emerging TMT diversity dimensions and firm performance, which allows collecting current information and it constitutes the first contribution of the paper. Second, the study supports the hypothesis that, based on TMT demographics, companies will have greater or less propensity for further expansion. The upper echelons theory was an appropriate conceptual framework for analyzing this strategic issue. The study finds that an appointment of Chief Digitalization/Information/Technology officer moderates the relationship between gender and age diversity and firm performance.

Table 4: Hypotheses test

	Beta	t	Sig.	Supported or Not Supported
Constant	0.60	16.12	0.00	Supported
<i>Hypothesis 1:</i> <i>The presence of CIO or CDO moderates positively the relationship between TMT Nationality and Firm Performance</i>	-0.05	-0.54	0.59	Not Supported
<i>Hypothesis 2:</i> <i>The presence of CIO or CDO moderates positively the relationship between TMT Gender and Firm Performance.</i>	-0.04	-0.28	0.78	Not Supported
<i>Hypothesis 3:</i> <i>The presence of CIO or CDO moderate positively the relationship between TMT Age and Firm Performance</i>	0.08	0.60	0.55	Not Supported

Significance if $p < 0,05$

Source: own elaboration in STATA Software, 2022

Conclusion

The study underlines that its authentic theoretical access to the quantification could be applied in managerial comparative study of TMT diversity within firms from different industries. The empirical findings of this study showed that TMT diversity possesses an important impact on firm performance. These results propose some conceptual and practical implications about the relationship between TMT diversity and company performance via the iteration of existence of CIO/CDO/CTO. Furthermore, the findings of this study suggested that TMT diversity and appointment of CDO should be considered for firms that desire to foster firm performance especially during digital era. In this study, the relationship between TMT characteristics and firm performance was elucidated. Many previous studies have shown that TMT characteristics have critical effects on organizational outcomes and contextual factors such as firm culture, climate, and knowledge base. In addition, many scholars have studied the social and contextual factors that influence company performance. However, few studies have examined the direct relationship between TMT diversity and organizational performance, as most of existing studies are concerned with a group impact on firm performance.

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Understanding Consumer Reactions to Fintech AI Algorithms

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Abstract:

This study examines the role of consumer aversion to artificial intelligence (AI) algorithms in the fintech service sector. Among the most widely known applications of AI are Robo Advisors as substitutes for financial advisors and credit and loan application processing. Consumer reaction to the use of such AI algorithms is examined in the salient context of an AI algorithm making a rejection decision toward a customer. More specifically, we examine consumer reaction to a loan application being rejected by a digital bank and how this impacts skepticism towards the fintech sector and willingness to collaborate with the digital bank in the future. This collaboration may involve supporting future requests of the bank to become involved in community social impact initiatives. The basis of the rejection decision is examined as a moderating variable. Loan applications were rejected either for environmental, social and governance (ESG) performance reasons or financial performance reasons. Using experimental data from 158 respondent, this study found that algorithm discomfort significantly increased skepticism towards fintech firms and subsequently reduced consumer willingness to collaborate with such firms. The study further found that the perception that customer loan applications were rejected for ESG reasons, reduced the tendency for Algorithm discomfort to generate skepticism toward the fintech sector.

Introduction

Artificial intelligence (AI) is increasingly used in a variety of consumer financial situations. Robo-advising may be its most developed form in which an AI application manages consumer investments. Usually, this involves pursuing a long-term passive investment strategy using exchange traded funds (ETFs), executing a customer's chosen investment strategy (Capponi, Olafsson and Zariphopoulou, 2021). Research suggests that younger consumers are more open to AI financial decisions. For example, automated investment platforms or robo advisors are less likely to be used by older and wealthier consumers, but rather by under 45-year-old consumers motivated by overconfidence in their investment abilities and higher-than-average willingness to take risk (Piehlmaier, 2022). AI systems are also used in loan underwriting, involving an assessment of the risk associated with granting a loan to an applicant. AI loan decision are most applicable in situations where the applicant does not have unique characteristics and the lender does not base loan decisions on idiosyncratic or unpredictable considerations (Sachan et al., 2020). When loan decisions are informed by abundant and varied data representing all market segments of loan applicants, AI provides cost-effective and quick decisions that clients find attractive regardless of the favorability of the decision.

Research has examined how consumers view AI decisions versus human decision making (references). The research evidence indicates that consumers expect AI to be better (than humans) on objective task, and humans to be better (than AI) at subjective tasks. This research has focused on consumer perceptions of product and service design and delivery. However, researchers have not studied consumer response to AI in situations of rejection. Consumers make a variety of applications such as job, loan and college applications involving rejection decisions by AI. However, there is no research addressing this issue. This study addresses this gap in the literature and industry practice.

RQ1: How do consumers respond to AI rejections?

Environmental, Social and Governance (ESG)

Corporate Social Responsibility (CSR) initiatives refer to corporate policies and practices pursued in the interest of wider social good and for which the manifest actions and degree of such actions remain at the discretion of the corporation (Matten and Moon, 2008; Carrasco and Vilchez, 2020).

Corporations are increasingly aware of the positive impact on the public of disclosures of CSR initiatives and seek to make this information available to the public through websites, events, corporate reports and even advertising (Hahn and Kunen, 2013). Companies actively signal their ethical culture by implementing CSR initiatives. CSR initiatives are often designed to communicate ethical values and practices to various publics that are not made public in the normal course of business and from which the brand benefits by increasing consumer, shareholder and regulatory trust in the company (Zerbini, 2017). CSR signals are effectively sent by the company via publication of a CSR report (Hahn and Lulfs, 2014). Sending CSR signals has been shown to be significantly related to a company having a good corporate reputation (Carrasco and Vilchez, 2020).

RQ2: Can ESG humanize fintech brands to have a material effect on consumer algorithmic aversion.

Literature Review

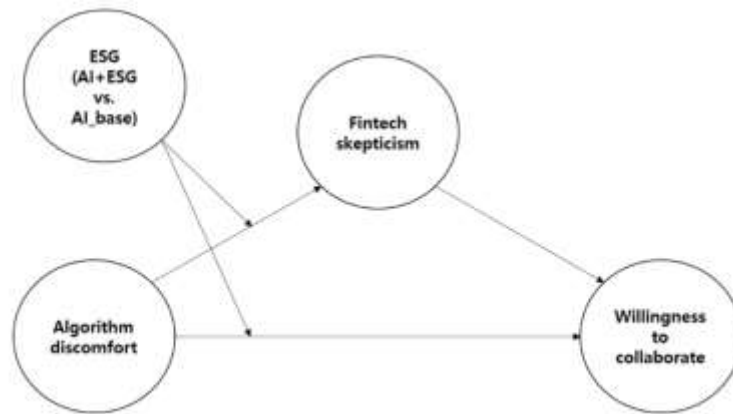
Dehumanization

As service businesses transition from interpersonal interaction as the primary mode of customer interaction to various AI driven digital touch points, consumers may be experiencing the dehumanization of the service experience in ways that may have negative consequences for customer relationships. It is possible that the dehumanization of the service experience changes the nature of consumer responsiveness and undermines development of deep collaborative relationships with customers. Haslam (2006) proposes that humanness comprise two elements. The first refers to characteristics that make us *uniquely human* (UH) by defining the boundaries separating humans from related categories of animals. Civility, refinement, morel sensibility, maturity and lack of culture are among ten categories of factures proposed as elements of UH. The second element is human nature or normative behaviors of humans such as emotional responsiveness, interpersonal warmth, agency/individuality, rigidity, and depth, among other factors, normative to human behavior. Haslam (2006) proposes that people may be dehumanized through efforts that minimize their uniqueness, referred to as *animalistic dehumanization* and though efforts that minimalize that human nature, referred to as *mechanistic dehumanization*.

Modern technology has been criticized as having a dehumanizing effect on culture. Computerized technology promotes dehumanization by imposing efficiency goals, conformity and

rigidity on human behavior (Grove and Meehl, 1996; Haslam, 2006; Montague and Matson, 1983). Within the service context, technologies promote standardization of options and even speech. These concerns are manifested in IT-mediated healthcare where there are ongoing debates about the potential for the absence of physical doctor-patient interaction to diminish the quality of patient care. IT mediated healthcare may dehumanize patients through a loss of clues such as sensorial perceptions and mutual comprehension afforded by physical doctor-patient interactions (e.g., Botrugno, 2021; Fleming, 2021).

Figure 1



AI in Service Delivery

Within the service context, research indicates that there are differences in how consumers attribute service failure to robots versus service providers. Experiments by Leo and Huh (2020) show that people attribute more responsibility for service failures to humans than to robots because robots are viewed as having less controllability or agency over service outcomes. Additionally, the authors found that failure by robots were more closely attributed to the service firm than to humans.

Algorithm Aversion

People tend to resist AI decisions and recommendations. A growing body of research attributes this to a belief among consumers that AI is better at objective tasks, whereas humans are better at subjective tasks. Longoni and Cian (2020) refer to this as the word-of-machine effect. According to the authors, people believe AI (human) recommenders to be less (more) competent when making hedonic decisions and more (less) competent when making utilitarian decisions. People are likely to be turned off by the inability of AI to make the ESG decisions leading to a negative reaction.

The word-of-machine effect is an aspect of a broader concept of algorithm aversion. Algorithm aversion is a “biased assessment of an algorithm which manifests in negative behaviors and attitudes towards the algorithms compared to a human agent” (Jussupow, Benbasat, and Heinzl, 2020). People consider decisions made by computers to be less ethical and authentic than decisions made by humans (Jago, 2019). People also react differently to algorithm failures compared with human failures. For example, in a series of experiments, Dietvorst, Simmons and Massey (2015) demonstrated that when people observe a forecasting model and a person make an error, they lose confidence in the model more quickly than in humans, despite knowing that the model forecast outperformed the human forecast.

Algorithm appreciation is the opposite of algorithm bias. In a series of experiments Logg, Minson and Moore (2019) report that subjects displayed greater confidence in identical advice from an algorithm than from a human. However, Logg et al. (2018) found that when subjects were required to choose between their own judgment and that of an algorithm, they displayed greater preference for their personal judgment.

The theoretical explanations of algorithm aversion vary (see Table 1). Initial research focused on static algorithms, but subsequent developments in neural networks and natural language processing have created learning algorithms with more dynamic decision-making features. Algorithm aversion has been attributed to the inherent opaqueness of algorithms (Jauernig, Uhl & Walkowitz, 2022). They reveal little to consumers about how they make decisions, which is frustrating consumers who have an ethical right to transparency (Mittelstadt 2016). Algorithm aversion has also been attributed to the tendency of consumers to consider their needs to be unique. Longoni, Bonezzi and Morewedge (2019) attribute patients’ preference for being cared for by human providers over AI providers to patients’ tendency to consider their circumstance and needs to be unique. Patients consider technology to be less capable of addressing their needs leading to a fear of uniqueness neglect. The appeal of humans having discretionary scope in decision-making has also been found to explain people’s preference for humans over algorithms (Jauernig, Uhl & Walkowitz, 2022). This study also eliminated the explanation that people have an inherent preference for humans over machines as a possible cause of algorithm aversion.

Explanations of algorithm aversion have grown more nuanced. For example, in a study of attitudes toward forecasting, Dietvorst and Bharti (2020) suggested that some people have diminishing sensitivity to forecasting errors and in situations of high uncertainty these people are

more likely to have algorithm bias. This implies that investors with diminishing sensitivity to errors are likely to prefer options that produce near perfect solutions over options that produce, on average, more correct solutions. This preference is increased when faced with the inability to reduce certainty before the outcome is known. In practical terms, this suggests that, for example, that in a high uncertainty situation a customer will forsake a better performing algorithm in favor of a human service provider he/she considers more likely to be precisely correct (in reality, on average less likely to be correct).

Table 1: Theoretical Explanations of Algorithm Aversion

	Theory	Exemplary Finding
Dietvorst, Simmons and Massey (2015)	People lose confidence in algorithms more quickly than humans after seeing them make the same mistake.	Seeing a forecasting model perform and err, decreased the tendency to use the model, but observing similar performance by a human did not significantly decrease the tendency to choose the human.
Leo and Huh (2020)	People attribute less responsibility for service failures to service robots than to humans because robots are considered to have less controllability over the task.	Participants attribute less blame to a robot pharmacist than to a human pharmacist for an incorrect dosage, and the robot was perceived to have lower controllability over task than the human pharmacist.
Longoni and Cian 2020	Word-of-Machine Effect: People believe AI recommenders to be more (less) competent to assess utilitarian (hedonic-focused) recommendations than humans	When a utilitarian (vs hedonic) goal is activated, significantly more people choose the product recommended by an algorithm than a person.

Research has also suggested that algorithm aversion can be tamed. For example, Dietvorst, Simmons and Massey, (2018) found that giving people some control over the outcome of an algorithm by allowing them to modify an imperfect algorithm, increase their satisfaction with the forecasting process and their belief that the algorithm is superior to others.

Hypotheses

The implications of Algorithm aversion for two dependent variables representing positive and negative reaction of customers are examined. In financial service relationships service firms often seek the support of customers to improve service delivery efficiency or even in serving the community. Examples of this are requesting donations of customers to aid local charities or asking customers to volunteer their time to assist needy community members. Customers may be asked to collaborate with a local bank to educate community members on financial prudence. This form of collaboration may extend to helping the community and has been termed altruistic customer participation (Battencourt, 1997). In this study willingness to collaborate is defined as altruistic behavior of the customer involving co-operating with the service provider to help the broader community (Johnson et al., 2018). We argue that algorithm bias creates uncertainty about the service outcomes. Customers who view their needs as unique may extend such perceptions to the wider community. Customers may also become more distant from the service firm as experiences with AI create feelings of dehumanization and social distance. Consequently, consumers may become less willing to collaborate with the service firm.

Category skepticism or in this case fintech skepticism is characterized by a sense that the quality of service delivered to customers is not improving and that improvements are slow and relapsing, eliciting habitual doubt among customers (c.f. Johnson et al, 2018 p. 2,352). This study examines category skepticism toward firms in the fintech sector. The Fintech sector is new to consumers and the pace of growth of the sector with respect to more established retail banking sector raises questions about a trust deficit toward these firms. Drawing on the prior discussion of algorithm aversion and the potential dehumanizing effect of technology, the present study argues that experiencing algorithm bias increases the consumer skepticism toward fintech firms. In summary, the following hypotheses are examined.

H1: Algorithm aversion has a negative effect on willingness to collaborate

H2: Algorithm aversion has a positive effect on consumer fintech skepticism.

The Moderating Effect of ESG

H3: When loan applications are rejected by AI for reasons of ESG performance (versus purely for financial performance), the negative effect of consumer algorithm aversion on consumer willingness to collaborate with the service firm will be reduced.

H4: When loan applications are rejected by AI for reasons of ESG performance (versus purely for financial performance), the positive effect of consumer algorithm aversion on category skepticism will be reduced.

Experimental Design

The study employed an experimental design involving the manipulation of AI rejection decisions on the grounds of ESG versus performance. This was accomplished through a scenario in which subjects were asked to help a small business entrepreneur, running a restaurant called Rick’s, to apply for a \$30,000 loan from the Sierra Digital Bank (fictional) to purchase critically needed equipment. They were also told that the application will be reviewed and approved solely by the banks AI algorithm without human intervention. Loan decisions are made within four hours and applicants are informed via direct message. Subjects in the experimental group and control group were presented with the following information on Rick’s performance and were told it would be used in the application.

FINANCIAL		PERFORMANCE	
Rick’s previous year:	- Sales	\$400,000	(100%)
	- Expenses	\$240,000	(60%)
	- Profit	\$160,000	(40%)

Rick’s is profitable and has an **excellent credit rating**.
The entrepreneur is confident Ricks will be able to repay the loan.

Subjects in the experimental group were presented with this additional information on Rick’s ESG performance and were told it would be used in the application.

ESG	PERFORMANCE
Ricks employees are proud of its performance on ESG issues:	
- Rick’s has an excellent rating (8.5 out of 10) on environmental practices	
- Rick’s has reduced its energy consumption by 30% in the last 3 years.	
- Rick’s employees are ethnically diverse	
- 50% of Ricks employees are women	
- Rick’s employees have a 90% satisfaction level	
- Rick’s donates \$8000 to community improvement projects every year	

Subjects were then told that the application was submitted using the presented information and that the entrepreneur was informed of the decision two hours later. Subjects in the control group or performance rejection condition were told their application was rejected because “Sierra Digital Bank estimates that Rick’s will be unable to repay the loan. Subjects in the experimental or ESG rejection group were told “the reason for rejection is “failure to meet our ESG standards.”

Data were collected from 158 subjects in the United States using Prolific Research Platform. All participants received monetary compensation for participating in this study. Participants were randomly assigned to the control and experimental groups. Fintech skepticism was measured using five items based on a scale by Kwon and Ahh (2021) but adjusted to the fintech context. Willingness to collaborate was measured using four items adapted from a scale developed by Johnson et al. (2019). Algorithm aversion was measured using a three-item scale measuring algorithm discomfort by (Castelo et al. 2019).

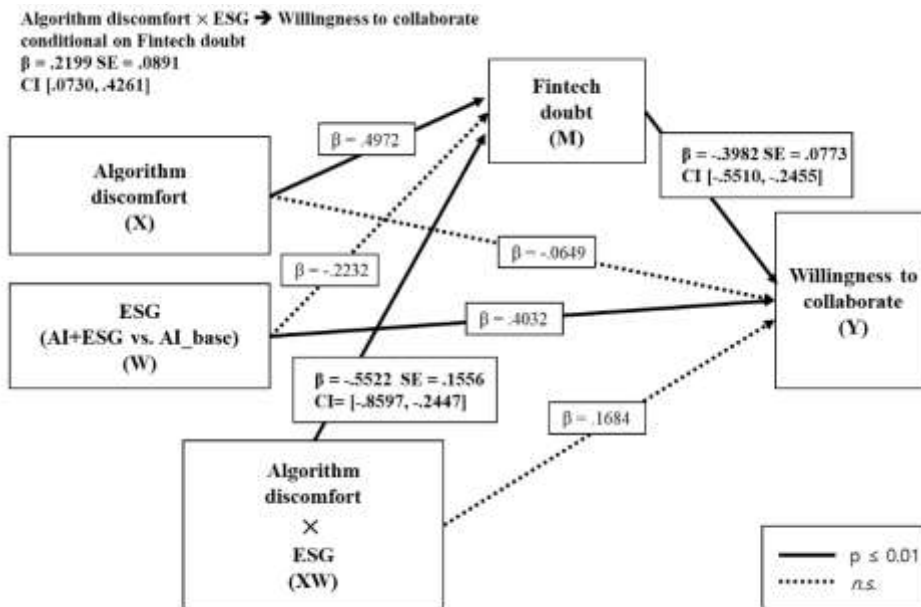
Analysis and Results

We confirmed the successful manipulation of ESG using a three-item measure of perceived importance of ESG to Sierra Digital Bank based on information presented to subjects. The ESG for the experimental condition was rated significantly higher on perceived ESG compared to the control group. Also, the manipulation check indicated no significant difference between perceived financial performance for the control group compared to the experimental group. This eliminated the possibility that the effects on the dependent variable are due to a difference in perceived performance.

The hypotheses were tested using a Hayes Process Model Procedure for SPSS Release 2.16.3. Hypothesis 1 was not confirmed with algorithm discomfort having an insignificant effect on willingness to collaborate. However, hypothesis 2 was confirmed with algorithm discomfort having a significant positive effect ($\beta = .4972$, $p < .01$) on fintech skepticism (doubt). Turning to the main effects of the manipulation of rejection based on perceived ESG versus financial performance reasons, the results show that subjects rejected for ESG reasons have a higher willingness to collaborate with the bank than subjects rejected for financial performance reasons ($\beta = .4032$, $p < .01$). Similar results were not found for fintech skepticism, with there being no significant difference between subjects rejected for financial performance reasons and those rejected for ESG performance reasons.

Turning to the moderating effects of rejection type on the effects of algorithm discomfort, the results do not support hypothesis 3. ESG (vs financial performance) rejection does not have a significant moderating effect on the impact of algorithm discomfort on willingness to collaborate. However, hypothesis 4 was confirmed with subjects who were rejected for ESG (vs financial performance) reasons having significantly lower levels of fintech skepticism ($\beta = -.5522, p < .01$) towards Sierra bank. This finding indicates that when people are rejected on an ethical basis such as ESG, it reduces the level of skepticism they have in the fintech industry. The study finds that fintech doubt significantly reduces customers willingness to collaborate with the Bank ($\beta = -.3982, p < .01$). Additionally, the results show that fintech skepticism moderates the effect of Algorithm discomfort and the interaction between algorithm discomfort and ESG performance rejection (vs financial performance) (Fintech skepticism index $-.2199$ compared to the lower-level CI of $.0730$ and upper-level CI of $.4261$).

Figure 2:



Discussion

Research on algorithm aversion typically examine consumer use of these algorithms. This is the first study to undertake an examination of consumer response to a rejection decision by the algorithm. It's also the first study to examine the link between ESG image and perceptions and reactions to AI algorithms in the service sector. This study makes significant contributions to the extant research on algorithm discomfort, ESG and to industry practice, especially, within the

fintech sector. The findings show clearly that customer discomfort with algorithms within the fintech industry is a substantive source of skepticism towards the industry. However, it points to a solution in that managers can reduce the effects of algorithm discomfort by investing in ESG initiatives to improve customer perceptions of their brands. This study also highlights the need for managers within the financial service to focus on category skepticism that has the potential to undermine the success of customer initiatives.

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The role and use of big data on creating organizational core competency and competitive advantage

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Abstract

The research paper attempts to analyze whether developing a core competency in the utilization of big data and business analytics results in a competitive advantage. The readily available computing technology and its use with business analytics tools could allow businesses to gain insights into the consumer behavior in their respective marketplace. The research describes the key characteristics of big data and outlines the ways various factors affect the utilization of the big data resource and how it could be effectively used to cultivate information. It will include varied industries, organization size, and how the market actors implement the knowledge they gain from big data acquisition to inform their business and market processes. The research paper hypothesizes that when business enterprises properly and within the bounded rationality of time and resources constraints acquire and utilize big data, no matter their size or nature of their industry, they can create a competitive advantage.

Key Words: Big Data, Analytics, Agility, Core Competency

Introduction

Big data is a collection of raw facts that is too large and too complex to process using traditional data processing techniques. Consequently, big data processing requires special software tools to manipulate and analyze the massive data sets. Once processed, big data allows you to recognize hidden patterns and identify trends in customer and competitor behaviors, allowing for the extraction of useful information that was not previously accessible. Based on these characteristics, we hypothesize that big data will allow businesses to better position their market behavior within their respective competitive landscape through a better understanding of their customers, market conditions, and competitive moves, as well as optimizing their business processes. This will, in turn, result in a competitive advantage for the firm.

What is Big Data?

McKinsey Global Institute defines big data as: “large sets of data that can be captured, communicated, aggregated, stored, and analyzed – big data is widely regarded as the next frontier for innovation, competition, and productivity” (McKinsey Global Institute, 2011). In practice, big data is an extension of traditional database processing to accommodate the rapid availability of a significantly larger quantity of data and a wider variety of data types. The data stored in a big data database typically includes structured, semi-structured, and totally unstructured data sets. Structured data, similar to that stored in an Excel spreadsheet, is easily handled by current database technology. The latter two types of data sources are not easily stored or processed using classical row-and-column relational database tables. Because of this, entirely new database techniques had to be developed to store, manipulate, and analyze big data databases.

According to John Mashey, who is credited with coining the term, big data is a predictable consequence of larger disk capacities, faster CPUs, distributed processing, increased bandwidth, and the Internet (Mashey, 1999). Once these technologies were generally available, businesses were quick to capitalize. This is evidenced by the rapid growth of data that is stored and potentially usable for big data analysis (figure 1). As shown in figure 1, the global datastore is increasing at an increasing rate and expected to reach 160 zettabytes (160 trillion gigabytes) by 2025 (Stair & Reynolds, 2020).

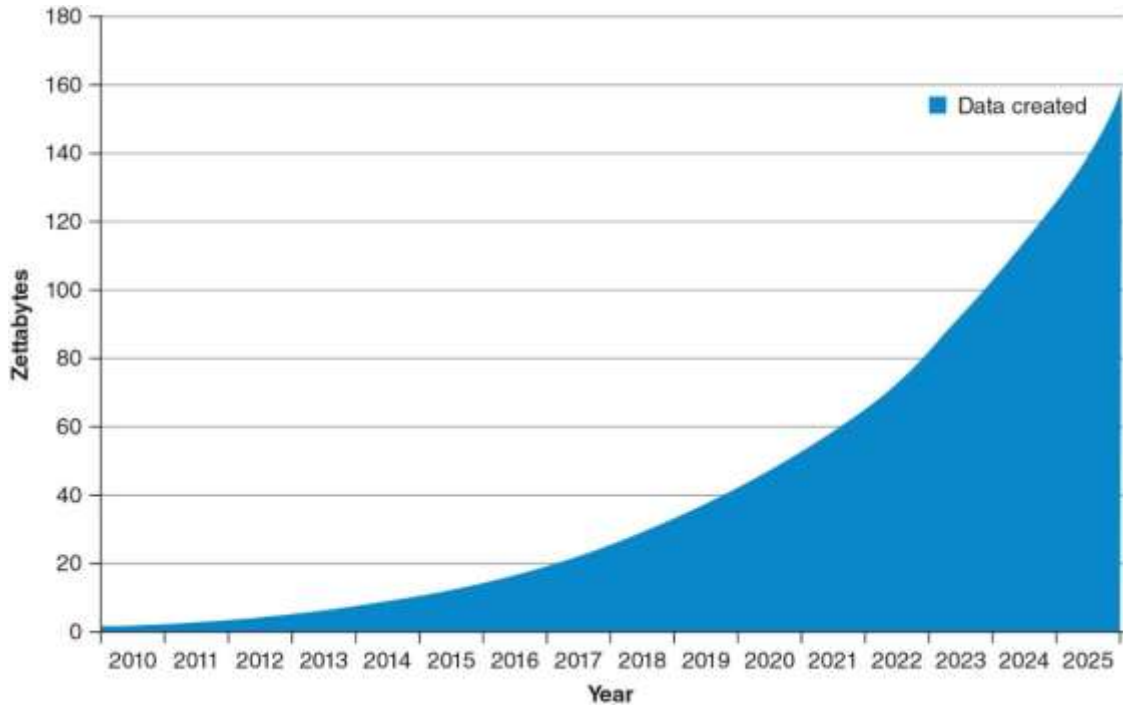


Figure 1: Increase in size of global data (Stair & Reynolds, 2020 p. 209)

Big data is typically described by the four-Vs: volume, velocity, variety, and veracity. Taken together, these characteristics form the basic framework of big data (figure 2).

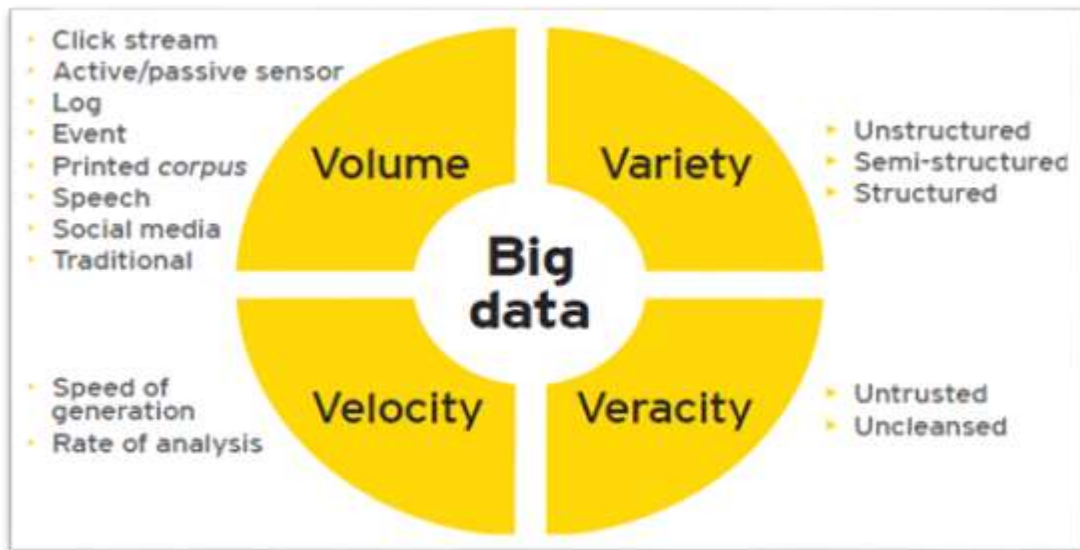


Figure 2: Big Data Characteristics (Mittal, Mohit & Goyal, Yashika & Monga, Yuvraj, 2017)

Volume refers to the unimaginably massive data sources that make up big data databases, sometimes measured in the hundreds of petabytes (1×10^{15} or 1,000 trillion bytes). Data sets this large would be difficult to process using standard database techniques even if the data were static. The second 'V' is **Velocity**. This refers to the speed that the data is received and acted upon. To understand the velocity at which data is being generated, consider that 243,000 photographs are uploaded to Facebook and 156 million email messages are sent every minute ("What is Big Data – Univ. of Wisconsin"). This creates a challenge for big data applications that use these data sources. In some applications the data is loaded directly into main memory because the disk drives cannot store the data quickly enough. This allows for real-time processing of the data. **Variety** refers to the structure of the data; structured, semi-structured, and unstructured. As mentioned above, structured data has a consistent layout that can be stored in a row-and-column format. Semi-structured and unstructured data, on the other hand, consists of a wide variety of data types that can have inconsistent structure. Unstructured data is particularly difficult to work with because the data items can vary in type, size, number, and even existence. Figure 3 gives examples of some of the semi-structured and unstructured data that could be found in a big data database.

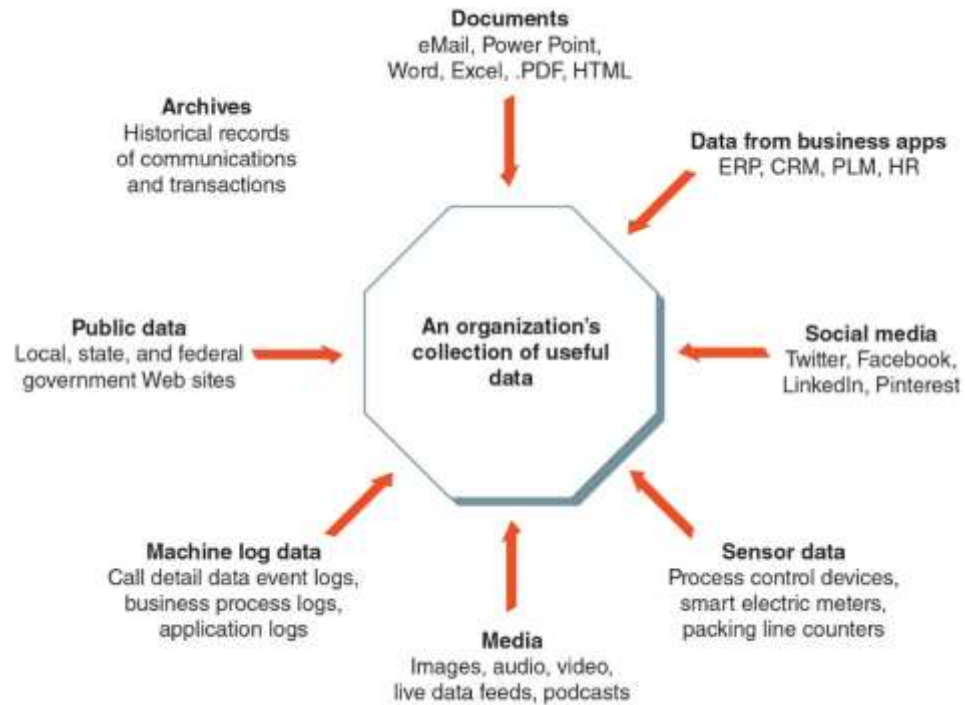


Figure 3: Sources of an organizations useful data (Stair & Reynolds, 2020, p. 210)

The final 'V' is **Veracity**. This term refers to the quality of the data. When you consider the speed that data arrives and the variety of formats that it can take, the quality, or accuracy, of the data becomes a concern. Only accepting data from trustworthy sources and performing data cleaning operations are two methods to improve the veracity of the data ("What is Big Data? - Oracle").

Due to the structural complexities and extremely large data sets, new methods to store, process, and analyze big data were developed. For storage, *data warehouses* were created using a three-pronged extract, transform, and load approach. Extraction pulls the raw data from the original sources and converts it to a common structure; transformation modifies data items, such as addresses, to a common format; and loading indexes and stores the data using innovative new frameworks such as the Hadoop Distributed File System (Stair & Reynolds, 2020). Analysis of the big data database uses a variety of mathematical and statistical techniques to locate hidden patterns and trends. This is normally done over a parallel processing distributed computer network using specialized query languages. The end result of using these technologies is the ability to generate actionable information that can be used to gain competitive advantage.

Big Data in Practice

Big data provides the opportunity for a company to identify interesting and potentially beneficial correlations. “For example, one company found that people who buy small felt pads for the bottom of chair legs to protect their wooden floors are typically good credit risks” (Daft, 2015). While this may seem like a somewhat silly correlation to make, an insurance company might find it useful and utilize this correlation in their workplace. Daft then explained that using big data analytics, FedEx has been able to determine which customers are most likely to switch to another provider with 70 – 90 percent accuracy (Daft, 2015). This allowed them to offer specific incentives to customers likely to switch providers by utilizing big data.

Acquiring big data can help a company better understand its customer base and afford them the necessary care management. Additionally, big data allows for effective waste management, improvement of manufacturing processes, assistance in product development, and enhanced talent recruitment and human resources management (the Seattle Data Guy, 2019). After sifting through what was originally messy data and identifying what is useful, a company can recognize trends related to its customers. These trends allow companies to tailor their strategies to their customers by observing what people are interested in and where they spend their time which can then be used to help companies predict future endeavors with their customers.

Nearly 35% of purchases on Amazon come from the personalized purchased recommendations that Amazon provides customers on their website from big data analytics (Wamba, S. F., Gunasekaran, et al., 2017). Through the utilization of big data, Amazon has found a way to make connections between their customers and the products they sell. This has been the driving force behind the push for companies to embrace big data to gain further insight into their customers. Organizations combine data from sales, marketing, transaction data, customer data, social conversations, and even external data such as stock prices, news, and weather forecasts to identify correlations with statistical models that will help them to make a more accurate decision.

The Potential of Big Data



Figure 4: The Potential Advantages of Big Data (SAS institute)

Big data can do more than give companies insights into their customers though; it can make a company's daily operations more efficient and effective. Big data can identify bottlenecks within internal production processes and information sharing processes, which allows companies to make more effective, quicker decisions (Wamba and Mishra, 2017). Additionally, big data has allowed companies to improve their communication among departments. The benefits of successful implementation of big data are modeled in Merck, a global healthcare company. Through utilizing big data technology, Merck discovered a costly issue in their payment system. They were receiving duplicate payments from their suppliers. Through the analysis provided by big data they were able to recognize these discrepancies and save over \$20 million in refunds ("Capitalizing on the Power of Big Data"). This supports our conjecture that utilizing big data can provide companies opportunities to improve their daily operations and internal processes.

The next advantage that big data can provide is aiding a company in becoming an ambidextrous organization. An ambidextrous organization is an organization that is continuously adapting to the changing competitive environment (Junni et al., 2013). Information scholars have observed that well-integrated information systems, such as those necessary for big data processing, can push a company to reap the benefits of ambidexterity (Gothelf, 2014; Lee et al., 2015). Big data systems allow for quick responses to market changes, as well as improving upon intra-organizational collaboration (Gao, 2013; Scuotto et al., 2016, 2017; Marzi, Caputo, and Dabic, 2017). This supports the notion that big data can help organizations obtain ambidexterity to stay agile and navigate the competitive marketplace more effectively. This is important because the current ecosystem of the business landscape requires agility and innovation to combat the inherent complacency that could result in taking the market position for granted (Harraf, 2015, 2018). The use of big data has the potential to generate the required momentum that could overcome organizational complacency and ignite a culture of innovation and resilience (Harraf 2016). As the marketplace realizes the impact of big data on innovation and the ability to be agile, it is estimated that the big data market size revenue growth will surpass 100 billion US dollars by 2027 (figure 5).

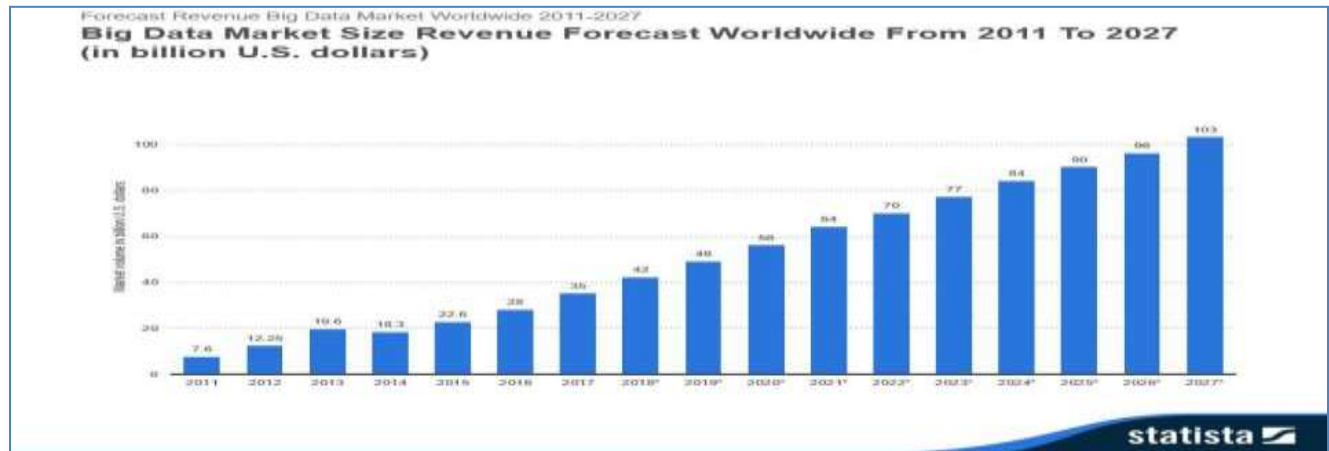


Figure 5: Big Data Market Size Forecast (Wikibon; SiliconANGLE; [ID 254266](#))

Developing, sourcing, storing, and performing appropriate and timely analytics on big data is very costly and very time-consuming. Many companies do not have the time, talent, or resources to go through all the semi- and unstructured data to find important information and trends. Historically, small companies were able to ignore the advantages that large companies had because the business environment was not as volatile. However, as time progressed, larger

companies began utilizing big data to keep up with the rapidly changing markets, and this quickly put smaller companies at a disadvantage because the cost of sifting through big data is so high. Companies, such as Target, can reap the benefits of economies of scale, and with the use of big data, they are also able to personalize their products and experiences to their customers. This puts smaller companies at a disadvantage because big data allows large companies to have a small company feel. Smaller companies must find creative ways to utilize or combat big data to stay competitive as big data technology becomes more prevalent.

Competitive Solutions for Smaller Companies

As the marketplace changes, smaller companies need an effective, reliable method to manage and access their data. Many companies are turning to a process called Information Lifecycle Management or ILM. According to Anne Stuart, just like big data, lifecycle management involves storage, security, network hardware, and other types of technologies (Stuart, A., 2004). The primary difference between big data analytics and ILM is that big data concentrates on processing the data to look for hidden patterns while ILM is concerned with the key processes involved in managing the data resource. ILM helps to manage information at every stage of its life within a business. By using information management technologies and processes, data will be automatically relocated to facilitate data access for backing up, replicating, archiving, and retrieving information. If successfully implemented, data managing can be streamlined from creation to deletion, independent from human intervention, and will instead be based on company policies, regulatory requirements, and automated timetables. ILM and big data work well together and often coexist.

Information lifecycle management allows someone to quickly access information that is valuable at a time, and then store the data away for later use. For a smaller company to optimize its use of ILM, Anne Stuart suggests that two critical steps must be taken. First, the business must identify the importance or value of the data. An effective method of determining importance is recognizing what could happen if this data were lost. This allows the company to set a certain priority for that data. Secondly, based on these valuations in the first step, the business must decide how accessible the information should be to the company. For instance, low-priority items, like employee PowerPoints, do not need to be quickly recovered or highly

protected. Backing up these low-priority items once a week is sufficient. However, high-priority items, like financial records, need to be highly protected and backed up frequently (Stuart, 2004). Information lifecycle management is an effective way for smaller companies to remain competitive through data management and information systems.

Smaller companies can additionally compete with large companies in big data by utilizing cloud-based services and Software as a Service (SaaS). Taylor Short describes SaaS as: “a method of software delivery that allows data to be accessed from any device with an Internet connection and a web browser. In this web-based model, software vendors host and maintain the servers, databases, and code that constitute an application” (Short, 2020). Microsoft Office 365 qualifies as SaaS. SaaS gives smaller companies a cost-effective way to maintain customer relationships, update and take orders, and improve upon their supply chain as a whole. SaaS eliminates associated overhead costs, like having to upgrade machines (Rangaswami, 2006,07). Software as a Service provides a means for smaller companies to use big data to remain competitive with large companies.

Finally, smaller companies can utilize big data by outsourcing it. This method can be just as effective and often more cost-effective. Big data is easily accessible, but it requires significant manpower and technology capabilities to sift through the messy data. Most smaller companies lack an IT department that is capable of utilizing big data (Shacklett, 2017). Outsourcing the process to a third party at a cheaper cost makes it possible for small companies to reap the benefits of big data.

Industry Specific Big Data Applications

Companies utilize big data to gain advantages in automating processes, gaining insight into their target market, and improving their processes. Amazon, American Express, BDO, Capital One, General Electric, Miniclip, Netflix, Next Big Sound, Starbucks, and T-Mobile are examples of companies that are known for “integrating big data and using it to boost their brand success” (O’Neill, E, 2019). To illustrate the many advantages that big data provides, a wide range of industries will be examined to determine if and how they are leveraging big data.

The retail industry pioneered many of the big data techniques currently being used, and most people associate big data with retail. Large corporations, like Walmart and Amazon, can accurately forecast demand, target select customers and their purchase patterns, and predict market trends. For example, Walmart can instantly optimize their prices based on their

customers' demand. Big data gives them access to their inventory, transactions, and costs in real-time, and this provides significant cost savings that they transfer to their customers (Marr, 2015).

Netflix offers a subscription-based streaming service that contains an extensive library of films and television series. Netflix is a prime example of how a company can use the big data generated by user interactions to craft a unique, tailor-made experience. The entertainment industry giant is a data-driven company whose core business strategy is to get users to stay on its website for as long as possible. The more time users spend watching Netflix, the less likely they are to cancel their subscription. To get the user to stay online for a prolonged amount of time, Netflix gathers user data. Data about when you pause, rewind, or fast forward, what day, date and time content is being watched, the device used to watch content, search queries, ratings given, and even browsing and scrolling behavior. This data is then fed through an algorithm that will suggest movies based on previous viewing habits. Through the use of these methods, Netflix, and other streaming services, have successfully utilized big data to generate customer loyalty.

The next industry to highlight is the financial services and banking industry. Big data can be utilized in this industry for security and data management. According to Atos Syntel, big data can aid in detecting fraudulent activity and help with storing historical data (Altos Syntel, 2013). The risks of credit card fraud have been reduced by big data analyzing buying patterns. According to industry experts, "when secure and valuable credit card information is stolen, banks can instantly freeze the card and transaction, and notify the customer of security threats" (Pearlman). Big data applications can identify fraudulent buying patterns more effectively and quickly than employees can.

The manufacturing industry has benefited from the increased use of big data. Through utilizing big data, a new form of analytics has been developed within this industry. Big supply chain analytics uses data and quantitative methods to improve decision making for all activities across the supply chain. This new analytics tool creates fresh insights that help improve supply chain decision-making within front-line operations, forecasting evaluations, and inventory projections ("Big data and the supply chain").

The healthcare industry has made considerable advancements in recent years due to the utilization of big data. According to EMC Consulting, certain developments or outcomes are now able to be predicted or even estimated by looking at large sets of data. It is now possible to

predict important factors of patients such as their length of stay, who will likely choose elective surgery, which patients will most likely benefit from surgery, and the patients at risk for health complications (Raghupathi, W., 2014). Due to the positive effects of big data, the healthcare industry can better cater to their patients.

Within the insurance industry, structured, semi-structured and unstructured big data sets are being used. Each of these data sets allow for improved predictive analytics which then allows insurers to make more accurate forecasts of future events. Big data has also influenced this industry's pricing, marketing, rating, and claims handling through their ability to make better decisions ("Big Data").

Conclusion

The research hypothesis stated that if business entities properly utilize big data, no matter their size or industry, they can create a competitive advantage, and the evidence provided supports this. Leading organizations in a wide variety of industries see big data as a worthy investment, and even small businesses are attempting to navigate their way into utilizing big data to gain insight on their consumers and improve their daily processes. The successful utilization of big data and business analytics is not limited to any single industry, and big data's far-reaching benefits provide a significant competitive advantage to a firm competing in today's complex marketplace.

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DXB244

The competitiveness of Asynchronous education with TIC’s in Superiors degree at University of Guadalajara, Mexico

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Abstract

Adapting the new trends of education has been evolved and also has a bigger advance with the COVID-19. Worldwide has been implemented new strategies to look for new knowledge at all education levels, this with the purpose that education doesn't have a blockage.

We are already using the technologies of the information and communication (TIC's)

With this changing the synchronous and/or asynchronous learning has demonstrated to be the most appropriate for higher education students and this is the most competitive and innovation learning, on this way the students get a deep and collaborative knowledge

Taking on advised that TIC's are innovation method that needs a complement with other tools, additionally we need to consider our geographic location because some countries don't have certain application, and we need to find an alternative.

Hernandez R. (2021) About innovation in educational technologies, at the Galileo University mention the use of platforms, just like Meet, zoom and others

Keys Words: synchronous and/or asynchronous, TIC's, Competitiveness, Education

Purpose

The main approach for this research is students ear new aptitude that demand the labor field.

Research question is: Is being accomplished synchronous and/ or asynchronous learning and TICs are helping students to obtain the competitiveness they need at their field?

One of the main objectives in general

Did the students with synchronous and/ or asynchronous classes and TIC’s are competitiveness candidates to obtain a job?

01. Students that were in synchronous and/ or asynchronous learning are competitiveness candidates at their field

02. Students that were during the pandemic from COVID-19 have a research competitiveness.

Among other option of semi-presential model, some authors mention the following table1.

Table 1

Synchronous hybrid model	Classes at the same time (face to face classes and virtual classes) High cost
Seasonal Rotation Model	It is in groups each one work in each season, when they finish, they go to the next season, they continue working like this until they finish with the assignment
Rotation laboratory model	The best example are sport activities, where they know about the rules and with this we can make the learning activities.
Individual rotation model	With this model the student doesn't work in station, just get individual knowledge
Flipped class	It is the most common at Universities. Students read the program and they study for the session, and professor give ideas and it starts a discussion

Own elaboration based on several authors

General hypotheses:

GH: Students that were in synchronous and/ or asynchronous learning are more encouraged to research

GH: Students with TIC;s and synchronous and/ or asynchronous learning have more experience with the reality of their field

GH: Students take advantage of the knowledge with TIC's

According to Delgado, P. (2020) “Synchronous learning refers to that education where students have an opportunity to learn or interact on the moment, with their professor and their partners.

Asynchronous learning is one that can happen face to face or online trough videos or educational resources previously provide by the professor, it means, the class is the same, but the students learn at their own timing.”

Justification

Just like Delgado mention it is when academic freedom is reached in the Universities that both types of synchronous and asynchronous learning and the use of TIC's, where the role of the teachers was to be a tutor, counselor, director and a partner in debates in each of the sessions and applying support strategies at the asynchronous learning with videos, applications.

We get advantage and disadvantages some authors mention that the class has a certain time but the place is not significant to get teacher feedback.

Methodology

This research used an exploratory, descriptive, correlational and prospective approach.

We used ANOVA and Cronbach Alpha in order to verify the reliability of the data.

In the first block we describe the skills required to be competitive, in the second block their performance in research and in the third block the use of the ICT and synchronous and/ or asynchronous learning

Results

In the table 2 we show the most significative between-groups

ANOVA

		Sum of squares	gl	Mean square	F	Sig.
D9.4	Between-group	21.750	22	4.438	2.121	.005
	Within-group	48.324	28	1.042		
	Total	70.074	50			

Table 2. Self-elaborated table with the use of SPSS.

Conclusion

With this synchronous and asynchronous learning modality and Tics, we remark that most of the students get involved with research, and they are more competitive at their labor field.

Limitations

Students that were just at synchronous modality, they restrict just to listen and not contribute with ideas.

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DXB245

Impact of Organizational Culture aspects of Trust and Transparency on Business Performance Indicators

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Abstract

While regulators and academics believe that compliance with corporate governance principles on transparency via more disclosure and reporting reduces company risk, we have argued that such requirements might impair the creation of trust and corporate responsibility. There's a danger that if it becomes the norm, transparency may become nothing more than a formality, with firms selectively providing what their stakeholders want to hear while remaining silent on or avoiding more nuanced issues. Thus, openness may lead to strategic moves that aren't motivated by ethics but are instead concerned with protecting the company's public image. The purpose of this paper is to "talk about the influence on Business performance indicator as a consequence of nurturing the workers via trust and transparency," as well as to "evaluate the contribution of trust and transparency to the success of an organization."

Secondary sources of information were gathered from previously published studies. In this research, a descriptive approach was used. Descriptive studies examine the problem from every possible viewpoint, as opposed to explanatory studies which focus on the subject's fundamental principles. To narrow down the data to the most compelling bits, we utilized a combination of inductive and deductive reasoning.

Taken as a whole, the study's findings stress the need to design workplaces where all employees are treated with dignity and respect and where the confidentiality of their responses is guaranteed. It's a prize for perseverance, and it's not easy to get back once it's gone. Personnel who have an optimistic perspective on their jobs are more likely to be successful and satisfied in their responsibilities.

Keywords: Corporation, Organization, Business, Trust, transparency, Business performance Indicator,

1. Introduction

Often incorrectly credited to management expert Peter Drucker, the adage "what gets measured gets controlled" (Drucker, 2020). "Objective measures known as business performance indicators (BPIs) have been widely used as a result of this. In order for a company to be healthy and successful, it must track the correct performance metrics. These sayings may be tested in a company's organizational culture. In part, this is due to the fact that culture is still considered as a subjective—or "soft"—factor in the success of a company. Trust and transparency are only two of the many characteristics of an organization's culture. Innovation thrives in an environment of trust and openness. Enhances the quality of interpersonal connections and contributes to a more positive work environment. Intimacy, deeper connections, and a healthy workplace culture may be achieved via trust and openness. "People are more willing to take chances, embrace change, and perform at their best when they have a sense of trust and openness" (Kwan, et al., 2021). Research on the influence of organizational culture on Business Performance Indicators, including trust and transparency, is the focus of the study that follows.

1.1 Background

Whether in a personal or professional setting, the axiom "Everything starts with trust" holds true. Conversely, a breakdown in trust is a sign that a partnership is on its way out. Given the actual, measurable benefits it may bring to a company, trust should be seen as a concrete, strategic, and essential asset. This asset, like others on the balance sheet, should be managed by taking into account its drivers and ramifications throughout the business more fully. Trust in a company should be established from the inside out through levers and actions that span functional boundaries, from product quality to data security to financial integrity. "This is how trust should be built in an organization" (Busser, & Shulga, 2019).

As a result, the relative effect of trust-building initiatives should be framed and examined through the lenses of all of an organization's stakeholders, including board members, investors, consumers, suppliers, and workers. Trust equity may be built by organizations that take a proactive approach to trust management, and this can have a beneficial effect on their bottom line while also providing the business with a layer of resistance against trust breaches.

Similarly, "Business is War" and "Loose Lips Sink Ships" were ingrained in my mind as a child, thus the notion of workplace openness sounded a bit unrealistic to me. "But my cynicism has waned with time" (Jiang, & Luo, 2018). Employee engagement, a better business culture, and a sense of comfort that enables workers to openly communicate are all benefits of a firm that is more open and transparent with its employees. Employees who feel appreciated and creative in a transparent work environment are more likely to perform at their highest level by enhancing their discretionary performance which is superlative to normal induced performance.

2. Literature Reviews

Alhanouf Aldayel & Ahmad Alturki, 2021 explained that there are “several manifestations of trust in an organization, including within teams, amongst workers, and in the leadership”. One strategy for fostering confidence in workplaces is to lessen or do away with managerial surveillance of staff members. Building a trustworthy corporate culture may pay dividends for a business in the long run. Trust has a multiplicative effect on team output, team happiness, and commitment in relationships. People are more inclined to comply with authority figures they trust. In conclusion, trust amongst co-workers is crucial to the success of any company's culture. Business performance metrics are instruments for maximizing the interplay between strategic planning and operational judgement and learning inside an organization. A company's performance metrics are used to drive innovation and direct resources toward accomplishing strategic goals. These indicators of business success tell upper management if the company is headed in the right path, whether problems exist, or when its objectives have been accomplished.

Verma, & Sachin, 2019 evaluated when someone is transparent, they are entirely open and honest about everything. Transparency in financial reporting is "an evident prerequisite of a fully functioning stock market," The epoch of globalization in every facet of business activity may trace its origins to the emancipation. People both within and outside of the nation have a vested interest in the company's operations and must have access to relevant data. As a result, for businesses to earn consumers' trust in a global economy based on knowledge, they must provide all relevant and material information.

Gian Luca Gara & José María La Porte, 2020 explained that connects the fields of study that focus on the human side of organizations with issues of openness and communication. Second, it considers the individual and collective responses to the order and chaos that exert internal and external pressures on every organization (centripetal and centrifugal force). Trust appears as the band that binds and harmonizes the destructive or constructive potential of those elements. It is crucial in coping with the frailty of organizations and the limits of their personnel. Because of labor market mobility, contractual circumstances, and shortened turnover periods, it is hypothesized that recruiting is a key part of internal and external communication and has strategic relevance for the future of the company. It all starts with the hiring process and continues through employees' anticipated career paths at the organization.

Jiang, Hua; Luo, Yi. 2018, explained that “trust in businesses is highly impacted by genuine leadership, open lines of communication, and enthusiastic participation from workers”. Transparency in corporate communication was one way in which genuine leadership influenced employee dedication. Employee trust was indirectly impacted by authentic leadership factors such as open lines of communication inside the firm and high levels of employee participation. This research should be used by training and mentoring programme directors to emphasize the value of genuine leadership and open lines of communication to their trainees. Building trust and enthusiasm among staff members is facilitated by an atmosphere that is inspiring, supportive, and open to everyone.

Edward C. Tomlinson & Andrew Schnackenberg (2022) have mentioned everyone understands how important it is for managers to be trustworthy to their staff members. However, previous transparency efforts have made it hard to identify openness's specific impact on confidence. We argue that people's opinions of a company's trustworthiness are uniquely influenced by three distinct aspects of transparency: disclosure, clarity, and accuracy (ability, benevolence, and integrity). We also argue that credibility, a more distal predictor of trust, mediates the connection between openness and confidence. We test our hypotheses that transparency has a distinct effect on trust through trustworthiness across two samples with different referents using a newly published measure of transparency that incorporates its aspects (direct manager and top-management-team).

Finn Janning, Wafa Khelif & Coral Ingley, 2020, have argued that while externally desirable, compliance with corporate governance guidelines on transparency through greater disclosure and reporting can hinder both the building of trust and corporate responsibility, despite the fact that regulators and academics insist that business risk is reduced when corporations comply with such guidelines. When openness is taken for granted, it risks devolving into nothing more than a formality, with companies strategically sharing what their stakeholders want to hear while keeping quiet or avoiding more complex topics. As a result, transparency might inspire strategic maneuvers that are less concerned with acting ethically and more concerned with maintaining the company's image and reputation.

2.1 Research Gap

The goal of this work is to fill up the research gaps identified in prior studies. By evaluating the importance of trust and openness in an organization's culture, the researchers were able to close the gaps in the study's findings. The research vacuum has been addressed by underlining the fact that fostering an environment of openness and trust in the workplace fosters employee trust, commitment, and buy-in, all of which contribute to improved company success.

2.2 Research Question

- I. What is the concept of organizational culture aspect of trust and transparency in business?
- II. What is the role of trust and transparency as an aspect of organizational culture in elevating the business performance?
- III. What is the impact on Business performance indicator as a result of nurturing the employees through trust and transparency?

2.3 Importance of the Study

Due to its emphasis on evaluating the relevance of developing an operational management culture that is transparent in order to attain a high business performance indicator, the paper is of crucial importance. In this article, a quick analysis of how businesses may make trust and openness a strategic advantage rather than risk should difficulties develop is of more relevance. As difficult

as it may be to manage trust and openness, it is a worthwhile endeavor if businesses are to fulfil their strategic goals and service a rising number of stakeholders in an ever-complex environment.

2.4 Research Objectives

- I. To elucidate the concept of trust and transparency as an important organizational culture.
- II. To evaluate the role of trust and transparency as an aspect of organizational culture in elevating the business performance.
- III. To discuss upon the impact on Business performance indicator as a result of nurturing the employees through trust and transparency.

2.5 Scope and Limitation

The paper is limited to the research of Impact of Organizational Culture aspects of Trust and Transparency on Business Performance Indicators. The paper is limited to secondary data methodology and qualitative approaches.

According to the scope of the study, trust and openness are critical success factors and crucial component in building conducive & high performance organizational culture. According to the study's findings, progressive & performance driven companies are looking at ways to recruit and retain people who share their core beliefs. Organizations will prosper if they place a priority on developing cultures based on working culture that are open, transparent, and characterized by mutual respect and trust.

3. Research Methodology

The methods used to gather data are outlined in the study's research protocols. The influence of organizational culture on trust and openness on key performance metrics is examined using data from a range of service sectors. New testing and research may be generated via the use of methodological procedures. However, secondary data was acquired from prior study that had already been performed. This investigation used a descriptive approach.

Description studies focus on all of the aspects of a research topic, as opposed to explanatory studies that strive to explain its fundamental principles. Using a combination of inductive and deductive reasoning, we only considered significant evidence throughout the data analysis process.

3.1 Research Method & Design

Researchers employ a study design to make sure that all of the data they collect is properly merged. A study's research design includes data gathering, analysis and interpretation. Cognitive approaches are examined in this research. Secondary data were obtained from journals, articles, publications, books, websites and other sources to undertake this non-equivalent design for the investigation. Explanatory research methodologies are suitably used in this study to analyze

conceptual components and assess several of the research difficulties. From a variety of reliable sources, we were able to draw inferences from the information.

3.2 Research Approach

The illustrative technique is used by the researcher to investigate the current objectives and questions, which builds a link between causes and consequences. The researcher used a method that was both explanatory and corrective in this specific investigation. The authors of the research analyzed qualitative data in order to back up their claims. It also includes in-depth analysis of the research assumptions used to identify data collection methods. Obtaining and evaluating relevant data on the subject of the study is an important part of the research methodology. To answer a particular research issue, qualitative methods apply the descriptive methodology.

4. Analysis of Study

I. What is the concept of organizational culture aspect of trust and transparency in business?

Culture in an organization may be defined as the common way of being, thinking, and behaving in a grouping of coordinated individuals with reciprocal expectations; it is developed and spread in an organization through time, and it can be learnt and altered over time. The term "organizational culture" is often used to describe what it informs us about a company. 'Something,' in this case, might be anything from an individual's character to an organization's philosophy or ideology. As a result, each organization has a distinct culture that sets it apart from the competition (Wiencierz, & Luenich, 2022).

From practical and hands on aspect of how Organizational Culture is defined, it is key behaviors role modelled by most influential people in any organization or enterprise or entity. There are numerous factors that make up an organization's culture, and trust is one of them. Trust may be broken down. Affective and cognitive trust, for example, are two different types of trust. Many studies have examined the impact of trust on various organizational elements, such as coordination and control between individuals and between organizations. There are many ways to look at trust at the organizational level. Some examples include trust in teams, trust in subordinates and leaders, and trust between organizations. The research on the specific function of trust and its impact on performance is ambiguous, therefore "some uncertainty is obvious" in the literature. "An organization's culture is not just value-based but also work-practice-based, despite the term "implicit" being used. In the context of trust, one entity (the trustor) expects that another entity (the trustee) will fulfil commitments, utilizing the trustor's knowledge and abilities, and that the results will be desirable for the trustor" (Roelofs, 2019). This notion of trust implicitly includes mutuality and variability. It is because of this variety and mutuality that trust relationships may be measured and compared.

Another aspect of organizational culture is openness. Employees are the first line of defense for a company's commitment to openness. Transparency flourishes in organizations when leaders actively model it and encourage their employees to do the same. Alternatively, transparency is a result of the interaction between people. Transparency, for example, may have a huge impact on a sustainable success and growth corporation. Consumers see businesses that are open and honest as more trustworthy. Survey results from consulting firm Label Insight show almost all consumers prefer companies that are honest about their practices. A firm is likely to be the source of the calls for greater transparency at work. An overwhelming majority of those who took part in the Future of Work poll conducted by Slack expressed a desire for more transparency into company decision making. When CEOs claimed that their organizations were open and honest, just few of employees agreed. As a result, employees can only be as effective as the knowledge they have access to and the decision-making power they are granted by their employers. "Confidentiality, on the other hand, boosts productivity" (Heald, 2018).

Zappos has created a reputation for itself as an online shoe shop by fostering an environment of transparency inside its workforce. This included the creation of an "extranet" for suppliers and the creation of internal databases that allowed workers to examine all of the financial activities of the firm as well as their own personal budgets and costs. Employee disengagement, mistrust, or lack of big-picture understanding may lead to wasted time and money, according to Zappos merchandising manager Fred Mossler. These protocols ensure that all employees and business partners are on the same page.

II. What is the role of trust and transparency as an aspect of organizational culture in elevating the business performance?

Trust in leadership grows when employees believe that their managers are being open and honest with them. Employee loyalty and greater retention are bolstered by trust among co-workers. Employees are more willing to put their faith in management when it comes to wage ranges, for example. This is because they can check the facts themselves. Because they know that their bosses are telling the truth, employees are less inclined to worry whether they're being underpaid for the same job as their co-workers. Employees' faith in their managers and supervisors will grow as well. Managers who trust their subordinates are less prone to micromanage them, resulting in improved work habits at the lower levels. Such high level of mutual trust oriented work environment infuses positivity and motivation amongst team members resulting into higher discretionary performance. Managers don't need to control when or how their staff completes their tasks because they can rely on their ability to produce high-quality work on schedule. "Leaders may establish ambitious objectives with the confidence that their people will work tirelessly to attain them if they are given the proper tools" (Newman, 2021). When workers need to depend on colleagues outside of their immediate teams, trust is essential. Workplace trust must be established amongst departments to ensure that everyone is working together for the greater good.

The trend toward more openness at work will continue. Organizational financials, operational details, and employee experiences are becoming more transparent to the public. This increasing openness may be a friend or adversary depending on one's perspective, and it is being pushed by social technologies and new cultural habits of open communication and data-driven decision making. An influential factor that may either boost morale, get you customers, and boost your bottom line, or destroy your reputation, alienate your employees, and sink your business. "Transparency pushes leaders to adopt a more detailed approach to allocating duties and breaking big objectives down into smaller, more doable components" (Pirson, et al., 2019). It's evident who is accountable for each piece of work that's linked to an overarching goal in a transparent organization. Implementing company's strategy is considerably easier when one has a clear understanding of who is responsible for each part of bigger objectives. Executives are able to see problems in processes or under-performance at a glance since each job's responsibilities are clearly defined. When one takes this approach, the willingness to be transparent and accountable leads to a stronger desire for flexibility and on-going improvement. It's possible to implement a plan to fix

anything when business able to recognize that something isn't working. “Employees at all levels, from the lowest to the highest, as well as those in between, will have greater confidence in one another when there is no room for secrecy” (Merton, & Thakor, 2021).

III. What is the impact on Business performance indicator as a result of nurturing the employees through trust and transparency?

An assortment of quantitative measures obtained from many sources and analyzed with an appropriate methodology is essential for management to maintain tabs on and assess the state of a company, project, or process. The four key components of the balanced scorecard used to measure a company's performance against targets are financial, learning and development, internal procedures, and customer-focused indicators. Business performance measures, which are closely related to KPIs, may be referred to as several names, including organizational performance, outcomes, and key success indicators. For a company to improve its KPIs, trust and transparency are essential. “In a nutshell, trust is having full faith in another person's or an entity's word or promises” (Wright, & Chambers, 2019). A company's employees are its greatest asset, therefore it's vital that management show them some love and trust at work. A company's moral compass is largely determined by how its employees see its upper management. Establishing trust requires being consistent in both words and actions. True leaders know who they are, adhere to strict moral principles, and have tremendous regard for the people they serve. When leaders do this, they gain their followers' utmost respect and adoration, and those followers grow to rely on them for their knowledge, honesty, and reliability (i.e., essential dimension of trust).

“People's confidence in their organizations increases when they trust their leaders” (Yue, Men, & Ferguson, 2019).

Trust is built slowly over time by a series of little yet sincere & role modeled actions, words, and thoughts.

Trust development does not happen overnight. Some customers may only be convinced after being called repeatedly over the course of many years. Despite trust's paramount importance in today's business world, very few leaders have invested the time and energy required to cultivate it.

Business expert David Horsager has spoken all over the globe on the subject of trust's monetary implications. “As a trainer for leaders, he came up with a plan called the "Eight Pillars of Trust" to help groups and teams build trust among themselves and one another” (Men, et al., 2020).

- Clarity – people have more faith in what is explicit than in what is nebulous.
- Compassion – People have confidence in people who show compassion for them beyond themselves
- Character – Standing out from the crowd requires doing the right thing even when it's not the most convenient option
- Competency – People have faith in those who manage to continually innovate and improve their skills and competence in the eyes of the public
- Commitment – People have faith in people who persevere under pressure.

- Connection – People are more likely to support, spend money with, and hang out with someone they know and like
- Contribution – Rapid reaction to success
- Consistency – People like it when you're consistent with the tiny things they notice

One of the most important skills for long-term success is the ability to build trusting relationships. “Trust in one's teammates, suppliers to provide quality items on time, and consumers' reliance on one's services” (Yavuz, 2020).

To a same extent, future company success relies on being open and honest with stakeholders. The number of inquiries for clarification from firms' employees and customers has increased. In today's climate, when ethical behaviors are cherished and corporations are rewarded for bringing about positive change, it is essential for an organization to be transparent at all levels. Establishing solid connections with customers is essential to the success of any business. One might think of the employer-employee interaction and the client-vendor exchange when considering the value of trust in business. The most important benefit of being transparent as a company is the trust it inspires in its stockholders. Communicating with investors on a regular basis and providing them with accurate information about the company's financial health will raise the probability that they will invest in your business.

“Open dialogue and personal accountability may go a long way toward mending frayed ties within an organization” (Ugaddan, & Park, 2019). Employees' loyalty to the organization improves when they have a better understanding of its direction. This tactic gives consumers a sense of ownership in your business. As a consequence, they are more likely to stay with the firm for the long term since they feel more invested in its success and have more trust in your leadership.

5. Results

From the analysis of the above research the results imply that, Organizations that encourage an open culture get a variety of sustainable benefits. Clear communication, agreement, and confidence help achieve goals. Workers are able to see how their job contributes to the success of the company from the top down, and managers are able to see the big picture. Transparency has far-reaching effects on business. In order to achieve company goals, one need to have a clear sense of purpose in actions. Employees are more satisfied and have a better experience when the company is more open. There are more opportunities for growth if company is more open to the public. By fostering a culture of transparency, alignment, and trust in organization, one may unlock full potential. Alignment and trust are fostered in an open and honest workplace, which has a positive influence on the bottom line. When everyone in the firm is working toward the same objective, it becomes much simpler to get things done. Employees are able to understand exactly what they need to do to make progress toward their own goals. Additionally, goal-setting procedures should include a way to track progress toward each goal's accomplishment. These metrics, or critical outcomes, provide workers a better understanding of what they need to do to keep the company's objectives in line. As a result of using goal alignment software, it is possible to increase the level of trust. Leaders,

supervisors, and workers may keep bigger objectives on track by keeping an eye on their colleagues' progress. In doing so, it promotes a level of openness and trust among the team members.

6. Conclusion

The study's findings are best understood as emphasizing the need of cultivating an environment where all employees feel safe and respected, and where information shared is treated in confidence. It's something you have to work for, and once it's gone, it's hard to get back. An engaged workforce is one whose members exhibit a favorable mental attitude toward their jobs, which in turn leads to increased productivity and satisfaction. Employees' trust in their company's capacity to successfully complete projects contributes to this productive mood. In addition, when workers are in a good mood, they are more likely to have a positive outlook on their employer, which may lead to benefits like higher levels of trust.

6.1 Future Scope

The issue statement about the factors that influence trust and openness in corporate relationships should be the subject of future study. The pros and cons of increasing openness and trust in the workplace might be the subject of further research.

6.2 Suggestions

- i. It is suggested that the study's attention be directed at clarifying the role of open and honest communication in fostering trust. A well-run firm relies heavily on effective communication. Effective communication is essential for keeping everyone on the same page and informed, whether you're talking to your employees, your suppliers, your stakeholders, or your consumers.
- ii. The study should also include how to increase consumer loyalty and investment inside the firm, something that may be accomplished via the use of various online mediums such as social media, blogs, newsletters, and corporate announcements.
- iii. Employees' buy-in, support, and advocacy are all bolstered when they believe their opinions and needs are being heard and acted upon, and when they are given agency in the process of change.

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The Influence of Digital Technologies on Born Global Business Models

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Abstract

This study aims at understanding the impact of digital technologies in shaping the Born Global companies' business models and the influence on their internationalization path. To develop our study, we adopted an approach based on interviews with key informants from two Italian Born Global companies that have developed their internationalization path by relying on digital technologies. Our findings highlight how digital technologies and collaborative design tools can represent the basis for new business models which exploit the opportunities coming from the increasing connectivity of people and businesses. According to this perspective, new types of born global companies can be identified, with a role of "digital-based process coordinator", which support with a pivotal role the management of complex projects.

Keywords: Born Globals; Digital Firms; Internationalization; Born Digital.

1. Introduction

With the development of digital technologies, the digitalization of business has become an everyday phenomenon, and digital firms play an increasingly important role in the world economy. Application of digital technologies, such as the Internet and mobile devices, is disrupting traditional business models, removing established incumbent firms, and reconfiguring firms' organisational structures (Chen et al., 2019; Wu & Gereffi, 2018; Monaghan et al., 2020; Vadana et al., 2021; Ye et al., 2022). One of the major emerging changes in business activity derived from digital technologies is the rapid and proactive international expansion via digital platforms, e.g. e-commerce platforms, social networks, and digital media (UNCTAD, 2017; Wu & Gereffi, 2018). As a matter of fact, digital technologies can reduce the cost of expanding business operations across national borders, reducing the time taken to internationalize. According to this trend, several authors identified an increased presence of internationally operating firms that are digital from inception, forging the definition of "born digital" (Monaghan et al., 2020) and considering them as a subset of born globals (BGs).

Given the critical role of technology in shaping business models and triggering new ones (e.g., digital business models), we want to understand the role played by digital technologies in BGs business model development and, by extension, the benefits in accelerating their international

expansion by answering the following question: how do digital technologies shape BGs' business models, accelerating the expansion in international markets?

To answer this question, we adopted a case study approach investigating two born global companies with the intent to find similarities and dissimilarities between cases (Eisenhardt, 1989) to inform both extant theory and managerial executives in developing strategies for international growth.

The paper is structured as follows. The research background section analyses the literature on BGs and the more recent literature on digital firms by addressing the gaps our study aims to fill. The methodology section describes the exploratory approach followed in the development of the case study, the specific reasons that led to the adoption of a purposeful sampling technique and sets out the parameters taken into account in the selection of the two business cases. Finally, the case study evidence discusses the results of the study and the contribution to the BGs theory in the light of digital technologies. Finally, conclusion, practical implication, limitations and future research directions are presented.

2. Research Background

Born global firms (Cavusgil and Knight 2009; Knight and Cavusgil 2004; Knight and Cavusgil 1996; Knight 2015; Knight and Liesch 2016; Madsen and Servais 1997; Moen 2002; Moen and Servais 2002; Rialp et al. 2005) have been the object of several studies that defined them as “fast internationalisers” (Vissak 2010) according to their ability to start an international process from the beginning of their establishment or almost immediately after, by entering simultaneously into different foreign markets without developing a solid domestic experience (Rialp et al. 2005).

Moreover, BGs can be found in both high-tech and low-tech sectors (Taylor and Jack, 2013; Cavusgil and Knight, 2009; Eurofound, 2012; Madsen and Servais, 1997). In particular, in the case of Italy, it is possible to identify young BGs belonging to high-tech, design and information, and communication technology (ICT) sectors, which have emerged in the last three decades, and BGs belonging to more traditional sectors, which emerged between the 1960s and 1970s as family businesses located in industrial districts (Pepe and Musso, 2003; Eurofound, 2012; Masili 2022).

The broad range of studies on BGs contributes in a fragmented manner to the literature due to the difference in the parameters adopted for identifying and studying BGs' internationalization processes. For instance, Rennie (1993, p. 45) defines BGs as “*small to medium-sized companies that successfully compete – virtually from their inception – against large, established players in the global arena*”. Likewise, McAuley (1999, p.70) refers to them as “*instant internationals*”, a term that better reflects “*the predominantly [...] rapid internationalization*”. Knight and Cavusgil (1996, p. 11) gave their own definition by considering BGs as “*small technology-oriented companies that operate in international niche markets from the earliest days of their establishment*” by underlining their ability to exploit knowledge-based resources and the sale of outputs in different countries to achieve a higher performance in international markets. In addition,

BGs have also been defined as “*entrepreneurial start-ups that, from or near their founding, seek to derive a substantial proportion of their revenue from the sale of products in international markets*” (Knight & Cavusgil, 2004). More recently, BGs have been defined as “*young entrepreneurial start-ups that initiate international business soon after their inception*” (Cavusgil and Knight, 2015, p. 3).

An important contribution to the identification of the BGs profile has been made by Zahra and George (2002), that suggested defining BGs according to three parameters: the time span between the firm’s foundation and its first foreign sales (time), the degree of foreign sales (scale), and the number of countries in which the company generates sales (scope). Several other authors (Gabrielsson et al., 2008; Kuivalainen et al., 2007; Kuivalainen et al., 2012) have further contributed by proposing a similar start-up pattern of internationalization based on the same three parameters. In particular, Kuivalainen et al. (2012) suggested a list of directions to take, and among the others, the consideration of “*at least five target countries*” as a good way to operationalize the scope parameter when selecting BGs. Therefore, according to all these considerations, BGs companies can be identified as firms that develop an internationalization process before the end of the third year from the inception by achieving at least 25% of total turnover as foreign sales in the same time span and by exporting in at least five countries in the same time period (Masili, 2022).

The strong global vocation of BGs (McDougall 1989) is encouraged by the reduction of cultural and geographical barriers to internationalization (Knight and Cavusgil, 2004), which has been triggered by the advent of the Internet and the ICTs (Rialp et al., 2005). In addition, the founders’ experience and networks are important, as well as the implementation of innovative strategies that include the adoption of new technologies and innovative digital tools, such as 3D platforms (Masili, 2022). Indeed, the introduction of digital technologies not only positively impacts communication with clients and stakeholders around the world (Cavusgil and Knight, 2009) and the integration and coordination of marketing activities but also the production processes addressing the digitalization of supply chains.

It is clear that today, the weight of technology is highly relevant, pushing companies to embark on digital transformation and triggering the emergence of new and more digital business models. In other words, it is inevitable to integrate new developing technologies with traditional business strategies (Caliskan et al., 2020). As a matter of fact, with the so-called fourth industrial revolution – also known as Industry 4.0 – new business strategies began to take shape, connecting people, machines, and objects to improve production efficiency while involving the customers in all processes (Bettioli et al., 2017). In this altered scenario, several technologies and applications are used from customers’ and firms’ perspectives. For instance, the internet of things (IoT), augmented reality (AR), cloud computing, big data technologies and artificial intelligence (AI) provide knowledge about customer needs (Agrawal et al., 2018; Ghaffari et al., 2020), while smart factories, robotics and cyber-physical systems allow for improving firms’ production performance (Yeo et al., 2017; Bienhaus & Haddud, 2018). An important role is also played by “product configurators” (Parlangeli et al., 2019) that can be seen as dialogue tools between manufacturers

and customers and should be able to support a lasting relationship, allowing a mass customization strategy (Franke & Schreier, 2010).

Configurators can be classified in various ways based on the industry and the type of user they address. For instance, configurators targeting end customers can be divided into three subgroups based on three main customization characteristics named: a) functional, b) aesthetic, and c) made-to-measure (MtM) customisation (Walcher & Piller, 2012; Walcher & Miksovsky, 2016). However, considering business-to-business (B2B) relationships, configurators can be seen as components of a sales force automation (SFA) tool (Mahlamaki et al., 2019) involving a wide range of solutions that can support cost reduction and/or improve the effectiveness of a company's relationship with its clients and suppliers (Speier & Venkatesh, 2002).

According to the emerging digital trends, the most recent literature (Chen et al., 2019; Wu & Gereffi, 2018; Monaghan et al., 2020; Nambisan et al., 2019; Piqueras, 2020; Stallkamp et al., 2021; Vadana et al., 2019; Vadana et al., 2021; Veglio et al., 2020; Ye et al., 2022), identifies the category of the “digital firms” that leverage on digital infrastructure, meaning on-line presence, and physical spaces as well as basing their production, operating and delivery processes on the internet (Ye et al., 2022) through a digital business model (Monaghan et al., 2020). Digital firms are classified into four different categories (UNCTAD 2017; Wu and Gereffi, 2018), which include internet platform firms, digital solution firms, both operating entirely in a digital environment, e-commerce firms and digital content firms, which combine prominent digital dimensions with a physical one (see Table 1). In addition, considering their global nature, digital firms may represent a subset of BGs identified in the literature as “born-digital” (Monaghan et al., 2020).

Table 1 - Digital firms characteristics

Categories of digital firm	<i>Internet Platform Firms</i>	<i>Digital Solution Firms</i>	<i>E-commerce Firms</i>	<i>Digital Content Firms</i>
Main characteristics	<ul style="list-style-type: none"> Digitally born businesses. Operated and delivered through the internet. 	<ul style="list-style-type: none"> Internet-based players and digital enablers. 	<ul style="list-style-type: none"> Online platforms that enable commercial transactions. Transaction content may be digital (intangible) or physical (tangible). 	<ul style="list-style-type: none"> Producers and distributors of goods and services in digital format. This format can be delivered both through the internet and other channels.
Examples	Search engines, social networks, and other platforms, such as sharing ones.	Electronic and digital payment operators, cloud players, and other service providers.	Internet retailers, and online travel agencies.	Digital media (video, TV, music, e-books), games, data and analytics.
Type of player	Purely digital	Purely digital	Mixed	Mixed

Source: Authors' elaboration on UNCTAD (2017) and Wu and Gereffi (2018)

According to Ye et al. (2022) born-digital firms have three main characteristics. First, they leverage the advantages of digital technologies since their foundation and they are built on digital infrastructures such as computers, mobile devices, and the internet network. The digital infrastructure provides born digital firms with an identifiable online presence that is in “cyber space” (Wu and Gereffi, 2018). They also have “physical places” such as offices, warehousing, robotics, or data centers (Nambisan et al., 2019). This “space-place” relationship is one characteristic that distinguishes born-digital from traditional manufacturing firms. While being similar to traditional manufacturing firms in terms of the need for capital investment in physical operations (i.e., plants), born-digital firms tend to have a much higher ratio of internet intensity to physical assets than traditional firms.

Second, born-digital firms tend to operate online, and thus they are virtual-permeated (Chen et al., 2019). They rely on digital infrastructures to develop and accrue communication, collaboration, and computing capabilities. These capabilities allow the firm to create, market and sell its product offering online through a digital business model. Built on digital infrastructure, the global internet network provides instant access to end-users, so that the products and services of the digital firms engage directly with their customers and stakeholders (Chen et al., 2019; Vadana et al., 2019).

Third, they are network-oriented (Stallkamp et al., 2021). Digital technologies provide those firms with the means to closely integrate with many different and potentially complementary actors within their networks. This extends the firm’s network from conventional business relationships to include end-users, local content producers, venture capital providers and other firms that offer complementary assets (Monaghan et al., 2020). Products and services of born-digital firms are more likely to be intangible, and thus their business transactions are less constrained by geographical distance, rather they rely on the size of their user networks, thus generating a network effect (Chen et al., 2019).

Based on the above considerations, and the lack of literature on the impact of digital technologies on BGs business models, this study focuses on highly digitalized BGs intending to understand the impact of digital technologies in shaping companies’ business models and the influence on their internationalization path’s development.

3. Methodology

To understand the impact of digital technologies on BGs’ business models, we adopted a case study approach (Yin, 2018; Tellis 1997). Such an approach is particularly appropriate for its flexibility in the research design (Eisenhardt 1989) and in adopting a variety of data collection procedures (Creswell and Creswell 2018; Vissak et al., 2017).

Indeed, due to the novelty of the topic, there is a need for further empirical insight. Therefore, we decided to adopt an explorative approach in developing the case study which is

particularly appropriate to answer how and why questions (Eisenhardt 1989; Welch et al. 2011; Yin 2018) when there is little knowledge about the topic under study (Yin 2018).

Moreover, given the aim and objectives of the study, we implemented a purposeful sampling technique (Patton 2001) for the case selection, due to the importance of identifying key informants in the field of research who can help identifying information-rich cases (Palinkas et al. 2015; Suri 2011; Patton 2001). Therefore, the case selection involves individuals that expressed their availability and willingness to be part of the research by communicating their experiences (Palinkas et al. 2015).

According to the global nature of the companies and their digital path, the identification and selection of cases followed four main parameters: 1) the development of the process within three years from inception, 2) 25% of foreign sales on total turnover, and 3) export in at least five countries in the same time-span (Kuivalainen et al. 2012); lastly, 4) an internationalization path by adopting different types of digital technologies from the beginning.

The inclusion of the fourth parameter facilitated the identification and selection of two born global companies that built their internationalization process by relying on different digital technologies that shaped their business models.

The companies selected are located in Italy, operating in traditional industries (footwear and home furnishing). The choice of traditional industries for the cases to be analyzed is due to the need to verify whether traditional sectors, which are not dependent on advanced technologies as regards the characteristics of products and the relationship with customers, can be influenced by digital technologies in the international development models of companies.

Regarding data collection, we opted for the use of multiple sources of evidence in order to meet the triangulation principle ensuring the validity of the study (Yin 2018). We collected primary data through semi-structured interviews (Saunders et al. 2019) which varied in length from 50 to 60 minutes. The interviews were recorded and then transcribed and integrated with secondary data sources such as companies' websites and the other material directly provided by the interviewees (e.g., internal reports).

With specific reference to data analysis, after writing the two case stories, data coding was carried out independently and then discussed among researchers (Ghauri 2004).

4. Cases description

4.1. Company A

Company A was founded in 2015 in the footwear-specialized Fermo-Macerata industrial district in the Marche region, Italy. The district is composed mainly of independent artisans and craft enterprises highly specialized in each phase of the footwear production chain, from soles and uppers to finished products. The three founders of the company came up with the idea to create an international digital firm aiming to sell customized high-quality shoes. To do this, since its

foundation the company has decided to connect a group of craft firms within the district with end customers worldwide using a proprietary e-commerce platform.

The corporate marketplace includes six main sections, the most important of which is dedicated to the different models and collections available. Others are dedicated to the craftsmanship and sustainability of the footwear products and to the level of customization possible, which according to one of the founders coincides with a “Made-to-Measure (MtM) customization”. MtM means a level of customization that reaches 100%, from the type of soles to the leather to the color of the laces and shoe masks. There is also a “blog” section, a style guide for the correct combination of the company's products in everyday life.

The e-commerce section is multilingual and multi-currency; it can be consulted in six languages (Italian, French, German, Chinese, Japanese, and Korean) and prices can be directly converted into fourteen currencies (UAE Dirham, Australian Dollar, Canadian Dollar, Swiss Franc, Chinese Yuan, British Pound, Japanese Yen, South Korean Won, Malaysian Ringgit, Russian Ruble, Swedish Krona, Singapore Dollar, Ukrainian Hryvnia, US Dollar), each corresponding to the company's main markets.

The business model relies on some fundamental company-owned digital tools. On the corporate side, the firm uses an Order Management System (OMS), further supported by an Enterprise Resource Planning (ERP) software by means of which end-consumer orders are directly routed to the craft enterprises. On the consumers' side, the 3D configurator gives them a clear idea of the fully customized aesthetics of the footwear available. To support this, the company has developed a foot measurement mobile app that calculates the size of the sole of the customer's foot using the smartphone's camera, thus making the online shopping experience as smooth and intuitive as possible. These technologies have enabled the company to export its products to three different continents from its inception, reaching 50% of the total in its first year of operation (see Table 2).

Then, in 2017, following a multi-channel approach, the firm decided to expand its distribution channels by entering into partnerships with traditional clothing shops specializing in tailoring. The search for partners was not only concentrated within the markets (countries) already served but also in areas where the company was not present, thus pursuing a market-spreading strategy. Today, the company boasts no fewer than 39 business partners in 21 countries. Within the tailor-made shops, a section is set up with a sample of the company's products, which the customer is free to explore. After weighing up the product and determining the most suitable size, the consumer can begin the customization process using a dedicated totem or his/her smartphone, scanning the QR code found next to the item to be purchased. By doing so, the individual is enabled to complete the transaction where and when he or she wants.

4.2. *Company B*

Company B is an “interior general contractor” for both open-to-public facilities (e.g., hotels, offices, restaurants, hospitals) and private residences. It was founded in 2016 and is located inside the furniture industrial district of Pesaro in the Marche region, Italy, which has an old tradition of manufacturing handicrafts in producing and exporting “Made in Italy” furniture. The company was founded based on the entrepreneur's previous experiences gained within the furniture industrial district, starting from the fact that for manufacturers, supporting supplies to big buyers (the so-called “contract” supplying of furnishing) was becoming more and more complex due to the increasingly high levels of accuracy and reliability required by customers. This issue has left room for specialists to manage the complexity of relationships that characterize an interior design project, focusing on the opportunities offered by new technologies. The company's first customers, which were international since the beginning, were brought by the local furniture manufacturers, so the choice of internationalizing resulted in a supplier-driven path.

The company offers a worldwide turnkey contracting service, supporting customers from project design and implementation, to completion. Customers are architectural firms and real estate companies which have to manage the completion of their building projects with all the interior furnishing, including decorative elements such as paintings, knick-knacks and sculptures. Starting from the project, the company's task is to organize all suppliers and coordinate their work so that timing and the sequence of interventions are respected. The company's expertise relates to value engineering consultancy (Gunarathne et al., 2022) and procurement services. The former provides support for studying the feasibility and cost analysis of all elements of the furnishing package understood as Fixture and Equipment (FF&E) and Operating Supplier & Equipment (OS&E); it is aimed at B2B operators. The latter is the supply support service, which is a direct branch of the former. These activities are managed through the “Building Information Modeling” (BIM) (Azhar, 2011; Volk, Stengel and Schultmann, 2014) which is a digital building information system consisting of 3D models integrated with the physical, performance and functional data of the structure. Therefore, the BIM represents a dynamic, interdisciplinary, and shared information system about the entire lifecycle of the structure, from design to construction up to its demolition and decommissioning. For interior furnishing, the BIM methodology allows the contractors to coordinate the interlocking of all furnishing components, including connections with plumbing systems (for bathrooms and kitchens) and electrical and gas supplies. This allows for drastically reducing errors by manufacturers when they produce furnishing elements based on orders that using traditional systems are prone to inaccuracies or errors, also because products are usually customized and exact correspondence in the measures must be ensured when they are installed.

In the years following the initial development, the relationships that have been created with international customers have made it possible to expand the market, with a logic based on the enhancement of the company's specialization, which has led to the pursuit of a market spreading strategy, albeit limited by the company small size, that still characterize it.

Table 2 - Companies’ profiles

	Company A	Company B
Sector	Footwear	Services
Expertise	Customised shoe	Business and Strategy Management; Value Engineering and Procurement
Foundation	2015	2016
Year of internationalisation*	2015	2016
First Countries*	USA, Germany, France, UK, Japan, South Korea, China	Russia, USA, UAE, Uzbekistan, Greece
Countries in 2022	Albania, Austria, Canada, Croatia, Czech Republic, France, Germany, Greece, Ireland, Japan, Kazakhstan, Malaysia, Mongolia, Qatar, Slovakia, South Korea, Spain, Switzerland, UAE, UK, USA	Albania, Cyprus, Croatia, Greece, Montenegro, UK, UAE, Uzbekistan
% of foreign sales on total turnover within three years from inception	50%	100%
% of foreign sales in 2022	90%	95%
Drivers of market selection	Market spreading strategy	Market spreading strategy
Adopted technologies	Order Management System (OMS) Enterprise Resource Planning (ERP) 3D platform	Building Information Modelling (BIM)

* Within three years from inception

5. Case study evidence

What results from the two case studies analyzed is that new digital technologies are allowing the emergence of new business models within the sectors considered, involving most of the dynamics regarding production processes, supply chains and marketing channels.

Company A acts as a process aggregator that speeds up the cycle order-production-distribution, with the additional advantage that through a common e-shop, manufacturing companies are able to acquire visibility that would be weaker if pursued individually.

The business model is based on the make-to-order (MTO) system. By adopting this model, the company operates a manufacturing process in which the production of an item only starts after

receiving a final order from the customer. Such an approach makes it possible to considerably reduce both sales discounts and inventories. However, it is important to specify that, in order to be successful, the MTO system must necessarily be associated with an efficient and fast manufacturing process and with an active demand management, taking care of the relationship with the prospective customer from the first contact to the act of purchase (Hendry, 1998).

The 3D configurator makes it possible to manage the online purchasing process through MtM product customization, which therefore becomes a factor of strong competitiveness for the company. Moreover, the configurator solution allows the potential for further technological developments. In particular, the adaptation to the morphology of the customer's feet is becoming an area of innovation through photo-based modelling, i.e. through scanning systems to measure the exact conformation of the customer's feet. In this sense, customization would go far beyond simple aesthetic solutions such as choosing colors and materials.

The company, while fully classifiable as an e-commerce firm, operates as something other than a simple e-retailer since it manages to directly connect end customers with producers, coordinating their activities and speeding up the customization processes. At the same time, it also plays a different role than the simple promotional support that an export promotion agency or consortium could play, since it does not limit its business model to the aggregation of several producers for promotional purposes, as it integrates the processes by participating in all the activities related to the development of the order.

The international development path of the company can be identified as a market-spreading strategy (Katsikeas et al., 2020), but the logistic constraints depending on the costs and conditions of product delivery tend to limit the number of countries. Indeed, the company is potentially in the condition to look at a very large number of markets, in line with a niche strategy that associates the quality of workmanship with customization and, last but not least, with the image of “Made in Italy” footwear. However, at the moment the number of countries to which the company addresses its e-commerce offers has been limited, in order to ensure an efficient service.

Company B is an example of new specializations that the development of digital technologies requires, leading to the emergence of international players that are not reflected in traditional roles within the value chains. The evolutionary path of the company deserves attention. It was born as a supplier of project management services for an industrial furniture district, whose companies provided contacts for starting international relations with architects and real estate building companies. Subsequently, the business model changed and the company started acting as a point of reference for foreign customers in the search for suppliers to complete interior furnishing projects. Today, the company could identify itself as a manufacturer that supplies a wide range of products having completely outsourced the manufacturing phases, focusing on its core business, i.e. project management on behalf of foreign customers.

To develop its business offering, the company adopts the BIM, a set of technologies, processes and methods that allow different partners to collaboratively design, build and manage a construction project in a virtual environment. As introduced in the previous paragraph, BIM represents a virtual representation of the building, an accurate digital reproduction of every single

component, which allows control and analysis activities throughout the building process, enabling the extraction of those data and documents necessary during the design, construction and management phases. The BIM adoption – and by consequence, its working methodology – allows the company to adopt an open, collaborative and integrated design form, leading to numerous economic and strategic advantages.

From an economic point of view, the BIM allows large savings in terms of cost and time if compared to the traditional Computer-Aided Design (CAD) process. In fact, the costs of a project increase in proportion to the degree of realization. Therefore, making changes during the execution of the work will be much more expensive than changes introduced during the project’s design phase using the BIM methodology. Possessing a virtual model that contains all the information about the building allows control and analysis of all the activities over its entire life cycle. This is a major advantage for the company, allowing efficient design, reducing errors and optimizing construction times.

From a strategic point of view, the BIM adoption within the company's business model implies the possibility of working on a more significant number of projects in parallel and choosing orders from a variety of private clients and public administrations worldwide. In fact, there are numerous cases of countries requiring the use of specific electronic tools for building information and just as many have made these tools mandatory to apply for public procurement contracts.

In general, it is possible to say that the adoption of new technologies by these two companies in two different traditional industries led to a radical change in their business model, putting them in a position that is in a borderline between a manufacturing and a distribution role. While some of these changes bring the case of Company A within the category of digital firms (specifically e-commerce firms), the same cannot be said for Company B. Although the business model of the latter has been radically changed by the adoption of the BIM system, it cannot be placed within a well-defined category among those proposed by Wu and Gereffi (2018). Its role could be identified as a kind of “digital-based process coordinator”, acting with a pivotal role in the management of complex projects.

6. Conclusion

Our findings show that adopting online platforms, product configurators, and collaborative tools for project management, such as BIM, strongly impacts the development of business models allowing a global approach since the startup phase of a company.

On one side, the digital approach of company A opens up the possibility to expand its customer base worldwide by leveraging its online e-commerce platform enabling worldwide sales and an MtM configurator that gives the possibility to reach high aesthetic customization. More in detail, the adoption of configurators facilitates the choice of products that better suit customers’ needs favoring a better relationship. Moreover, according to the literature (UNCTAD 2017; Wu & Gereffi, 2018), company A can also be considered a born-digital firm and, more precisely, an e-commerce firm adopting an online platform associated with product distribution in physical shops worldwide.

On the other side, by benefitting from the BIM system, company B has built its business model around an open, collaborative and integrated design format by focusing on BIM-based project management (Chan et al., 2018) as a core business. Such an approach guarantees projects quality, production flexibility, speedy deliveries and the possibility of always offering the customer a competitive price in line with the market. Indeed, using the BIM in the design phase of the building's furnishings, the company works alongside the client and the designer at every stage of the technical design by coordinating multidisciplinary cooperation.

What links both cases is the fact that the exploitation of digital technologies has allowed the emergence of new roles and new business models in sectors that are traditionally anchored to the production of low-tech material goods. In these sectors, digital technologies express their potential in the connection of the value chain activities, allowing the link between producers and end users to be organized in an innovative way. In both cases, the strong specialization required to carry out the coordination and connection activity justifies new roles and related business models, which can find the full expression of their potential in the international dimension of the market. By this point of view, BGs can certainly be enriched by this profile, which identifies its characterizing role in the digital base the business.

The implications for management are significant. On the one hand, the emergence of this type of role opens new market spaces for companies able to offer specialized services that are based not only on technical features and information technology, since they combine digital competences with coordination and relational skills that require precise knowledge and experience about the sectors in which companies operate, including the ability to manage network relationships both through innovative / digital channels and through traditional and informal relations, that still characterize business interactions.

On the other hand, a further indication can be addressed to manufacturing companies, which should recruit adequate human resources and acquire technological equipment in order to interact effectively with the new mediator / coordinator roles identified in this study. A further assessment that can be made by companies is whether and to what extent they can incorporate part of the functions performed by the roles observed in the cases analyzed, deciding which stages, if any, they can internalize to retain value within their processes.

This work has some limitations, the first of which is in the fact that the study was conducted in only one country and, within it, in only one region. Although this does not necessarily represent an element that could affect the results of the study, since it is an exploratory phase, it would be appropriate in further studies to consider cases from other regions and other countries, as well as from different sectors. Undoubtedly, the exploratory phase should be continued to enrich the variety of cases considered, leading to more complete hypotheses that could form the basis for subsequent quantitative analyzes, aimed at measuring the relevance of the phenomenon and its diffusion.

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Challenges faced by Indian Women while working from home during Covid-19 lockdown

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Abstract

As the unprecedented Covid-19 pandemic continued wreaking havoc across the globe, most organizations were forced to relook at their work schedules and entered into a work-from-home regime, which they hardly knew would soon become the ‘new normal’. Workplaces continued getting chaotic as millions of employees across the globe struggling with the initial confusion of the sudden disruptive changes happening at work. Amongst others were the Indian working women who now faced the brunt of increased workload while they tried juggling between perfecting home and office. The paper attempts to surface certain gender specific challenges that these women faced while working remotely from home. The qualitative research builds on the lived experiences of 16 working Indian women employed in managerial positions across diverse industries, captured through semi-structured telephonic interviews. The average age of these respondents was 36 and all of them stay in nuclear families with their husbands and children. The findings reveal that working Indian women faced more challenges than men while trying to manage office work, children, and home. During the lockdown, they disbursed all these responsibilities almost single-handedly since external domestic support was unavailable. Spousal support for child care or domestic chores was limited – either because husbands were unacquainted with these tasks and were hesitant to do them now or because wives did not allow them to do these tasks thinking that they would not be able to do it satisfactorily. Respondent women even highlighted that they struggled to carve out a space to work at home and were often the last in the family to choose a comfortable working space. They wriggled with increased family expectations and did not even have the heart to deny any of them. Respondents told that they were already guilty of not spending enough time with family before and felt like this is their time to make up for those lost times. However, catering to this additional family wish-list was burning them out. Delving deeper into these issues surfaces core societal problems in the Indian society that need to be addressed. This paper draws attention to the gender roles defined in Indian families which are a result of the societal conditioning. It tries to unveil the superwoman syndrome that Indian working women very easily fall prey to. It ends by discussing methods to address these challenges through redefining gender roles in Indian families, relooking at lifestyle and parenting methods for Indian parents, and re-exploring self-expectations of a working Indian woman from herself. The paper also analyses the situation in the light of work-family conflict theories and models and draws implications from therein for corporate strategies regarding diversity, inclusion and equity in the new normal of virtual working.

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Redefining Total Rewards and Performance Standards in the Hybrid Work World

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Abstract

The hybrid model of work is the new normal in the post pandemic era. This has forced organizations to relook, re-invent and re-discover the various practices to be followed in the arena of measuring performance of employees and rewarding them for meeting performance standards. The performance standards themselves are getting re-organized, given the new way of working and handling business. This paper reviews published literature to find trends that have caught up in the area of redefining performance standards and relooking at total rewards in the new hybrid way of working. The trends derived from analyzing secondary data are then weaved into insights drawn from the responses collected through semi-structured interviews from 15 HR managers (working in the field of performance and total rewards) in the corporate India.

The study revealed that most firms evaluate policies and practices on three corner-stones now - agility, fairness, and hyper-personalization. Compassion and empathy form the base of the spirit of decision making for any matter in a firm nowadays. Whether it is performance or total rewards, organizations look at collecting ‘thick data’ (more personalized data about each employee – data that is more and beyond the big data) for employees in order to build and employee value proposition that suits the unique needs of each employee. A ‘one-size-fits-all’ approach is considered redundant and non-sustainable now. While bringing in flexible policies and providing employee to choose between various pay packages of pay and benefits has become most important, the importance of maintaining equity while providing such flexibility also cannot be undermined. This would need organizations to use more agile and efficient (AI driven) systems to help managing such models. Similarly, performance researchers predict different performance standards and parameters to be set for different set of employees working in an organization under different service rules today. Futuristic models even suggest the co-existence of three different

worlds – orange, blue, and green in any particular organization. While orange world employees would be more risk taking and would mostly operate as free lancers in the gig economy, the blue world employees would be driven by sense of equity and performance competition. The green world employees would value collaboration and working together for a cause. The cause of their work would be the greatest motivation for them. How do organizations formulate employee value propositions (mostly in terms of performance standards and total rewards) so that such complexity at workplace can be dealt with and organizations can sustain themselves in the dynamic and competitive business landscape?

Further, the paper also discusses potential challenges that Performance and Reward leaders might face while implementing the policies on ground level and suggests ways to address these challenges.

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Upskilling and re-skilling through training and development: Employee perception on implementation of digital technology in the telecommunication sector in Qatar.

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Abstract

Background: Training and Development teams of every organizations aims to provide better services and make a better impact on their businesses in the digital age. The use of digital tools for learning in organizations continues to be an area of both potential and frustration. Organisations are struggling to develop digital learning strategies that bridge the expectations of the multigenerational workforce whilst individuals are also struggling to learn and make effective business decisions. Human Resource professionals develop digital learning strategies that connect a multitude of learning technologies that are aligned with organisational strategies. As demand for new capabilities gathers pace, upskilling and re-skilling can enable the organization to develop the skills of the employees to remain competitive.

Purpose: This paper focuses on determining the impact of digital training and development on upskilling and re-skilling at one of the organizations in Qatar's telecommunication sector. It also determines the employees' opinions of how digital training content provided by the trainer impacts the employee's skills, individual performance and productivity.

Research methods: A simple random sampling method was used to select participants randomly for this study and the quantitative approach was employed by using a survey-based data collection through questionnaire and received data from 122 employees. The data was examined through descriptive statistics, reliability analysis and correlation analysis.

Results: The findings demonstrated that an alpha value of all variables is above 0.97, which shows that the results for the test are highly reliable and valid. Correlation coefficients show the strength of the link between variables. This research demonstrates training needs assessment, training contents, and training evaluation are strongly correlated with each other.

Originality: The originality of the current paper comes in identifying the implementation in training and development with technology and how it helps to upskill and re-skill employees, specifically in one of the Qatari organizations in the telecommunication sectors. It also broadens the discussion of ways to enhance these skills. In fact, the study outlines the training and development methods designed to enhance digital technology used.

Conclusion: The organization lacks to provide enhanced digital training on delicate job responsibilities and skills needed to implement a specific role for the new and existing employees, as well as a poor training on new trends and knowledge, which negatively affects the company's market position. Moreover, the ineffectiveness of training and development on employees affects the organization's productivity, as organizations rely on having people with the necessary skills, attitudes, and capabilities to achieve their objectives.

Keywords: Training and Development, Upskilling, Re-skilling, Employee perception, Digital technology, telecommunication sector.

1.0 Introduction

In many firms, the use of digital technology is essential for training, employee education, and the development of human resources. The widespread adoption of digital technological settings makes learning resources adaptable, accessible, and available whenever needed. It supports human resources in upskilling and re-skilling their workforce. For instance, employees can advance their knowledge and skills through the use of learning management systems, webinars, or e-learning. Despite these benefits, human resource developers and trainers would benefit from knowing more about how learners gain from learning digitally, what they encounter, and how they see upskilling and re-skilling through digital training (Gegenfurtner, Schmidt-Hertha, & Lewis, 2020).

This paper aims in determining the employee's perception on the implementation of digital technology in an organization in the telecommunication sector. Training and development are essential to any organization. It provides all the needs for employees to move forward with their careers and that is by upgrading their skills with the current trends and with the current digital technology tools used presently to deliver the training programs. Hence, the telecommunication organization's absence of a relevant curriculum and qualified employees presents a problem in this area. Presently, standard training programs are unproductive since they don't address the specific skill sets required by the company. Human resource professionals must carefully design upskilling and re-skilling programs to avoid the shortcomings of their conventional counterparts. Soft skills should be thoughtfully incorporated into the training programs because they are equally vital to improving talent. Along with candidates' educational background and technical skill set, consideration should be given to how easily candidates can learn and adapt. Moreover, training and development using digital technology help with the skills gap that some organizations might face. It gives them the opportunity to reconsider their employee's skills. Therefore, upskilling and re-skilling is an important factor to work on the skills gap of the employees. For instance, everyone having access to lifelong learning is now a reality. In comparison to a decade ago, new technologies and abilities are being introduced considerably quicker. According to survey participants, almost 40% of workers will need to reskill for a period of six months. In the next four years, half of the workforce will need to reskill due to the COVID-19 pandemic's double-disruptive effects on the economy and rising automation that is changing occupations (Whiting, 2020).

In order to help find possible ways to fill these gaps, it is of great importance to describe the current state of scientific literature on upskilling and re-skilling is and how it is associated with training and development.

2.0 Review of Literature

Many theories and research have been proposed to explain what upskilling and re-skilling is and how it is solved and associated with training and development by using the required digital technology. Although the literature covers a wide variety of such ideas, this review will focus on major themes such as training and development, upskilling and re-skilling through digital technology. Although the literature represents these topics in various contexts, this research will primarily focus on the impact of upskilling and re-skilling through training and development.

2.1 Training and Development

According to Madukoma, Akpa, & Okafor (2014) research, non-managerial and managerial individuals develop technical knowledge and abilities for a specific purpose through training and practice, which can be also known as a short-term procedure involving a structured and organized approach.

2.1.1 Training effect on employee turnover

As stated by Li & Lu (2014), employee turnover is when an employee leaves the company after working for a length of time due to many different reasons, considering the gap between their wants and reality in all aspects. In contrast, Porter & Rigby (2020) emphasized that employee turnover is when an employee participates in actions that lead them to quit a job since they are not interested in the organization. There are mainly two types of turnover; involuntary and voluntary turnover. According to Dwesini (2019), involuntary turnover happens when an organization ends the services of a company's employee, and the employee resigns from their employment unwillingly. On the other hand, voluntary turnover defines as when employees leave the company of their own free choice, for example, to pursue a better job opportunity in another organization which leads to upskilling or to have a better income.

Therefore, some employees tend to leave the organization because of their poor used technology and ineffective training programs. Jain & Sharma (2018) discovered that training and development improve overall company performance in retail sectors, including employee satisfaction which leads to a higher engagement rate. Martinelli (2018) demonstrated that a higher turnover rate and other consequences are caused due to lack of training and development, which

may not be a significant issue. Moreover, an employee's high turnover rate can be a financial risk to organizations. The expense of finding a replacement for an employee can be up to 30% of the entire annual income for the position. Therefore, an inefficient training program leads to a high employee turnover rate. The higher the probability of employee turnover, the less likely that a firm or a stakeholder would invest in the organization.

Moreover, employees tend to leave the organizations and resign their roles due to inadequate training programs, which causes a high turnover rate (Martinelli, 2018). Miah & Hafit (2019) indicates that there is a significant positive relationship between training and development and job satisfaction rate, which concludes that the better the training program is, the more employees would continue working for this organization. Research from Johnson, Huang & Doyle (2019) focused on how solid management structures and human resource systems must facilitate strict training and development programs, particularly in small and medium corporation firms. Researchers Misra & Mohanty (2021) focused on the importance of training in creating a competitive and demanding corporate environment in today's world. It promotes and enhances the employee's work-life balance, which leads to increasing the retention rate of employees and lowering the turnover rate while also contributing to the organization's significant growth (Misra & Mohanty, 2021).

2.1.2 Training needs assessment

According to Ferreira & Abbad (2012), training needs assessment refers to the organizational process of gathering and evaluating data to support and make decisions on whether training is the best choice or not to enhance individual and organization performance, specifying who should be trained, why they are getting training and precisely what material should be taught. Organizations must start developing strategies for training and implement them directly to the employees who need them. Therefore, a systematic needs assessment can guide and serve as the foundation for training program design, development, delivery, and evaluation; it can be used to establish several critical elements for training program implementation and evaluation (Ferreira & Abbad, 2012).

2.1.3 Training content

The outcome of the training needs assessment is determining what training subjects will be implemented to employees. Therefore, the content of the training itself is important and needs to be determined according to what employees need training in. Ensuring and delivering the

employees the correct information can help them perform better in the organization. As reported by Otuko et al. (2013) study, researchers found that training content has a positive and significant effect on employee performance and skills. Moreover, delivering the training content can leave a positive impact on employees. Researcher Nguyen et al. (2018) proved that there is significant evidence that the communication of training and its content approach improves employees' skills, abilities and knowledge, which will increase their performance.

2.1.4 Training evaluation

The term "training evaluation" refers to determining how successfully employees learn and adapt to a system or program. Over the last few decades, various ways for conducting training assessments of systems or software have been created (Saminathan & Suaib, 2021). One of the models to evaluate the training is using the Kirkpatrick model. Kirkpatrick (2009) describes that the training evaluation goes into 4 different stages: *reaction, learning, behaviour, and impact*. these levels were purposefully created to evaluate training outcomes. According to Otuko, Chege, & Douglas (2013), employees should be asked how they felt and input their feedback about the training to determine whether replies are emotionally or psychologically based on opinions or bias. Every training program should be reviewed at this level at the very least in order to provide advancement of a training program, where the knowledge and skills contents as indicated in the training objectives are reviewed. This can be motivating to employees where they see it as a chance to perform better. Overall, researcher found that training evaluation and employee performance has a significant positive relationship (Otuko, Chege, & Douglas, 2013).

2.2 Upskilling and re-skilling through digital technology

According to the Cambridge Dictionary, "upskilling" refers to the process of giving employees new skills, while "re-skilling" refers to the process of acquiring a new skill that allows individuals to perform a different job or provide direction to other people to do a different job.

The results of a research by (Li L. , 2022) demonstrate the need for lifelong learning to be a component of an organization's strategic goals. Upskilling and re-skilling must be a priority for both individuals and businesses, and career development must be a key component of the future workforce. Moreover, researchers Chookaew & Howimanporn (2022) has emphasized how many training programs fail to provide and deliver the required knowledge due to a lack of strategies to motivate telecommunication engineers to learn and blend easily with new technology practices.

Therefore, the results from the research indicated that active digital training can enhance employees' skills and their perception of technology.

As stated by Gaur, et al., (2020), despite of the pandemic, the outcomes of it has provided many opportunities as well for trainers, such as the incorporation of online learning in the curriculum and upskilling and re-skilling in new technologies. Beqiri & Mazreku (2020) has discovered that the level of education also plays a significant role when it comes to using technological training were employees with higher education level have less interest in IT training compared with employees with lower level of education.

Donner, Dean, Osborn, & Schiff (2020) study has recognized platform-led upskilling as a growing component of the training environment and a potential contribution to the creation of a more dynamic and comprehensive digital society. According to the researchers, platform-led upskilling is training offered by marketplace platforms to vendors and independent contractors without the involvement of an employer-employee relationship such as freelancers. Because of this, marketplace platforms and the development community are more likely to work together instead of competing. The paper aims to achieve its objectives in the following section.

3.0 Research objectives

1. To understand and analyze the demographic profile of the employees in the chosen organization in the telecommunication sector and how it relates with their individual skills.
2. To determine the perception of employees on training and development activities.
3. To determine employees' opinions of how training and development are associated with implementing digital technology in the telecommunication sector.
4. To investigate and analyze how digital training content provided by the trainer impacts the employees' skills, individual performance and productivity.

4.0 Research Methodology

The research methodology will justify the research design choices, sampling methods, and population chosen in this section by demonstrating the procedures and techniques selected as the best match for the research questions, goals, and purpose, ensuring valid and reliable results (Jansen & Warren, 2020).

4.1 Research design

The descriptive research design involves in-depth explanations and descriptions of the problem or scenario being studied. This type of research design involves gathering, analyzing, preparing, and presenting quantitative data comprehensively (Leverage Edu, 2021).

In this study, descriptive research is utilized to examine and collect information needed to answer important research questions. This survey-based study examined the association between training dimensions with its impact on up-skilling and re-skilling. This method collects measurable data to undertake statistical studies on a population sample at one of Qatar's telecom companies and its subsidiaries. The method of data collection is quantitative through survey method, which allows the collection of vast quantities of information that can be evaluated for frequencies, averages, and tendencies that study employee demographics, employee opinions, and workforce satisfaction with the company's training and development (McCombes, 2019).

5.0 Methods of data collection

Primary and secondary research collected the data needed within a one-week timeframe. The data collection using primary and secondary research will help the paper to achieve its objectives.

5.1 Primary Research

For the primary research, we adapted an existing questionnaire that was used in previous research. The questionnaire was developed, and it was sent to the employees at one of Qatar's companies in the telecommunication industry and its subsidiaries through their company email. The responses received will help this paper to achieve its research objectives and reach its aim. The sampling method followed probability sampling, in which the questionnaire participants had an equal chance of being selected randomly or by chance within the company.

5.1.1 Research instrument (Constructs/ dimensions)

The questionnaire was developed to gather information regarding the company's training and development to achieve the paper's research objectives. The questionnaire was divided into two sections: employee demographic profile, and training and development. The questions were rated from 1 = strongly disagree to 5 = strongly agree using Likert scale.

Section 1: Demographic profile had the regular and general demographic questions such as age, education level, work experience, department, and monthly income of the respondents.

Section 2: Training and development: consisted of 16 questions in total and it was divided into three categories and sub-factors as follows:

- **Training Needs Assessment:** This category consists of 6 questions that were adapted from (Otuko, Chege, & Douglas, 2013). This section is primarily used to identify performance requirements and the knowledge, skills, abilities, and other characteristics (KSAOs) of the company's staff to accomplish the set requirements as well as the quality of training and level of satisfaction.
- **Training Contents:** This category consists of 5 questions that were adapted from two reviewed articles, (Otuko, Chege, & Douglas, 2013) and (Siddiqui & Sahar, 2019). The training content refers to the information and ways in which the information will be presented to the learners (staff/employees) of the company. The main aim of the contents is to provide them with all the knowledge they are seeking after reviewing the TNA and establish training topics and tools to help them move forward with the training process.
- **Training Evaluation:** This category consists of 5 questions that were adapted from (Otuko, Chege, & Douglas, 2013) and (Tahir, Yousafzai, Yousafzai, Jan, & Hashim, 2014). Training evaluation is a systematic approach of gathering data and evidence that will be used to better enhance the training program. Training evaluation provides feedback that helps identify if the desired outcomes have been accomplished. This will also allow specific decisions to be made in the future (long-term)

5.2 Secondary Research

For secondary research, a research review, journal articles, or papers published in the last five years, databases such as ProQuest, Academia.edu, Research Gate, and valuable research studies were used for this study and added to the literature review.

5.3 Sampling Method

Probability sampling illustrates the equivalent chance of every element in the population being selected to be a part of a sample and eliminates the bias of sampling (Taherdoost, 2016)..

With the method of Simple random sampling, respondents were randomly picked, including an arbitrary number of employees with at least one form of training in each subsidiary related to their job. It generates statistically accurate results for the entire population, and most of its applications are in the quantitative research (McCombes, 2019).

5.4 Population and Sample Size

The population of this study consisted of five subsidiaries of the telecommunication company which composed of a total of 150 employees. According to (Kenpro, 2012), using the sample table created by Krejcie and Morgan, 108 workers was a valid number to be selected as a sample size where the confidence level is 95%. However, 122 valid survey responses were received from the company and its other subsidiaries, representing a response rate of 88.5% of the sample size determined. It was also considered a valid sample of the whole population when the confidence level was 99% (Taherdoost, 2017).

6.0 Results and Discussions

In this section of the research, interpretation, and analysis of the questionnaire are conducted using the methodologies and analytics tools.

6.1 Reliability of Questionnaire

Cronbach's alpha is a tool to measure of internal consistency or reliability of a test. This method is used to test the reliability of the construct: Training and development, this test was conducted using the excel tool Anova: Two-Factor without replication.

Table 1. ANOVA test of Reliability

<i>SUMMARY</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Training Needs Assessment [I feel training is essential for my job title.]	122	459	3.7623	1.5711
Training Needs Assessment [Training reduces the stress of the employees.]	122	441	3.6148	1.5115
Training Needs Assessment [Enhanced technology used in training programs are useful.]	122	449	3.6803	1.5251
Training Needs Assessment [Understating the objectives of the training program helps me to perform my task.]	122	455	3.7295	1.5543
Training Needs Assessment [The company provides right training for the right people.]	122	417	3.4180	1.4023
Training contents [Training programs provided by the organization are adequate for my development.]	122	424	3.4754	1.4415

Training contents [Training has significant role in improving work quality.]	122	448	3.6721	1.5445
Training contents [I am able to understand the tool used by the trainer]	122	435	3.5656	1.3717
Training contents [Training programs improve my individual ability]	122	439	3.5984	1.4324
Training contents [The training programs that was offered is organized.]	122	419	3.4344	1.4543
Training Evaluation [Training improve job knowledge in the task.]	122	452	3.7049	1.5651
Training Evaluation [The company's training program meets my expectations.]	122	412	3.3770	1.4765
Training Evaluation [My trainer accepts feedback.]	122	417	3.4180	1.4850
Training Evaluation [I feel lack of training increases the turnover.]	122	360	2.9508	1.3695
Training Evaluation [I had a thought of leaving the organization due to lack of training.]	122	311	2.5492	1.5058

Table 1 illustrated the results of the summary results of the questions that was in the survey which calculates the count, sum, average and variance of each statement. The statement are aligned in rows.

Table 2. ANOVA Alpha Value

Source of Variation	SS	df	MS	F
Rows	2035.8470	121	16.8252	43.7383
Columns	179.5552	14	12.8254	33.3405
Error	651.6448	1694	0.3847	
Total	2867.0470	1829		

$$\alpha = 1 - (0.3847 / 16.8252) = 0.9771$$

Table 2 shows how Alpha value was calculated using the formula, $\alpha = 1 - MS \text{ Error} / MS \text{ Rows}$. The MS represents the mean squares of the rows which are the questions, this shows a value of 16.8252. The MS Error is a risk function that calculates the square root of the number of mistakes, which could be repeated, unanswered results.

This research indicates a value of 0.9771, respectively. According to (Real Statistics Using Excel, 2022), the acceptable values of alpha range from 0.70 – 0.95 or higher. The closer the range to 1.00, the higher the reliability of this test. This concludes that our results for the training and development test are reliable and valid to use for the research.

The research has also indicated each construct alpha value to test individual reliability.

Table 3. Variables Individual Reliability Results

Variable	Number of items	Reliability (Cronbach Alpha)
Training Needs Assesment	6	0.9645

Training Content	5	0.9774
Training Evalutaion	5	0.8443

As an evidence from a study by (Vasudevan, 2014), his research shows that his test of reliability had a safe indicator therefore his results demonstrated training evaluation was 0.91, respectively, training needs assessment was 0.94, and training contents and delivery approaches had an alpha value of 0.88.

6.2 Analysis of employees’ demographic profile

To analyze the employees’ demographic profile in the research objectives, Pivot tables was used to give the research detailed percentages for each demographic question.

Table 4. Employees Demographic Profile

Variable	Options	Percentage
Gender	Female	89%
	Male	11%
Age	18 - 25	3%
	26 - 35	51%
	36 - 45	39%
	46 - 55	7%
Education Level	High School Degree	15%
	Diploma	24%
	Bachelor Degree	54%
	Master Degree	7%
Work Experience	Less than 1 year	7%
	1 - 5 years	43%
	6 - 10 years	27%
	11 - 15 years	16%
	More than 15 years	7%
Department	Education	65%
	Administration	1%
	IT	6%
	HR	2%
	Marketing	2%
	Customer Service	15%
	Operation Manager	5%
	Finance	4%

Variable	Options	Percentage
Monthly Income	Less than 5,000	66%
	5,001 - 10,000	30%
	10,001 - 15,000	1%
	15,001 - 20,000	3%

According to the findings presented in table 2 of the frequency distribution, there were a total of 89% female participants and 11% male participated in the survey.

Moreover, 51% of respondents are between 26 - 35 years old, 39% of respondents are 36 - 45 years old and 7% are 46 - 55 years old and 3% of respondents are 18 - 25 years old.

Table 2 also shows the education level of participants, it shows that more than half of respondents have a bachelor’s degree a rate of 54% whereas the second largest group has a diploma degree only which represents 24%, 15% of respondents have a high school degree, and 7% has a master’s degree.

Moving on to the work experience of the respondents, table 2 illustrates that most employees with a rate of 43% have experience from 1 to 5 years’ whereas 27% of employees have from 6 to 10 years of experience, 16% of participants have 11 to 15 years of experience, 7% who has less than 1 year and 7% who has more than 15 years of experience.

Table 2 also illustrates the participants’ departments. 65% of respondents are associated with education department such as teaching, nursery, career counselors, academic coach, etc., 15% of respondents are associated with customer service, 6% of respondents are associated with IT, 5% of respondents are associated with operation managers, 4% of respondents are associated with finance, 2% of respondents are associated with HR, 2% of respondents are associated with marketing, and 1% of respondents are associated with administration.

Lastly, table 2 shows that 66% of respondents earn less than 5,000 QAR monthly, were 30% of respondents earn between QAR 5,001 to 10,000, 3% of respondents earn between QAR15,001 to 20,000, and 1% of respondents earn between QAR 10,001 to 15,000.

6.3 Employees’ perception of digital technology

It is critical for employees to understand the importance of digital technology in training programs. Moreover, it is essential for this research to understand the employee’s perception of the digital technology that has been implemented in the company. To determine this, cross-

tabulation was used to read the employees’ perceptions and pie charts to present the results. Table 3 illustrates the questions that respondents answered about training.

Figure 1 illustrates the participants' input rate on statement 4, the pie chart results shows that 66% of employees agree that enhanced technology are useful when its used in training. Therefore, employees see that implementing digital technology in training sessions in the telecommunication sector helps the organization to upskill and re-skill their employees.

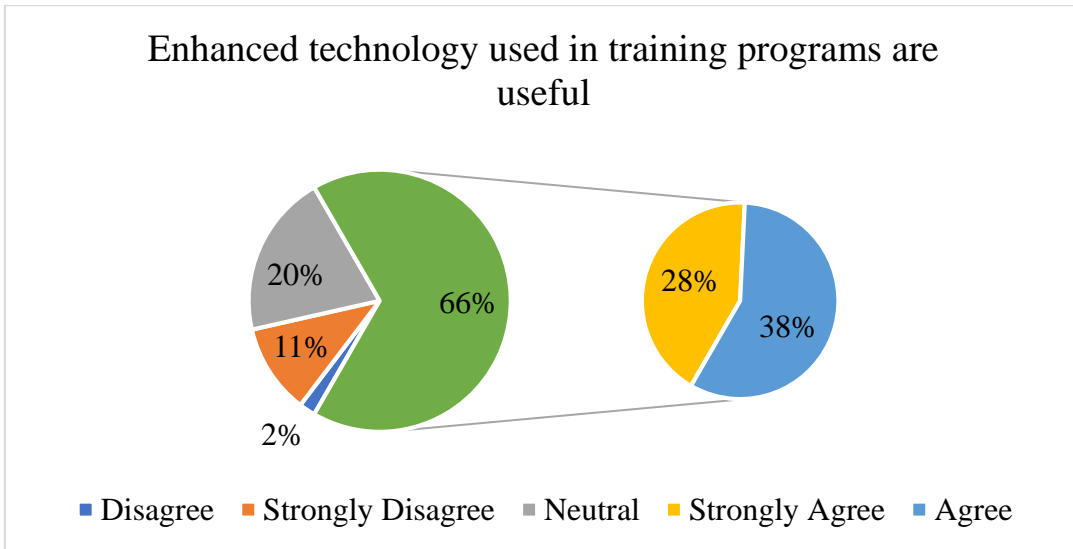


Figure 1. Employees perception of technology in training programs.

Figure 2 illustrates the participants' input rate technology used in the training sessions. The pie chart results shown in the figure that 63% of employees agree that the tools used by the trainer are understandable. However, 23% of participant feels neutral toward this statement. Therefore, we can conclude that the training tools provided that are used in the organization are useful; however, upgrading the tools can lead to higher success in perusing the e-learning and development of employees’ skills.

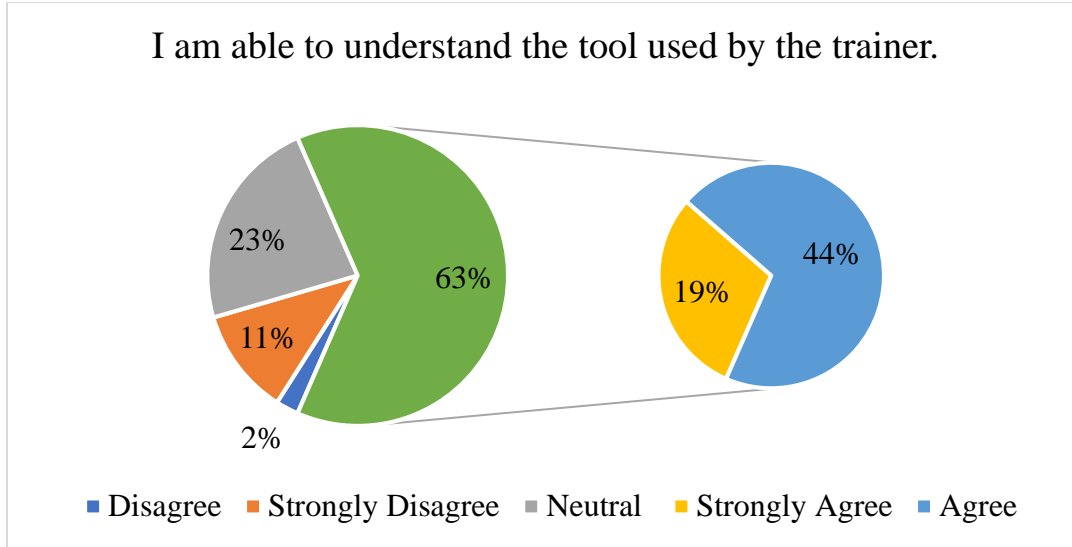


Figure 2. Employees perception of technology in training programs.

Table 5. Cross Tabulation of Employees Perception of Training

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Training Needs Assessment						
1. I feel training is essential for my job title.	30%	38%	19%	1%	13%	100%
2. I understand the purpose behind training for my job.	32%	38%	16%	2%	11%	100%
3. Training reduces the stress of the employees.	25%	37%	23%	3%	11%	100%
4. Enhanced technology used in training programs are useful.	28%	38%	20%	2%	11%	100%
5. Understating the objectives of the training program helps me to perform my task.	30%	38%	18%	2%	11%	100%
6. The company provides right training for the right people.	15%	42%	27%	3%	13%	100%
Training Content						
7. Training programs provided by the organization are adequate for my skills development.	19%	38%	28%	3%	12%	100%
8. Training has significant role in improving work quality.	26%	42%	17%	2%	12%	100%
9. I am able to understand the tool used by the trainer.	19%	44%	23%	2%	11%	100%
10. Training programs improve my individual ability.	20%	45%	20%	2%	12%	100%
11. The training programs that was offered is organized.	16%	40%	28%	2%	14%	100%

Training Evaluation						
12. Training improves job knowledge in the task.	30%	38%	18%	3%	11%	100%
13. The company's training program meets my expectations.	15%	40%	28%	2%	15%	100%
14. My trainer accepts feedback.	17%	38%	29%	2%	14%	100%
15. I feel lack of training increases the turnover.	8%	25%	35%	16%	16%	100%
16. I had a thought of leaving the organization due to lack of training.	7%	14%	31%	21%	26%	100%

6.4 Analysis of employees’ opinions on training

This analysis emphasizes the significance of employees’ opinions of how training needs assessment, training content, and training evaluation are associated with one another in the company, as well as the impact that it has on how employees are considered to execute their jobs. The correlation method was used for this analysis in table 4, and It could be interpreted as follows:

- The correlation coefficients highlight the areas in which the variables are the most strongly connected to one another. The correlation results indicate that all training and development variables (Training Needs Assessment, Training Content, and Training Evaluation) are correlated with each other. However, training needs assessment and training content appear to have a high correlation with the coefficient value of more than 0.9 and less than one, which is (0.9950), where all coefficients are greater and more significant than 0.97, respectively. TNA and its relationship with training content shows its effect on the quality and quantity of implementing their task or job using adequate digital content and tools.
- The correlation coefficients highlight the areas in which the variables are the most strongly connected to one another. The correlation results indicate that all training and development variables (Training Needs Assessment, Training Content, and Training Evaluation) are correlated with each other. However, training needs assessment and training evaluation appear to have a higher correlation with the coefficient value of more than 0.9 and less than one, which is (0.9752).
- A strong positive correlation between training evaluation with training content indicates a number of (0.9820), respectively. Table 4 shows the correlation between the evaluation of training in terms of employees’ opinions on how providing adequate training and the level of expected training provided is important.

The results prove that the Training Needs Assessment (TNA) is essential for employees to be provided to increase efficiency. In addition, it indicates that a legitimate training program with a defined training objective and applicable instructional content might entice employees to attend and engage in the training to increase their capabilities. Otuko et al. (2013) argued that the primary goal of training evaluation is to demonstrate that the training has achieved its intended results and to enhance the training materials and content delivered for future applications which illustrated its relationship with each other. In addition, as per the study, the relationship between TNA and training content through the outcomes of the TNA that are the training objectives, which in turn specify the skills and knowledge that will be developed through the process. It is possible to select a training delivery method that is most suitable for a given task or training contents, despite the fact that all methods can and are meant to impart specific skill, knowledge, attitude, or task information to trainees (Otuko, Chege, & Douglas, 2013)

Table 6. Association of Training and Development

	Training Needs Assessment	Training content	Training evaluation
Training Needs Assessment	1		
Training content	0.9950	1	
Training evaluation	0.9752	0.9820	1

7.0 Findings

In this section, the paper will discuss its findings based on the results concluded.

- The results of the training and development test yielded a Cronbach alpha value of 0.9792, which is considered to be a safe indicator of internal consistency. Therefore, the test is reliable and valid for its desired purposes.
- The data interpretation of research survey found that 66% of employees in the company believed that the incorporation of digital technology into the training sessions supports the company in the process of upskilling and re-skilling it’s personnel.
- The data analysis of the survey shows that 63% of employees finds the tools used by the trainer are understandable, were 23% of participant feels neutral toward this statement, we

can conclude that the tools are useful; however, advancement of the tools can lead to higher success in perusing the e-learning and development of employees' skills.

- The study results show, correlation coefficient greater than 0.97 implies that there is a positive relationship between the variables of concern emphasizing the significance of training needs assessment and the strong link it has with training content.

8.0 Conclusion

In conclusion, this study has outlined the essential aspects of training and development in the telecommunication sector. Every factor that has contributed to a digital shortage in the telecommunication sector has been analyzed and interpreted. Termination and hiring new candidates that have the required skills are commonly the first option to solve the problem. The telecommunication organization lacks the capability to deliver training through up-to-date technology for new and current employees on accurate job responsibilities and skills needed to implement a specific role, as well as a deficiency in training their current employees with new technology used for their roles, new trends, new knowledge, such as recent HR trends and practices, different accounting-related activities and software services that affects the company's position in the market and enable other similar companies to compete with them with faster adaptation and digital technology development.

This research concludes that the company does provide digital training to fill the skill gap. However, the technology used does not cover all employee's satisfaction with training programs that are provided, which clearly shows that it is impacting the employee's overall skills. The study is based on the information gathered, surveys created, data analysis, and findings through quantitative primary research and methodology. In this situation, training and development are straightforwardly intertwined with the right use of digital technology; therefore, using advanced technology while training is essential to upskill and re-skill. The originality of the current paper comes in determining the implementation of training and development with technology included within the training programs and how it supports to upskill and re-skill the existing employees in the organization. Moreover, this research was focused on one of the Qatari organizations in telecommunication sectors. Future research could be considered on other organizations to start implementing digital technology in training and development in Qatar to improve the skill of the workforce and bridge the skill gap in the industry.

9.0 Research Limitations

This study had three main limitations. First, the survey was not distributed equally between the genders of the employees within the organization, and only 11% of males who have answered the survey can't represent all the males in the company (the survey statistics showed that 89% of the survey sample were females and only 11% males). The small sample size of male respondents limits the generalizability of the research findings.

The second limitation of this study is that the survey was also not distributed equally between the company's departments, most of the survey responses were from the education department in the organization and one department can't represent all the other departments in the company. Additional research is suggested to test the employee's opinions in the other departments.

The third limitation of this study is that the respondents of the survey were from one organization due to the time limits. The results cannot be generalized to all the telecommunication organizations in Qatar. The future research could be done with samples representing various organizations from the telecommunication sector in Qatar.

10.0 Implications for future research

This study concluded a noticeable positive relationship between employees' digital training and development, and employees' skills. However, there are still numerous other variables that might be playing role along with this construct. It would be beneficial for researchers to conduct research in this area in the future by including additional dimensions like employee performance, employee motivation, employee satisfaction, employee retention and turnover along with other working condition in relation to employees training and development to create more convincing results that may increase the importance of employee training and development using digital technology. In addition, future studies could emphasize how training and development could lead to high organizational profit in terms of its effect on the productivity of its personnel.

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Emerging Technologies and Ethical Dilemmas

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Extended Abstract

The debate on ethics and technology has been around academic circles for decades. This has taken a greater sense of urgency during the fourth industrial revolution. The fourth industrial revolution is distinct from three previous industrial in three critical areas: speed, magnitude and global impact on entire human systems. The fourth revolution is digital, and the growth is exponential. Industries have been disrupted in the most unexpected ways, and traditional industry boundaries rendered insignificant. Technological advances are happening increasingly fast, leaving behind ineffective institutional rules, regulations and norms. Many modern technologies have been used to solve complex problems afflicting the human race. Some of the technologies have been developed to mimic human actions and behaviors. Such technologies have been applied in medicine, agriculture, manufacturing facilities and even in advanced laboratories to undertake advanced functions and decisions that have far-reaching consequences on human beings. Developers have gone a step further to develop robotics and software with adaptive and learning capabilities. Many firms that use these advance technologies have effectively replaced employees with machines. The question of how ethics ought to interact with these emerging technologies is yet to be answered. This paper focuses on three principal areas: identifying the most relevant ethical frameworks governing

technology; highlighting the most critical issues and ethical dilemmas in emerging technology and sketching a practical path forward.

The following are some of the main ethical conundrums:

1. Many philosophical frameworks exist. These are often specific to different technologies while others are of a general nature. However, these perspectives are often confined to the academia and far removed from the industries where they are needed.
2. Many ethical frameworks have been developed without duly balancing the interests of the innovator and wider ethical norms required by society. Such prescriptions are impossible to deploy, short of killing innovation.
3. While modern technology has brought many benefits, unintended consequences and even application of are often difficult to predict and not within the control of the innovator.
4. The hasty reconstruction of value chains around modern technologies is introducing and exacerbating ethical concerns across industries. It is a chaotic situation as companies compete to impress users with new capabilities, and what is at stake isn't just which ones survive but whether we are able to sustain a civilized society or end up in a high-tech Wild West.²
5. Scientists and developers work in isolation, and often "amoral" environments without involvement of ethicists in the development and implementation of modern technology.
6. Business entities and other beneficiaries tend to minimize potential negative consequences while overemphasizing the benefits.

² Wessel, M., & Helmer, N. (2020). A Crisis of Ethics in Technology Innovation. *MIT Sloan Management Review*, 61(3), 71-76.

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Biotech startup applying artificial intelligence in Bangalore

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Abstract—Approximately 20 biotech startups and firms belong to the incubation rooms at the Centre for Cellular and Molecular Platforms in Bangalore; it is India's one of the main biotech startup ecosystem hubs. This national incubator has several representative biotech firms, such as Bugworks Research, Strand Life Sciences, Biomoneta Research, Cellworks, and Aten Porus Lifesciences. Moreover, in Bangalore, some practically pioneering startups apply artificial intelligence (AI) to life science, which we consider India has an advantage in terms of human software resources. For example, SigTuple uses AI for diagnosis, whereas Tricog Health uses it for online electrocardiogram analysis. Meanwhile, Niramai Health Analytix applies AI for breast cancer diagnosis, and Cyclops MedTech uses it for a virtual reality-based ophthalmic service that tracks viewpoints. This study analyzes the core algorithm architect's cooperative research and development network in SigTuple regarding the research and conference papers, patents as media, university researchers, large firm laboratory engineers, and the company's internal members as constituent players. The partners' specialty mainly includes the areas of software and medical sciences. The partners' fields primarily consist of software and medical sciences. Before and after the company's founding, the network partner's characteristics changed from research papers related to academic concepts to conference

proceedings articles and patents, deemed more practical tools for business in the weight of projects.

Keywords—*artificial intelligence, biotech startup, research and development network*

1. Introduction

Biotech drug discovery startups have an apparent advantage in speed, cost, and flexible management at integrating innovative technology with a niche market over large pharmaceutical companies (large pharma). However, they tend to face the valley of death—an initial negative profit period—due to the long-term drug development, huge investment, and very low success rate worldwide. For example, it takes about 12 years, costs 300 million to 1 billion US dollars (USD) and has a thirty-thousand probability of success rate from the laboratory bench for an approved drug on the market. Especially, high risk has become an issue related to the expansion of the investment amount and the shortening of the profit period because of the increasing difficulty in research and development (R&D) and the predetermined patent effective period. However, artificial intelligence (AI)-oriented drug discovery is currently expected to speed up the drug-candidate search. Particularly the accumulation of human resources related to software and AI and its government-led technological innovation in India is attracting attention.

About 20 top-notch companies occupy the incubation facilities at the Centre for Cellular and Molecular Platforms (C-CAMP)—an incubator for a national biotech startup in Bangalore—India's one of the main biotech startup clusters. For example, Bugworks Research is studying infectious disease (so-called "superbug") and receiving CARB-X grants. Biomoneta Research is spun out of Bugworks Research and developing an indoor air decontamination device. Strand Life Sciences is developing genomics based. Cellworks is developing simulation tools for cancer treatment responses, and Aten Porus Lifesciences is developing orphan drugs. These representative companies are influencing regional biotech clusters as a successful model. Besides government agencies and industry, C-CAMP is closely related to the Indian Institute of Science (IISc), a major basic research institute. Moreover, the Vision Group formulated a regional biotech industry development strategy composed of the representatives of regional industry, state government, and academic societies.

Furthermore, in Bangalore, practically path-finding startups apply AI to life science using locally abundant human software resources. For instance, SigTuple uses AI for diagnosis, whereas Tricog Health uses AI for online electrocardiogram analysis. Meanwhile, Niramai Health Analytix also uses AI for breast cancer diagnosis, and Cyclops MedTech uses it for a virtual reality-based ophthalmic service that tracks viewpoints. In these startups, the core persons are identified in terms of intellectual properties, such as academic papers, conference papers, and patents.

I. Literature Review

A. AI and Healthcare

Several scholars have explored AI in the literature. For instance, N. Miah and C. Hodes [1] indicated that a new wave of AI

has potential. Moreover, U.B. Mir et al. [2] proposed critical success factors for integrating AI and robotics using a total interpretative structure model to examine the opinion of 15 Indian experts.

Regarding the relationship between AI and healthcare, P. Shah et al. [3] discussed the vision for digital algorithmic evidence to improve medical care for patients from a perspective of bridging the gap between academia and practical sides. Furthermore, S.M. Paradesi [4] proposed bridging the gap between academia and industry for the Indian government to develop AI applications for healthcare, agriculture, and education. R. Pandya et al. [5] provide insight into information communication technology, enabling AI as a motivational factor for developing healthcare industries in India. Meanwhile, A.T. Polcumpally [6] expected India's high potential of AI from a hub for the software industry; India ranked fourth in the Hurun's 2020 unicorn rank, and it is the third-largest ecosystem for the entrepreneurs in 2019 Elets News Network. Moreover, G. Gujral et al. [7] considered the potential of AI application to healthcare informatics.

B. AI for Overcoming the Valley of Death in Drug Discovery

P. Agrawal [8] specified the promising potential of AI for speedy, cheaper, and smaller failure rates of the drug discovery process and for generating superior medicines. Moreover, N. Fleming [9] introduced the following AI application examples for drug discovery: Pfizer used IBM Watson to search for immuno-oncology drugs, Sanofi established a partnership with Exscientia, a UK startup, for metabolic-disease drugs, and Roche's Genentech used an AI system of GNS Healthcare for cancer treatments. This author also emphasized the role of startups. For instance, using AI for medical science, Berg identifies unknown cancer mechanisms. BenevolentBio uses an AI platform that feeds research papers, patents, and clinical trial data.

Moreover, Wuxi NextCODE, a spin-off from the famous Icelandic company deCODE Genetics, uses AI to classify genes. S. Natalie et al. [10] discussed machine learning and drug discovery patterns. Meanwhile, J.M. Cooper et al. [11] introduced a microsystem technology with advances in chemistry and molecular biology to aid the earlier identification of qualified drug candidates for clinical development.

Moreover, using bigger datasets created from high-throughput screening data, S. Ekins et al. [12] explained machine learning methods (e.g., Bayesian method with vector machines and deep neural networks) demonstrating utility for drug discovery and development. It allows prediction accuracy of bioactivities for targets and molecular properties. J. Knowles [13] also introduced the main issues in target selection and discussed the decision-making rationale. Furthermore, I.V. Hinkson et al. [14] explained Accelerating Therapeutics for Opportunities in Medicine (ATOM) Modeling Pipeline, which enables the advanced and emerging machine learning approaches to build models from diverse historical drug discovery data. In addition, E. Gawehn et al. [15] emphasized an emerging field of molecular informatics, such as deep neural networks, restricted Boltzmann machine networks, and convolutional networks. K. Sharma et al. [16] proposed regulation and policy improvement for AI application to drug discovery and healthcare.

Thus, we expect AI greatly overcomes the valley of death of biotech startups using advanced machine learning methods.

C. India's AI-based Biotech Start-up

Start-up is superior in speed, cost, and flexibility for connecting innovative technology with a niche market to big pharmaceutical firms.

Vijai C. et al. [17] observed that AI is reshaping the Indian healthcare market in medical tests, predictive healthcare diagnosis, and integration with big data and

robotics. Meanwhile, A. Saxena [18] emphasized the growing culture of startups in manufacturing devices and software in diagnostics. Moreover, by analyzing the value creation, I. Kulkov [19] classified business model innovation of AI healthcare startups. V. Venkobarao [20] analyzes the reason for most startup failures. Finally, Bhattacharya et al. [21] introduced two Indian startups—Niramai and UE Lifesciences—that apply machine learning to screen early breast cancer.

D. India's Software Human Resource Development

R. Dossani [22]. According to the author, India has witnessed a technological change from custom-made software to module software and from exporting talents (i.e., engineers) to developing products within India. For instance, there are leading entrepreneurs such as L.S. Kanodia (IIT Bombay, BE; MIT, MA, and Ph.D. in Management) for Tata Consultancy Service (TSC), N.R.N. Murthy (NIE, BE; IIT Kanpur, ME) for Infosys, AH Premji (Stanford Univ., BSE), and A. Soota (IIT Roorkee, BE; AIM, MBA) for Wipro. Domestic software and human resource development system has matured between the academic and industry sides. A.K. Paul et al. [23] explored human resource development (HRD) and found the influence on organizational commitment among India's software professionals as self-confidence.

Meanwhile, A. Arora et al. [24] compared each growth of the software industries in five countries: Brazil, China, India, Ireland, and Israel. The software industries in India, Ireland, and Israel—the so-called three Is—were aimed at export. In contrast, Brazil and China responded to domestic demand by all members using comparatively lower wages. The authors stated that even within 3Is, India's software industry shifted from low-level to upgraded quality. B. Khadria [25] also demonstrated large-scale migration of Indians skilled in IT with the progress of information and communication technology: not only fully trained and educated workers

go abroad for employment, but also students, the semi-finished human capital, pursue higher education in offshore universities of developed countries. These occurred before modular software product development in India.

Thus, as aforementioned, India's software industry has shifted from exporting skilled engineers to domestic product development after the technological change from custom-made to modular software architecture. Then the interaction of educational improvement of HRD has been established between the domestic universities (e.g., IISc and IITs) and the onshore software companies (e.g., TSC, Infosys, and Wipro).

E. AI Social Implementation Strategy in India

S. Chatterjee [26] proposed the necessity of AI-related government policies regarding security, privacy, and governance. According to S. Kumar et al. [27], in computer science, Indian authors tend to publish papers more in developed countries by the team than Chinese authors do. Chinese authors are catching up with the higher productivity of Indian authors. Moreover, S.K. Srivastava [28] reported that the government should prepare the infrastructure development, policy and regulations, technology development, and HRD cooperating with industry while expecting AI to improve the quality of India's healthcare and education. Meanwhile, H. Haider [29] indicated that the obstacles to the diffusion of AI into India's healthcare market include the investment cost of infrastructure, big data treatment, the reliability of new technology, and the insurance against privacy, security, and accuracy.

Furthermore, A. Mahajan [30] shed light on the gap between developed and developing countries regarding the implementation and acceptance of AI in healthcare. He proposed government

initiatives to ease the progress of AI in India's healthcare. S. Chatterjee et al. [31] raised the general issues of the AI application to the Indian healthcare sector and proposed government initiatives, opportunities, and challenges for policymakers.

India is deemed a successful growing country because of the software industry. If we expect the biotech startup's valley of death is overcome by applying AI, some excellent cases of AI-oriented biotech startups might exist.

II. Research Question

Given that the science linkage—the connection between basic science and technological application—is stronger than other technical areas in both life sciences and AI business areas, how can the firms' potential and R&D productivity be improved to overcome and survive the valley of death of deep tech?

In this paper, we examine and analyze the characteristics of R&D collaboration in each intellectual property (IP) from the number of citations and cooperative relationships concerning the academic papers, patents, and proceedings papers at international conferences by the research group with the CEO of SigTuple, the leading AI-oriented biotech startup in Bangalore.

III. Situation of SigTuple

SigTuple was founded in 2015. However, among the three co-founders, the core person who had been the CEO for the first two years since the founding returned as the CEO in June 2020, and they also closed the overseas R&D base. Thus, this company is facing a valley of death due to COVID-19. The leading venture capital firms sending directors to this company are Accel Partner, Chiratae Ventures, and Endiya Partners, with a total of 40 million USD raised in four rounds, including Pi Ventures and Flipkart co-founder Mr. Binny Bansal. Major support companies include the following facilitators: Google Developers Launchpad Accelerator, Microsoft Accelerator, NetApp Excellerator, and NVIDIA.

IV. Cooperative Research and Development

The current CEO received his Ph.D. from the Indian Institute of Technology (IIT) Kharagpur in 2006 while working at National Semiconductor. The number of citations for his journal papers and proceedings papers presented at international conferences is still high (Fig. 1). The blank period covers before and after the company's founding. However, before the founding, the ratio between the journal papers, the international conference proceedings papers, and the patents was balanced or relatively more academic-oriented. In contrast, after the founding, the weight among the international conference proceedings papers and the patents was high (Fig. 2).

A. Journal Paper

As for papers, the number of citations of early documents is high. Even after the company's founding, they could publish relatively constantly by cooperating with researchers from universities and research institutes (Fig. 3, Table 1). In particular, the present CEO collaborated with a combination

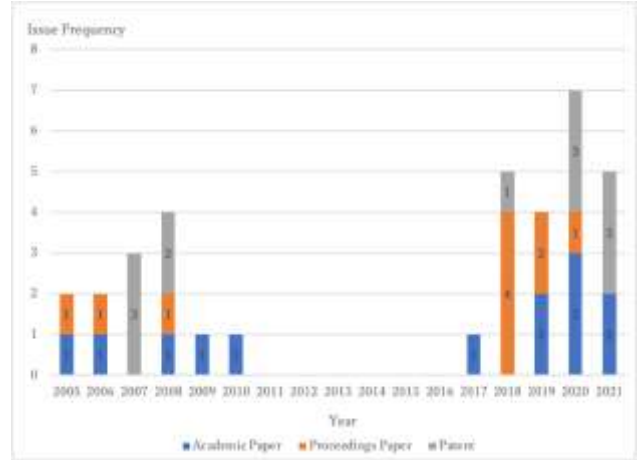


Fig. 2. Core researcher's intellectual property issued time series frequency.

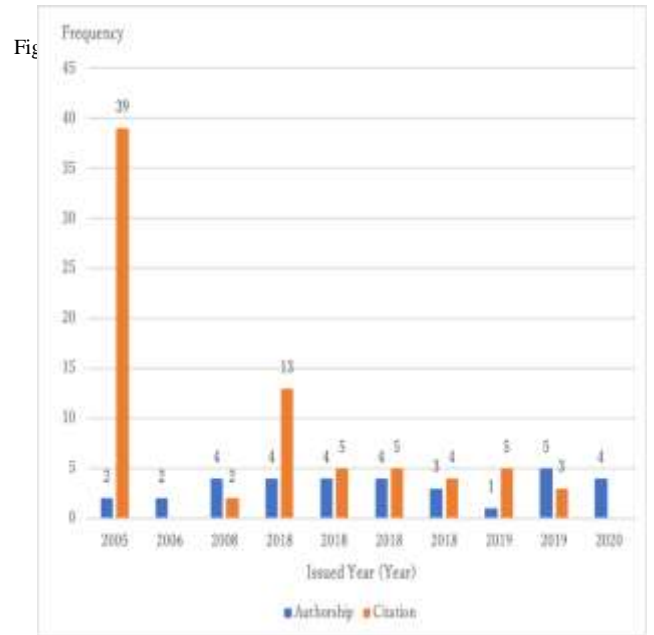
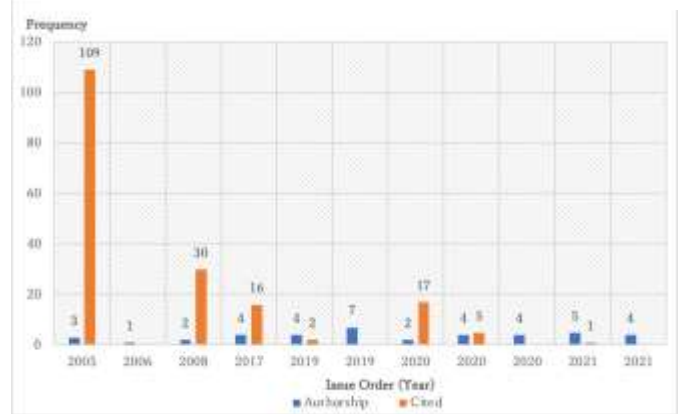


Fig. 3. Core researcher's issue order of proceedings paper: authorship and citation.

of highly productive and young researchers

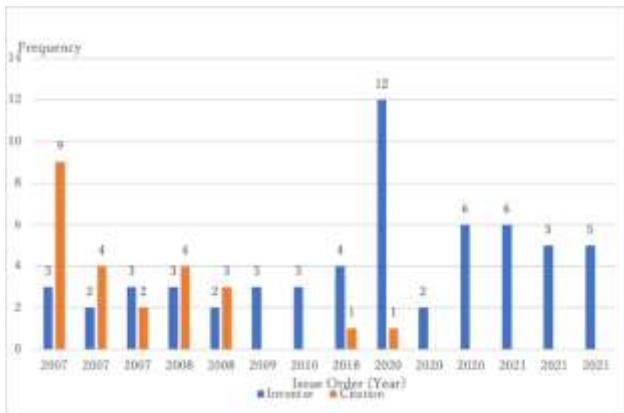
TABLE I. Core Researcher’s Issue Order of Academic Paper: Authorship and Citation

Issued Year	Chief Executive Officer, SigTuple	Authorship	Affiliation	IP	Affiliation	Author	Affiliation	Author	Affiliation	Author	Affiliation
2005	128	2	Nat. Semicond., India	TRO	IT Khargapur	PFC	Nat. Semicond., India	PI			
2006	1	1	Nat. Semicond., India	TRO							
2006	38	2	Nat. Semicond., India	TRO	IT Khargapur	PFC					
2017	16	4	SigTuple	TRO	SigTuple	DM, JR	Infocore Labs	BC			
2019	2	4	SigTuple	TRO	SigTuple	HL	IT Delhi	SD, SD			
2019	7	7	SigTuple	TRO	SigTuple	RL, VS, RP	Nanopara Nethrasa Eye Inst.	TMD	Vivek	AA	Nanopara Nethrasa Foundation
2020	27	2	SigTuple	TRO	SigTuple	RI, DM					
2020	6	4	SigTuple	TRO	IT Delhi	DP, VK	IT Indrap	DM			
2020	4	4	SigTuple	TRO	SigTuple	HL	IT Delhi	DM, RK			
2021	1	5	SigTuple	TRO	SigTuple	DK, AM	NeuEx	LAN, CS	SB	SB	
2021	4	4	SigTuple	TRO	SigTuple	DK, AM	NeuEx	LAN, CS			

in IISc or IITs.

B. Proceedings Paper

In international conference proceedings papers, the researcher mainly conducts cooperative R&D with researchers from universities and corporate research laboratories, including those overseas (Fig. 4, Table 2).



Core researcher’s patent Issued: inventor and citation

C. Patent

The number of patents has never been enormous since the company's founding. However, the number of participating research institute staff, including large companies and internal company employees, is increasing (Fig. 5, Table 3).

V. Analysis and Discussion

In this paper, we examine and analyze the characteristics of R&D collaboration in each

TABLE II. Core Researcher’s Issue Order of Proceedings Paper: Authorship and Citation.

Issued Year	Chief Executive Officer, SigTuple	Authorship	Affiliation	IP	Affiliation	Author	Affiliation	Author	Affiliation	Author	Affiliation
2005	28	2	Nat. Semicond., India	TRO	IT Khargapur	PFC					
2006	2	2	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC					
2006	2	4	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC	Univ. of Calicut	AKK	IT Khargapur	TMB	
2018	13	4	SigTuple	TRO	SigTuple	DM, JR					
2019	5	4	SigTuple	TRO	SigTuple	HL	Bullseye Inst. of Sci. & Tech., Mysore	SB			
2019	5	4	SigTuple	TRO	SigTuple	DP, AA	Infocore Labs	BC			
2020	4	3	SigTuple	TRO	SigTuple	MD, HA					
2020	5	1	SigTuple	TRO							
2021	3	5	SigTuple	TRO	SigTuple	HL, DM	IT Khargapur	DM, FT			
2021	4	4	SigTuple	TRO	SigTuple	AK, SG, AB					

intellectual property (IP) from the number of citations and cooperative relationships concerning the academic papers, patents, and proceedings papers at international conferences by the research group with the CEO of SigTuple.

TABLE III. CORE RESEARCHER’S PATENT ISSUED: INVENTOR AND CITATION

Issued Year	Chief Executive Officer, SigTuple	Inventor	Affiliation	IP	Affiliation	Inventor	Affiliation	Inventor	Affiliation	Inventor	Affiliation	Inventor	Affiliation	
2007	6	3	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2007	4	2	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2007	2	4	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2008	4	3	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2008	3	2	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2009	3	3	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2010	3	3	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2018	4	1	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2018	1	1	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2019	2	2	Nat. Semicond., India	TRO	Nat. Semicond., India	PFC								
2020	1	12	Nat. Semicond., India	TRO	SigTuple	DP, DM, AA, RP, SB	Microsoft	USA	AKK	DR	Infocore Labs	BC	Vivek	AA
2020	2	2	Nat. Semicond., India	TRO	SigTuple	HL	BA							
2020	6	6	Nat. Semicond., India	TRO	Infocore Labs	BC								
2021	4	3	Nat. Semicond., India	TRO	SigTuple	DP	SigTuple	DP, DM, AA, RP, SB	SigTuple	AA	Vivek	AA	Infocore Labs	BC
2021	3	3	Nat. Semicond., India	TRO	SigTuple	MD	Infocore Labs	BC						
2021	5	5	Nat. Semicond., India	TRO	SigTuple	MD	Infocore Labs	BC						

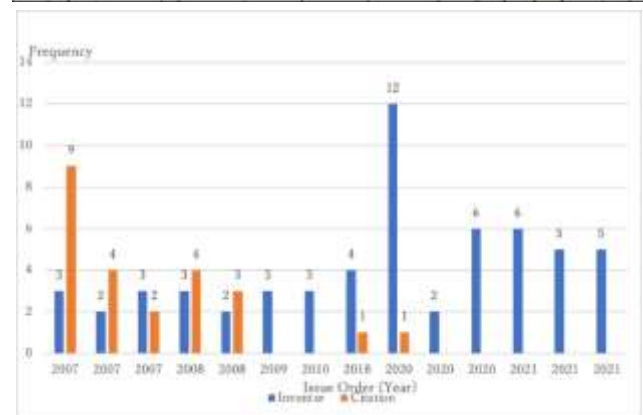


Fig. 4. Core researcher’s patent Issued: inventor and citation

VI. Conclusion

We examined and analyzed the R&D partnership of SigTuple, a leading Indian AI-oriented biotech startup, in terms of academic paper, proceedings paper, and patent. The key

researcher's partnership has shifted the IP production network's weight from the academic papers with the university and research institute scientists before founding to the proceedings papers and patents with large firm laboratories, startups, and internal engineers after establishment. Some core and peripheral partners exist in terms of partnership frequency. Moreover, the key person's Ph.D.-related works remain to have high citation frequency. Therefore, these AI-oriented biotech ideas can be considered deeply dependent on industrial skill and academic concepts to overcome the valley of death as deep tech.

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Workplace Environment and its impact on Employees' Job Satisfaction in Premier Educational Institutions in the Temple Town, Tirupati.

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ABSTRACT

The main purpose of this study is to find the impact of the workplace environment on the job satisfaction of the teaching faculty and to find whether there exists any difference between the satisfaction of employees belonging to State owned and Private Universities with regard to Workplace Environment in and around Tirupati city, Andhra Pradesh, India. This study is based on a model which has been published by Jacob Morgan (2015), in the forbes.com and according to him, every employee experience in any organisation regardless of its industry, geographical area, or size, consists of three environments: The Physical environment, The Cultural environment and The Technological environment. The sample population includes 124 employees that are working as teaching faculty in State Owned and Private Universities. A well structured questionnaire was used to collect the primary data and Convenience sampling method was used to select the respondents. The study found that there is no significant difference between the satisfaction of employees of State Owned and Private Universities with regard to Workplace Environment.

Keywords: Workplace Environment, Physical Environment, Cultural Environment, Technological Environment, Job Satisfaction.

INTRODUCTION

Working Environment is the place where the individual works according to his profession. Working environment is not only up to the place but it can also be the condition, environment where people perform their duties and earn for their life. The workplace has directly influenced the job performance and job satisfaction of the employees (Birdsall, Ross, and Sabot, 2013). Sometimes the work environment plays a significant positive role in employees' job satisfaction while on the other hand sometimes the working environment is negatively influencing the job satisfaction of the employees. The workplace environment includes all those factors that are present in the environment and surrounding of the employees where they work. Heath (2006), explained that the workplace environment includes the physical location as well as all those factors such as rules, policies, working relationships, resources, behavioural procedures are also a part of the workplace environment. Hence the workplace environment includes both physical and organisational factors and all of these factors are important. The competitiveness of any organisation is based on the quality of the workplace and the environment that the organisation provides to its employees.

The outcomes of a healthy workplace environment include productive, satisfied and loyal employees, profits and economic values for the organisation. A healthy work environment builds a long-term relationship with the employees. Job satisfaction is highly deemed in the workplace environment (Enwezor & Obi, 2022). All the successful organisations specially empathise on the quality of the workplace and that's one of the reasons their employees are satisfied with their jobs.

LITERATURE REVIEW

Working Environment:

According to Buhai, Cottini, and Nielseny (2015), the most important factor in any organisation is the work environment or internal climate of the organisations for its people. They studied the impact of the working environment and internal climate of organisations on employee's productivity in different organisations. According to their analysis, they found that the productivity of the firm can be increased by the efficient and effective work environment and internal climate of work.

According to Baah and Amoako (2011), the motivation factors include different factors such as work nature, achievement sense from the work, responsibility, advancement, recognition, personal growth opportunities. They explained that all of these factors help in giving the motivation to the employees about their work and organisation. By positively influencing all these motivational factors to the respective employees, the organisation can get maximum input from these employees and can lead to maximum output.

According to Sell and Cleal (2017), there is some sort of correlation between job satisfaction and economic factors. Their analysis revealed that those organisations or workplaces which are far from cities or located in more hazardous areas have more job satisfaction of the employees because of high economic return while in case of cities, employees are less satisfied with their jobs because of low economic return. They further explained some factors that are associated with psychology and work environment such as social support, work place, rewards, working environment. So, the organisations need to improve all these factors so that their employees get more satisfaction from their job.

Schroffel (2013), explained some of the most important traits that are very necessary for the job. He explained that in the time of need, the availability of supervisor, employees interlink, creative thinking, knowledge stimulation and employees' communication ability are considered as the most important and basic traits for any organisation to keep the employees loyal and productive. It is up to the employers and management how they use these traits. If they use all of these traits positively and efficiently, this will increase the employees' satisfaction level and vice versa.

According to Bakotic and Babic (2013), there is one most important factor which is very much associated with job satisfaction. They explained that the working conditions are different for different employees but this has a great influence on the job satisfaction. According to them, some workers work in very different and difficult working conditions and their job satisfaction level is different from the others. Their analysis revealed that all the workers who feel that their working conditions are difficult for them have a low level of job satisfaction. So, the management needs to understand the working condition factor and should take necessary steps to improve the working condition of the employees.

Job Satisfaction:

According to Tariq (2016), in the telecom sector, job satisfaction is associated with different variables. He explained that factors such as salary, workload, stress at the workplace, conflicts, family matters have a significantly bad impact on satisfaction and this leads to job dissatisfaction as well. This dissatisfaction leads to the poor performance of the organisation overall.

Researchers such as Chandrasekar (2014) and Ishrat et al., (2021), narrates that the work environment plays a significant role in enhancing the performance of the employees. If the organisations need more economical values and profits, then they must understand the importance of the workplace environment role in the organisation. The decent and productive work environment helps in increasing the capabilities of the employees to give their maximum output to the organisation. He also narrates that job satisfaction can be achieved by the effective human to human relationship. Some of the factors which can enhance the job satisfaction level are time management skills and energy.

According to Castilla (2015), job satisfaction is the scope for the employees to which they think that their job is positively or negatively associated. He explained a phenomena that job satisfaction is a measure of the extent to which the employees react to their job scenarios. Job satisfaction is associated with the work a person is performing. Thus, they sum up that job satisfaction is a worker's feelings about his job. Job satisfaction can be increased through various factors such as rewards, social organisational and physical characteristics such as work environment, correlation with other employees, management etc.

Heywood (2017), explained that job satisfaction helps the employees to be more loyal, trustworthy, reliable towards the organisation or firm. He further explained that job satisfaction helps in long term employer's employee relationships. If the employees are satisfied with their job then they are more loyal and will build a long term relationship with the organisation. Whenever there is much workload on the organisation, then the management needs to understand the importance of the job satisfaction of the employees because this will help in retaining the employees to the organisation.

Bashir (2015), explained that the performance of the employees are the results of the ability, effort, and perception of a task. The job performance is associated with the job satisfaction level. Job satisfaction means when the employees are satisfied with their jobs. They feel happiness, self motivated and satisfied in whatever they are doing. Job satisfaction is positive feelings and perceptions about the job one has.

Parasuraman (2009), explained some of the important reasons why job satisfaction is necessary for the employees and the employers. He explained that the main reason for which the job satisfaction is necessary is that the satisfied workers are the key assets for the organisation. If the employees are satisfied with their work, then this will create more proactive employee output leading to profits and higher economic value. The other reason is that it is the responsibility of the management of the organisation to provide a healthy, proactive and pleasing workplace environment which is feasible for their employees.

Armstrong (2010), explained that the work environment is very important to understand for the management and employers because the employees have to spend their most important part of their lives here only. According to his analysis, he found that the work place environment has direct and positive correlation with the job satisfaction level of the employees and their behaviour. Some other

factors which added value to the job satisfaction are pay, work itself, employee support and supervision, relationship with co-workers, advancement opportunities.

According to Ahmad (2010), each and every aspect of the working environment plays a role in the job satisfaction of the employees. In most of the highly sophisticated and multinational organisations, the work environment is friendly and helps the employees to support their work. The work place of these organisations helps the employees to put their maximum effort for their organisation. The employees of these organisations consider that the work environment is supportive for them, hence it can reward them by putting their efforts into their work.

Job Satisfaction & Working Environment:

Pitaloka and Sofia (2014), explained the impact of some variables on the job satisfaction level of the employees. They explained that the factors such as workload, time of work has also affected the job satisfaction level. Their study indicates that if the workload is beyond the capacity of the employees then they have health issues such as laziness, weakness and anxiety which ultimately leads to dissatisfaction of the job and turnover ratio increases. The turnover of the employees is mostly due to job dissatisfaction. Those organisations where there is more turnover, there is less job satisfaction recorded while those organisations where there is low turnover ratio, there is huge job satisfaction level of the employees has been recorded.

Dildar (2006), explained some of the important reasons why job satisfaction is necessary for the employees and the employers. He explained that the main reason for which the job satisfaction is necessary is that the satisfied workers are the key assets for the organisation. If the employees are satisfied with their work, then this will create more proactive employee output leading to profits and higher economic value. The other reason is that it is the responsibility of the management of the organisation to provide a healthy, proactive and pleasing workplace which is feasible for their employees.

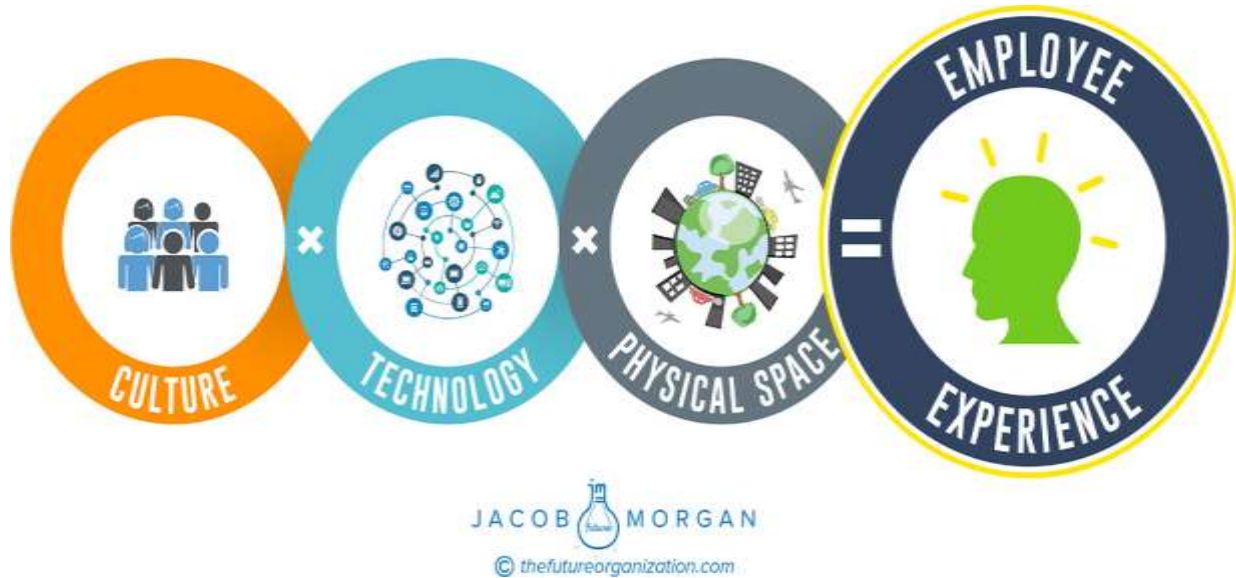
According to Imran & Ramli (2019), clean, safe, conducive, and comfortable working environment conditions can be a supporting factor to provide comfort and relaxation for employees, because the work environment is one of the factors that can affect employee job satisfaction for achieving company goals.

Sparta (2017), explained that most of the organisations are not taking into serious consideration the issue of the working environment which has an impact on the employees' performance and satisfaction. Working environment includes safety in the working areas, good relationships with co-workers and developing a sense of ownership within an organisation by allowing the employees to air their views on what should be done to improve their satisfaction level within the organisation. By doing so a worker feels that he or she is valued and that may boost up the morale and satisfaction towards the job.

Devi and Rani (2016) justified that work environments have a direct effect on job satisfaction and stress level of the employees. Productivity of employees tends to increase if the organisation is able to provide a good working environment.

THEORETICAL FRAMEWORK

This study is based on a model which has been published by Jacob Morgan (2015), in the <https://www.forbes.com/?sh=4a3611522254> (forbes.com) and according to him, every employee experience in any organisation regardless of its industry, geographical area, or size, consists of three environments: The Physical environment, The Cultural environment and The Technological environment as seen below.



Source :

https://www.google.com/search?q=the+three+employee+experience+environments&sxsrf=ALiCzs aDMcTptcwozeF99xhlls6N0VpsJA:1668179137074&source=lnms&tbn=isch&sa=X&ved=2ahUjgGHWHyCkEQ_AUoAXoECAEQAw&biw=1366&bih=600&dpr=1#imgrc=Xn2KbHeUOcGbRM

1. Physical Environment:

The physical space is that, which we are able to see, touch, taste, and smell. It's the art that hangs on the walls, the workplace architectural plan, the demographics of the individuals we tend to work with (old, young, diversity, etc), and any physical perks we'd get, like catered meals, an on-site gymnasium, or a lounge space where staff can unwind a bit.



Source :

<https://www.forbes.com/sites/jacobmorgan/2015/12/15/the-three-environments-that-create-every-employee-experience/?sh=1176647c66c6>

2. Cultural Environment:

It's the “vibe” you get after you get in the door and it's the mood and also the tone that the work sets. It's the leadership style, the sense of purpose your staff feel, the organisational structure, and also those who make your organisation. It's not written and it's not said out loud, but it's one of the most vital elements of creating and designing the employee experience. Usually company culture is what energises us or drains us. It also motivates us, or discourages us, empowers us, or suffocates us. No matter what, every employee experience their company's corporate culture every single day, whether it be positive or negative



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Source : <https://www.forbes.com/sites/jacobmorgan/2015/12/15/the-three-environments-that-create-every-employee-experience/?sh=1176647c66c6>

3. Technological Environment:

The technological setting of the organisation refers to the tools that the employees use for getting their work done. This includes everything from the interior social network your company may use to the mobile devices that are approved to the laptops, desktops, and video conferencing solutions that employees have access to. This conjointly includes any apps, software, e-learning tools, and user experience that impact how the employees use these numerous tools. Now-a-days technology is the central system of any organisation and most ideas and themes associated with the longer term of employees don't seem to be potential without technology.



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Source : <https://www.forbes.com/sites/jacobmorgan/2015/12/15/the-three-environments-that-create-every-employee-experience/?sh=1176647c66c6>

PROBLEM STATEMENT

One of the many challenges for any organisation is to satisfy its employees in order to cope up with the ever changing and evolving environment and to achieve success and remain in competition. To increase efficiency, effectiveness, productivity and job commitment of employees, the organisations must satisfy the needs of its employees by providing good and sensible working conditions. Unfortunately, not much attention has been given to find out the satisfaction levels of academicians and about various work environmental variables which influence their satisfaction in educational institutions in and around Tirupati. Therefore, there is a need for researchers to focus more attention on investigating the impact of the workplace environment on employees' job satisfaction. Hence, this paper presents the impact of the workplace environment on employees' job satisfaction at educational institutions in the Temple town of Tirupati.

SCOPE OF THE WORK

The present study covers job satisfaction of employees working as teaching faculty in the M.B.A, M.C.A, M. Com, B. Com and B. Sc departments of State owned and Private Universities, in Tirupati.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

1. To analyse the job satisfaction of employees belonging to State owned and Private Universities with regard to the workplace environment.
2. To compare the satisfaction of both the university's employees with regard to the workplace environment.
3. To offer suitable suggestions for the improvement of job satisfaction of employees belonging to State owned and Private Universities.

RESEARCH METHODOLOGY

A well structured questionnaire was used to collect the primary data and the secondary data were collected from various books, journals, websites of the Selected Educational Institutions. A five point scale was used to measure the opinion of respondents on the workplace environment. To select

the respondents, a random sampling method was used. Sample size is 124, with 62 employees belonging to State owned and Private Universities respectively.

DATA ANALYSIS & INTERPRETATION

Job satisfaction of employees in the workplace environment is tested on Physical Environment, Cultural Environment, and Technological Environment.

Comparison Of Workplace Environment:

Data relating to satisfaction of employees towards workplace environment is presented in tables below

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

DEMOGRAPHIC VARIABLES	CATEGORIES	STATE	PRIVATE	FREQUENCY (N)	PERCENTAGE (%)
GENDER	Male	36	44	80	64
	Female	26	18	44	36
DESIGNATION	Research Scholar	9	8	17	14
	Academic Consultant	22	11	33	27
	Assistant Professor	21	26	47	38
	Associate Professor	6	14	20	16
	Professor	4	3	7	6
QUALIFICATION	UG	0	0	0	0
	PG	27	33	60	48
	Ph. D/ M.phil	35	29	64	52
AGE	20-30 Years	12	13	25	20
	30-40 Years	22	18	40	32

	40-50 Years	15	21	36	29
	50-60 Years	8	7	15	12
	Above 60 Years	5	3	8	6
MARITAL STATUS	Unmarried	21	18	39	31
	Married	34	41	78	58
	Widowed	5	3	8	6
	Divorced	2	0	2	2
	Separated	0	0	0	0
EMPLOYMENT DURATION	Less Than 5 Years	26	21	47	38
	5 - 10 Years	18	23	41	33
	10 - 15 Years	11	13	24	19
	15 - 20 Years	9	3	12	10
	Above 20 Years	8	2	10	8

Source: Primary Data

As presented in the above table, the majority of the surveyed respondents were males, recording 64 percent of the total respondents whereas females were 36 percent. This shows that the study had a reasonable representation of gender.

Majority of the respondents are working as Assistant Professors recording 38%, followed by Academic Consultants recording 27% and Associate Professors recording 16%.

Furthermore, in the light of respondents' educational level, the majority of respondents have done Ph. D/M. Phil with 52 percent followed by Post Graduates with 48%. This implies that the respondents had the ability to grasp the issues at hand and provide responses that were precise for the study.

The study revealed the highest number of respondents belong to the age category of 30-40 years with 32 percent, followed by those between the ages 40-50 and 20-30 years with 29 and 20 percent respectively.

Then coming to the marital status, the majority of the respondents i.e., 58 percent were found to be married, followed by single respondents with 31 percent. Ultimately, 6 percent and 2 percent of the respondents were widowed and divorced respectively.

In addition, from the demographic data collected on respondents’ employment duration, the majority of the respondents i.e 38 percent are having less than 5 years of employment duration, followed by 33 % and 19% for 5 - 10 years and 10 - 15 years of employment duration respectively. This further reaffirms their understanding of their workplace environment.

Means and Standard Deviations of Study Variables:

MEAN INTERPRETATION

SCALE	MEAN RANGE	INTERPRETATION
5	4.21 - 5.00	Very Satisfied
4	3.41 - 4.20	Satisfied
3	2.61 - 3.40	Neither Satisfied nor Dissatisfied
2	1.81 - 2.60	Dissatisfied
1	1.00 - 1.80	Very Dissatisfied

Source: Computed Data

Tables presented below, shows the mean scores along with standard deviations for the various variables used for the study.

INSTITUTION-WISE MEAN VALUES OF PHYSICAL ENVIRONMENT

WORKPLACE PERKS	STATE		PRIVATE	
	MEAN	S.D	MEAN	S.D
Gym	2.95	0.66	2.24	1.14
Lifts	3.25	1.35	4.03	0.92
Cafeteria	3.28	1.18	3.90	1.09
Committee Halls	4.28	0.75	3.87	1.02
Toilets	3.52	1.26	3.76	1.09
Staff Common Room	2.76	0.60	3.28	1.19

Transport	3.83	1.69	3.41	2.86
Medical	4.77	1.15	4.01	1.00
Break time	4.29	1.48	3.94	1.05
Paid time off	3.28	2.20	3.91	0.95
Maternity leave	3.52	1.19	3.80	1.16
Paternity leave	3.78	0.20	3.70	0.72
Reduced time schedule	4.16	1.71	3.66	0.83
AVERAGE MEAN	3.67	1.26	3.65	1.16
WORKPLACE LAYOUT:				
Temperature	2.85	0.55	3.65	0.82
Lighting	3.73	1.30	3.48	0.88
Ventilation	3.14	1.23	3.44	0.96
Noise Level	3.31	2.14	4.01	1.08
Furniture	2.90	1.73	3.67	1.07
Equipment	3.15	1.84	3.67	1.17
Adequate no. of classrooms	4.04	0.65	3.18	1.21
Sufficient Office Space	3.65	1.23	3.13	1.30
Cleanliness	3.06	1.81	3.99	1.00
AVERAGE MEAN	3.31	1.46	3.58	1.05
WORKPLACE CREATIVE:				
Colourful Classrooms & Staff rooms	3.70	1.74	3.89	1.07
Relaxing rooms/Game rooms	2.41	2.40	3.85	1.05
Natural Office Decor	4.65	1.34	3.74	1.08
Community Drawing boards	3.56	0.59	2.85	1.36
Collaborations with other departments	4.10	1.69	3.68	0.84
Guest lectures & Conferences	3.71	1.05	3.57	0.88
AVERAGE:	3.68	1.47	3.59	1.05
OVERALL AVERAGE MEAN:	3.55	1.39	3.61	1.09

Source: Computed Data

The above table reveals the means of Physical Environmental Variables of State owned and Private Universities

Comparison of mean scores of the above variables reveals that in State University, Maintenance of Committee halls, Availability of Medical facilities, Break Time, Having reduced time schedules, Adequate no. of classrooms, Natural office decor and collaborations with other

departments have scored higher. Maintenance of Gyms, Staff common rooms, having adequate furniture and Temperature have scored lower than the other variables mean in.

In Private University, Maintenance of Lifts, having Medical facilities, Noise level have scored higher and variables like maintenance of Gyms and Community drawing boards have scored lower.

The overall mean scores of State owned and Private University are 3.55 and 3.61 respectively. This shows that employees of both the institutions are “Satisfied” with their Physical Workplace Environment but employees of Private University have slightly higher satisfaction with regard to Physical Workplace Environment.

INSTITUTION-WISE MEAN VALUES OF CULTURAL ENVIRONMENT

ORGANISATIONAL STRUCTURE	STATE		PRIVATE	
	MEAN	S.D	MEAN	S.D
Comfort	3.78	1.35	3.55	0.94
Coordination	3.40	1.08	3.43	1.00
Communication & Information Structure	3.69	1.33	4.14	2.68
Division Of Work	3.25	0.61	4.06	0.64
Diversity	3.49	0.82	3.91	0.77
Job Security	3.52	0.83	3.65	0.89
Reputation	4.26	1.16	3.63	0.90
Networking Opportunities	3.74	0.99	3.37	1.03
Challenging Work	3.33	0.95	3.31	1.07
Job Role	3.66	1.27	3.55	0.94
Work Load	3.31	0.98	3.89	0.69
Motivation	3.40	0.95	4.26	2.16
Opportunities To Apply Your Talents	3.58	1.15	3.35	1.05
Job Related Training	3.56	1.10	3.36	1.01
Discrimination	3.28	0.88	3.28	1.05
Geographic Location	3.47	0.55	3.29	1.05
Flexible Working Hours	4.58	1.37	3.44	0.93
Working From Home	3.47	0.46	2.51	1.26
Longer Annual Leave	3.41	0.44	2.48	1.25
Childcare Facilities	4.28	1.37	4.58	2.37

AVERAGE	3.62	0.98	3.55	1.18
LEADERSHIP APPROACH:				
Supervision	3.34	0.92	2.59	1.25
Decision Making	3.53	1.13	4.46	2.02
Respectful Treatment	4.46	2.02	3.28	0.20
Expectations	3.58	0.02	2.90	0.73
Employees' Participation In Decision Making	3.86	1.49	3.23	0.94
Acceptance Of Your Leaves	3.82	0.27	3.31	1.02
Grievance Handling Procedure	3.28	0.81	3.24	0.98
AVERAGE	3.69	0.95	3.29	1.02
WORK STYLES:				
Autonomy	4.43	0.86	3.62	0.98
Job Stress	3.42	0.58	3.42	1.02
AVERAGE	3.93	0.72	3.52	1.00
PAY & BENEFITS:				
	2.23	1.30	2.55	1.73
PERFORMANCE:				
Appraisal for good work	4.81	1.34	3.33	0.98
Recognition for your work	3.45	1.05	3.28	0.89
Reward System	3.62	0.21	4.16	0.71
Opportunities to get promoted	3.76	0.07	3.32	0.92
Retention	4.22	1.68	3.31	0.90
AVERAGE	3.99	0.87	3.48	0.88
PEOPLE:				
MANAGEMENT:				
Communication	3.41	1.05	3.19	0.85
Trust	3.77	1.34	3.83	1.03
Respectful Treatment	4.23	1.44	3.77	1.35
Support	3.21	0.78	3.50	0.76
Effectiveness Of Their Work	3.53	1.20	3.42	1.02
COLLEAGUES:				
Availability Of Enough Personnel	3.14	0.79	3.84	0.73
Communication	2.83	0.39	1.98	0.04
Trust	3.13	0.86	3.99	0.85

Respectful Treatment	3.14	0.70	3.69	0.94
Support	3.43	0.49	3.32	0.92
Effectiveness Of Their Work	3.23	0.86	3.31	0.90
SUPPORT STAFF:				
Availability Of Enough Personnel	4.20	0.57	3.17	0.75
Communication	4.33	0.74	2.97	0.65
Trust	4.10	0.52	3.40	0.99
Respectful Treatment	4.90	1.31	3.57	1.17
Support	3.35	0.94	3.28	0.89
Effectiveness Of Their Work	4.39	0.77	3.19	0.85
STUDENTS:				
No. Of Students Attending Your Classes	4.34	1.86	3.04	0.62
Communication	4.09	1.64	3.32	0.89
Trust	4.84	1.29	3.37	0.92
Respectful Treatment	4.37	0.94	3.25	0.81
Support	4.19	1.73	2.68	0.45
Effectiveness Of Their Work	4.79	1.26	2.79	0.63
AVERAGE	3.87	1.02	3.30	0.82
PURPOSE	3.77	1.35	4.28	1.86
OVERALL AVERAGE:	3.59	1.02	3.42	1.21

Source: Computed Data

The above table reveals the means of Cultural Environmental variables of State owned and Private Universities. Comparison of mean ratings of variables reveals that in State owned University, Reputation, Flexible Working Hours, Respectful treatment, Autonomy, Appraisal, Communication and Effectiveness of Support Staff, Trust and Effectiveness of Students have scored higher. Communication with Colleagues have scored lower than the other variables mean.

In Private University, Information Structure, Motivation, Availability of Child care facilities, Decision Making of Management, Reward System and their Purpose of working, have scored higher and Communication with Colleagues have scored lower.

The overall mean scores of State owned and Private Universities are 3.59 and 3.42 respectively. This shows that employees of both the institutions are “Satisfied” with their Cultural Workplace Environment but employees of State owned University have slightly higher satisfaction with regard to Cultural Workplace Environment.

INSTITUTION-WISE MEAN VALUES OF TECHNOLOGICAL ENVIRONMENT

	STATE	PRIVATE
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DEVICES	MEAN	S.D	MEAN	S.D
Digital Interactive White Boards	3.36	0.18	3.42	1.02
Ultra High Definition Television	3.28	0.07	3.41	1.00
Digital Projectors	3.33	0.52	3.49	0.85
Your Own Dedicated Computer	3.08	0.76	3.62	0.98
AVERAGE	3.26	0.38	3.48	0.96
APPLICATIONS:				
Website	4.15	1.12	3.23	0.94
Social Media	3.26	0.57	3.61	1.02
App	2.75	0.08	3.24	0.98
AVERAGE	3.39	0.59	3.36	0.98
DIGITAL TRANSFORMATION:				
AI Grading	2.92	0.06	3.26	0.98
A Cloud Terminal	2.76	0.07	3.67	0.60
Biometrics	3.29	0.90	3.31	1.02
Video Conferences	3.24	0.83	4.24	0.97
Digital Signage	3.41	0.69	3.41	0.86
AVERAGE	3.12	0.51	3.57	0.89
OVERALL AVERAGE:	3.26	0.49	3.47	0.94

Source: Computed Data

The above table reveals the means of Technological Environmental variables of State owned and Private Universities. Comparison of mean ratings of variables reveals that in the State owned University, Functioning of their Website and implementation of Digital Signage facility have scored higher. Functioning of their App, implementation of a cloud Terminal and AI Grading have scored lower than the other variables mean.

In the Private University, having Interactive digital white boards, Television, Digital Projectors, own Computer, functioning of their Social Media Platforms and Cloud Terminal have scored higher than the means of other variables.

The overall mean scores of the State owned and Private Universities are 3.26 and 3.12 respectively. This shows that employees of State owned University are “Neither Satisfied nor Dissatisfied” with their Technological Workplace Environment and employees of Private University are “Satisfied” with their Technological Workplace Environment.

OVERALL AVERAGE

VARIABLE	STATE		PRIVATE	
	MEAN	S.D	MEAN	S.D
PHYSICAL ENVIRONMENT	3.55	1.39	3.61	1.09
CULTURAL ENVIRONMENT	3.59	1.02	3.42	1.21
TECHNOLOGICAL ENVIRONMENT	3.26	0.49	3.47	0.94
OVERALL AVERAGE	3.47	0.96	3.50	1.08

Source: Computed Data

The above table shows the Overall mean scores of Physical, Cultural and Technological Environment of the State owned and Private Universities, are 3.47 and 3.50 respectively. This shows that the employees of both the institutions are “Satisfied” with regard to their overall Workplace Environment but employees belonging to Private University have slightly higher satisfaction with regard to their workplace environment when compared to the employees of State owned University.

HYPOTHESIS TESTING

The following hypothesis has been framed to test whether the scores of workplace environment differed significantly between the employees of State owned and Private Universities.

H₁₀: There is no significant difference between the satisfaction of employees belonging to State owned and Private Universities with regard to Physical Workplace Environment.

T-TEST FOR COMPARISON OF OVERALL MEAN SCORES OF PHYSICAL WORKPLACE ENVIRONMENT

t	t _{0.50}	df	Sig. Value
0.222	1.96	122	0.50

Source: Computed Data

The calculated t-test value, 0.222 is lesser than the table value of 1.960 at 0.50 level of significance. It is therefore inferred that there is no significant difference between the satisfaction of employees belonging to State owned and Private Universities with regard to Physical Workplace Environment. Hence, the hypothesis is **Accepted**.

H2₀: There is no significant difference between the satisfaction of employees of State owned and Private Universities with regard to Cultural Workplace Environment.

T-TEST FOR COMPARISON OF OVERALL MEAN SCORES OF CULTURAL WORKPLACE ENVIRONMENT

t	t_{0.50}	df	Sig. Value
0.845	1.96	122	0.50

Source: Computed Data

The calculated t-test value, 0.845 is lesser than the table value of 1.960 at 0.50 level of significance. It is therefore inferred that there is no significant difference between the satisfaction of employees belonging to State owned and Private Universities with regard to Cultural Workplace Environment. Hence, the hypothesis is **Accepted**.

H3₀: There is no significant difference between the satisfaction of employees of State owned and Private Universities with regard to Technological Workplace Environment.

T-TEST FOR COMPARISON OF OVERALL MEAN SCORES OF TECHNOLOGICAL WORKPLACE ENVIRONMENT

t	t_{0.50}	df	Sig. Value
1.556	1.96	122	0.50

Source: Computed Data

The calculated t-test value at 1.556 is lesser than the table value of 1.960 at 0.50 level of significance. It is therefore inferred that there is no significant difference between the satisfaction of employees belonging to State owned and Private Universities with regard to Technological Workplace Environment. Hence, the hypothesis is **Accepted**.

FINDINGS

1. State Owned University:

- The mean values of the Physical workplace environment variables in State Owned University reveals that Maintenance of Committee halls, Availability of Medical facilities, Break Time, Having reduced time schedules, Adequate no. of classrooms, Natural office decor and collaborations with other departments, have scored higher, which implies that the respondents are more satisfied with these variables, and are dissatisfied with the maintenance of Relaxing rooms, Furniture and Temperature as they scored the lower mean.
- The mean values of the Cultural workplace environment variables, reveals that Reputation, Flexible Working Hours, Respectful treatment, Autonomy, Appraisal,

Communication and Effectiveness of Support Staff, Trust and Effectiveness of Students, have scored higher, which implies that the respondents are more satisfied with these variables and are dissatisfied with the Communication with Colleagues as it have scored lower than the other variables mean.

- The mean values of the Technological workplace environment variables, reveals that Functioning of their Website and implementation of Digital Signage facility have scored higher, which implies that the respondents are more satisfied with these variables and the respondents are dissatisfied with the implementation of the Cloud Terminal and AI Grading system.

2. Private University:

- The mean values of the Physical workplace environment variables in Private University reveals that Maintenance of Lifts, having Medical facilities, have scored higher, which implies that the respondents are more satisfied with these variables, and are dissatisfied with the Gyms and maintenance of Community drawing boards as it scored the lower mean.
- The mean values of the Cultural workplace environment variables, reveals that Information Structure, Motivation, Availability of Child care facilities, Decision Making of Management, Reward System and their Purpose of working, have scored higher, and the respondents are dissatisfied with the Pay & Benefits and Communication with colleagues as these variables scored lower mean.
- The mean values of the Technological workplace environment variables, reveals that having Interactive digital white boards, Television, Digital Projectors, own Computer, functioning of their Social Media Platforms and Cloud Terminal have scored higher, and the respondents are more satisfied with the above mentioned variables.

3. Hypothesis Analysis:

- From the hypothesis analysis, we can infer that there exists no significant difference between the satisfaction of employees belonging to State owned and Private Universities with regard to the Physical, Cultural and Technological Workplace Environment.

SUGGESTIONS

In the light of the key findings of the study the following suggestions are made:

1. State Owned University:

- The management should consider the need to provide Relaxing rooms for Men and Women separately, where they can relax, eat lunch or take a nap or can unwind a bit, as in Valley elementary school in Phoenix, Arizona, created “Quiet Rooms” called “Zen Den” to balance the burnout of teachers at schools, and the teachers are very much satisfied with it.
- The management should invest more in the provision of furniture, as the number of chairs, tables, and fans are not adequate.

- The management should focus more on its digital transformation, and need to provide more awareness and train employees on new softwares.
2. Private University:
- The management should consider the need to adjust the Pay of its employees, as recently done in Maharaja Sayajirao University, Vadodara. The university had constituted a committee and accepted its recommendation to increase cadre-wise fixed monthly consolidated salary to its employees. This increases satisfaction of employees and also leads to retention of talented employees.
 - Due attention should be given to the maintenance of community drawing boards, with a proper protocol and can also consider the provision of inhouse Gym facility for the staff, as these perks can increase employees job satisfaction.
 - To increase relations among the employees, there should be an avenue for the teachers, support staff and administrators to talk to each other and discuss their issues to develop a viable solution.

CONCLUSION

Eventually, this study proved the words of Robert Hoppock that “Job satisfaction is also related to the place of work or work situation” and also established that job satisfaction of employees is affected by all the three workplace environment elements, i.e. Physical, Cultural and Technological Environments. Generally it’s believed that employees at the workplace in Private Organisations are generally less satisfied with their jobs than those who work in Government owned Organisations. This study proved that there is no difference in the satisfaction of employees belonging to State owned and Private Universities, in the Tirupati City and both are equally satisfied with regard to their respective Workplace Environment. For further studies, researchers can add data related to employees belonging to the Centre owned Universities and compare the satisfaction of employees belonging to Centre owned, State owned and Private Universities, and also there is a possibility of doing an in-depth study on a particular workplace environment for instance a study focusing only on Technological workplace environment to gain more understanding on its effects on Job Satisfaction.

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Changes in HR management - remote working: experience from Covid-19 period

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Abstract

Thanks to the development of information and communication technology and the global pandemic of the Covid-19 disease, non-standard form of work - remote working - have become widespread in the world. This paper recaps the evolution of remote working, including its name, followed by a discussion of a number of papers dealing with the advantages, disadvantages and management practices and recommendations that will lead to minimizing the impacts and maximizing the benefits associated with remote working.

Keywords: remote working, advantages and disadvantages, technologies at work

Introduction

In recent years, we have faced a significant challenge in terms of human resource management. The non-standard situation caused by the Covid-19 disease pandemic has challenged employers and employees to apply non-standard management methods and forms of work. Remote working has become an important form for professions where the nature of the work permits. In the literature we encounter various terms to describe this form: remote working, home-office, distant work, mobile work, etc. All stakeholders had to adapt as a result of the restrictive measures. Researchers in the field of human resource management who deal with non-standard forms of work have had the opportunity to examine not only the actual course and conditions of remote working, but also its consequences for the management of the whole company and, of course, for individual employees. Many surveys in this field have been carried out not only by university teams but also by companies themselves, recruitment agencies or professional chambers, as these stakeholders were interested in finding out important facts about the operation of this important phenomenon in the field of human resources management. This paper reviews the knowledge on remote working from recent literature and studies and recapitulates the managerial recommendations. The Covid-19 pandemic has helped to overcome the barriers that were hindering the greater spread of remote working, which have been overcome by mandatory measures. Firms quickly managed to prepare the conditions for moving as many employees as possible to a form of remote working, full-time remote working brought with it many negatives. Since 2020, many studies have emerged that look at this form of employment, present interesting findings and suggest partial measures suitable for minimising the disadvantages and maximising the benefits of remote working.

This paper recaps the findings on remote working. The method is a search of studies dealing with the conditions, advantages and disadvantages of remote working. The aim is to map the knowledge

on remote working and make managerial recommendations based on the researchers' findings to help to create better conditions for the implementation of this form of employment.

The development of remote working

When the WHO began recommending the implementation of measures to prevent the spread of Covid-19 in early 2020, one of the mainstays of the containment strategy was isolation of residents in the home environment. The practical recommendation was to introduce home-based working as widely as possible. Although many companies and employees had no real experience with this form of work, it is certainly not new (Kyzlinkova et al, 2020). In the 19th century, manual work at home emerged in some fields of work. This was work with simple equipment that was not performed in workshops but in the home environment (Kotíková et.al, 2019). Work from home reappears prominently and also on a different ground in the 1970s, during the Great Oil Crisis, when work from home was mainly used to solve the commuting problems of workers as high fuel prices made the cost of transportation very expensive. This scheme was developed by Nilles (1976), who in his article discusses the factors affecting the extent of telecommuting, including the environment for commuting, technological sufficiency, technological familiarity, social aspects of work, other motivations for telecommuting, management issues, legal and regulatory barriers and incentives, and issues of job entitlements. It was then that Jack Nilles (1976) came up with the idea that employees should not drive to work, but that work should drive to them. So working from home seemed the ideal solution. The original definitions referred to telework as work away from the employer's workplace, most often done from home, with the employee used telephone, fax or courier services to communicate with the employer. Since the late 1980s, the definition of teleworking has expanded to include the use of information and telecommunication technologies.

In recent decades, technology has added a significant aspect to the use of the Internet. The Internet has not only ended the dependence of work performance on the employer's premises per se, but has facilitated access to the data immediately underlying the processing. This access in turn makes it possible to work from virtually anywhere. It has also created a need for some authors to create a different name or names to better describe working off-site at the employer's premises, as well as different phases due to the use of different communication technology.

Messenger, for example, distinguishes three generations of teleworking: the "home office" in the 1970s and 1980s is characterized by stationary computers and telephone communication (which was the so-called "telecommuting"). The next phase was the "mobile office", where it was possible to work from both home and office, which introduced the term "third places".

At the beginning of the 21st century, studies predicted an evolution in the management of organizations towards the inclusion of virtual work, highlighting the decreasing importance of space as technology allows people to work anytime, anywhere: at home, in transport vehicles. Organisational relationships can take place in space, time and culture as organisations become 'boundaryless' and 'pervasive', constrained only by access to the necessary technologies (DeSanctis et al., 1999; Davidow and Malone, 1992; Barnatt, 1995; cit. Halford, 2005). With virtuality, work,

organisation and management are expected to take on new forms. Individuals may become multitasking, flexible and independent, and organisations may become, for example, according to Stanworth (2008), a loose network of individuals, capital and technology. Now that remote working is part of work regimes it is clear that methods of managing employees working remotely are still evolving and ways are being sought to minimise the negative impacts and maximise the benefits it offers.

Crisis situations have facilitated a greater expansion of teleworking and overcoming barriers. Security was an important motive for the further development of teleworking in 2001. This was linked to the terrorist attacks on the WTC in New York.

The promotion of a work-life balance strategy was also an important motivation, for which working from home proved to be an appropriate means. Davis and Francis defined work-life balance as 'an overall level of content resulting from an assessment of one's degree of success at meeting work and family role demands'. Here too, the negative effects of teleworking in the form of work-life conflict when there are tension and strain between the roles undertaken in the separate domains of work and family begin to emerge.

The terminology of telework found in the literature is very broad. These include the terms home working, home office, home based work, distant work (job), remote work, teleworking, ICT based mobile work, e-work, etc. For workers who work away from the employer's premises, the terms e-worker or e-nomad are also sometimes used in the English literature (Eurofound). ILO still uses the original term telework and understands this term as regular work performed by an employed worker outside the usual premises of the employer, emphasizing that this arrangement has been made possible by the development of information and communication technologies. In contrast, Eurofound (European Foundation Agency for the Improvement of Living and Working Conditions, hereafter Eurofound) considers the term telework⁶ to be inappropriate, as it considers that the term refers to the performance of work away from the employer's premises, but at a different fixed location (i.e. not from anywhere), as has been the traditional concept of telework since the 1980s.

The term telecommuting was not used in the traditional understanding of teleworking until internet connection technology became so advanced, to make it possible to connect to the Internet from virtually anywhere. According to Eurofound however, the development of information and communication technologies has brought far greater opportunities mobility, and so Eurofound introduced a new name and a new definition in 2015, which is the most recent version to date. Eurofound names off-site work as ICT-based mobile work and defines it as ICT-based mobile work that employees can perform from any location and at any time (Kyzlinková et al., 2020).

However, both reputable institutions, the ILO and Eurofound, agree that regardless of the name, the basic defining features of this form of employment are:

- (a) the ability of the employee to do his or her work from anywhere (i.e. from any location, which may or may not be fixed),
- (b) this possibility is made possible by information and communication technologies.

However, the most significant role in the development of teleworking and the exploration of this phenomenon is clearly the result of the development of computer and communication technology. The possibility of remote access, digital data processing and transmission, video communication, the development of mobile technology and the speed of internet connections have played a significant role in the expansion of home working. The pressure to overcome barriers and take advantage of these opportunities is creating social crises. In recent times, this has included both the Covid-19 pandemic and the current energy crisis related to the war in Ukraine.

Digital technologies in recent decades have begun to change organisations which has led to distance work, including telework, remote working and work from home. The actual performance of work and its management can be done from home (telework), from satellite offices (intra-organisational work), or with customers and clients (inter-organisational work). According to Fisher and Fisher, time, space and/or culture constitute the distance between managers and employees (Ipsen et al., 2021).

Modern ICTs then enable workers to work from anywhere at any time due to mobile devices and wireless network access. The employees work at home using communication tools, such as smartphone, videoconference, email or Line, to connect with a remote computer site.

Songsangyos and Supakorn (2021) named 3 main groups of factors that are essential for the implementation of remote working: people, processes and technology.

People	Process	Technology
➤ how will do the work	➤ what to do	➤ tools help remote working
<ul style="list-style-type: none"> ➤ mind set ➤ guide ➤ teamwork 	<ul style="list-style-type: none"> ➤ organization culture ➤ procedures ➤ monitoring and evaluation 	<ul style="list-style-type: none"> ➤ internet ➤ intranet ➤ e-mail ➤ application ➤ clouds

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Advantages and disadvantages of remote working

Since Niles (1976) there has been a change in the perception of remote work. Research on this non-standard form of work has shown not only advantages but also disadvantages. Studies have looked at remote working from the perspective of both employees and employers. Work-life balance, relationships between employees, subordinates and supervisors, rule setting, self-management, control mechanisms, psychological effects caused by isolation and the use of computer technology and other aspects were frequent topics.

Studies on remote working have highlighted the barriers that hinder the increased uptake of teleworking: the fear of losing control over the employee, the inability to ensure the security of the information transmitted and adequate working conditions (ILO, Eurofound). Significant differences in the take-up of homeworking between countries have also been identified (Eurostat). On the employees' side, there are also bottlenecks that employees perceive as barriers to the adoption of homeworking, such as higher demands on self-discipline, the need to set rules, the adaptation of the home environment to the performance of work duties, health risks linked in particular to isolation from the work team, etc.).

According to the ILO and Eurofound survey, the main advantages of working from home for employees were the work-life balance, the financial and time savings associated with travelling to work and the flexibility of their own working day. Employers particularly valued the reduction in financial costs associated with the employee's workplace and presented teleworking as a benefit provided to employees.

The advantages of remote work that have been mentioned are increased productivity, less stress, a better work–life balance (Fønner et al., 2010), reduced commuting time (Kurland, 1999), increased control of work patterns and being in less contact with others (Biron et al., 2016).

Conversely, scholars have also reported numerous potential disadvantages associated with remote work, including home-based telework. These include isolation, misunderstandings, decreased interpersonal contact and role ambiguity (Hertel et al., 2005). Other studies have found that the work–life balance may change into disadvantage, when people work more hours, when they do not have visible support and leadership. Also employees have lack of social interaction, they feel isolated from the workplace (Gurstein, 2001). A better balance of home and work life, increased flexibility and autonomy, reduction in commuting time, increased productivity, and higher morale and job satisfaction is mentioned by Tavares (2017). Martin and MacDonnell (2012) found is a small positive association between remote work and organizational outcomes, such as increased productivity, employee retention, and organizational commitment. Study by Di Martino and Wirth (1990) called remote working responsible for social isolation and marginalization, and increasing stress of employees.

The phenomenon called presenteeism means productivity loss caused by sickness was found associated with remote working (Shimura et al., 2021). It is important to note that, according to several scholars employees WFH have more positive and less negative job-related well-being

experiences compared to days working in the office. Further, they emphasised the importance of recognising individual differences when adapting to teleworking environments (Anderson et al.).

Challenges of pandemic

During pandemic Covid-19 the government of the countries were forced to accept the measures to prevent contact. In this period the companies have used remote working in maximum. In EU countries the amount of remote working employees increased in all countries, even in countries like Romania and Bulgaria where was the minimum share of remote working before pandemia.

Fig. 1 Share of employed people working from home sometimes or usually by EU Member States in 2019, 2020 and in 2021

Country	2019 (sometimes or usually)	2020 (sometimes or usually)	2021 (sometimes or usually)	2021 (usually only)
EU	14,6	20,9	24,4	13,6
Netherlands	39,7	42,7	57,6	24,0
Sweden	38,2		47,3	27,7
Luxembourg	33,1	47,8	45,4	28,4
Finland	32,6	40,4	42,2	25,5
Denmark	29,9	36,9	37,7	18,9
Belgium	24,9	33,9	40,3	26,4
France	23,1	29,8	34,8	17,3
Austria	22,5	29,8	29,0	16,2
Ireland	20,3	32,6	40,6	33,0
Estonia	19,9	23,2	26,5	15,1
Slovenia	18,0	20,1	23,1	10,6
Portugal	15,7	22,8	26,1	14,5
Poland	14,4	18,2	15,4	6,9
Germany	12,9	21,2	25,2	17,3
Malta	11,8	26,0	29,7	15,1
Czechia	10,0	13,1	14,5	7,2
Slovakia	9,5	11,6	15,0	6,6
Spain	8,4	15,2	15,5	9,6
Croatia	7,0	11,1	13,5	4,7
Greece	5,2	10,4	14,9	6,7
Latvia	4,8	6,1	13,6	11,0
Italy	4,7	13,7	14,8	8,3
Hungary	4,6	11,0	13,4	4,6
Lithuania	4,5	8,4	14,4	9,2

Cyprus	2,5	7,4	12,8	6,7
Romania	1,4	3,2	6,6	2,4
Bulgaria	1,1	3,0	6,5	2,8

Source: Eurostat, annual statistics, 2022. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Employment - annual statistics&oldid=563713](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Employment_-_annual_statistics&oldid=563713)

The COVID-19 crisis has drastically altered working conditions in organizations. Indeed, to ensure their business continuity, most organizations have moved to remote working, requiring their employees to work from home (Hamouche, 2021).

The category of employees working from home represents a small fraction of the overall workforce (Gourinchas, 2020), mainly because remote working is not suitable for manufacturing industries (Koirala and Acharya, 2020). Remote working cannot be applied to all job positions (Bartik et al., 2020).

Some research shows that prior experience with remote working plays a significant role. These experiences have proven to be crucial for adapting to full-time remote working during a pandemic. Social isolation has been shown to be an important critical factor (van Zoonen et al., 2021).

There was the enormous role of communication technology. Remote working requires the availability of technological tools which will facilitate communication between employees and managers, like Zoom, Microsoft remote desktop, team viewer, Microsoft team and of course hardware for employees to work from home (Prasad and Vaidya, 2020).

The increased use of information and communication technology can lead to the perception of an everlasting urgency, generating possible expectations about the constant availability of employees, refer to a technostress related to the use of ICT, which has increased among employees working remotely (Molino et al., 2020).

Remote working during pandemia was the challenge for HR practitioners (Hamouche, 2020), to ensure effective communication, supervision, support, performance management, and a realignment of their compensation.

Employees' family-work conflict and social isolation were negatively related, while self-leadership and autonomy were positively related, to remote work productivity and engagement. Family-work conflict and social isolation were negatively related to stress, which was not affected by autonomy and self-leadership (Galanti et al., 2021).

It can also be psychologically demanding for these employees considering the possibilities of family distractions and the multiple roles that they have to assume while working from home (Prasad & Vaidya, 2020). This can undermine the psychological health of employees, especially those who isolate themselves by choosing only emails as a means of communication.

The study of Prasad and Vaidya (2020) reported that workplace isolation, lack of communication, family distractions, role overload, and occupational stress factors (role ambiguity, role conflict, career, job-control), which have emerged due to the COVID-19, mainly among employees working from home are significant predictors of employees' performance.

The advantages and benefits are related to those that employees can obtain, since the well-being and happiness of employees are extremely important for companies, on the other hand, the challenges of companies involve the mutual trust that must be acquired, the adoption of good monitoring techniques and the provision of technological resources, so that this new way of working is possible and beneficial for everyone (Fialho, 2022).

Managerial recommendations

Based on studies conducted and lessons learned during the pandemic, management recommendations have emerged that can help eliminate the disadvantages of remote working. At first there are recommendations for employers. Working from home/remote working should be part time. Full-time working from home is problematic for three reasons: It is hard to be creative at a distance, it is hard to be inspired and motivated at home, and employee loyalty is strained without social interaction. From 1 to 3 days a week is ideal amount of remote working days. Remote work is associated with the reduction of psychological and physical stress responses independently of changes of job stressors, social support, sleep disturbance, and total sleep time on workdays. On the other hand, remote work of 5 days a week (full-remote) was associated with the reduction of work productivity. (Shimura et al., 2021).

Working from home should be optional. Extra risk for motivation of employees to force them to work from home full time. It is essential form effective performance to have effective review system. For employees is important to have feedback from their managers. The isolation is a stressful factor of remote working and it can reduce motivation and performance (Bloom, 2021). The way the company and employees are managed in a crisis, the approach of superiors to the evaluation and control of effects on work, and the adaptation of support to the real needs of employees, all play fundamental roles. The factors examined that influence the perceived benefits of or barriers to remote working from an organization's perspective contribute to adoption theory (Urbaniec et al., 2021).

The responsible approach is required from employees. The recommendations for work-life balance are inspired especially the pandemic experience. The important measure is the separation of work place from other parts of the house due to concentration on the work. and to protect other family members. Device like headphones can help to remote workers.

Self-management is important for workers including work schedule or plan (Songsangyos and Jamamporn, 2021). Work form home requires a lot of discipline. Clear work plan, including relaxation breaks is needed. The employees with more experience in remote working are better able to adapt to new situations because they have already acquired some of the practices and competencies required. which shows the importance of training the skills.

For employees and for teams is important to stay in touch and communicate. Working at home may cause loneliness and stress. Using videoconference services the meetings with team members would be prepared to support and exchange ideas on work.

Many HRM practitioners have implemented some activities to support their employees, like creating virtual socialization activities, e.g. virtual lunch or coffee breaks (Carnevale & Hatak, 2020). Undoubtedly, these practices help to support employees in this tough crisis while they are far from each other, and from their workplace (Hamouche, 2020).

It is the challenge for organizations, considering that besides being applied in a context of unexpected changes, these practices are new for employees and managers, who have not been previously trained or psychologically prepared for such changes, which may lead to an increase in their perceptions of person-environment misfit and dissatisfaction if they prefer the face-to-face interactions that they used to have prior to this pandemic outbreak (Carnevale & Hatak, 2020). Moreover, virtual interactions might affect the socialization process recognized for its importance to help employees acquire the tacit knowledge related to the organizational culture, and contributing to its development (Hamouche, 2021).

Since the well-being and happiness of employees are extremely important for companies, on the other hand, the challenges of companies involve the mutual trust that must be acquired, the adoption of good monitoring techniques and the provision of technological resources, so that this new way of working is possible and beneficial for everyone (Fialho, 2021).

Conclusion

This paper summarizes some findings about remote working. It discusses the findings that emerged before the pandemic, as well as those influenced by the pandemic, which greatly accelerated the spread of remote working as a result of anti-epidemic measures. It recapitulates the drivers of remote working with a view to finding appropriate management solutions, an overview of which is provided here. It builds on the efforts of other authors to look for remote working as a suitable solution for certain professions in situations that occurred between 2020 and 2022 with the Covid-19 disease pandemic. The findings presented are not original, they are based on published studies. They motivate further research in areas such as employee relations, psychological aspects of remote working, economic context, etc. Further investigation of remote working is important because of the great potential of events such as the Covid-19 pandemic in recent years (van Zoonen et al., 2021). This could be the emergence of a similar pandemic, natural disasters, economic crises or war.

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DXB291

Self-Regulation of Slippery Deadlines: The Role of Procrastination in Workplace

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Abstract

One of the most celebrated artists in history, Leonardo da Vinci, allegedly struggled to complete his most notable work, the ‘Mona Lisa’, for more than 16 years. Leonardo's career in art was very distinct from the norm. In his era, time was more of a friend than an enemy, and he was able to accomplish a great deal in a short amount of time. In 2022, it appeared that procrastination had infiltrated our offices and was spreading like wildfire. Many people at work seem to be procrastinators. They are busy shuffling papers and responding to emails when they should be finishing the last page of the monthly report. Some people seem to be better at performing their best when under pressure. It's as if they have a knack for being able to thrive in challenging situations. Psychologists have observed that some people tend to view reality in a distorted way, where things are viewed as being more significant than they are. This is known as cognitive distortion, and it can lead to problems in our lives. Procrastinators are individuals who believe that instead of performing a specific task today, it is better to do it tomorrow, and later on keep on postponing it due to various reasons such as boredom, laziness etc. Workplace procrastination although a predominant factor has acquired little attention in Organisational behaviour research. Procrastination has been studied/emphasised concerning academic performance, life domains, everyday patterns, and health areas. This research study aims to provide more perspicuity into the relation of procrastination with the work life of an individual. Hence due to such behavioural observations, there has been a growing interest in the behaviour literature to understand and analyse the effect procrastination creates on the work efficiency and productivity of an individual. According to the findings in both psychological and economic research, and also through common intuition, it has been found that people procrastinate importantly due to time-inconsistency preferences for their immediate gratification.

Keywords

Cyberslacking, Soldiering, ADHD, Conscientiousness, O*NET, ORP, Hedonism, PAWS, IPS

Introduction

The intention behind the study

The main objective of the study is to examine the effects of procrastination in the workplace. Our research question focuses on the effects of procrastination at work. Procrastination is above all a behaviour of collecting/ summing/ putting things off despite knowing that the consequences are harmful. A professional study shows that 75% of people in today's society consider themselves procrastinators. This study is aimed to commiserate with how much procrastination affects the work

of an individual when entering the workforce and whether the results of it are satisfactory or unsatisfactory. Also, through this study, the reasons one procrastinates shall be discussed.

Background of the study

This section discusses an important aspect of the research proposal. It is about examining the effects of procrastination on work and how it affects the working domain. The primary goal of this research is to identify the root causes of why workers procrastinate during work hours, as we predict that this is one of the reasons why organisations struggle. According to Pakistan Social Science Reviews (PSSR), organisations suffer significant losses as a result of delayed work, which leads to poor work performance. This research will contribute to helping readers understand how a habit that develops subconsciously can lead to a lack of originality and huge losses for both individual employees and organisations.

Gravity behind the study

According to Dr Joseph Ferrari, PhD, professor of psychology at DePaul University in Chicago, "Everyone procrastinates, but not everyone is a procrastinator." To further comprehend this remark, a link was searched between procrastination and other factors that have a positive relationship with each other. As a contribution to society, this research paper aims to demonstrate how when utilised wisely, procrastination can be used to increase performance. Individually, people procrastinate because they feel disconnected from everyone and have no clear roadmap to their future. Understanding the elements that contribute to procrastination is critical since it can lead to depression. This will be exhibited at work and will demonstrate poor job performance, adding to one's anguish.

Theoretical Framework

Dilmac, (2009) stated that procrastination seems to be a disturbing phenomenon, folks most strongly characterised it as evil, harmful and foolish. Justifying this stand of point of view, several studies have linked it to individual performance, where the procrastinator performs worse overall making them feel even more miserable long term. At a broader level of analysis, procrastination is associated with several organisational and social issues.

Procrastination is not merely a human irregularity in which people failed to pursue their interests efficiently and productively. It represents the dysfunction of necessary human abilities, if not essential, for coping with the myriad tasks, major or minor, that accumulate daily on our desks, in our memo books, or our minds.

Procrastination at work is a type of self-regulatory failure to execute an intended work task. In the present study, we conceptualised procrastination at work as an adverse and non-productive type of work activity. Consistent with this notion, previous studies showed that procrastination at work was associated with fatigue, psychological detachment, job-related stress, and low income. However, a shortcoming of these earlier studies was that they used general and academic procrastination scales for measuring procrastination at work.

The purpose, context, meaning, and framework of the study reveal that procrastination exists in everyone, but it is just a matter of how well one can overcome it. And it can also be found that procrastination is not just concomitant to habits, but also an individual's status, stress levels and even income level. Also, this sheds light on the fact that procrastination may not only affect the work of an individual in the short term but may also have a psychological impact on the person, possibly leading to an increase in psychological stress and raising the risk of depression. Of course, many factors have a hand in procrastination, and it can be more than just getting the work done.

A comprehensive summary of the existing works of literature-

Based on the extensive literature available in different strands we select the most relevant to our topic and present that the risk is that employees may sometimes engage in non-work-related activities during work hours, such as procrastinating work tasks (e.g., excessive breaks, browsing on social media, or online shopping). According to the web of science (2014), procrastination was connected with job-related stress, associated with fatigue according to De Armond in 2014 in his research and low income by Ngyuen in 2013. They distinguished these areas and through their studies came up with the conclusion involving cyberslacking and soldiering.

Cyberslacking is a term used when an individual engages in non-work-related activities during office hours using office resources (computers, laptops, telephones, etc) (Anushree tandon 2021). Cyberslacking can be viewed as an extension of typical counterproductive workplace behaviour, and it involves distraction and putting off work to “surf the Internet.” Engagement can be viewed as the intensity of physical, cognitive, and emotional involvement with work activities. (Puneet Kaur 2021)

Soldiering is defined as engaging behaviourally or cognitively in non-work-related activities during working hours with no intention of harming the employer, co-workers, and/or clients

Creating a relationship between Negative emotions and more access Procrastination

For Example: If an individual fails to meet their deadline, they may encounter pessimistic emotions for failing to meet their deadline, which could lead them to procrastinate or give up totally on the end goal.

However, if this failure is justified with an appropriate reason, or, put differently, it could be excused (e.g., he/she had a hospital appointment), he/she may be less likely to encounter negative emotions and much less likely to procrastinate.

When people are busy trying to do many things at once, it is harder to do anything well, because they have less time and resources to do everything. People who are in this situation may feel like they are not able to do everything and that they need to be careful about how much they do. Busy people are more likely to feel that they will not be able to complete tasks on time. Thus, the busier a person is, the more they expect that they will not get everything done on time.

It is crucial that these pessimistic emotions are mitigated and it doesn't affect the target goal that is to be achieved because it gives them a reason to justify their failure and not take responsibility for their actions.

In a workplace setting, for example, managers assume that their employees and subordinates are less likely to procrastinate if they keep them busy by assigning them a lot of tasks. However, it is a very limited possibility. Through studies, (Dilmac 2009) it is expected that very busy employees will feel “overloaded” and “overwhelmed” by the tasks they need to accomplish and complete. Thus, the risk of procrastination will increase instead of decrease. This explains the cruciality of keeping and maintaining a balance in assigning tasks. Capacity and ability should be considered.

Another implication of these findings is that in workplace environments, managers tend to use “busyness” as a tactic to motivate their employees to be more efficient and productive.

Does productive procrastination exist in work environments?

There are no specific devices that can measure typical procrastination practices that can be used by organisations to increase their productivity, such as extended break times or scrolling through social media during working hours. Metin, Taris, and Peeters (2016) have addressed this issue by developing the Procrastination at Work Scale (PAWS) to assess and investigate the idle behaviours of a variety of employees. In their study, they conceptualised procrastination at work as postponing work-related activities by engaging (willingly or behaviourally) in non-work-related activities. This action is done with the intention of not harming the employer, client, colleagues or the organisation. Through this study, they also differentiated between soldiering and cyberslacking. Soldiering can be defined as a task or work that can be done in a specific amount of time but is accomplished in a longer amount of time without any specific/ justifiable reasoning. Again, this action is taken with no false pretence of intending any harm (for example- daydreaming, taking coffee or snack breaks). The latter can be defined as the use of mobile technology such as social media or the internet for personal purposes during work hours (Garrett & Danziger, 2008).

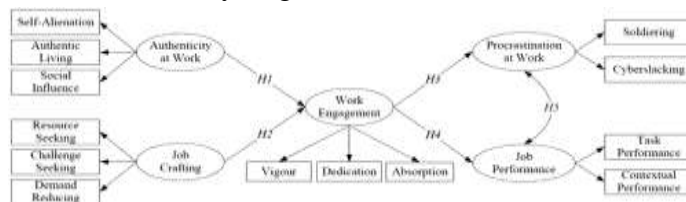
Metin et al. (2016) intentionally excluded the usage of the internet and mobile technology from the conceptualization of soldiering as it is adjacent to the cyberslacking dimension of procrastination. Cyberslacking is a type of work behaviour where employees spend a lot of their time online, doing things that are not related to their work. About three-fourths of the employees who report this behaviour say they use the internet for things that interest them, like checking their social media pages, reading blogs, and doing online shopping. (Eddy, D’Abate, & Thurston, 2010; Lavoie & Pychyl, 2001).

The limited availability of positive emotions at work could lead employees to seek out shorter or longer periods away from work-related activities to enjoy themselves, and those employees may be less productive than others.

To illustrate, procrastination at work was found to be related to boredom at the job (Metin et al., 2016) which is a state of under-stimulation at work (Reijseger et al., 2013). Employees who don't get a lot of mental and physical stimulation at work may feel less energetic and committed to their work, which could lead them to seek out distractions, such as messaging or taking too many breaks. Attached workers are expected to be resilient, active, and enjoy their work, which may reduce their need to engage in other activities. People tend to think that working harder will lead to less procrastination, but this is not always the case. Some research shows that people who are engaged in their work are more likely to procrastinate.

Although the workplace procrastination literature presents little evidence for a possible relationship between procrastination and work performance, research on academic procrastination has found that procrastination is strongly and negatively related to conscientiousness. This means that more conscientious people tend to be more procrastinating, while less conscientious people are less likely to procrastinate. Conscientiousness is associated with better academic performance. Procrastination is often associated with lower academic performance and increased stress.(Steel, 2007; van Eerde, 2003).

It is expected that the same patterns will continue within the work context. Procrastination can be a big problem for employees, as they often spend a lot of their time on non-work-related activities. This can lead to missed deadlines and decreased productivity. To complete their daily tasks, these workers might work longer hours, which would lead to lower levels of concentration and more exhaustion, or they might rush their tasks, which could lead to mistakes.



Source: **Metin, U. B., Taris, T. W., & Peeters, M. C. (2016).** Measuring procrastination at work and its associated workplace aspects. *Personality and Individual Differences, 101, 254-263.*

Search Welch’s findings on procrastination Skowronski, A Mirowska - SAM Advanced Management, Cognitive Behavioural Research and Practice of Procrastination was written in 2018 by Wenna Zhang, School of Humanities and Social Sciences, Anhui University. This article focuses on the fact that in the current information age, “today is the day” is the state of work that everyone pursues, but some people suffer from procrastination in the face of work. Although procrastination does not directly cause any substantial trauma, it indirectly affects people’s emotional state and work state, and may eventually lead to delayed personal development.

The first is that the person has a clear intention to complete or receive the work. The second characteristic is that the person will find more reasons to delay the work. The third characteristic is that the person is aware of the delay in completing the work and understands the possible effects or bad consequences of delaying the completion of the work. The fourth point is the anxiety and guilt that occurs when the person experiences procrastination. Simply put, procrastination is a failure of self-regulation, a behaviour that occurs when people choose to put off doing what they plan to do even though they can anticipate the consequences.

There are several reasons for people to procrastinate in the workplace, the first being the pursuit of perfection. Some people procrastinate in the face of work because they want to pursue perfection too much, worrying that they will make mistakes in completing the work, worrying that the final result of the work will not satisfy them, and then their colleagues will dislike them because of this imperfection in their work. Therefore, this type of person in the face of the task has a habit of thinking that “*I am not ready to start work*”, but in this case will also lead to anxiety when they work, this emotion is reflected in the behaviour of procrastination.

Another reason for procrastination at work is hedonism, which is when you receive a work assignment and your boss gives you a time frame to complete the work, then some people choose to take a break or go have fun and wait until they are about to hand the work over to the boss to catch up on the work. Most of these people will remember that they still have work to do when they are having fun, and they may have a short period of nervousness and anxiety, but they will quickly use the pleasure of having fun to wash away these uneasy emotions, and then they will leave the work that should be done behind!

There is another reason to seek pleasure. Some people who procrastinate want to enjoy the thrill of the process by taking less time to complete all tasks before they are due, and enjoy the high regard others have for their efficiency. However, this "high efficiency" can be the reason for not completing the task with high quality. At the same time, this high evaluation of "high efficiency" by others can have a reinforcing effect on their procrastination behaviour.

Procrastination is a type of people's incapacity to self-regulate and procrastinate for taking action, resulting in situations from which they cannot readily recover. Choosing when to undertake a certain activity is a frequent procrastination action. Time is quite important in the subject of procrastination. Ferrari, Diaz-Morales, O'Callaghan, Diaz, and Argumedo (2007); Steel (2007). According to Dr Ferrari, Diaz-Morales, O'Callaghan, Diaz, and Argumedo, procrastination is a chronic problem in the workplace since data reflect that 25% of the adult population perceives procrastination is considered to be a personality attribute. According to D'Abate and Eddy, procrastination consumes around a quarter of a typical working day, costing companies approximately \$10,000 per employee annually.

Can procrastination reduce salary? Of course, the answer is yes. To explore this further, this research defines that procrastination has a significant influence on income, and one of the reasons contributing to this impact, as mentioned by Resnick, is attention deficit hyperactivity disorder (ADHD) along with other characteristics for example tractability & disorganisation. ADHD, according to statistics, affects wages by about 30%.

Procrastination is linked to but not similar to conscientiousness. The primary explanation for this, according to Spark and Abele, is that individuals expect procrastination to exhibit comparable findings as conscientiousness but not necessarily reproduce them. A study of 1,600+ people conducted in 1995-1996 found that conscientiousness regression analysis indicated a positive \$3,874.84, with males having better relationships than women. One potential reason for this stronger relationship is occupational segregation. This leads to the conclusion that procrastination is connected with lower income, and gender impacts procrastination levels during work hours.

According to Fletcher, ADHD has a 10% loss in employment when procrastination is one of the primary factors.

Lay and Brokenshire emphasised that their research found that procrastination has a more consistent relationship with unbothered job search than conscientiousness, but Senecal and Guasy verified the preceding fact. The conclusion is that Procrastination is significantly related to work status.

Procrastination also mediates the relationship between pay and gender, as well as work status and gender. Women, according to Higgins and Tewksbury, exhibit greater self-discipline than males. To ensure performance improvements, jobs at this age have grown more supervised and self-disciplined. According to two big studies, women just seemed to procrastinate less than males. As a result, a delay may be at fault for the differential in educational performance between men and women. Women outperform men in K-12 school performance and demonstrate dominance in college, resulting in common behavioural issues among boys. As a result, women who exhibit lower levels of procrastination will be able to acquire higher levels of education.

Not every job has the same degree of procrastination, nor are all employees' procrastinators. Those in white-collar employment are believed to have a higher level of procrastination than employees in blue-collar ones. However, Taras Steel discovered that expert arbitrators work in a field where any delay in decision-making might cause significant harm and hence have lower procrastination levels. An employee can sense meaningfulness in their job by contributing value to them, which motivates them to enhance their job performance. As a result, chronic procrastinators are less likely to stay or find work. Second, the job may be closely watched, leaving little space for procrastination.

The workplace is an important aspect that promotes procrastination and devalues the job. Employees will actively postpone if work features are deemed to be highly connected with components of irritation, resentment, and boredom. Job designs must be motivating rather than mechanical. According to Barrick, professions that display less motivation tend to encourage procrastination since employees find the job appealing and provide them with a sense of value.

Occupational Information Network descriptions describe the kind of job aspects that might lead to procrastination. By common sense, this states that occupation is motivating if the working environment is satisfying basic human needs. Those components are briefed below:

- 1) Achievement: The job allows accomplishment and the utilization of one's abilities.
- 2) Independence: The job permits creativity and personal initiative.
- 3) Recognition: The job provides status and prestige.
- 4) Relationship: The job fosters collegial relationships and social service.
- 5) Support: The job is predictable and stable, with supervisors who manage well and provide appropriate training.
- 6) Working Conditions: The job is comfortable, and provides a variety of work with little stress.

Therefore, the more individuals detest a work, the less effortful it appears to be and the activity creates more tension and anxiety, leading to procrastination.

To collect data about procrastination, Steel learned about the procrastination data gathering initiatives and the Irrational Procrastination Scale (IPS). This was primarily purchased to comprehend why individuals bring up the necessity for "When I should be doing one thing, I will do another."

Research Methodology

What will be accomplished through this study:

Procrastination is a self-regulatory failing in which individual volunteers to postpone an assigned activity while knowing the repercussions of doing so. It is quite common in the workplace. The main purpose of studying the impact of procrastination on people's work is to analyse the data of the respondents and then to come up with the magnitude of the impact of procrastination on work and the main reasons for it, to reduce procrastination at work. This paper will look at what researchers believe are the main causes of procrastination, and try to help understand why an individual might be struggling to get things done. Procrastination may exist on a scale, with some people being more prone to it than others. In its most extreme form, procrastination can have serious consequences. Procrastination is a problem that can make it difficult to do homework, chores, or other tasks. There are ways to help reduce the impact of procrastination, and this paper will review some of them.

The design of this research

Steel calls procrastination a “prevalent and pernicious form of self-regulatory failure that is not entirely understood” (Steel, 2007, p. 65). The researchers, T Schouwenburg and Lay, have defined procrastination as a lack of conscientiousness. They've said that all of the different explanations for procrastination should fit within this framework and that for any other explanations researchers might want to introduce in the future, some element of lack of conscientiousness will have to be at its core. As this procrastination is very subjective, it will differ from person to person.

But, given its effects on the quality of work performed by an employee, it became important to understand their views and where they stand in this scenario. Given the subjective factor, we opted to approach this research experimentally. This is to see the effect of an individual factor (procrastination) on another factor (work life).

Taking into consideration that the data provided in this research will contain results of quantitative data, the research will adhere to a scientific research design. After completing an experimental research study, a correlation between a specific aspect of an entity (procrastination) and the variable being studied will be either supported or rejected. Most importantly, experimental research is completed in a controlled environment. This method of research is referred to as hypothesis testing or deductive research method.

Brief about the participants who took part in the study:

Procrastination overall consists of a quarter of an individual's working day, which can cost an employer up to 10,000\$ per employee every year (D'Abate & Eddy, 2007; Steel, 2011). In the present study, we explore the impact that procrastination can create on work productivity and its intensity.

The survey was conducted mainly among people working in Dubai, India and China, including Indians and Chinese working in Dubai, and data was collected from over 50 participants. Collecting

answers from people from different countries increased the diversity of responses bringing different viewpoints and working styles into consideration. , allowing us to take into account the views of people of different ages and different upbringings.

Pilot Study

The pilot study, also known as a feasibility study, is a small-scale preliminary study done before performing the actual large-scale quantitative research. For this research paper, a pilot study consisting of 5 participants was conducted to observe any potential problem areas or any limitations that it can come across. It also helped to become familiar with the procedures that were going to follow to perform this research. Hence it can be concluded that a pilot study is often helpful in planning a research project since it allows researchers to ascertain whether the proposed study is feasible and whether the proposed methods will produce the desired results. From the observations, due to the pilot study, it can be concluded that there can be involvement of a psychological element of understanding, interpreting and performing procrastination. This calls for deep research to understand the reason behind and the causes that it brings in the work life of an individual.

Limitations of this study-

Every research publication, including this one, is constrained to some extent. Many issues constitute impediments to this study paper's future investigation. Time is a vital part of any research paper, and even if the researchers have enough time to complete the research paper, it would be more helpful for the researchers to observe more data, both primary and secondary. Getting timely replies from participants to continue with the research paper and analyse the data was a little difficult for the researchers during the collection of primary data online. Again, time is emphasised as a crucial component contributing to the research's shortcomings.

Data Analysis and Findings

Data Analysis

This Data analysis consists of the observations obtained from the answers given by 5 participants of the Pilot study. All 5 participants are university professors who have been working in the field for a good number of years. Our questions were to determine the dominant factor of procrastination which is creating a difference in the quality of work if any. The question asked to the participants were based on the following factors which can help determine the direct or indirect impact of procrastination on the efficiency of performing tasks as an employee:

- Personal preference
- Time management
- Habitual approach
- Personal opinion
- Environment
- New trends
- Finding of solution

- Psychological impact

The very first question was to understand the participant's personal preferences which can also be interpreted on how they view themselves when it comes to the maintenance of a discipline. The question was framed with the context that from an individual point of view do the participants prefer doing assigned tasks hands-on or taking their time? According to the results, the majority of the participants answered that they like to do their tasks assigned hands-on with 69.6%. On the other hand, 30.4% view themselves as individuals who take on their considerably relaxed manner. This shows an indication that psychologically the majority of people are) Responsible and disciplined to take on their tasks. Or b) The individual views themselves as a disciplined person eager to do their tasks as assigned. However, one's viewpoint can be subjectively seen.

The second question was to determine the time management habit and if it has any impact on the approach towards work, or if it adds to procrastination. The question was framed as to how long it takes for the participant to start a task. Here, the definition of the task was generalised into any tasks performed by the participants daily or occasionally. According to the responses received it can be understood that the majority of over 60.7% of participants believe that it depends on the task and its nature. This can be an indication of how prioritisation and the general nature of the tasks, whether they are liked or not by the participants can play a huge part in the process of taking on over a task. The second highest majority agreed that approximately it takes them more than a day to get onto a task, this can be an indication of people adjusting their schedules and making space for new tasks.

To get a perspective of the actuality of the situation and an introspection whether the participants do end up procrastinating or not was asked in the third question whether they always end up doing tasks in the end minute or not. From the responses gathered it can be seen that the viewpoints of the participants are very much divided here. 37.5% were neutral about this topic, 28.6% disagreed, 12.5% agreed, 10.7% strongly agreed, and 10.7% strongly disagreed. This gives us the viewpoint that a lot of tasks where people do end up procrastinating or not are very situational, there can be a lot of materialistic factors into this whether it be the lifestyle, their habits, their working style, distractions, etc. The second majority of participants disagreeing is a strong indication of a habitual practice of punctuality and responsibility shown and also that the tasks performed by these participants daily are something that they like and dread doing. This question however brings out an interesting factor to the viewpoint asked in the first question where 60% of participants agreed that they do the tasks hands-on, in this question, if we add the responses percentage of neutral, strongly disagree and disagree get approx. of 75% which is higher than the majority of the first question. Through this, it can be understood that although one would procrastinate, deadlines play a huge part in being the motivating factor for people who end up doing their tasks even if it's a little late. This helps to understand that procrastination can be short-term as well.

In an attempt to consider the personal opinions of the participants, they were asked in the fourth question whether according to them doing work at the end moment affects the quality of the work which is to be performed. The majority was won by Strongly agree with 37% followed by Agree with the second highest majority of 33.9%. Statistically, the majority of the participants believe that the quality of work is affected. This raises a concern and a possibility that ultimately the efficiency

of the organisation can be affected due by procrastination. Prioritisation and work-life balance are to be given more importance given the responses. If on an average level 20% of employees in an organisation end up procrastinating during office hours, there is a possibility that 20% of the efficiency of the organisation will also be gone, raising concerns.

To understand the main causes of procrastination, the participants were asked what were the main causes of procrastination. There was seen to be a tie between the option for other reasons and boredom with 25% for each. Again, this brings to light how other distracting factors such as social media, and games, can be playing a role in causing procrastination. Also, this emphasizes the importance of doing tasks which interest an individual and how it can be a contributing factor to causing less procrastination in individuals. The third largest majority which has agreed that the main cause can be a difficult task can be an indicator of how challenging tasks can lead to putting it off as this creates a sense of discomfort from their daily routine of doing specific tasks.

Environment play has a huge effect whether it be psychological or physical on an individual. So, to bring into understanding the participants were asked whether a disorganised workplace that is their work desk affects their will to do their work. And in case yes then does it lead to procrastination? According to the responses majority of participants (41.1%) strongly agree with the statement in the question, following to this the 2nd majority (30.4) % Agree hence, bringing the implication that there is higher feasibility of procrastinating in an unorganized workplace. These results emphasized how crucial an organized workplace is for the efficiency of work and the employees.

Social media has opened not only new avenues for communicating and doing business but also has transformed the lifestyle of people. To apprehend whether this new trend of social media has any contribution to the procrastination of employees at work, the question was addressed to the participants whether they believe social media is a contributing factor in this case. According to the responses, most of the participants strongly agreed (35.5%), and 33.9% agreed with the statement. This creates a likelihood of people getting distracted from their work breaking the chain of work rhythm due to notifications from social media and the addictive nature of social media as it is.

In an attempt to get viewpoints into finding a solution to procrastination in a workplace, which can in future be adapted by managers and organizations to create an environment of productivity for the employees, a question regarding a solution was asked. The participants were asked whether rewarding themselves in some manner can help decrease the tendency to procrastinate. The vast majority (42.9%) agreed with the statement, a small majority (17.9%) strongly agreed, and (35.7%) were neutral about the same. However, the least amount disagreed with the statement giving it merit and making rewarding the employees a viable option to be adopted to prevent them from falling into the cycle of procrastination.

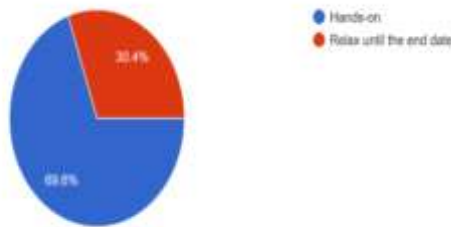
Many individuals tend to change jobs if they do not find it motivating or due to low compensation. Some people are satisfied with the job even if the salary is low mainly because they love what they are doing, so a question was preached, can individuals procrastinate in a job that they love to work?

According to the data collected, (39.3%) of the people agreed on the fact that no matter how satisfying a job can be, there is a certain degree of procrastination during work hours. This fact can be supported by the (26.8%) who strongly agreed that people tend to procrastinate on jobs that they love. This can be due to a large number of tasks, deadlines, not maintaining a proper schedule and other factors.

Some rare cases show that applying pressure allows the individual to function properly at their work, in other words, stressing the work to be finished later allows the individual to complete the work quickly keeping in mind the time limit. Regarding this situation, a question was asked to the participants, do they believe procrastination can improve performance levels? The question was disagreed by (37.5%) who thought that procrastination can never improve performance and will only create a strong habit of leaving pending tasks in the future. While around the same percentage (33.9%) of individuals were neutral about the question meaning that in some cases procrastinating on a task can boost the performance of the employee.

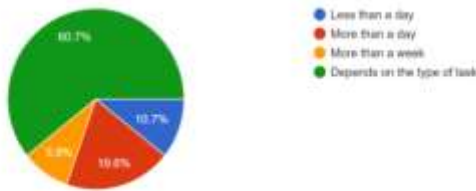
Results of Research Questions

Hypothesis 01: Determine the personal preference of the participants.



The main purpose of this question is to find out how many people may procrastinate at work. This answer shows that 17 of the 56 people we surveyed prefer to relax until the deadline, while the remaining 39 prefer to get things done first.

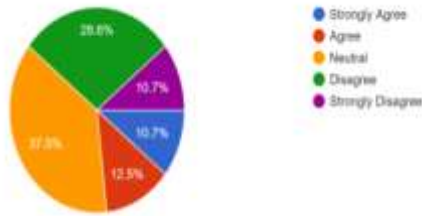
Hypothesis 02: If the participants have time management discipline.



The main purpose of this question was to find out how long you plan when you start a job because when we looked into the causes of procrastination, we found that some people procrastinate. After all, they over-plan.

From the answers we collected, 60.7 per cent of people plan their time based on the type and size of the project, the remaining 10.7 per cent plan in less than a day, 19.6 per cent plan in more than a day and less than a week, and finally, 8.9 per cent spend more than a week planning how to start a project.

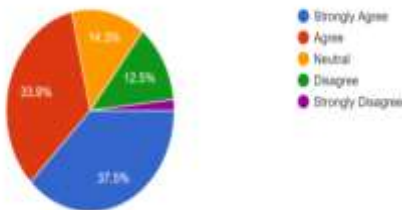
Hypothesis 03: If the habitual approach of participants leads to procrastination.



The main purpose of this question was to look at the level of procrastination of our respondents in terms of whether they always finish their work at the last minute, and our answers ranged from strongly agree to strongly disagree.

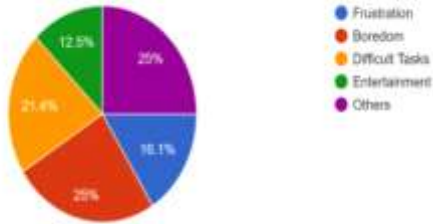
Two of the responses were the same: Strongly Disagree and Strongly Agree, with the two extremes accounting for 10.7 per cent of the respondents, while the Neutral category accounted for 37.5 per cent, the second largest was Disagree at 28.6 per cent, and finally, 12.5 per cent were in agreement.

Hypothesis 04: Can working closer to deadlines affect the quality of work?



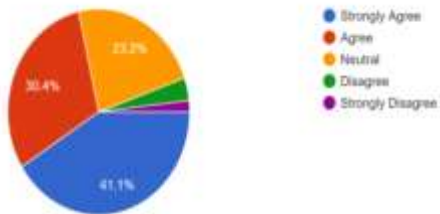
The main purpose of this question was to analyse whether the respondents were aware that delaying the completion of a job could affect the quality of the work. One of the answers to this question was 1.8 per cent, which means that 1 out of 56 respondents felt that finishing work last did not affect the quality of work. The remaining 22 people chose to strongly agree, which means that 21 people feel that finishing work at the end of the day has a significant impact on quality. Then 19 people chose to agree, which means that they feel that finishing work last has an impact on quality, 8 people chose to be neutral, and 7 people chose to Disagree.

Hypothesis 05: Factors like Frustration, Boredom, Difficult Tasks and Entertainment are one of the main causes of procrastinating



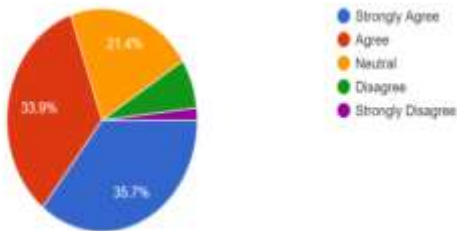
There are very many causes of procrastination, and as research, we wanted to see which one was the most common cause, but the answers to this question were arguably the most evenly distributed. The answers included Frustration, Boredom, Difficult tasks, Entertainment, and others. 25% of those who chose other reasons were the same as those who were bored. The second most common reason is that the project is too difficult, so it leads to procrastination, which accounts for 21.4%. The remaining two are very close to 16.1% for frustration and 12.5% for entertainment.

Hypothesis 06: Understanding the effect of the work environment on an individual.



The main purpose of this question was to find out if the work environment affects a person's procrastination. One of the interesting points about this question is that only a very small number of people chose that a cluttered work environment does not affect procrastination, with only 5.3 per cent strongly disagreeing and disagreeing combined. 41.1 per cent of people feel that a cluttered work environment can have a significant effect on work, 30.4 per cent feel that it can have some effect on procrastination, and 23.2 per cent were neutral.

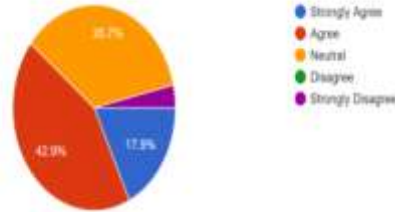
Hypothesis 07: Does social media have a role in showing signs of procrastination



Because of the development of the times, people are relying more and more on the internet for their work, and the internet also includes social media, and in this question, we wanted to investigate the effect of social media on procrastination. 20 people think that social media has a great influence on procrastination and 19 people think they agree that social media influences procrastination, so 39 people think that social media influences procrastination in this question. Twelve people maintain a

neutral view, four people disagree with this statement, and only one person strongly disagrees that social media affects procrastination.

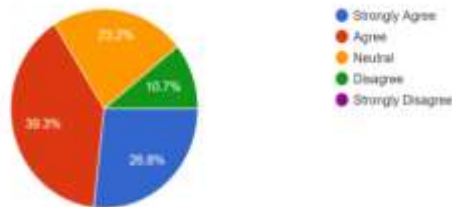
Hypothesis 08: Can there be a reduction in procrastinating if individuals reward themselves for



working hard

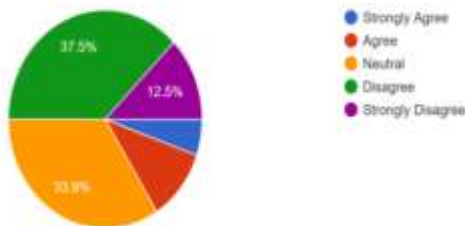
The question was whether rewarding yourself would reduce your procrastination, i.e. self-motivating yourself to complete a job or project. The interesting thing about this answer is that no one chose to disagree but 3.5% chose to strongly disagree, while those who chose to be neutral and those who agreed were very close to each other on the chart at 35.7% and 42.9% respectively, leaving 17.9% who strongly agreed that rewarding yourself would reduce the level of procrastination.

Hypothesis 09: Can an individual procrastinate even if they enjoy their time working



This question was designed to investigate whether you procrastinate when your job is something you like. In the answers to this question, we did not have people who chose to strongly disagree, so we only had four answers, 22 participants chose to agree that even if you like your job but still procrastinate, 15 people chose to strongly agree with this statement, then people chose to strongly disagree, and the remaining 13 people chose to remain neutral to this statement.

Hypothesis 10: Whether procrastinating in a workplace can improve the performance level



The main purpose of this question was to find out if when procrastinating your work causes you to need to finish your work in a short time, and if this way of working will improve your performance and make your work better. In this question just twice as many people chose to agree as strongly

agreed, with 6 people agreeing and 3 people strongly agreeing, that is only 9 people agreed with this statement, while 19 people chose to remain neutral, 21 a person different procrastination will improve performance, and 7 people said they strongly disagreed with this statement.

Conclusions and Recommendations

Summary of findings

Through this survey, it is found that 17 out of 56 people will choose to procrastinate their work, and there are many reasons to procrastinate work. Most people think that whether one likes or enjoys the work they have, they will have the emotion of procrastination. The survey respondents for this study are from different countries, have different upbringings and work in different countries, but they all still have the emotion of procrastination to work. This shows that most people are in a procrastinate mood about their work or projects, only some of them can find ways to solve and overcome it, and some of them will choose to procrastinate their work, of course, partly because they think that procrastination will improve performance because procrastination will cause one to finish your work in a short time, which means one has to focus on work in a short time. Of course, some people strongly disagree with this statement and believe that procrastination does not improve your performance at work, but is likely to have an impact on the quality of your work.

Limitations of this study

Every research publication, including this one, is constrained to some extent. Many issues constitute impediments to this study paper's future investigation. Time is a vital part of any research paper, and even if the researchers have enough time to complete the research paper, it would be more helpful for the researchers to observe more data, both primary and secondary. Getting timely replies from participants to continue with the research paper and analyse the data was a little difficult for the researchers during the collection of primary data online. Again, time is emphasised as a crucial component contributing to the research's shortcomings.

Recommendations built through this study -

By analysing the present data through this research, a lot of factors came into light through which light has been shed into the area of procrastination affecting work life. It can be recommended through the findings that organisations should attempt to make the tasks assigned to the employees according to their capabilities and something that they gain interest in, rewarding in a small way can be a great start towards keeping employees engaged towards assigned tasks, reducing the possibility of procrastination for it. Time management should be brought more into relevance, and how much time the employees are spending on which task can help reduce the possibility of slacking off and wasting time. Necessary breaks can help maintain the interest of the employees towards the tasks and avoid burnouts which ultimately leads to procrastination. As social media is playing a crucial role in the reason for employee procrastination, small breaks can help employees get to social media enjoy their break and then do their work undisturbed. No mobile phone during meetings, important tasks should be conveyed to avoid unwanted distractions. Having an organized, clean workplace creates a positive outlook of employees towards their job, making them want to perform their tasks. This makes it vital to create an environment which is clean and motivating.

Implications for Practice

The content in this research paper will allow individuals to thoroughly understand the behaviour pattern of humans and what are the key factors that contribute to increasing the need to procrastinate during work hours. The conclusions derived from this research paper will leave an impact on organisations that are financially stable but are not able to move higher in ranks to compete with other businesses, the reasons could be lying between the habits of procrastination. This research paper explores the impact of procrastination on work and how it can affect on an individual scale also how it can affect the workers around people who procrastinate. The findings in this research help readers to get a view of why organisations are running low on performance even after having proper finance to cover all business activities. The details in this research paper trigger readers to understand questions like "Can people procrastinate even if they like their job?" stating what could be the key factors that make people procrastinate, how many people agree to this fact, and what solutions can be bought up by the readers. To summarise, the implication for practice will allow readers to understand the areas that give rise to procrastinating work.

Implications for future research

Higher procrastination has been related to a poor ability to vividly imagine and contemplate the consequences of present actions in the future. There is a lot of behavioural research which needs to be implemented to understand the occurrence of procrastination and find the solutions for it. More in-depth dive into the avenues such as if social media does contribute to the increase of procrastination on an individual level, and if yes then how much is the contribution? Another great avenue can be to discover whether rewarding an employee to reduce procrastination can help reduce procrastination levels and increase productivity, again how impactful will it be. Distraction can be of several types, it may differ from person to person, finding the commonality which causes procrastination becomes crucial to bring into the attention of people and organizations. As procrastination can be deeply related to self-discipline, understanding the psychological impact of procrastination can be helpful to apprehend how seriously this topic must be taken and what adverse effects can it bring it the organization.

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Appendices

Particulars to be remarked

Cyberslacking: Use of technological resources of the office such as computers and laptops to do non-office related work.

Soldiering: The process of doing the least amount of work in the longest amount of time.

ADHD: Attention deficit hyperactivity disorder.

Conscientiousness: the quality of wishing to do one's work or duty well and thoroughly.

O*NET: Occupational Information Network.

ORP: Occupational Reinforcer Patterns.

Hedonism: the pursuit of pleasure; sensual self-indulgence.

PAWS: Procrastination At Work Scale.

IPS: Irrational Procrastination Scale.

Table 1. Demographic characteristics and average procrastination level of participants

Characteristic	N	%	Procrastination
Sex			
Male	9,885	44.9	3.69
Female	12,115	55.1	3.54
Employment status			
Unemployed	1,253	7.8	3.92
Working part-time	2,420	15.1	3.71
Working full-time	12,297	77.0	3.50
Annual income			
Less than \$10,000	3,511	18.4	3.85
\$10,000 to \$20,000	1,848	9.7	3.83
\$20,000 to \$30,000	1,749	9.1	3.70
\$30,000 to \$40,000	1,682	8.8	3.59
\$40,000 to \$50,000	1,697	8.9	3.55
\$50,000 to \$60,000	1,581	8.3	3.52
\$60,000 to \$75,000	1,764	9.2	3.50
\$75,000 to \$100,000	2,069	10.8	3.47
\$100,000 to \$200,000	2,426	12.7	3.36
\$200,000+	794	4.2	3.28

Table 2. Mean procrastination levels and percentile rank associated with jobs from a sample of occupations

Occupation	N	Rank	Mean (SD)
High procrastination jobs			
Food servers	22	100.0	4.39 (.64)
Legal secretaries	20	98.7	4.04 (.20)
Computer systems administrators	18	98.3	3.91 (.18)
Library assistants	14	97.4	3.89 (.22)
Sales representative	37	96.5	3.87 (.13)
Moderate procrastination jobs			
Photographers	25	74.8	3.64 (.17)
Poets, lyricists and creative writers	274	75.7	3.66 (.05)
Lawyers	416	65.2	3.59 (.04)
Education teachers, postsecondary	63	45.3	3.53 (.73)
General operation managers	569	27.0	3.46 (.76)
Low procrastination jobs			
Chief executives	162	9.4	3.32 (.79)
Librarians	111	7.5	3.25 (.72)
Economists	28	4.4	3.20 (.81)
Loan officers	20	1.9	3.14 (.73)
Military officer special and tactical operations leaders	26	2.5	3.16 (.85)

Note: Rank indicates the procrastination percentile rank with respect to jobs with the highest procrastination. Food servers had the highest procrastination score and represented the 100th percentile.

DXB293

Working from home: How does it affect productivity as well as employee engagement, health, and wellbeing?

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1.0 Introduction

The COVID-19 pandemic was deemed a major systemic risk and global disaster (United Nations, 2021; Carroll & Conboy, 2020). In order to control the spread of the virus, governments took stringent measures to restrict the movement of people (Al-Habaibeh, Watkins, Waried, & Javareshk, 2021) and in the UK, these measures were implemented on 23rd March 2020. This resulted in the closure of non-critical businesses such as hair salons, gyms and cinemas (ibid). As consequence, non-keyworkers were subject to COVID enforced homeworking (CIPD, 2020e), and at very short notice, many organisations were forced to implement supportive technological infrastructures, adjust work arrangements, put support in place, in order to facilitate business continuity. This study explored the impact of Covid enforced home working on productivity, workforce engagement and health and wellbeing within a UK housing association and attempts to answer the question ‘What impact did mandated homeworking have on productivity, workforce engagement and health and wellbeing at John Smith Housing?’

2.0 Methodology

The study was undertaken through a qualitative methodology (Ghauri and Grønhaug, 2005:16). It utilised an inductive, theory building approach (Saunders et al., 2016). Conclusions were drawn from the participants’ subjective observations (Collis and Hussey, 2014), in order to contribute to an existing knowledge and make best practice recommendations. A single, exploratory case study strategy (Saunders et al., 2016; Yin, 2009) was adopted. Collis and Hussey (2014) and Hesse-Biber and Leary (2011) attest its use in when investigating under-researched topics or when a small body of knowledge exists. This is the case of COVID-enforced /mandated homeworking.

3.0 Results

It was evident that mandated homeworking impacted on the workforce in different ways, but the majority of participants felt that the company's response was "just about right" even though "some of the guidance from the government was very grey."

3.1 Productivity

The majority of participants resoundingly felt that productivity had risen as a result of mandated homeworking being imposed. Some participants stating that working from home made me more productive as they had more time.

3.2 Workforce Engagement

All participants reported that mandated homeworking had a significant effect on their levels of engagement and that collaboration reduced.

3.3 Health and Wellbeing

All participants reported that lockdown was a difficult time for both them and the business. Madeleine, a Manager, recalled "It was horrendous...even team members that are really, really, really strong would come on Teams and just cry."

4.0 Discussion

4.1 Mandated Homeworking and Productivity

In order to survive in today's highly competitive and rapidly changing business environment, Nwaeke and Obiekwe (2017) espouse that organisations must pursue efficiency, effectiveness and productivity. The majority of participants reported that JSH handled the transition to mandated homeworking well. Bloom et al. (2020) found that increased productivity was attributed to more hours being worked during the pandemic. This concurs with the findings. Productivity across the business increased because staff worked more hours. Senior management credited this to removal of the commute and removal of office distractions.

4.2 Mandated Homeworking and Workforce Engagement

Workforce engagement during the pandemic became a priority for organisations (Chanana & Sangeeta, 2021; 2020). During lockdown, Broom (2021) reported that 1 in 3 people experienced

feelings of disengagement. Although participants initially felt their engagement levels had decreased, the implementation of key strategies by senior management, bolstered individual and team engagement. While it has not yet returned to pre-pandemic levels, staff certainly feel happier than they did. There are therefore similarities as well as differences between theory and practice.

4.3 Mandated Homeworking and Health and Wellbeing

During mandated homeworking, Suleman (2021) reported a noticeable decline in mental health and wellbeing. This is congruent with the findings. A number of staff admitted that mental health and wellbeing suffered across the business. Chanana and Sangeeta (2020) suggest that people had problems maintaining a healthy balance between home and work lives during mandated homeworking. This is both congruent and incongruent with the literature. Whilst some had problems, the majority of participants were able to find a balance. One participant enjoyed homeworking so much that she found a bigger house to accommodate a dedicated office, with others expressing a preference to permanently work from home.

In summary, aspects of the findings are at times congruent and some other times incongruent with the literature. It is evident that COVID-enforced/mandated homeworking had a major impact on the business and the workforce, but positives can be drawn from it insofar as many participants expressed an interest in homeworking, or a hybrid, as their new normal.

Entrepreneurship

DXB205

Teaching entrepreneurship in South African Universities: A lecturer's perspective

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ABSTRACT

The idea of integrating entrepreneurship into university curriculum is driven by the numerous benefits entrepreneurship has on economies, such as job creation and increased societal proactiveness and innovativeness, particularly among the youth and graduates. Despite these benefits, universities offering entrepreneurship programmes are reporting a low entrepreneurship activity among students and graduates. Against this background, the purpose of this paper is two-fold, firstly, it uses lecturer perspective to share insights into how entrepreneurship is taught in South African universities and secondly, the paper asks the question what infrastructure is required by lecturers to facilitate entrepreneurship modules and to cultivate the entrepreneurial mind-set and encourage self-employment among students. The paper concludes by making recommendations.

DXB207

Entrepreneurial ecosystems in public and private universities: An international perspective with data collected during pandemic

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Abstract

Entrepreneurial ecosystems in universities (EES) are environments connected to the academic life of students immerse in a pandemic vision of their youth. In this context, this study aims to give an account of the entrepreneurial university ecosystem impact on public and private universities. An international sample of 1,298 students in three countries and five universities was surveyed during the pandemic. Amenable to multi-group structural equation modelling to compare public and private universities. There is a significant relationship between EESs in all the universities, thus having a direct effect on the TPB model. The findings contribute to understanding the entrepreneurial intention during the pandemic and contextualize the studies of EES through the environment and support systems, especially in public universities. Therefore, it can help universities to design their educational programs and other interventions to encourage students to consider entrepreneurship a viable career choice to enhance their social and economic development.

1. Introduction

Since the beginning of the pandemic, the economic and social perspective of the world has changed. It is expected that the economic conditions of the nations would recover and hope for a stable life would be restored to the youth. Entrepreneurship is one of the ways to alleviate poverty (Shepherd et al., 2021; Sutter et al., 2019), create a career for the youth that will survive this pandemic (Kim et al., 2020), and achieve a better future with the support of entrepreneurial ecosystems (EESs). Thus, the current situation demands intensifying all the agents involved to contribute to the recovery of the EES, which has been deeply deteriorated by the COVID-19 pandemic. As a socio-economic activity, entrepreneurship provides a way for society to recover from the crisis. Therefore, to face the unprecedented challenges in recent history, it is recommended that high levels of entrepreneurial skills should be generated. Entrepreneurial

capacities are one of the essential elements of this ecosystem, which energize and make possible the assumption of risk by both private and public agents. Notwithstanding the different structures and origins, the successes of EESs depend on their ability to create a cohesive social and economic system that supports the creation and growth of new ventures (Spiegel, 2017).

Audretsch et al. (2019, p.314) referred to “ecosystem” as a reflection of the tendency in academia to describe the old phenomena of cluster effects at different levels, regions, or industries that are not necessarily geographically defined (Isenberg, 2010) but are a set of interrelated elements within a network (Audretsch et al., 2019). EES approaches seek to build an engaged community of entrepreneurial actors who can co-create the support required to help innovative new firms to start and scale (Feld, 2012). There is empirical evidence that the elements of the business ecosystem are mutually interdependent and co-evolve in a territory (Stam & van de Ven, 2021). Spiegel et al. (2020) defined EESs as the regional collection of actors (e.g., entrepreneurs, advisors, workers, and mentors) and factors (e.g., cultural outlooks, policies, R&D systems, and networks) that contribute to the creation and survival of high-growth ventures. According to Stam & Spiegel (2017, p. 407), EES is a “set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory.”

Geographical dimension and proximity play a critical role in understanding the growth dynamics and firm performance (Grillitsch & Nilsson, 2017; Molina-Morales et al., 2014). Furthermore, the spatial unit of study mostly chosen under the EES approach is the region. However, there is no consensus on the definition of this level, whether local, regional, or national (Liguori et al., 2019).

From an institutional perspective, the university itself is an ecosystem within another ecosystem (Feld & Hathaway, 2020), which Spiegel et al. (2020, p.489) referred to as the “Russian dolls” perspective, that is, ecosystems operate as a nested system. An entrepreneurial university provides a suitable environment for driving entrepreneurial initiatives that contribute to economic and social development. Studies have shown the regional impact of universities on new business creation and knowledge transfer (Etzkowitz & Klofsten, 2005) and the impact of universities’ entrepreneurial activities on regional competitiveness (Guerrero et al., 2016).

Entrepreneurial university ecosystems are environments connected to the academic life of students. Therefore, EES is the environment and support system that is a source of motivation for students to perceive entrepreneurship as a career option (Bazan et al., 2019). However, since 2020, the world has been immersed in an uncertain pandemic scene, which has influenced the vision of the youth.

In addition, there is a gap in studies that have compared public and private universities from an

international perspective; there is even less empirical research about EES and universities. Furthermore, entrepreneurial intention (EI) is a trusted framework to reveal the mechanisms to improve entrepreneurship in these institutions. Therefore, the following research question arises: “*How does EES affect public and private universities in different countries?*”

The following sections first review the theoretical perspective, develop hypotheses, describe our research design and sample, report the results, and draw conclusions.

2. Theoretical perspective

The transformations that EESs are carrying out in educational institutions have given rise to the concern that in future generations, it may happen that the curricula and activities of universities would be designed to generate EIs (Hallam et al., 2014). These ecosystems are an eclectic framework of entrepreneurship that identifies the resources and skills of individuals. This indicates that attitudes and preferences toward entrepreneurship are critical elements of the demographic and social environment that influence the supply side of entrepreneurship (Verheul et al., 2002) and is reflected in undergraduates’ innovation capacities (Bock et al., 2020). Thus, an element to consider in the university context is that EIs are related to the university support that an institution has, which reveals the influence of higher education on entrepreneurship (Coduras et al., 2008, Nabi et al., 2017). Moreover, depending on the type of institution, the influence can be exerted toward entrepreneurship.

In the literature, we find studies in which universities are compared because some produce more entrepreneurs than others (Di Gregorio & Shane, 2003) and studies that have investigated whether the type of university is an important element in the research of EIs (Zhang et al., 2014). Intention models based on the theory of planned behavior (TPB) (Ajzen, 1991) offer a sound theoretical framework that can precisely map out the nature of processes underlying the EI behavior (Krueger et al., 2000) of universities. TPB is configured by cognitive factors, such as perceived control of behavior using self-efficacy (SE), subjective norms (SN), and entrepreneurial attitude (ATE). These are potent predictors of intention and behavior in entrepreneurship studies. In addition, a considerable amount of cross-disciplinary research has been devoted to testing, advancing, and criticizing these models (Armitage & Conner, 2001; Fernández-Pérez et al., 2019).

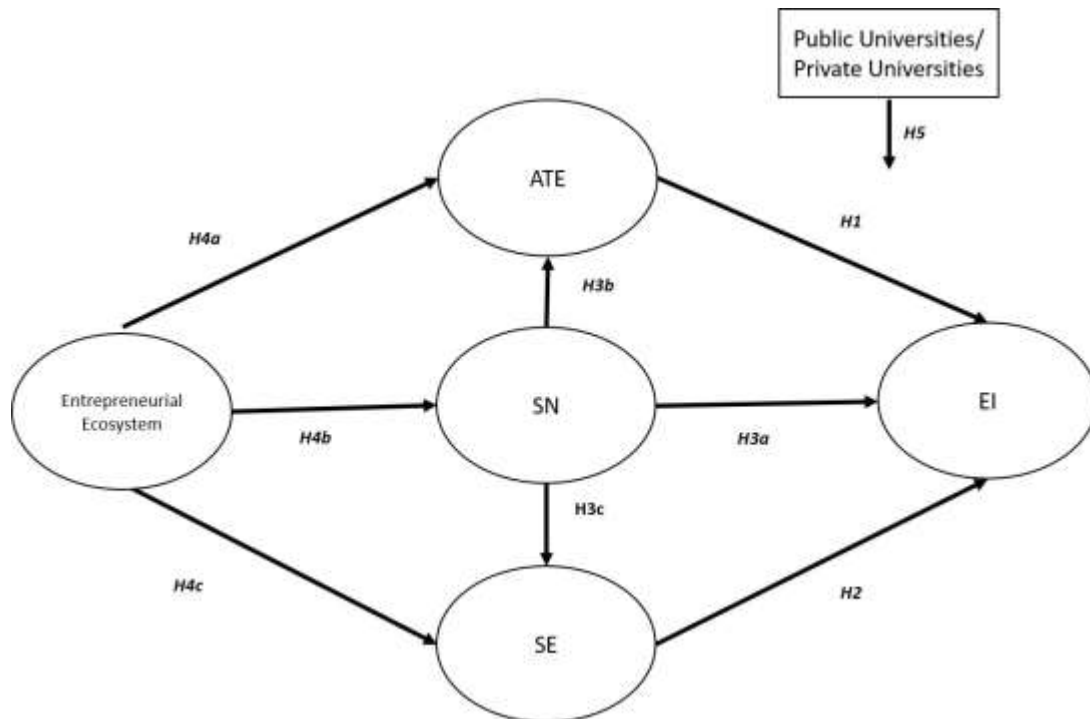
The decision to act entrepreneurially emerges in a context that impacts both internal and external factors. There is evidence that universities’ ecosystem, as an environment and support system, can motivate students to consider an entrepreneurial career (Boyd & Vozikis, 1994; Krueger & Carsrud, 1993; Lee & Wong, 2004). However, the EI of students is associated with factors that are, at least partly, under the university’s control. Moreover, a negative appraisal of the university’s activities to provide knowledge and active support for

the process of new venture creation significantly lowers the EI level of students (Franke & Lüthje, 2004).

The results in the study of Turker & Selcuk (2009) revealed a positive but weak explanatory power of educational support factors on the EI of students. Akinbola et al. (2013) found that entrepreneurial educational support at the university is significantly related to students' EI. Schwarz et al. (2009) revealed that external factors could significantly predict EI, although only the university's environment emerged as a clear predictor of the EI of students. Pihie & Bagheri (2013) measured self-regulation (promotion focus), entrepreneurial SE, and intention to become an entrepreneur among students of public and private universities in Malaysia. They concluded that students in public universities have significantly higher entrepreneurial regulation and intentions than their counterparts in private universities.

In summary, this study focuses on how the EES in universities influences the precursors of university students' EIs in different university ecosystems. We apply an extended EI model based on the TPB (Ajzen, 1991) to understand EESs' influence on the moderating role of public and private universities ecosystems in an international perspective. Figure 1 depicts the model to be tested.

Figure 1. Entrepreneurial (university) Ecosystem-driven Intention Model (EESIM)



3. Hypotheses

3.1. Attitude toward entrepreneurship and SE in university students.

Studies have validated the predictive power of ATE in developing EI and subsequent entrepreneurial behavior, establishing a direct and positive relationship between them (Engle et al. 2010; Iakovleva et al. 2011; Usaci 2015; Zhang et al., 2014). Students who display a stronger ATE feel more confident in their ability to recognize an opportunity to start a business at an early stage and take risks in the entrepreneurial field (Kickul et al., 2009). Moreover, people with a higher attitude toward entrepreneurship are more willing to devote their resources and time to entrepreneurial activities (Schwarz et al., 2009).

Contreras Torres et al. (2017) found that the EI of young Latin American business students in five Latin American countries—Chile, Colombia, Ecuador, Perú, and Venezuela—is positively correlated with their leadership skills, their risk propensity, and their locus of internal control. Furthermore, Soria Barreto et al. (2017) found that the university environment affects EI through ATE in Chile and Colombia. Finally, work experience, which is used as one of the variables to measure prior entrepreneurial exposure, explains EI inversely through SN.

Different studies have proposed that the concept of SE is appropriate for studying entrepreneurs (Chen et al., 1998), and it is an essential antecedent of EI (Krueger et al., 2000; McGee et al., 2009; Boyd & Vozikis, 1994; Zhao et al., 2005). SE reflects personal beliefs and attitudes toward control and management. Among other things, it embodies the competencies needed to successfully address the challenges involved in creating a new company (McGee et al., 2009). Drnovsek et al. (2010) pointed out that by understanding the nature of SE in entrepreneurship and the mechanisms through which it affects EIs, the understanding of the effectiveness of the processes can be broadened.

Some authors, such as Boyd and Vozikis (1994), have pointed out that it is beneficial because it incorporates personality and environmental factors and is a powerful and robust instrument that predicts EIs and, ultimately, actions. Karimi et al. (2014) found that SE is the strongest predictor of EI among college students. According to García-Rodríguez et al. (2017), personal ATE and SE (which they called “control of perceived behavior”) are antecedents of EI. Yurtkorua et al. (2014) found that, among other factors, both ATE and SE predict EI,

having a direct and positive relationship, although the effect of ATE is much more intense. Liñán & Chen (2009) found ATE to be the strongest predictor of EI.

Therefore, we hypothesize the following:

Hypothesis 1 (H1): ATE directly and positively influence university students' EI.

Hypothesis 2 (H2): SE directly and positively influence university students' EI.

3.2. SN and its effects on the EI of Students in university students

In the context of this study, SN reflect the perceived social pressure to engage in entrepreneurial behavior or not. In particular, they refer to the influence exerted on EI by “reference people” (Ajzen, 2001). The term, “reference person” or “reference groups,” refers to the people who serve as a point of comparison (or reference) for an individual, i.e., family members, friends, and colleagues—all of whom may play a decisive role in an individual’s decision to enter or abstain from entrepreneurial activity (Chang et al., 2009). Thus, emotional support or otherwise is frequently a key factor in the decision to go on or to give up (Liñán & Santos, 2007), especially among students, who in many cases are emotionally and financially dependent on their families.

The values transmitted by the reference people improve the perceptions of SE (Fernández-Pérez et al., 2014; Matthews & Moser, 1995). As Ashraf & Merunka (2017) indicated, students continually redefine their group environment and adapt to the norms. Thus, some authors have suggested that SN may be the weakest among the three indicators in influencing EI (Fini et al., 2012) and the cognitive factor that varies between different countries (Moriano et al., 2012). In general, it has been suggested that SN contributes less to the intention of individuals with a strong locus of control (Ajzen, 2002) than those with a strong orientation toward action (Bagozzi, 1992).

Other authors have found that SN has little or no effect in a specific context. For example, in Western societies, individuals demonstrate higher levels of independence and individualism and emphasize the uniqueness of goals and objectives—individual achievements (Schlaegel & Koenig, 2014). García-Rodríguez et al. (2017) demonstrated that SN loses its capacity to influence EI in less developed economies. Regarding the low predictive power of SN in forming of intention toward behavior, several explanations have been proposed for this apparent weakness in the relationship; one of them is that SN affects ATE and SE (Fernández Pérez et al., 2019; Liñán et al., 2011) and therefore, indirectly influence EI. In this study, the direct and indirect effects are examined to understand the role SN plays better.

Contreras Torres et al. (2017) found that the EI of young Latin American business students is positively correlated with their leadership skills, risk propensity, and locus of internal control.

Thus, we hypothesize the following:

Hypothesis 3 (H3). SN have a direct and positive influence on the following:

university students' EI (H3a)

university students' ATE (H3b), and

university students' SE (H3c).

3.3. Effect of EES on Attitude toward Entrepreneurship, SN, and SE

The EI of university students positively relates to perceived educational support (Schwarz et al., 2009), and the strength of the relationship between EI and perceived structural support is affected by the level of SE (Turker & Selcuk, 2009). Consistent with these findings, Pihie & Bagheri (2013) found that university environments highly influence entrepreneurial regulation, SE, and EI in students. Perceived contextual support is positively related to ATE and EI, according to Karimi et al. (2016).

The findings in the study of Trivedi (2016) reveal that a university's EES has a positive relationship with perceived behavioral control but does not have a significant relationship with ATE. The daily exposure of students to the university environment might shape their ATE and EI, and the scope of startup activities is positively moderated by a favorable university entrepreneurial environment (Shirokova et al., 2016). García-Rodríguez et al. (2017) analyzed the role of the university environment in the EI of young people in a peripheral and less innovative region in Spain. They found that the university environment directly influences ATE, SE, and motivation but indirectly and moderately influences the EI of students. These results are consistent with those of the study of Zollo et al. (2017), which found a significant influence of students' perceptions of the university environment on their ATE and EI.

We present the theoretical foundations and hypotheses to verify if EESs have a positive effect on the EI of university students because of the direct and positive influence of the latter in shaping EI and its positive impact on their cognitive antecedents. Then, we hypothesize the following:

Hypothesis 4 (H4). The entrepreneurial university ecosystem has a direct and positive influence on the following:

university students' ATE (H4a), university students' SN (H4b), and

university students' SE (H4c).

3.4. Public University compared with Private University: EES effects on EI

The university ecosystem positively influences students' EI (Morris et al., 2013), but in some

contexts, the influence is marginal (Campos et al., 2021). Pihie & Bagheri (2013) researched self-regulation (promotion focus), entrepreneurial SE, and intention to become entrepreneurs among public and private university students in Malaysia. They found that students from public universities significantly have a higher entrepreneurial regulation and EI than their counterparts in private universities.

Soomro et al. (2019) studied business graduate students in public and private universities in Pakistan, finding that students' attitudes mediate the relationship between EIs and entrepreneurial education. Similarly, Duarte Canever et al. (2017) studied Brazilian university environments (public and private universities) and found that students' EI and its antecedents do not have significant differences. However, Endeavor (2014) identified a higher EI among students of private universities than public university students in Brazil. Huezo-Ponce et al. (2021) studied private and public universities in México, comparing EI between the two types of institutions. The finding of the TPB model is different, showing the difference between the two types of entrepreneurial university ecosystems. However, in these studies, the authors did not control the effects of the institutional environment on EI.

Thus, we hypothesize the following:

Hypothesis 5 (H5): In the TPB model, **EES** in public and private universities affects different to students' EI (stronger in public universities).

4. Research design and sample

The design of this research comprises a quantitative, non-experimental, and cross-sectional approach and uses the survey method. The scope of the analysis presented is descriptive, correlational, and causal. The sample consists of 1,289 students in public and private universities from Spain, México, and Perú. The sample type has a non-random design, and corresponds to a 99.97% confidence level and has a 5% margin of error.

The questionnaire was self-administered, and distributed through a link using the Qualtrics platform; the data were collected in February, March, and April 2021, during the COVID-19 pandemic. The data analysis techniques used for descriptive statistics and multivariate analysis follow the process suggested by Orozco-Gómez (2016), using the SPSS software v.22. The relationships proposed with the hypotheses were tested with a multi-group structural equation model developed in the AMOS software v. 24.

The scales used for the TPB questionnaire were based on the study of Muller (2011), which were adopted and proved in the study of Huezo-Ponce et al. (2021), and the ESS scales were adopted from the study of Bazan et al. (2019). The instruments were measured on Likert scales.

5. Results

According to the hypothesized model, this section describes the sample and differences between public and private universities.

5.1 Background of the entrepreneurs

The analysis of the characteristics of the students and universities in the sample is described in Table 1. The number of students from private universities (789 students) is more than that from public universities (529), with an average age of 20–22 years and an average of 15 years of education. The gender with the most presence in the sample is female (60.6%). The education of both fathers and mothers is higher in private universities (one year) than in public universities, and it is higher in fathers than in mothers. The presence of entrepreneurial occupation in parents follows this same trend. This activity is higher in parents of students in private universities than in parents of students in public universities. Thus, the proportion of entrepreneurial parents is higher than the number of entrepreneurial mothers.

Table 1. Demographics and characteristics of the sample

		Public University		Private University	
Sample size	N entrepreneurs	529		769	
Age	Mean years	20.9		22.7	
Gender: Female Male	Percent	66%	33%	57%	43%
Education	Mean years	15		15	
Education of the father	Mean years	11		14	
Education of the mother	Mean years	11		13	
Occupation of father entrepreneur	Percent	16%		30%	
Occupation of mother entrepreneur	Percent	7%		17%	

5.1. Measurement model

A measurement model was estimated using the five variables. It is confirmed that they are part of a construct, and from this, the reliability, as well as the discriminant and convergent validity, can be evaluated. The chi-square test indicates that the model does not fit well, ($\chi^2 (N = 1298, df = 340) = 2219.866, p < .000$). However, the criteria of several authors are followed (Murnieks et al., 2014; Schlaegel & Koenig, 2014; Schumacker & Lomax, 2010), complementing the analysis of the model with other indicators, such as the root mean square error of approximation (RMSEA), indices of incremental goodness of fit, the statistical significance of the estimates for the paths proposed in the model, and the magnitude and direction of these parameters that fit the model.

Table 2 presents the standardized coefficients. All of them are significant and above 0.7. The R^2 of each item is higher than the recommended value of 0.05, which indicates that the observed variables are significantly represented by their respective latent variables. Some items are eliminated from the model due to low loads on the factor. The Cronbach’s reliability alpha and composite reliability indicators are acceptable. The average variance extracted (AVE) confirms the convergent validity of the constructs with a value greater than 0.5 (Fornell & Larcker, 1981).

Table 2. Evaluation of the measurement model.

Variables	Item	t value	Standardized Coefficient (β)	R ²	Cronbach Alpha	Composite reliability	AVE
ATE	IE01_IE18_1 * 2		0.906	0.821	0.933	0.932	0.822
	IE01_IE18_1 1	48.809	0.888	0.788			
	IE01_IE18_1 0	53.846	0.925	0.856			
SN	IE01_IE18_3	18.676	0.494	0.244	0.794	0.830	0.635
	IE01_IE18_2	42.417	0.922	0.849			
	IE01_IE18_1 *		0.901	0.811			
SE	SE01_SE05_ * 5		0.873	0.761	0.935	0.936	0.744
	SE01_SE05_ 4	42.592	0.866	0.75			
	SE01_SE05_ 3	44.262	0.883	0.78			
	SE01_SE05_ 2	41.066	0.85	0.722			
	SE01_SE05_ 1	40.151	0.84	0.705			
EI	IE01_IE18_6 * 7		0.894	0.8	0.879	0.889	0.731
	IE01_IE18_7	31.643	0.719	0.517			
	IE01_IE18_8	51.092	0.936	0.875			
Ecosystem	ESS14_14 *		0.834	0.695	0.974	0.974	0.729
	ESS14_13	42.273	0.889	0.79			
	ESS14_12	39.343	0.852	0.727			
	ESS14_11	39.804	0.858	0.737			
	ESS14_10	39.647	0.856	0.733			
	ESS14_9	42.059	0.886	0.785			
	ESS14_8	40.063	0.862	0.742			

ESS14_6	43.623	0.904	0.817
ESS14_5	42.841	0.895	0.801
ESS14_4	40.262	0.864	0.747
ESS14_3	37.285	0.825	0.681
ESS14_2	34.925	0.792	0.627
ESS14_1	36.412	0.813	0.661
ESS14_7	36.578	0.815	0.665

Note: * implies that the values were not calculated because the weight was set at 1.00 to fix the construct’s variance.

Discriminant validity was evaluated using the criterion that assumes that the AVE value must be greater than the square of the correlations between the factors (see Table 3), as mentioned by Fornell & Larcker (1981).

Table 3. Discriminant validity.

	ATE	SN	SE	EI	Ecosyste m
ATE	0.822				
SN	0.477	0.635			
SE	0.328	0.298	0.744		
EI	0.723	0.397	0.419	0.731	
Ecosyste m	0.071	0.091	0.116	0.248	0.729

Note: AVE in bold and square of the correlations below the diagonal.

5.2. Structural model

The load direction of the structural elements, the resistance, and the significant paths are illustrated in Table 4. Of all the relationships raised in the hypotheses, the only path that is not significant is that of the SN to EI. The model explains 74.9% of the variance of EI ($R^2 = 0.749$). Additionally, the goodness of fit analysis is evaluated with indicators, such as RMSEA, which has an acceptable level of 0.067 (Hair et al., 1999; Schumacker & Lomax, 2010). Finally, the model’s incremental goodness of fit indices—NFI, RFI, IFI, TLI, and CFI—are also acceptable, all of which are above 0.9, ranging from 0.931 to 0.946.

Table 4. Evaluation of the structural model.

Path		Standardized Coefficient (β)	t value	P
SN	<--- Ecosystem	0.302	10.389	***
ATE	<--- Ecosystem	0.056	2.408	0.016*
SE	<--- Ecosystem	0.185	7.164	***
ATE	<--- SN	0.689	25.538	***
SE	<--- SN	0.512	18.164	***
EI	<--- SN	0.001	0.016	0.987
EI	<--- ATE	0.724	24.239	***
EI	<--- SE	0.262	11.509	***

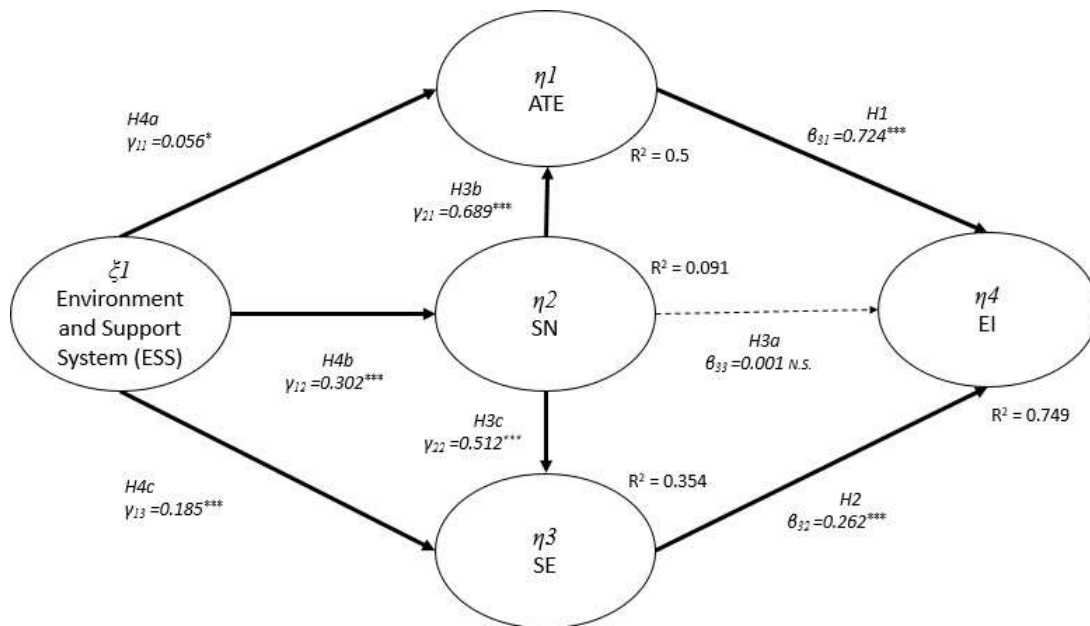
† p <.10; * p <.05; ** p <.01; *** p <.001

5.3. Results in general perspective

As depicted in Figure 2, in the general sample model, only one route has no significance; this is H3a, which hypothesizes that among university students, SN affects EI. Therefore, this hypothesis is rejected.

The ecosystem (environment and support system) influences attitude, SN, and SE (H4a, H4b, and H4c), indicating a low intensity, especially toward attitude and SE. However, SN has a medium intensity influence on attitude and SE (H3b and H3c), and according to this model, it does not influence EI (H3a).

Finally, ATE has a medium-high influence on EI (H1), unlike SE, which indicates a low intensity of this variable (H2).



† p <.10; * p <.05; ** p <.01; *** p <.001

Figure 2. ESSIM—Estimation of the results of the theoretical model (N = 1,298)

5.4. Estimation of the ESSIM among University Students: A Multi-group Analysis of Private and Public Universities

To compare private and public universities, an invariance test was performed to analyze the differences in the chi-square. Based on this test, an evaluation was made at two levels—the model level and the level of each proposed path or local level. The unrestricted and restricted models were compared, as proposed by Byrne (2010). The results of the chi-square difference test reveal that the model is not invariant for the two groups. However, the p-value of the chi-square difference test is not significant (see Table 5), so we can conclude that the model is not different between the university groups.

Table 5. Global invariance test for private and public universities.

	X2	DF
Unconstrained	3091.941	685
Constrained	3091.941	685
P-Value	1.000	

However, in the local test, at the level of the routes (Table 6), we find that although the p-value for the difference is not significant in the proposed hypotheses, the significance of the coefficients (β) indicate that two paths are only significant in one of the groups—public universities. These are H4a and H3a, which indicate that the ecosystem and SN have a positive influence on ATE and EI, respectively.

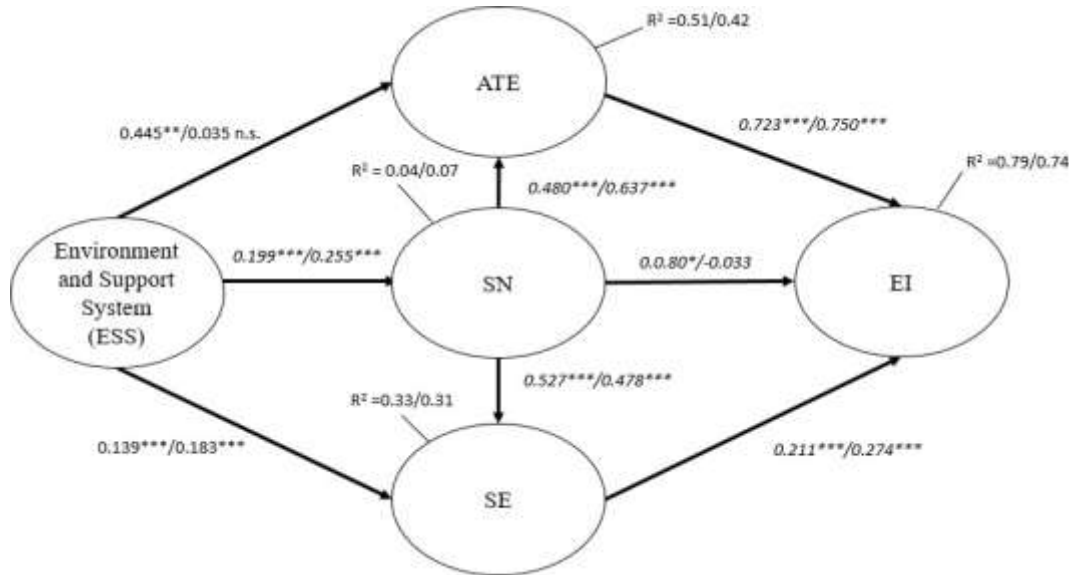
Table 6. Multi-group analysis of Private and Public Universities.

Path	Publics Universities - (β)	Privates Universities- (β)	Difference (β)	Difference in P-Value for Difference
Ecosystem -> SN	0.199***	0.255***	-0.056	1.000
SN -> ATE	0.480***	0.637***	-0.157	1.000
SN -> SE	0.527***	0.478***	0.048	1.000
Ecosystem -> ATE	0.445**	0.035	0.411	1.000
Ecosystem -> SE	0.139***	0.183***	-0.044	1.000
ATE -> EI	0.723***	0.750***	-0.028	1.000

SE -> EI	0.211***	0.274***	-0.063	1.000
SN -> EI	0.080*	-0.033	0.113	1.000

† p <.10; * p <.05; ** p <.01; *** p <.001

Table 6 is depicted graphically in Figure 3.



† p <.10; * p <.05; ** p <.01; *** p <.001

Figure 3. Analysis of differences between Public and Private universities (N = 529/769)

The EESIM results demonstrate an influence toward ATE, SN, and SE with a different intensity, directly affecting the TPB model. These results are consistent with those in the studies of both Soria Barreto et al. (2017), which found that the university environment affects EI through attitude toward entrepreneurship, and Zollo et al. (2017), which reported a significant influence of students’ perceptions of the university’s environment on their ATE and EI. The university EES has a low direct positive influence on ATE ($H4(a), \beta = 0.056, p < 0.050$) and SE ($H4(c), \beta = 0.1285, p < 0.001$) and a medium direct positive influence on SN ($H4(b), \beta = 0.302, p < 0.001$). These results contrast with those in the study of Duarte Canever et al. (2017), which found that public and private university environments do not have significant differences in the way they influence EI and its antecedents, and, as a whole, EES does not contribute to the development of university students’ EI.

In the global analysis, the constructs with more explicative power of shaping university students’ EI are ATE and SE, which is consistent with the findings of Yurtkorua et al. (2014). Moreover, Liu et al. (2019) also found that SE has a significant and positive effect on both ATE and EI; and ATE partly mediates the relationships between SE and EI.

SE has also been identified as a critical antecedent of EI in the study of Spagnoli et al. (2017). Phuong et al. (2021) concluded that the mediating variables of ATE, especially positive attitudes, have the strongest effect on students' EI. Furthermore, Karimi et al. (2014) found that SE is the strongest predictor of EI among college students, and Liñán & Chen (2009) identified ATE as the strongest predictor.

SN also exerts a medium direct influence on both ATE ($H3(b)$, $\beta = 0.689$, $p < 0.001$) and SE ($H3(c)$, $\beta = 0.512$, $p < 0.001$), which is not consistent with the study of Al-Qadasi et al. (2021). Furthermore, we do not find that SN has a direct effect on EI ($H3(a)$, $\beta = 0.001$, $p < 0.987$), which is consistent with the study of Naushad et al. (2018). Conversely, both Nguyen & Phan (2014) and Phuong et al. (2021) reported both direct and indirect effects of SN on students' EI. Finally, ATE has a medium-high influence on EI ($H1$, $\beta = 0.724$, $p < 0.001$), unlike SE, which indicates a low intensity on this variable ($H2$, $\beta = 0.262$, $p < 0.001$).

When comparing private and public universities, the university EES across developed and developing countries (Spain, México, and Perú) do not significantly have different effects on students' EIs under the TPB model except for the university EES results, which indicate a positive influence toward ATE of public and private universities ($H4(a)$, $\beta = 0.445/0.035$; $p < 0.010/n.s.$) they are only significant for public universities. At a lower level, the influence of the perceptions of family and close friends' support ($H3(a)$, $\beta = 0.080/-0.033$; $p < 0.050/n.s.$) on students' EI is only significant in public universities.

Different studies have shown how social stratification and levels of development influence entrepreneurship: countries with lower levels of development have higher entrepreneurial activity (Fernández-Serrano & Liñán, 2014). Thus, EES vary in how their entrepreneurial activities connect with economic growth. It is expected that more productive entrepreneurship would be found in higher quality EES than in the lower models (Content et al., 2020). However, no study has concluded on the level of development between regions as a driver of EI (Acs & Amorós, 2008).

Looking at the model's analyses, global and multi-group, the more robust constructs are ATE on EI and the influence of NS on ATE and SE. However, we find no significant relationship between SN and EI in the general model. Nevertheless, in the results of the multi-group, SN in the public university is significant for the EI. Several explanations have been proposed for this apparent weakness in the relationship. Fernández Pérez et al. (2019) and Liñán et al. (2011) found that NS significantly affect ATE and SE and, therefore, indirectly influence EI, which is consistent with our results.

6. Conclusions

EES in universities are environments connected to the academic life of students, who have been affected by the pandemic. In this context, the EI results reveal patterns to follow to improve entrepreneurship. Furthermore, this phenomenon brings a re-thinking that this is a more accelerated entrepreneurial economy (Audretsch & Thurik 2000) in which the youth is immersed.

Studies related to entrepreneurial university ecosystems are a way to understand how some EESs advance more than others. Following this approach, Miller & Acs (2017) proposed a model to explain the relationship between the EES of universities and the creation of high-growth ventures. Thus, this research's view of ESS and TPB in different universities in various countries could give some answers to support the growth of economies through these types of institutions. These results suggest that the entrepreneurial university ecosystem during the COVID-19 pandemic has had a positive but limited influence on university students' EI, which is mainly driven by the role of reference people (SN). Additionally, their ATE and SE should be reinforced, which indirectly influences EI. Due to the uncertainty of EES, university students consider the perceptions of their reference groups, family, and friends when deciding to undertake entrepreneurship. Therefore, the EI of students is associated with factors that are partially under the university's control. Consistent with the study of Franke & Lüthje (2004), during this COVID-19 pandemic, a negative appraisal of university's activities to provide knowledge and active support for the process of new venture creation might significantly lower the EI level of students, affecting the role of the university EES as an EI driver. It is expected that the differences in the two main university environments (public and private) will shape students' EI differently. This is due to the high scientific research orientation of public universities in Ibero-American countries (Duarte Canever et al., 2017), contrasting with the private universities, which are more oriented toward meeting the demands of the business environment. The U-Ranking report 2020 (Fundación BBVA and IVIE, 2020) revealed that the research orientation of Spanish public universities is much clearer, although, in this area, the performance in the Spanish University System is very heterogeneous, whereas the private universities, which is far from the average in research, exceed the average in teaching performance.

The emergence of COVID-19 requires a determined effort by university communities to change their behavior to take advantage of the change to a digital learning environment, which requires an urgent, vast, and coordinated effort of all university stakeholders. This study offers suggestions for acting more dynamically and innovatively in times of crisis and incorporating crisis scenarios into strategic planning in university ecosystems. Thus, it implies thinking in terms of crisis response, aligning strategic decisions with the university's mission and values (Ratten, 2020).

Contribution

The findings contribute to understanding the EI of young students in the context of entrepreneurial university ecosystems in different countries. As Rodríguez Gutiérrez et al. (2019) mentioned, universities have to provide tools to their students for them to fit the labor market. Therefore, they contribute to their communities' better economic and social development. In addition, the study was developed during the COVID-19 pandemic, contextualizing the studies of entrepreneurial university ecosystems through the environment and support systems. Therefore, the contributions of this study support both types of universities, especially public universities.

Not enough studies about entrepreneurial university ecosystems in two different continents are available. Moreover, there is still a lack of research that compares public and private educational institutions in different countries. This type of research supports the better design of interventions in the entrepreneurial education of students. Moreover, this knowledge gives a general perspective of the entrepreneurial dynamics in these contexts. This study is essential because economic recovery in a post-pandemic scene requires better institutions that are aligned to encourage people to generate enterprises and new ventures.

Limitations and Further research

To conclude this exploratory analysis, the main limitations and future lines of action are presented. The study results must be contextualized in a pandemic scene so that it would be interesting to repeat the process of data collection at different times in the future. The crisis scene might have influenced the impact of university ESS on EI. Moreover, the study limits its scope to university students in Spain, México, and Perú, without considering the specific culture in each country. Another limitation is the number of universities. A large number of universities in more countries would have brought more representativeness. Thus, it is expected that more universities and countries in different regions would be included in future studies.

Furthermore, universities are influenced by the culture in their countries, which is considered fundamental for forming an entrepreneurial cultural identity and survival of entrepreneurial communities (Spigel, 2017). Although culture, as well as other informal institutions as role models (family and friends), can be considered for future research.

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**Redundancy Analysis to Uncover Gender Differences in Business Incubation:
An Exploratory Approach**

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ABSTRACT

A key support mechanism for entrepreneurs is the business incubator programs, which provide tailored assistance and a conducive work environment for early-stage entrepreneurs. Despite the need for diversity in entrepreneurship and incubators' positive impact, women remain under-represented in the incubation environment, indicating a gender-based barrier to incubation and entrepreneurship. Extant research on incubation is largely gender-neutral. This research addresses this gap in scholarship by designing a behavioral intention model rooted in social psychology theories to explain entrepreneurs' intention to participate in incubation programs and assessing if gender differences exist. We develop a multidimensional measure of intention (e.g., usefulness, ease of use, and self-efficacy) to test our model. Studying 346 nascent entrepreneurs, we find that female entrepreneurs are not convinced if incubation programs are beneficial considering their use and access. This highlights the need for adopting inclusionary best practices to expand the applicant pool for business incubation programs.

Keywords: Business Incubation, women, intention, gender

Introduction

The extant entrepreneurship literature generically describes the concept of business incubation as a support program where business founders share workspace and equipment and receive professional business assistance with the end goal of becoming a viable, sustainable business upon completion of the program (Marlow et al 2015; Marlow et al 2005; Hackett et al 2004). Although business incubation has been a proven process for firm growth and increased survival rate of start-ups; women remain under-represented in these programs (Maxheimer et al, 2021; Agnete Alsos, Hytti, & Ljunggren, 2011; Fiske, Cuddy, Glick, & Xu, 2002; Heilman, 2012; Marlow & McAdam, 2012; Marlow & Patton, 2005). To that end, several researchers found that women who get the support they need; such as participating in business support programs, often outperform their male counterparts (Amezcuca 2010; Pompa, 2013; Bendell et al 2019; Smith et al 2020).

This study aims to explore why few nascent women entrepreneurs choose to participate in business incubation programs. To investigate this question, the study evaluates nascent entrepreneurs' internal attitudes and beliefs to better understand their decisions on whether to use business incubation programs and if gender plays a role in this association. Drawing on theories of social psychology, the study uses the theory of planned behavior (Ajzen, 1991, 2002; Fishbein & Ajzen, 1980), social cognitive theory (Bandura, 1977, 1986, 2012), and the technology acceptance model (Venkatesh & Davis, 2000) to explain the inner understanding (perception),

attitudes and beliefs, of the nascent entrepreneurs in their decision to apply (entry) a business incubation program and if gender differences exist.

This study developed the business incubation acceptance model extending the technology acceptance model proposed by Venkatesh & Davis (2000) to investigate the study's overall research question; why nascent entrepreneurs' choose not to seek or apply to business incubation services. The business incubation acceptance model illustrates that perceptions of nascent entrepreneurs' personal beliefs and attitudes, form intention and it is widely understood that intentions affect a person's actions. To investigate the dependent variable intention to incubate the research team adopted a reflective and formative scale (Arnett, et. al 2003) to add further rigor to the proposed model. The measurement scale developed in this study explored nascent entrepreneurs' perceptions of business incubation programs. The research model defined intention to incubate as the nascent entrepreneur's readiness (or willingness) to apply to a business incubation program. The study attempted to explain the variance of this construct through three key independent constructs: ease of use, usefulness, and self-efficacy. Gender difference was also explored by evaluating biological sex gender and gender roles as a set of behaviors and attitudes based on one's actual or perceived sexuality and is anchored on notions of femininity and masculinity (Steffen, 2015) (see Figure 1).

Given there is not a widely applied or existing scale, consistent with our priorities we develop a business incubation intention scale to test our hypotheses. Implementing a quantitative research design, this study empirically tests the nascent entrepreneurs perceived usefulness and ease of use of a business incubation program, and their self-efficacy around successfully completing the program. For gender we used biological sex as a dichotomous variable and gender roles is measured using the Traditional Masculinity-Femininity (TMF) scale, which was designed to assess central facets of self-ascribed masculinity-femininity (Kachel et al 2016). Partial least squares was the primary statistical technique used to evaluate the research model. Our stratified sample consisted of 346 early-stage entrepreneurs, with respondents of 164 men and 180 women. The findings of this study supported the notion that perception (attitudes and beliefs) do influence an entrepreneur's intention to participate in a business incubation program. In addition, the study uncovered gender is a mediating factor in an entrepreneur's perception of business incubation programs.

The remainder of the paper proceeds as follows. A review the relevant literature and development of our hypotheses, followed by the methods , discussion and empirical results.

Literature Review

Business Incubators Relevance to the Entrepreneurship Process. Business incubation programs were developed on the principle of increasing the survival rate and growth rate of new firms. This is done by supporting companies with a high potential for success but are inhibited by a lack of resources (Lesakova, 2012). The incubation process assists and guides firms in overcoming obstacles, thereby creating companies that can better manage challenges that are competitive, profitable, and sustainable (Salvador & Rolfo, 2011). The goal of a business incubator is to create self-sustaining businesses that contribute to the local economy by creating new jobs,

diversifying industries, revitalizing neighborhoods, and reducing unemployment. (Al Mubarak & Busler, 2011; Bizzotto, 2003; Mutambi, Buhwed, Byaruhanga, & Trojer, 2010).

Over the last two decades, researchers have empirically tested and identified several indicators which lead to a successful business incubation program (Hackett & Dilts, 2004; Hackett & Dilts, 2008; Theodorakopoulos, K. Kakabadse, & McGowan, 2014a, 2014b; Udell, 1990). Out of these studies, strong empirical support was found for three key indicators in describing the business incubation process: Selection, Program, and Graduation. For the purpose of this study, we define each indicator accordingly: *Selection* defined as the evaluation, recommendation, and selection of new start-up applicants into the business incubation program (Aerts, Matthyssens, & Vandembemt, 2007; Culp, 1996; Henry & Treanor, 2010; Lumpkin & Ireland, 1988; Smilor, 1987; Tsaplin & Pozdeeva, 2017); *Program* defined by the services provided by the business incubator (Campbell et al., 1985; Smilor and Gill, 1986; Smilor, 1987; Rice, 2002; Markley and McNamara, 1995; Mian 1996; Hackett & Dilts, 2004a ; Bruneel et al., 2012); and *Graduation*, which is defined by the performance and viability of the businesses after completing the incubator program (Bollingtoft, Ulhoi, Madsen, & Neergaard, 2003; McAdam & Marlow, 2008). These variables help form the concept of a business incubation program.

Nascent Women Entrepreneurs and Business Incubation Programs. Research regarding nascent women entrepreneurs has been steadily evolving. Amezcua's (2010) baseline research model indicated that nascent women entrepreneurial firms that are clients of business incubators represent better odds of survival, higher performance, increased growth in sales, and higher levels of employment growth than nascent men. In addition, several researchers have agreed that when women-owned firms get the resources they need, they can more easily overcome obstacles of gender bias and acquire legitimacy for their businesses (Amezcua, 2010; Boden Jr & Nucci, 2000; Godwin, Stevens, & Brenner, 2006; Henry & Treanor, 2010; McAdam & Marlow, 2008). All things being equal, researchers have also found that female-owned entrepreneurs are just as likely as men to succeed when given access to resources, contacts, and legitimacy necessary to function (Amezcua, 2010).

Other studies have explained the low participation rates of women entrepreneurs in business incubators by focusing on their experiences. For example, Scharff's (2011) post-experiential gender study analyzed how women internalize, process, and engage in the high-stakes, high-stress environment of a business start-up. Henry and Treanor (2010) discussed establishing selection policies around gender, providing a balance of women mentors, and including gender balance in promotional activities. McAdam and Marlow (2008; 2012) discussed the male-dominated culture of incubation facilities. They shared how nascent women entrepreneurs felt excluded and had difficulties balancing gender roles, not only from the incubation culture, but also from the expectations of themselves as entrepreneurs, women, wives, and mothers, which often conflicted (Marlow & McAdam, 2012).

Gender role identity. Traditionally, studies viewed gender from a biological gender perspective where both sex and gender are equivalent, meaning women are human females and men are human males depending on *biological* features (chromosomes, sex organs, hormones, and other physical features). Some influential researchers lead the movement of considering the distinction between

sex and gender (De Beauvoir & Parshley, 1953; Simone de Beauvoir, 1972). Subsequently, other gender-based studies distinguished gender and sex depending on *social* and psychological factors (social role, position, behavior, or identity as opposed to strictly biological differences) (Rubin, 1975; Nicholson, 1994).

Brush's 1992 study serves as a basis for interpreting gender differences in women entrepreneurs. Brush (1992) stated entrepreneurs both men and women can be similar in terms of personality, risk-taking propensity, and psychological traits, despite when individual characteristics differ regarding education, occupational experience, motivations, and availability of business start-up resources. This study aims to take a deep dive into the gender differences of both biological sex and gender roles, and the characteristic differences, like experience and motivation, that shape a nascent entrepreneurs perspective on entering a business incubation program.

Theoretical Influences on Intention to Behavior. Some of the entrepreneurship research geared toward theory of planned behavior has made profound progress in demonstrating how attitudes and beliefs of nascent entrepreneurs, especially around social values leading to the intent of becoming an entrepreneur, have actually indicated action (Carr & Sequeira, 2007; Kautonen, van Gelderen, & Fink, 2015; Krueger Jr, Reilly, & Carsrud, 2000). Applying the theory of planned behavior (Ajzen, 1988), this study examines nascent entrepreneurs' attitudes and beliefs to better understand how perceptions form intention to act.

The theory of planned behavior (TPB) is a generalized theory used to accurately predict individuals' intentions and actions. Ajzen (2002) described the theory of planned behavior as a model that takes into consideration three types of beliefs: a) behavioral beliefs or attitudes, b) consequence of the behavior that forms positive or negative feelings or normative beliefs and expectations of others; and c) control beliefs or factors that may further or hinder performance such as abilities, skills, habits.

The Technology Acceptance Model (TAM) is a well-established research stream that evolved from the theory of planned behavior by studying the relationship between cognitive, and emotional factors, and technology application (Yawen and Li, 2021). The technology acceptance model started to garner substantial theoretical and empirical support when it was discovered that beliefs and attitudes of technology users formed the intention of users based on external observation variables (Yawen and Li, 2021; Venkatesh & Davis, 2000; F. D. Davis, et al 1989; Ajzen, 1988;). In the last 30 years, the Davis's technology acceptance model (1989) has become a seminal piece due to its wider applicability in technology and other representative research contexts (Yawen and Li, 2021). TAM's basic elements are, behavior intent which refers to the willingness of a user to adopt new technologies; perceived usefulness which is the understanding of a user to accept new technology; and perceived ease of use which is the undertaking to use new technologies (Tambun et al., 2020; Yawen and Li, 2021). Across the many empirical tests, TAM's perceived usefulness, and perceived ease of use continue to remain strong predictors of the users intention based on inner understanding (Martasubrata and Priyadi, 2020; Syarwani and Ermansyah, 2020; Korry, 2020; Pibriana, 2020; Ranugalih et al., 2020; Yawen and Li, 2021). In

other words, intention and attitudes of the user (Sipayung et al., 2020; Sugeng et al., 2020; Liu and Chen, 2021; Yawen and Li, 2021).

This study extends the Ajzen (1988) generalized theory of planned behavior and the Venkatesh & Davis (2000) technology acceptance model into the entrepreneurship discipline and more specifically into the business incubation field of research. We posit that business incubation programs provide nascent entrepreneurs with an experiential learning environment to develop their business acumen and improve their chance for success (Jones et al. 2021; Kennett, et al 2020); however, the attitudes and beliefs of the entrepreneurs keep them from using these services. In this study, we developed the parallel model to the technology acceptance model to help support the understanding of nascent entrepreneurs' intention to enter into a business incubation program. This research identified perceived usefulness and ease of use of Business Incubation as reflective variables that can influence behavior.

Social Cognitive Theory. Social cognitive theory helps to address the dynamic interaction of an individual's personal (i.e., cognitive or affective) behaviors to frame intentions that precede individual action (Bandura, 1977, 1986, 2012). One of the key constructs in social cognitive theory is self-efficacy. Self-efficacy, which is an individual's belief in his or her ability to perform a certain behavior, has been adopted to explain behavioral intentions in various research disciplines (Ambrose & Chiravuri, 2010). Many researchers believe that some of the differences in new business creation rates are attributable to women's self-efficacy and stereotypical gender environments (Boden & Nucci, 2000; Javadian et al., 2014; S. Marlow et al., 2008). In addition self-efficacy will also be used a reflective variable, has it has been shown to have a distinct impact on the decision to initiate nascent entrepreneurial activities; this impact is more significant than actual abilities (Manoj, 2015).

Redundancy Analysis through Reflective and Formative Scales. In this study, we conceptualized a nascent entrepreneur's intention to incubate as readiness (or willingness) to apply to a business incubation program determined by both reflective and formative processes. Operationalizing a construct using a inter-dependent set of measures is known as redundancy analysis (Chin, 1998), where one set of measures is dependent on another. In a *reflective construct*, the causality flows from the construct to the indicators, that is, the indicators are caused by the construct (Roy et al 2012). In a formative construct, the causality flows from the indicators to the construct, that is, the indicators cause the construct. Thus, a formative construct is the result of an aggregate of indicator variables (Roy et al 2012).

This study created reflective (specific beliefs) and a formative (general beliefs) constructs, to add further depth and useful insights to understanding a complex problem (Chin, 1998; Arnett et al. 2003; Tehseen et al, 2019; 2020). Accordingly, we used Selection, Program, and Graduation, to generally describe the business incubation program; these are the formative variables. The second set of variables ease of use, usefulness, and self-efficacy, are independent variables and specifically describe the perception of the incubation process; these are reflective variables.

The research model in this study gives a nuanced understanding to the difficulties women entrepreneurs face when starting a business. We begin to peel back the layers to explain why women may be reluctant to join a business incubation program. Previous studies focus on programmatic fixes and creating more attractive internal environments for women, but this study takes it a step further and opens the conversation to a richer and deeper understanding of the beliefs and attitudes affecting nascent entrepreneurs' intentions to use business incubation programs.

The Research Model and Hypothesis

This study attempts to explain the variance in this dependent variable, nascent entrepreneur's readiness (or willingness) to apply to a business incubation program, through a number of cognitive and affective determinants: ease of use, usefulness, and self-efficacy. In addition, we examine the moderating effect of biological sex (i.e., gender) and gender (i.e., gender roles). The conceptual model of the study representing both the reflective and formative processes are captured below:

[Insert Figure 1 about here]

Usefulness of a Business Incubation Program and Gender. This research identified perceived *usefulness* (Venkatesh & Davis, 2000) an indicator that can influence behavior. Drawing on this logic, we expect nascent entrepreneurs' attitude toward entering an incubation program to be similar to individuals' attitudes and beliefs in adopting a new technology because both require an inner understanding and change in attitude of the user (Sipayung et al., 2020; Sugeng et al., 2020; Liu and Chen, 2021). Furthermore, building on the technology acceptance model, we propose that a business incubation program's usefulness would influence a nascent entrepreneur's intention to incubate. We defined usefulness of a business incubation program as a person's attitude and belief that participating in a business incubation program will enhance their business performance and increase their businesses survival rate. The perceived usefulness of the overall business incubation program can develop from the entrepreneur's perception about specific characteristics (or Formative variables) of the program such as the *application process* (represented as "selection" in the model); the *programmatic activities* (represented as "programs" in the model), and an increase in business performance after completing the program (represented as "graduation outcome" in the model).

H1: A nascent entrepreneur's perception of the usefulness of a business incubation program is positively associated with the intention to incubate.

To see whether there is a difference between males and females from a biological sex or social construction perspective. Similarly we explored gender roles, which are behaviors based on perceived sexuality. Based on prior research which states women and men think differently about how and why to start a business (Boohene et.al, 2008; Santos et.al, 2010; Santos et.al 2016; Parga-Montoya et.al 2020), we argue there are gender differences in the attitudes and beliefs of the *usefulness* of a business incubator program. Therefore, biological sex and gender roles is hypothesized as moderating variables in the model. Accordingly, the hypotheses relating to gender and usefulness are:

H1a: Biological sex will moderate the relationship between a nascent entrepreneur's perception usefulness of business incubation and the intention to incubate.

H1b: Gender roles will moderate the relationship between a nascent entrepreneur's perception of usefulness of business incubation and the intention to incubate.

Ease of Use of a Business Incubation Program and Gender. The study identified perceived *ease of use* (Venkatesh & Davis, 2000) as an indicator that can influence a nascent entrepreneurs' attitude and belief toward entering an incubation program. Building on the technology acceptance model, an individual's inner understanding needed to shift one's attitude and beliefs toward adopting new technology, is similar to an nascent entrepreneurs' inner understanding needed to join a business incubation program (Sipayung et al., 2020; Sugeng et al., 2020; Liu and Chen, 2021). Specifically, we propose the ease of use of a business incubation program would influence an entrepreneurs intention to incubate. We define ease of use of a business incubation program as a person's belief that participating in a business incubation program will be easy to accomplish or complete. The perception about the ease of use of the incubation program can be formed, using Formative variables, by the effortlessness to apply for entrance into the program (or "selection"), the perceived effortlessness to attend and complete the activities within the business incubator (or "program"), and the perceived effortlessness of increased business performance after completing the program (or "graduating outcomes").

H2: A nascent entrepreneur's perception of ease of use of a business incubation program is positively associated with the intention to incubate.

Further, since previous research established gender differences exists between male and female entrepreneurs (Boohene et.al, 2008; Santos et.al, 2010; Santos et.al 2016; Parga-Montoya et.al 2020), we argue biological sex and gender role differences, due to differences in the availability of resources and their cognitive makeup, gender (i.e., the social construction of the notion) will likely influence the direct relationship between entrepreneurs' attitudes and beliefs of ease of use and intention. Accordingly, biological sex and gender roles is hypothesized to influence the intention to incubate.

H2a: Biological sex will moderate the relationship between a nascent entrepreneur's perception of ease of use of a business incubation program and the intention to incubate.

H2b: Gender roles will moderate the relationship between a nascent entrepreneur's perception of ease of use of business incubation and the intention to incubate.

Business Incubation Self-efficacy and Gender. This study identified self-efficacy as an indicator that can influence a nascent entrepreneurs' attitude and belief toward entering a business incubation program. Self-efficacy is the belief in one's ability to produce designated levels of performance (Bandura, 1977). Extending the general notion of self-efficacy, drawing on the the technology acceptance model (Venkatesh & Davis, 2000) and theory of planned behavior (Ajzen,

2002), we propose that the nascent entrepreneur's attitude and belief in their ability to further their business performance through skills and new abilities may influence the intention to incubate.

This study defined business incubation self-efficacy as the nascent entrepreneur's belief in their ability to grow or scale their business within a business incubation program. The nascent entrepreneur's business incubation self-efficacy can be formed, from a set of Formative variables, the confidence associated with being selected into the incubation program (or "selection"), the confidence with successfully increasing skills and abilities throughout the program (or "program"), and the confidence to increase the business survival rate after completing the program (or "graduation outcomes").

H3: A nascent entrepreneur's business incubation self-efficacy is positively associated with the intention to incubate.

Bandura (1986) defined self-efficacy as the self-judgment on one's ability to execute a series of actions to achieve a desired goal. As such, an individual's self-perception of their ability to complete a task has a significant effect on their actual ability to pursue the task (Bandura, 1978). That said, prior research suggests significant gender differences in entrepreneurial self-efficacy around cultural norms and gender role stereotypes; resulting in diverse self-beliefs which feed into gender disparity (Liu et al 2019).

Drawing on the extant literature on self-efficacy and gender differences (Liu et al 2019, Boden & Nucci, 2000; Javadian et al., 2014; Marlow et al., 2008), we predict women entrepreneurs may have a negative view of their self-efficacy. Based on biological sex and gender roles of the nascent entrepreneurs, we predict a differentiated moderating influence. Accordingly, the hypotheses relating to self-efficacy are:

H3a: Biological sex will moderate the relationship between a nascent entrepreneur's business incubation self-efficacy and the intention to incubate.

H3b: Gender roles will moderate the relationship between a nascent entrepreneur's business incubation self-efficacy and the intention to incubate.

Methodology

Sample and Method

A stratified random sample was adopted for this study³. The sample was stratified by gender but was random in selection. The sample drew from individuals who had started setting-up or running an entrepreneurial venture but had not chosen to enter a business incubation program at the point of survey dissemination. This rationale followed the GEM 2017 study for identifying nascent entrepreneurs; however, the study intentionally elected to leave in serial entrepreneurs as a control variable. The regression sample consisted of 346 early-stage nascent entrepreneurs, with 164 men and 180 women respondents.

Measurement of Variables

³ This study develops a scale for business incubation intention which was empirically tested and validated the research model. A web-based survey instrument was designed for this study and administered through Qualtrics, a third-party survey administrator.

Measures from this study were developed from existing measures and adopted for the business incubation context⁴. The survey used a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree) for the dependent and independent variables. To measure perceived usefulness, 6-items were used as the reflective measure and 15-items to measure formatively. For ease of use, 6-items were used to measure reflectively and 13-items measured formatively. To measure a respondents' self-efficacy, we asked them to rate their ability to complete several tasks found in the business incubation environment (Bandura, 1986). The instructions asked survey-takers to rate how confident they are in the task as of now. The degree of confidence was rated on a scale from 0 (*Cannot do*) to 10 (*Highly certain can do*). Lastly, to measure behavioral intent (Intention to use a business incubation program) 6-items were adapted from the technology acceptance model (Venkatesh and Davis, 2000).

This study examines biological sex determined at the time of birth, and gender roles as range of masculine or feminine. Biological sex was evaluated to see whether there is a difference between males and females from a social construction perspective. Gender roles were evaluated as a set of behaviors and attitudes that are considered acceptable for individuals based on one's actual or perceived sexuality and are anchored on notions of femininity and masculinity (Steffen, 2015). Biological sex was measured as a dichotomous male/female variable. Gender roles are measured using the Traditional Masculinity-Femininity (TMF) scale, which was designed to assess central facets of self-ascribed masculinity-femininity (Kachel, Steffens, & Niedlich, 2016).

The Traditional Masculinity-Femininity (TMF) scale, which measures gender roles, is designed as a self-assessment instrument for masculinity-femininity (Thompson Jr & Bennett, 2015). The TMF consists of a 7-point-scale with six items: one for gender-role adoption ("I consider myself as..."), one for gender-role preference ("Ideally, I would like to be..."), and four for gender-role identity ("Traditionally, my 1. interests, 2. attitudes and beliefs, 3. behavior, and 4. outer appearance would be considered as...") in order to measure an individual's gender-role self-concept in a parsimonious way (Kachel et al., 2016). We also identified the relevant control variables using established scales. All items developed were first tested for face validity and then for preliminary convergent and discriminant validity through a pilot study.

Data Analysis

We employ Partial Least Squares (PLS) regression analysis, structural equation modeling, as well as redundancy analysis to statistically examine the relationships between the dependent construct (intention to incubate) and the three independent constructs: perceived usefulness of business incubation, perceived ease of use of business incubation, and self-efficacy. In PLS-SEM, relationships among latent variables are estimated and tested within the context of a measurement model, essentially using a combined regression and factor analysis within the same statistical procedure (Hrivnak Jr, 2009). Measuring a construct using two sets of measures is known as redundancy analysis (Chin, 1998), where one set of measures are reflective and the other formative. In this study, two sets of items were developed to measure each of the perceived belief constructs. One set of measures contained the reflective measures (usefulness, ease of use, and

⁴ Where the constructs are novel, in the absence of direct measures, proxy measures were created.

self-efficacy) that tap into the general feeling of the variables. The second set of measures (selection, program, and graduation) attempted to capture a comprehensive set of formative indicators that help create that perception. General beliefs and attitudes are formed from specific beliefs and attitudes (Chin, 1998). For example, the general beliefs about self-efficacy, usefulness, or ease of use of business incubation are formed from beliefs about specific components of business incubation. Accordingly, this research modeled specific beliefs arising from perceived beliefs about the incubation selection process, program, and graduation expectations as shown in Figure 1. Additionally, common methods bias was controlled by using a common marker variable in the measurement model (Podsakoff et al, 2003; Valence, Dastous, & Fortier, 1988).

Results and Discussion

This study sought to analyze influential behavior and better understand how nascent entrepreneurs' perceptions form intention using the theory of planned behavior, the technology acceptance model, and related social-psychology theories. In addition, we examined whether biological sex or gender roles **moderate these effects**. Therefore, the dependent variable in this study is an intention to incubate. Table 1 presents the descriptive statistics for the regression sample. As it can be seen, the research team collected 180 female responses (52%) and 164 male responses (48%). The sample of respondents was ethnically diverse, with 49% identifying as Caucasian (white) and 51% identifying as minority (non-white). In addition, of the minority respondents, 24% were African American (Black), and 11% were Hispanic/Latino. The sample was also diverse by age and education. As a part of the study, the research team gave an extensive definition of business incubation and the process of how it works. The definition was critical because most of the respondents were first-time entrepreneurs and may not have been familiar with the business incubation process.

[Insert Table 1 about here]

To examine the links between the observed and latent variables, exploratory factor analysis (EFA) was conducted to help determine how many items uniquely measured ease of use, usefulness, and self-efficiency. Although most of the measurement scales have been used in previous literature, EFA was conducted because the scales were altered to fit the business incubation arena. Confirmatory factor analysis (CFA) was then performed to test the measurement structure of each latent construct. Table 2 reports the detailed information about CFA.

[Insert Table 2 about here]

Using PLS-SEM analysis the research team validated the outer model by testing and checking convergent and discriminant validity and reliability for all constructs. Fitting the inner model as the second step was accomplished primarily through path analysis with latent variables. Evaluation of the reflective measurement model, internal consistency considers two elements for evaluation: Cronbach's alpha and composite reliability (Hair et al., 2013). Considering the exploratory nature of the research, the results indicated robust values for both composite reliability (0.84 to 0.95) and Cronbach's alpha (0.71 to 0.96). All alpha and composite reliability values are well above the threshold of 0.7, indicating excellent reliability for each construct (Nunnally and

Bernstein 1994). To evaluate the convergent validity, as suggested by Fornell and Larcker (1981), each average variance extracted (AVE) is above the minimum of .05, ranging from 0.56 to 0.61, indicating that convergent validity is well satisfied (Hair et al. 2012). Discriminate validity was examined based on the Heterotrait–Monotrait ratio. The results show values were also below 0.90 between constructs, further establishing sufficient discriminant validity among reflective constructs (Fornell and Larcker 1981). Detailed information on the correlation matrix for latent constructs can be found in the Table 3.

[Insert Table 3 about here]

The coefficient of determination (R^2) is a measure of the model's predictive accuracy and represents the amount of variance in an endogenous construct explained by all exogenous constructs linked to it. Henseler et al. (2009) indicated that 0.67 is substantial, 0.33 is moderate, and 0.19 is weak when predicting accuracy for R^2 values respectively. Accordingly, we find all the models of this study are good at explaining the data with high R^2 values (Henseler, Ringle, & Sinkovics, 2009). The R^2 values for the constructs of intention, usefulness, ease of use, and self-efficacy are 0.508, 0.528, 0.342, and 0.498, respectively. Overall, our models provide a solid predictive accuracy.

Figure 1 presents the hypothesis test results from the path analysis. Hypothesis 1 explored the relationship between usefulness and intention to incubate. A nascent entrepreneur's perception that participating in a business incubation program will increase firm performance, which would be positively associated with his or her intention to incubate. The results indicated that the path from the usefulness to the intention of incubate was positive and significant ($\beta=0.354$, $p<0.001$). This result supports that incubators are generally considered as a useful tool for nascent entrepreneurs. H1a assumed that gender moderates this relationship. The multi-group analysis (MGA) for biological sex was found to run on two path coefficients, one for male and one for female. The result of the MGA indicated that there is a positive and significant moderating effect of biological sex ($\beta=0.199$, $p<0.01$) on the relationship between usefulness and intention to incubate. Thus, H1b is supported. The result of TMF (gender roles) suggests usefulness is negatively associated with the intention to incubate ($\beta=-0.140$, $p<0.001$), which means, compared with their counterparts, entrepreneurs with differentiated gender roles are less likely to find the business incubation program useful. This distinction is likely, as incubators are viewed as offering services for high-tech startups, whereas women entrepreneurs are represented largely among low tech industries (e.g., grocery, lifestyle business).

Hypothesis 2 predicted a positive relationship between the perception of ease of use and the intention to incubate. The results of PLS-SEM analysis show that the path from the ease of use to the intention to incubate was positive and significant ($\beta=0.266$, $p<0.001$). This result provides strong support for the H2 that when nascent entrepreneurs feel business incubation program is relatively easy to use, they are more likely to participate in it. H2a tests the moderating effect of biological sex on the above direct relationship. Using the multi-group analysis (MGA), we find a positive and significant coefficient for biological sex ($\beta=0.019$, $p<0.001$). The result from TMF (gender roles as a socio-cognitive construction), however H2b, shows that although there is no difference in gender perception. The strength of masculinity compared to femininity

was not a significant moderator ($\beta=0.058$) on the relationship between ease of use and intention to incubate.

Hypothesis 3 investigated whether a nascent entrepreneur's self-efficacy is positively associated with the intention to incubate. The results indicated that the path from the self-efficacy to the intention to incubate was negative and significant ($\beta=-0.057$, $p<0.01$). Thus, H3 was not supported. In fact, the results suggest the otherwise, that not only self-efficacy is not enough to entice a nascent entrepreneur to join a business incubation program, but people who are particularly high on self-efficacy are even less likely to participate in incubation programs. Using the MGA, we find a positive and significant moderating effect for biological sex on the relation between self-efficacy and intention to incubate ($\beta=0.104$, $p<0.001$). The statistical result of H3a suggests that there is, in fact, a difference between males' and females' view of self-efficacy on joining business incubator programs. Specifically, compared with female, male entrepreneurs with high self-efficacy are less likely to join an incubator program. In addition, the result from TMF (gender roles) predicted in H3b was insignificant. As shown in table 1, most of the companies surveyed in our study were lifestyle businesses. We infer it means, given the sample of our subjects, nascent entrepreneurs who were mainly in lifestyle industries felt the business incubation programs were not conducive to growing their businesses.

Implications and Contributions

The aim of this study is to open the conversation to a richer and deeper understanding of the beliefs and attitudes affecting nascent entrepreneurs' intentions to use a business incubation programs. The study identifies influences affecting women's intention to incubate. The literature already explicitly recognizes the importance and the need to understand if women feel these programs support their entrepreneurial goals (Carter, et al., 2007).

The article brings several contributions into the business incubation literature. First, it extends Ajzen's (1988) generalized theory of planned behavior and the Venkatesh & Davis (2000) technology acceptance model into the entrepreneurship discipline in general and more specifically into the field of business incubation. This study adds further support to the logic of the theory of planned behavior in entrepreneurship research (Carr & Sequeira, 2007; Kautonen, van Gelderen, & Fink, 2015a; Krueger, Reilly, & Carsrud, 2000) to expand the knowledge base into business incubation. Using parallel intention theories help support the understanding of nascent entrepreneurs' reactions during the pre-incubation period.

Second, the research presents multiple variables to offer a better measure of intention (usefulness, ease of use and self-efficacy) using a unique multidimensional model. We assess their joint impact on intention to incubate. The study also integrated a reflective and formative model into the framework to assess the structural portion of the research model (Chin, 1998).

Third, this study looks beyond programmatic fixes for encouraging women into these environments (McAdam and Marlow 2008; 2012) and encourages other researchers in future studies to do the same. The literature asserts the necessity to find strategies to encourage women into business incubation programs (Scharff, 2011). As a practical implication of this study, incubation managers should take action to look deeper into the public perception and inclusivity of their programs. The Global Entrepreneurship Monitor identified there are about 252 million

women entrepreneurs in the world (Elan et al, 2019). Being intentional about increasing the amount of women in the incubation applicant pool through government regulation may need to be assessed (Hechavarria and Ingram, 2019).

Limitations and Future Research

This research leaves out other socio-cultural factors that have been studied by previous scholars as likely determinants to participation in business incubation programs. We recognize the exploratory nature of this study based on a sample of early-stage life-style industry entrepreneurs. These limitations open up avenues for future research. Subsequent studies can be devoted to assessing the model's validity with a sample of entrepreneurs from high growth sectors. In addition, this study does not take into account other demographic, ethnic, or cultural influences that could also affect individuals' intentions to participate in a business incubation programs. Future streams of research may examine the impact of various contextual factors and certain social-psychological aspects that increase nascent women to participate in business incubation programs. Future research could identify additional important variables for increasing use of business incubation programs.

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Table 1: Sample Characteristics

Description	N	
Gender		
Male	180	
Female	164	
Total	346	
Age		
18 - 24	41	
25 -34	80	
35 -44	73	
45 - 54	70	
55 - 64	55	
65 or older	27	
Ethnicity	Female	Male
American Indian/Alaskan Native	7	4
Asian	12	11
African American/Black	48	34
Hispanic/Latino	16	22
Hawaiian/Pacific Islander	1	2
White/Caucasian	82	86
Other	1	0
I prefer not to state	1	1
Two or more races	12	4
Education Level		
Completed some high school	11	
High school diploma/GED	46	
Completed some college	90	
Associate’s degree (2-year degree)	50	
Bachelor’s degree (4-year degree)	88	
Completed some post-graduate	12	
Master's degree	37	
Professional degree (JD, MD)	6	
Previously Owned a Business		
	Yes	98
	No	248
Industry Sector	Female	Male
Wholesale	4	5

Finance and Insurance	0	4
Construction	5	13
Professional Services	13	19
Real Estate & Rental & Leasing	4	5
Transportation	2	3
Manufacturing	3	5
Health Care and Social Assistance	8	5
Arts, Entertainment and Recreation	37	31
Accommodation and Food Service	7	7
Other	42	34
Education	8	4

Table 2: Confirmatory Factor Analysis

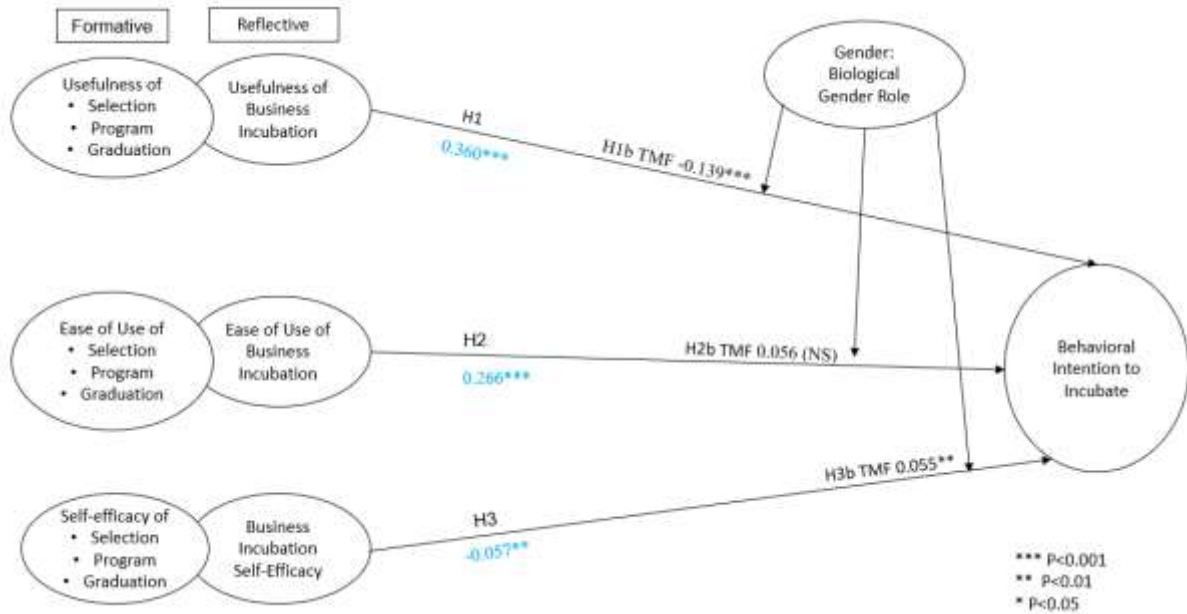
Significant Usefulness Items				
Latent Variable	Indicator	Level of Significance	Path Coefficient	R ²
Selection	Projecting the number of jobs my business will create over the next 5 years would be a helpful exercise for my business.	0.071*	.787	59.7%
	Articulating the market opportunity or business opportunity for my business during the selection process would be a useful exercise for my business.	.001***		
	Creating a business plan and having it evaluated by the selection committee would enhance my skills and knowledge needed to effectively grow my business.	0.012**		
Program	Getting assistance with access to financing or capital during the incubation phase will improve the financial viability of my business.	0.090*		
	Getting access to business training sessions (like social media, managing people, creating an advisory board) during the incubation phase would improve my ability to enhance the skills and knowledge needed to effectively grow my business.	0.001***		
Graduation	Graduating from a business incubation program would enable me to increase my business profitability.	0.012**		
	Graduating from a business incubation program would make it easier to grow my business	0.056*		
Significant Ease of Use Items				
Latent Variable	Indicator	Level of Significance	Path Coefficient	R ²
Selection	As a part of the selection expectations, I would find it easy for me to discuss the scalability or growth potential for my business.	.084*	0.690	44.2%

Program	Learning how to access and use the amenities of the business incubation facility (such as the maker lab, social media lab, conference rooms, and private offices) would be easy for me.	.013**		
	Learning the concepts in the business incubation training sessions, such as digital marketing, tax planning, advisory board selection, and understanding legal risks, will be easy for me to master.	.043**		
	I would find the on-site experts in the business incubator easy to access when I need their services.	.000***		
Graduation	It is easy for me to complete the business incubation program and graduate as a growing business.	.001***		
	I would find it easy to fail and restart my business in a different direction with minimal business losses after graduating from a business incubation program.	.095*		
Significant Self-Efficacy Items				
Latent Variable	Indicator	Level of Significance	Path Coefficient	R ²
Selection	Q28_1: Register your business with the city or state you reside.	.083*	.756	53.8%
	Q28_2: Commercialize the product or service within two years.	.015**		
	Q28_3: Create a business plan.	.037**		
	Q28_4: Create a 5 year financial forecast.	.094*		
	Q28_5: Demonstrate a strong market demand for your product or service.	.018**		
Program	Q31_1: Locate your main business office in the business incubator.	.051*		
	Q31_3: Oversee the managerial aspects of the business.	.000***		
	Q31_6: Attend monthly meetings to give the incubator manager progress updates on your business.	.072*		
Graduation	Q34_2: Create a company with rapid growth.	.034**		

Table 3: Correlation Matrix for Latent Constructs

	General Perceived Ease of Use	General Self-Efficacy	General Perceived Usefulness	Intention to Incubate	TMF	Cronbach's alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
General Ease of Use	0.760					.758	0.844	0.575
General Self-Efficacy	0.410	0.757				.917	0.933	0.582
General Usefulness	0.548	0.413	0.781			.854	0.903	0.614
Intention to Incubate	0.538	0.290	0.592	0.828		.914		
TMF	-0.105	-0.092	-0.038	-0.122	0.904	.955		

Figure 1: Results of the Path Analysis



DXB247

VITALITY FACTORS OF SMES – A HOLISTIC APPROACH

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ABSTRACT

A lot of research has dealt with successful management of enterprises, successful entrepreneurs or managing company growth. However, there is a shortage of studies concerning a holistic management of company system in its context. The aim of this study was especially to find out empirically the most important vitality or success factors of SMEs seen by entrepreneurs, chairmen of entrepreneurial associations, financiers, and founders of enterprises, municipal decision makers, trade promoters and corresponding representatives of industrial and commercial activity in the area. The study was based on multidimensional empirical data analyzed in a systems approach framework. The purpose was not to map earlier studies and results but to find out in systems framework the views of local actors related to SMEs' success. A framework of the vitality factors covering all three effectiveness dimensions, input, process and output effectiveness of an open system was presented. Nine vitality or success factors of SMEs were formed using a factor analysis. From the point of view of implementation, the study produced useful framework of essential vitality factors, which SME entrepreneurs, trade promoters and municipal decision makers should know in order to be successful in managing, developing and supporting SMEs in an open environment.

Keywords: Systems approach, SMEs, management, success or vitality factors

INTRODUCTION

In order to find out the success factors of SMEs, of course, the entrepreneur is the key force. Certain personal characteristics and behavior patterns may be beneficial when running an enterprise, that is entrepreneurial personalities differ from the general population (Routamaa, V. & Miettinen, 2007; Routamaa 2008). Correspondingly, certain personalities may have an interest in enterprising but have some difficulties with hard financial affairs (Brandt & Routamaa, 2010). Financial criteria are often considered to be the most appropriate measure of business success, but also Walker and Brown (2004) stated that many small business owners are motivated to start a business on the basis of lifestyle or personal factors. Many studies have focused on the entrepreneurs' tenacity or personal importance in success. For example, Baum, Locke, and Smith (2001) empirically tested a multidimensional model of venture growth, with one of their main predictors being passion. They found that entrepreneurs' traits, including tenacity, proactivity, and

passion for work, exerted positive effects on venture growth. Baron and Markman (2003) found that self-reported expressiveness (one's tendency and ability to express emotions) was positively related to entrepreneurs' business incomes and their companies' sales revenues. Ramukumba's (2014) research established that attracting repeat customers and the performance of the product are the critical success factors that can lead to the sustenance of SMEs. The study concluded that the resource-constraint SMEs need to focus on critical success factors to build competitive advantage to stay competitive amidst the challenges from globalization and liberalization.

More recently, Awwad, Shibani & Ghostin (2022) found that small and Medium-sized enterprises (SMEs) are lagging behind in adopting and implementing this new technology. This slow adoption, has led to a competitive disadvantage for SMEs. Lateef & Keikhosrokiani's (2022) findings revealed that there are some key success factors such as knowledge management, technology orientation, market intelligence, and orientation and entrepreneurial orientation, which affect business intelligence implementation in SMEs. The other factors such as the organizational resources, management structure, and organizational culture were found to be insignificant success factors for the implementation of business intelligence in SMEs. Wahab et al. (2022) found that SMEs may consider the soft and hard factors in order to achieve the operational excellence. The soft and hard factors include process management, organizational culture, leadership style, human resource management, operations strategy and organizational structure. Samadzad & Hashemi (2022) concluded that the most important success factors identified were 1) Business environment, 2) Capital availability, 3) Business support, 4) Leadership and Management, 5) Business characteristics, 6) Individual factors, 7) Government Support, 8) Infrastructure, 9) Human Resource Management and 10) Networks/Partnerships

The findings of a Canadian pilot study (2003) suggest that the primary factors driving firm growth are owner's growth intentions and diversity of managerial ability. Adizes (1979), Churchill & Lewis (1983) and Flamholz (1986) have analyzed owner managers' ability requirements, necessary skills and management risks at the stages of company growth. Those models purpose is mainly consider how to move from an entrepreneurship to a professionally managed firm. However, there is a shortage of studies concerning holistic management of company system in its context. The aim of this study is especially to find out empirically the most important vitality factors of SMEs seen by entrepreneurs, chairmen of entrepreneurial associations, financiers, founders of enterprises, municipal decision makers, trade promoters and corresponding representatives of industrial and commercial activity in the area. A SME is considered as a part of larger environment as an open system.

Based on systems approach, every organization can be seen as open system, which is dependent on the environment (Kast & Rosenzweig, 1972). The contingency approach being made up to diverse studies has brought the most important contextual variables, that is, the contingencies affecting the system to be known. The effectiveness of the system depends on the ability to acquire input resources, transform them in the system's inner process into diverse outputs valued by

different interests. That is, an entrepreneur as well as other staff has to manage not only the inner process but also a large circle of interest groups, and to co-operate with the interests. As Daft (2009) has presented, the system effectiveness can be assessed in terms of input, process and output effectiveness. These three approaches serve as holistic method to consider the success of SME's, too. A successful management must take into account all these effectiveness dimensions.

As an open system, a SME is strongly dependent on its environment. The success of a SME is not only dependent on its management's skills but also on the investment of efforts of the outside actors in the area. The more competent network between the staff of enterprises and outside actors, the more successful company, can be assumed. Success of a SME requires a successful management at the single system level but also an appropriate area management as a part of the environmental system. To be successful at macro level presumes proficient management at local area level, too.

The aim of the study is to find out the most important vitality factors of SMEs seen by entrepreneurs, trade promoters and public sector decision makers in the area. Consequently, a framework of the most important success factors covering all three effectiveness dimensions, input, process and output effectiveness of an open system will be presented. The aim of this study is not to review and continue this kind of study concerning especially the entrepreneur or either success studies, in general, but give holistic results of an empirical study on entire system of a SME. That is, this study concerns the success factors of a SME as an open system as a part of its area environment (see Fig. 1).

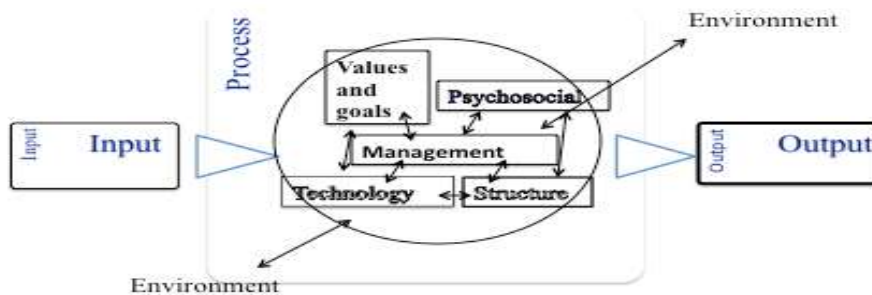


Figure 1. Organization as a system.

Input effectiveness deals with the ability to acquire work force, raw materials, information, finance, etc. Process effectiveness concerns functioning of subsystems (management, psychosocial, structure, technology, and value and goal subsystems) flow of information, and use of internal and external feedback, for example. Output effectiveness deals with products,

efficiency, quality, etc. The study is especially based on multidimensional empirical data analyzed in a systems approach framework.

MATERIALS AND METHOD

First, a preliminary study was executed in order to find out factors explaining the success of a SME. The half-structured questionnaire covered open questions of most important vitality issues are seen to be for a SME, and what kind of tacit knowledge could be found as a reason for company success. Further, a questionnaire of 135 items sorted out the single predictors that could explain the SME success from the point of the respondents' opinion. The respondents were entrepreneurs from different lines of business, chairmen of entrepreneurial associations, financiers, founders of enterprises, and trade promoters representing the system environment. At the next phase, 50 most important success items based on the preliminary study were ranked by 125 respondents representing entrepreneurs, trade promoters and corresponding representatives of industrial and commercial activity, and municipal decision makers. As assessed by the respondents in the primary study, the most important (and also least important) vitality items (issues of assumed success determinants) were identified.

Further, based on those most important success items, nine success factors of a SME were formed using a factor analysis. The factors were: (1) Inputs, (2) Area, (3) Management, (4) Development, (5) Products, (6) Technology for customers, (7) Success Transmits, (8) Experiences and knowledge, and (9) Value and imago. Consequently, these success factors were presented in terms of different effectiveness viewpoints that are input, process and output. The success factors were also considered from the point of view of the five subsystems of the system organization. Additionally, the factor analysis was done from the system theory point of view fitting factors in the nature and the level of management control, that is internal/external and weak/strong control.

RESULTS AND DISCUSSION

The most important success items or issues identified by the respondents were ranked. From the whole ranking list of success issues, test unit equivalence items and impurely loaded issues were excluded. Thirty-three most important single success items or issues of companies identified were:

- | | |
|--|--|
| 1) Availability of raw material | 8) Company's value |
| 2) Company's customer orientation | 9) Vitality in the region |
| 3) Availability of labor | 10) Ability to create experiences |
| 4) Continuous development of the company | 11) Quality of raw material |
| 5) Competitive advantage on the markets | 12) Number of innovations in the company |
| 6) Company's visionary | 13) Region has a wide industry mix |
| 7) Products of the company | 14) Company's management style |
| | 15) Prices of raw material |

- | | |
|--|--|
| 16) Key people of the company's | 26) Township treats the companies equally |
| 17) Success of others encourages | 27) Region has a intellectual (mental) management team |
| 18) Township's daycares and schools | 28) Level of technology |
| 19) Company's functional effectiveness | 29) Company's profit earning capacity |
| 20) Management's capabilities | 30) Owners' personal financial commitment |
| 21) Strong and charismatic leader | 31) Flexibility of company's resources |
| 22) Company's owners "have a face" | 32) Company's image |
| 23) Stability of labor | 33) Company has tacit knowledge |
| 24) Ability to share knowledge | |
| 25) Renewal capacity of the cluster | |

Using factor analysis, success factors were formed. Based on the 33 success items left, nine success factors were obtained:

Factor	Eigenvalue	Var.expl.%	Cumulative%
Factor 1 –Input	10,684	32,4	32,4
Factor 2 –Region	2,522	7,6	40,0
Factor 3 –Management	2,132	6,5	46,5
Factor 4 –Development and Innovations	,622	4,9	51,4
Factor 5 –Output	1,512	4,6	56,0
Factor 6 –Technology for Customers	1,183	3,6	59,6
Factor 7 –Success Transmits	1,121	3,4	63,0
Factor 8 –Experiences and Knowledge	1,067	3,2	66,2
Factor 9 –Values and Image	1,013	3,1	69,3

The success factors show nine most important dimensions of successful companies. However, to see in more detail the content of the success dimensions, the issues included will be presented. Factor loadings of each issue were mostly high from .436 to .803, only two were under .500. Next, the contents of the success factors and their factor loadings and means of assessment are presented. The means prove the relative valuations of each issue.

Factor 1 Input

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Availability of raw materials	.799	5,53
2. Stability of labor	.676	5,50
3. Price of raw materials	.657	5,35
4. Quality of raw materials	.631	5,68
5. Township (or district) treats entrepreneurs equally	.557	5,21

Input illustrates the required input that company need and their quality. It is interesting that stability of labor is included instead of availability of it. Input represents an external source of success.

Factor 2 Region

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Region has a good industry mix	.767	4,92
2. Region has an intellectual (mental) management team	.669	4,01
3. Township's day care and schools	.638	4,90
4. Availability of labor	.585	5,61
5. Vitality of the region	.568	5,27

Region describes company's environment, region and its vitality and diversity. This is also an external source of success.

Factor 3 Management

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Company's key people	.695	6,20
2. Company's owners have a face	.687	5,20
3. Capability of management	.642	6,39
4. Owners' personal financial commitment	.562	5,57
5. Company's management style	.529	6,10
6. Possession of tacit knowledge	.436	5,47

This factor describes managers', key persons', and owners' ability to carry out business operations successfully. This factor includes the most influential success issue: capability of management. Management is the most important internal source of success.

Factor 4 Development and innovations

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. The number of innovations in the company	.765	5,53
2. Continuous development	.696	6,16
3. Company's visionariness	.646	5,78
4. Company's transformational capability	.598	5,98

The factor of development covers innovations and continuous development. A company cannot stay put. This factor is considered to be internal source of success.

Factor 5 Output

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Company products	.780	6,13
2. Competitive advantage in the market	.761	5,95
3. Company's quality of technology	.553	5,59
4. Company's profit earning capacity	.423	6,18

This factor includes company's products, productivity, technology, and performance technically and economically. Output is an internal source of success.

Factor 6 Technology for Customers

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Company's customer orientation	.725	5,90
2. Company's functional effectiveness	.635	6,08
3. Flexibility of company's resources	.569	5,68

Factor describes company's production process, flexibility, and ability to serve the customer. This factor is an internal source of success.

Factor 7 Success Transmits

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
1. Success of others encourages	.737	5,13
2. Powerful and charismatic leader	.560	5,02

This factor illustrates company's enthusiasm in operations and a desire to be successful with the help of strong management. This factor is another internal source of success.

Factor 8 Experiences and Knowledge

<i>Success item</i>	<i>Factor Loading</i>	<i>Mean</i>
Ability to create experiences	.803	4,53
Ability to share knowledge	.647	5,26

Factor includes company's capability to communicate with the customer on an emotional and factual level. Ability to create experiences is strongly loaded on this factor. Factor represents an external source of success.

Factor 9 Values and Image

Success item	Factor Loading	Mean
Company’s values	.685	5,03
Company’s image	.477	5,69

This factor describes company’s true values and image in the eyes of interest groups. This factor can be considered an internal and external source of success.

The factor analysis was done from the system theory point of view fitting factors in the nature and the level of management control

Success factor	Internal/External	Management Control
Input	External	Weak
Region	External	Weak
Management	Internal	Strong
Development	Internal	Strong
Output	Internal	Strong
Technology for Customers	Internal	Weak
Success Transmits	Internal	Weak
Experiences and Knowledge	External	Weak
Values and Image	External/Internal	Strong

When observing the factors, there is a clear division between internal and external sources of success; only one mixed factor was found. This is an interesting discovery when considering the system theory. The order of factors was following when organized by mean score:

Success factor	Mean	Internal/External
Output	5.96	Internal
Technology for Customers	5.89	Internal
Development	5.86	Internal
Management	5.82	Internal
Input	5.45	External
Values and Image	5.36	External/Internal
Success Transmits	5.08	External
Region	4.94	External
Experiences and Knowledge	4.89	External

Internal sources of vitality are on the top of the list when factors are organized by the mean score. Output, productivity and level of technology had the highest mean scores. The results can be interpreted so that output is the main objective of companies, even though in factoring input has a strong loading. This corresponds with the open questions, which assessed company's products as the most important success factor. In conclusion, company's products and productivity, customer orientation, continuous development and company's management are a connected success clustering.

When observing the factors, there is a clear division between internal and external sources of success. Internal sources of success are on the top of the list when factors are organized by the mean score. Output, productivity and level of technology had the highest mean scores.

CONCLUSIONS

This study concerns the success or vitality elements of SMEs' management as a part of wider study on management success factors at company, cluster, and regional levels. The success factors were also considered from the point of view of the five subsystems of the system organization. From the point of view of implementation, the study produced holistic framework of essential success factors, which SME entrepreneurs, trade promoters and municipal decision makers should know in order to be successful in managing, developing and supporting SMEs in an open environment. Also in a small business, all three effectiveness approaches, that is input, process and output effectiveness should be taken into consideration. SME-managers have often quite low and/or technically oriented education. Management and leadership training is usually not the first choice they use their limited time. That is why it should be important to introduce them to take into consideration the holistic view of the business based on systems approach.

To manage successfully a SME the entrepreneurs and other staff must take into consideration the system complex as a whole:

- Three effectiveness approaches: input, process and output effectiveness
- Interaction of different subsystems
- The relationships between system environment and subsystems
- A change in one subsystem affects the whole system
- Several success factors consisting of important single success issues
- Several success factors concerning each phase of the input-process-output system including environments

Single company management, outside trade promoters, and public sector officials in the area and elsewhere should know the critical vitality factors in order to support the company. Capability of management was seen the most important single success items by most of the interests groups. It

does not mean only excellent management and leadership inside the company but also active participation in political and societal activities in the environment in order to take care of entrepreneurs' interests.

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DXB248

Start-up Ecosystems in China: the key elements of the entrepreneurial culture in Macau.

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Keywords: start-ups, entrepreneurial culture, competitive collaboration, Macau, Hengqin, digitalization

The understanding of the innovation environment is critical for regional development. Start-ups are key to developing innovation environment and have been the focus of many comparative and individual case-studies, focusing on different localities (China, India, etc) and specific products (fintech). Researchers have demonstrated that innovation and nurturing of start-ups does not necessarily happen similarly to Silicon Valley (eg Switzerland or Singapore) and scaling up is not always the goal or corollary of success.

Macau is a special administrative region (SAR) of China with population of around 600.000 people, economically relying predominantly on gaming and tourism. As a SAR it has many privileges and autonomies (granted by the PRC under the framework of one country, two systems) – free economic system (Yen, 2022) tax regime, migration law, customs. Until 2020 it attracted a great number of foreign workers and expats to participate in the boom propelled by gaming industry development. Diversification of Macau’s economy is a key topic and developing a competitive startup ecosystem is a challenging undertaking.

This study poses the key research question:

What are the structural and cultural constraints for Macau to become a start-up and innovation hub?

Through the qualitative analysis of interview data and ethnographic observations in 2020-2022 and analysis of secondary data, this paper will identify the characteristic features of Macau as a “small-scale” innovation system within a larger network of relations with Zhuhai (SEZ) and Greater Bay Area urban megacluster and expand on the notion of *competitive collaboration* of Macau and Hengqin (special trade zone) as well as Macau and Hong Kong.

While Macau is a small city for Asian and Chinese standards, it is an interesting case – firstly, it is a case of an urban prosperity model that was based on single industry, secondly, Macau is hailed as an important launchpad (platform) for foreign (primarily Portuguese-speaking) companies, that are interested in doing business in China and needing legal and financial consulting, thirdly, it is the city with a developed university infrastructure for academic, applied research and talent nurturing. Finally, due to the scarcity of space Macau is being developed as a case of administrative integration between the municipality of Hengqin – a special trade zone of the Zhuhai SEZ.

DXB253

**THE PERSONALIZED LEARNING ECOSYSTEM
BRINGING ENGAGEMENT, INNOVATION, AND IMPACT INTO YOUR
CLASSROOM!**

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INTRODUCTION

AACSB introduced the three pillars of engagement, innovation, and impact as cornerstones of its accreditation process. Accordingly, 'Assurance of Learning' is the process by which colleges determine whether students know what the faculty think they know

This abstract is to introduce the constructs of “The Personalized Learning Ecosystem” to aid educators safeguard that every student has access to a healthy, engaged, innovative and impactful learning Experience.

“Ecosystem” is defined in Oxford Languages, as a biological community of interacting organisms and their physical environment. Every ecosystem is characterized by its vibrance, interactions, energy transferences and growth.

In our classrooms, we have four different types of learners. Visual learners, auditory learners, Kinesthetic learners, and reading/writing learners. However, how do we approach our classes? Often, in one simple way that we have designed that we think will benefit all of the students.

According to Study.com, (<https://study.com/blog/the-6-types-of-students-you-ll-have-in-your-first-class.html>) there are six types of students you will have in your first class...

THE OVERACHIEVER: The eager beaver in the classroom that is willing to go the extra mile to let you know he/she is thorough, detail oriented and never late to class. School is a game that needs to be won. Strategy: Nudge his/her comfort zone to think without a box.

THE UNDERCHIEVER: The dreamer that does not bring his/her body, mind, and spirit to class and wants to just get by. In reality, could do much better than the overachiever and can think without a box, responding well to one-on-one engagement. Strategy: find the spark and ignite the passion and allow its cultivation.

THE TOUGH ONE: This individual is behaviorally challenged, with defiant attitude, strained dynamics with peers and no real “home-life”. This one could be one of your favorites because of the need to grow up quicker and may need one-on-one coaching.

Strategy: May have to devote good amounts of time and energy in listening and understanding the academic and personal struggles.

THE CLASS CLOWN: The true joker who finds humor in anything that happens in the classroom and lightens up the class learning atmosphere at odd times. Strategy: Set up well established and enforced boundaries and set up appropriate time for inputs.

THE TEACHER'S PET: An individual that is always ready with answers and highly reactive to keeping the class warm and enlightened and you very appreciated. A volunteer by nature for all class activities. Strategy: Being a moderating influence for overactive attention gaining attempts.

THE GOLDEN STUDENT: An individual who genuinely appreciates learning, is smart and knows reason for being in the classroom. Strategy: Challenge this individual at every opportunity.

"Seventy percent of... kids who are high ability are underachieving."

... Don Ambrose, Rider University

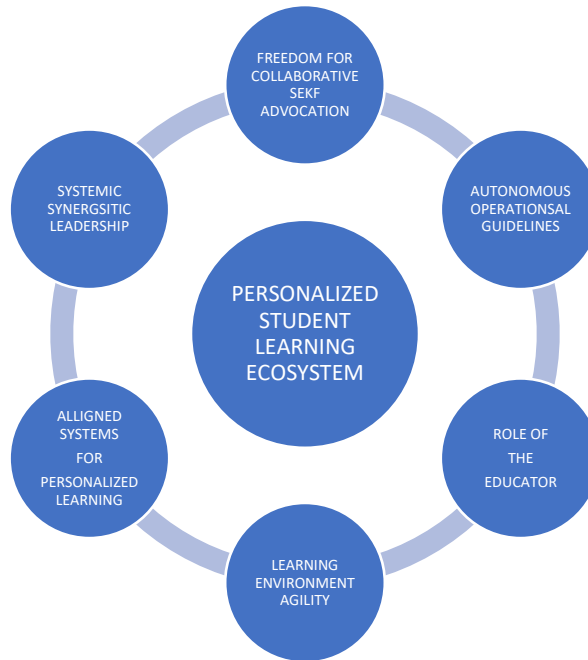
Given the composite of students in our classrooms, it is imperative that we design a Personalized Student Learning Environment that will benefit the various constituents that make up our classrooms rather than one dictatorial, instructor centered model in the learning environment. The benefits of personalized learning environment in our classrooms are highly obvious through research.

Dreambox cites a study that shows “93%” of educators agree that personalized pacing would be beneficial to students to close achievement gaps or accelerate learning.

<https://www.studylnlearn.com/blog/personalized-learning/>

Personalized learning is an educational strategy that aims to tailor learning to the strengths, needs, skills, and interests of each student. Students learn faster when they are given individual attention and guidance. Personalization can help students achieve better results. Each student is different, and they have their own learning style, strengths, and areas for growth. Students are encouraged and challenged to do their best through personalization. Personalized learning focuses on activities that are tailored to each student's strengths and interests.

Understanding the “Personalized Learning Ecosystem” can deliver higher student engagement, higher motivation, less time wasted, fast understanding of the subject matter, learning at student's own pace, opportunity for exploratory student learning, active student learning environment, improves shortcomings and weaknesses of students, and students taking ownership of learning.



The Ecosystem components

Collaborative Self-Advocation

This encompasses the abilities of students to be learning anonymously, solving issues/problems in a collaborative manner, and being creative self-advocate. We, as facilitators of educational process should be able to customize learning pathways for our students.

Teacher’s Role

This role demands that we become a learning coach and act as a resource creator and designer of learning experiences for our students. This role requires higher levels of talent, critical thinking, expertise, and commitment to enhance the learning environment for the students.

Personalized Learning Model

This involves incorporating learning paths for individual students, defining behaviors and roles, and including Life Ready Best Practices and directions. The most important element in this learning model is the framework within which we can customize and operate anonymously with conscious assurance of classroom culture of safety, vulnerability, and purpose.

Agile Learning Environment

This involves agility in learning through technology and physical classroom configurations that allow collaborative learning.

Aligned Systems

This component deals with aligning the curriculum, assessment, communication, and professional leaning systems emanating from the mission of the organism germinated by the members of the organization. Aligned Systems dispel the concept of “One-Size Fits All” mindset.

Synergistic Leadership

This component demands that the leaders become culture catalyst, collectively designing system protocols and develop systems-thinking entities to advance student achievement and personalized student learning and encourage behaviors and roles conducive to PLE growth.

CONCLUSION

According to Sarah O'Rourke (<https://www.ringcentral.com/us/en/blog/benefits-personalized-learning/>), "Personalized Learning" is a formidable new approach to education. This methodology allows students to determine what they learn and the pace they learn. Technology and the communication abilities allow this process to thrive.

The benefits of Personalized learning are...students learning at their own pace, students taking ownership of their educational goals, increases their technological skills, allows students to learn collaboratively from each other, sidesteps major assessment challenges, prepares students to assimilate better in the new economy.

"Personalized Learning" is the next step to blended learning, competency-based learning, flipped classrooms and the like.

This abstract is designed to introduce the constructs of "The Personalized Learning Ecosystem" to aid educators safeguard that every student has access to a healthy and innovative Learning Experience.

DXB256

CONTEXTUALIZING THE IMPACT OF ENTREPRENEURSHIP EDUCATION AND TRAINING: MICRO, SMALL, AND MEDIUM SIZED ENTERPRISES (MSMEs) IN THE STATE OF TAMIL NADU, INDIA

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ABSTRACT

Given the size and diversity of India in terms of multiple languages, religions, ethnicity, and caste system, it is a step challenge to implement coordinated policies and programs with a top down approach. Among the 28 states and 8 union territories, there exist significant differences between the urban and rural areas. Widespread inequality of wealth and income, gender bias, and unemployment impede the country's growth in numerous ways. In view of the unique nature of India's diversity it is relevant to use a contextualized approach to study the impact of entrepreneurship education, training, and mentoring programs that are meant to meet the demands of diverse communities in Tamil Nadu.

Key words: Contextual Analysis, Entrepreneurial Ecosystems, Self Help Groups (SHG), Street Vendors, Incubators and Accelerators, and Startups

INTRODUCTION

India is a complex and diverse country in terms of geography, demographics, languages, religions, social and cultural differences. Moreover, the ideological differences that exist among national and regional political parties, and other stakeholders also make it a challenge to frame policies and programs that would lay the foundation for a robust and acceptable entrepreneurial ecosystem needed to foster enterprise development. Considering this unique context, it is imperative for the Government of India (GOI) and the states to work in tandem and fine tune the programs in order to synchronize with the characteristics of the regional and local environment. The GOI has envisioned a number of programs to create opportunities for self-employment, enable academic and research institutions to collaborate in establishing technology business incubators (TBIs), and expand school and university curriculum across all disciplines with courses on entrepreneurship, creativity, innovation and problem solving.

Entrepreneurship paves way for self-employment, increased family participation, opportunities for additional employment, long-term sustainable livelihood, and self-liquidating credit obtained from financial institutions. The government at all levels emphasizes the need for promotion and protection of entrepreneurs for the primary reasons of income equality, financial inclusion, empowerment, and equity. The government has also enacted legislation to formalize "street vendors" to function as a "legitimate" business and mandated all the states to enact legislations to facilitate "street vendors" to engage in business without any fear or favor. Thus, the entrepreneurial ecosystem in India with specific reference to the state of Tamilnadu requires an analysis with emphasis on its impact on Micro, Small and Medium-sized Enterprises (MSMEs) as follows: (i)

Efficacy of entrepreneurship education, training and mentoring; (ii) Self-employed “Street Vendors,” (iii) Women entrepreneurship, (iv) Agro-based innovations and “startups” and (v) technology-based incubation programs and “startup” initiatives by educated/graduates interested in entrepreneurship.

METHODOLOGY

The study will use data bases available at the two major institutions (noted above) that serve as nodal points of entrepreneurship education, training and mentoring during the past two decades. The study cites examples of about 80 case studies of new successful initiated by different cohorts of trainees (representing different backgrounds in socio-economic conditions, education, gender, and prior experience) from different sectors (such as agriculture, horticulture, manufacturing, sales, marketing, and other services). The study tests the relevance of the concept of contextualization of entrepreneurship education and training and its efficacy in Tamil Nadu. It seeks evidence if the nodal agencies adapt, develop, and deliver tailor made programs and services to meet the specific needs of the targeted groups and assess its outcomes. The study attempts to analyze the antecedents, performance and challenges of the new ventures and how the managers use institutional resources, including family ties, networks and social capital to navigate the challenges. The final section will include discussion on outcomes and conclusions along with a note on policy implications, limitations of the study and suggestions for future research.

REASONS FOR SELECTION OF TAMIL NADU, INDIA

Tamil Nadu, one of the 28 states and 8 Union Territories is located on the east coast of southern India. Tamil Nadu with a population of 72 million is the fourth largest and third most developed state in India with a literacy rate of 80.3% and a per capita GDP of \$3,400. Agriculture accounts for 13%, Industry 33% and services 54% of the state’s GDP; Tamil Nadu is also a major hub for automotive and software industries. The state accounts for about 700,000 Micro, Small and Medium (MSMEs) enterprises; a significant percentage of adult population are self-employed or in informal sector as street hawkers, road side vendors of fresh food and other services. According to Periodic Labor Force Survey (PLFS) in 2017-2018, Tamil Nadu had the highest rate of unemployed among the developed states in India. Unemployment stood at 7.6% as against the national average of 6.1% in 2018. Nearly 1.5 million students graduate every year and only about 25% of them are employable. Majority of fresh graduates seem to prefer government or private sector jobs and entrepreneurship is not a priority for them. For example, about 2 million graduates applied for 9,321 Group IV category jobs in 2018; about 8.4 million have registered for jobs through employment exchanges.

In view of the dire nature of the labor market, the Government of India (GOI) proposed a number of programs (e.g., Make in India, Skill India, Digital India, Startup India, Ease of Doing Business in India, etc) and the programs are administered in cooperation with the states. The GOI also announced a new Education Policy (2020) that highlight the importance of vocational education and entrepreneurship, and proposed plans to develop entrepreneurship ecosystems that are relevant for different locations and economic sectors. Colleges and schools are directed to hone their curriculum with emphasis on critical thinking, innovation, and problem solving. The current policies and programs are geared towards developing skilled workforce and creating space for self-employment and entrepreneurial opportunities across sectors (agriculture & horticulture,

manufacturing & services) through micro, small and medium enterprises (MSMEs). The definition of the MSMEs is shown in Table 1.

Table 1 Classification of MSMEs in India

Classification of MSMEs			
Not exceeding	Micro	Small	Medium
Investment in Equipment	\$133,000	\$1,330,000	\$6,670,000
Sales Revenue	\$667,000	\$6,670,000	\$33,500,000
Source: Ministry of MSMEs, Government of India			
(\$ estimates are approximate)			

Tamilnadu is home for a diversified manufacturing sector including automobiles, auto components, engineering, pharmaceuticals, garments, textiles, leather, chemicals, and plastics. It ranks first among the states in terms of number of factories and industrial workers. State sponsored institutions such as Tamil Nadu Industrial Development Corporation Ltd (TIDCO), State Industries Promotion Corporation of Tamil Nadu (SIPCOT), Tamil Nadu Industrial Investment Corporation Limited (TIIC), and Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO) are together engaged in the promotion of industrial infrastructure in the state. The magnitude of the state’s contribution to the nation’s economy is displayed in Table 2 below.

Table 2 GDP of Tamilnadu, India

GDP of Tamilnadu, India	
Year (ending March 31)	GDP (\$ million)
2016	179.73
2017	194.16
2018	227.32
2019	233.25
2020	261.85
2021	285.40

Source: Industrial Development & Economic Growth in Tamilnadu, IBEF.org

The GDP growth rate in Tamilnadu has consistently registered a double-digit rate but for its dismal growth in 2021 due the COVID-19 pandemic as shown in Table 3. However, the positive growth rate was much better than many other states in the country and several nations as well.

Table 3 GDP Growth Rate in Tamilnadu

GDP Growth Rate of Tamilnadu	
Year (ending March 31)	GDP Growth Rate (%)
2013	13.75
2014	13.3
2015	10.75
2016	9.68
2017	10.72
2018	12.47
2019	11.27
2020	13.23
2021	5.28

Source: Ministry of Statistics and Programme Implementation, Economy of Tamilnadu
 The state recorded total merchandise exports of \$ 30 billion in 2020 and \$26 billion in 2021. The levels of satisfactory education and abundant availability of skilled labor has attracted major multinational corporations such as Bridgestone (Japan), Cognizant (US), HTC (US), Komatsu (Japan), Panasonic (Japan), Randstad (Netherlands), Roca (UK), Hyundai (South Korea), and Saint-Gobain (France) to make significant foreign direct investment in the state. Such investments have helped the state’s GDP per Capita grow by 145% in ten years as displayed in Table 4.

In Tamil Nadu the Entrepreneurship Development and Innovation Institute (EDITN) a state-owned institute located in Chennai and the Center for Entrepreneurship Development (Cedtn.org) located in Madurai have been offering a range of specifically designed programs to cater to different targeted groups and industries for more than two decades. The proposed study draws from the data available from those two institutions.

Table 4 GDP Per Capita in Tamilnadu

GDP Per Capita (\$) in Tamilnadu	
Year (ending March 31)	GDP Per Capita (\$) at Current Prices
2012	\$1,402
2013	\$1,584
2014	\$1,782
2015	\$1,961
2016	\$2,136
2017	\$2,352
2018	\$2,633
2019	\$2,916
2020	\$3,286
2021	\$3,444

Source: Ministry of Statistics and Programme Implementation, Economy of Tamilnadu

LITERATURE REVIEW OF CONTEXTUALIZATION

Innovative research methodologies redefine the landscape of entrepreneurship with reference to contextualization [Fletcher, 2011]. Contextualization of entrepreneurship helps in accomplishing qualitative outcomes which results in a direct impact on corporate strategy and implementation [Parhizgar, 2007]. The framework of paper is drawn from the contextual entrepreneurship research proposed by Welter [2011], Zahara [2007], Zahara and Wright [2011] and Baumol [1993], spatial proximity [Cohen and Levinthal, 1990], place dependency [Isaksen, 2015] and industrial clusters [Porter, 2000] among others. Contextualization is an important factor in the field of entrepreneurship as it addresses the broad scope and minute differences of diversity. Theories of entrepreneurship have become deep after addressing the subjective elements initially and then enacting the context at the next level [Welter et al, 2019]. A study of diverse national economies finds some focusing on a specialized national strategy while others promote catering to their mass markets [Audretsch et al, 2021]. A bibliometric study of entrepreneurship theories traces similarities among diverse regional contexts but at the same time registers the importance of cultural relationships of guanxi in the local context [Su et al, 2015]. Entrepreneurial action helps transform social structures through detection of opportunity and implementation thereof [McMullen et al, 2021]. Contextualization helps in understanding different dimensions of entrepreneurial activity and integrating different theoretical frameworks [Zahra et al, 2014]. A resource-based theory of contextualization reveals the critical factors of resource constraints and firm informality in emerging markets located in high-technology ventures [Siqueira et al, 2010]. Women entrepreneurs in various developing countries expressed legitimate satisfaction both in the personal and business spheres according to a study conducted among 6,000 female entrepreneurs [Liu et al, 2019]. Entrepreneurial development is hampered in hitherto disadvantaged societies as evidenced in a study in South Africa which may be important for many countries in transition [Swartz et al, 2019].

LITERATURE REVIEW OF CASE STUDIES IN TAMILNADU

The literature on entrepreneurship in India is broad, deep, and extensive. The importance of the context helps us understand when, how, and why entrepreneurship happens [Welker, 2010]. Tamilnadu, India fits into this framework in understanding the economic behavior of its entrepreneurs who detect the opportunities presented and unearth their potential. They operate within the boundaries overcoming the constraints by building informal networks of clusters in their respective domain [Porter, 2000]. Notwithstanding the problem of facing limited resources, the modernization in India is rapidly advancing in all sectors of production. The challenges in the country's unique context such as lack of time management, long-range planning, and entrepreneurship hinder organizational effectiveness in management [Thomas et al, 1994].

The government at central, state, and regional levels has installed policies of liberalized credit, concessional tax rates, tax exemption, tax holiday, and establishment of an association. However, there is a need to enhance awareness among entrepreneurs regarding utilization of services provided by supporting agencies as evidenced in lock-manufacturing units in Dindigul, Tamilnadu [Jeyanthi, G., 2010]. The city of Dindigul is renowned for its brand of locks. The coir industry is native to all of Tamilnadu which has innovatively used the raw material left out of coconut shells. The cottage industry has not registered any significant effect on its business due to the government sponsored training programs. Despite protection and promotion to preserve its large employment potential, the industry struggles in the face of global competition, synthetic substitute products,

and the lack of eco-friendly awareness of consumers [Lavanya et al, 2021]. It provides employment to about 700,000 rural people, 80% of them being women who earn about \$3 per day. The industry recorded \$550 million in exports as it focused on marketing the products globally instead of competing with each other. The loss of the next generation of youths to responsibly hold the mantle is noteworthy as in the case of many native industries. Contextualization is critical for enhancement of the economic impact of entrepreneurship as a study of the initiatives of key venture development organizations in South Africa has found with particular emphasis on academic institutions [Swartz et al, 2020]. Scientists in Vietnam chose their modes of entrepreneurship based on their experience of going through different sets of ideology, systems, and institutional factors [Nguyen et al, 2018].

Another study of entrepreneurs in Vellore District, Tamilnadu reveals that accomplishment of social status is the main entrepreneurial capability of micro enterprises [Babu, C. et al, 2015]. The study also recorded that the entrepreneurs recognize political power as the important capacity of micro entrepreneurs. In a study among the commerce students of Arts and Science colleges in Theni district, Tamilnadu, it was concluded that entrepreneurial traits are important factors in developing prospective entrepreneurs and creating new ventures [Suresh, G. et al, 2014]. The study emphasized the need for help from educational institutions and the government. Women entrepreneurs succeed due to their inherent skills of enterprise even in the absence of family support and a formal knowledge of business as evidenced by a study to evaluate the growth and performance of select women entrepreneurs in Coimbatore District, Tamil Nadu [Thomas, S. et al, 2021]. Entrepreneurs who started industrial units after attending training programs were surveyed all across Tamilnadu including Chennai, Madurai, Salem, Dharmapuri, Dindigul, Erode, Ramanathapuram, Sivanganga, Tiruchi, Villupuram, Coimbatore, Tirunelveli, Kanyakumari; Pudukottai, Virudhunagar, Cuddalore, Tuticorin, and Thanjavur districts [Gnanadas, M. et al, 2008]. The study recognized the Entrepreneurial Development Programs in the state of Tamilnadu and made specific recommendations for an increased degree of success.

THE ENTREPRENEURSHIP DEVELOPMENT AND INNOVATION INSTITUTE (EDII)

This non-profit organization was established in 2001. This serves under the MSME department of the state government to promote entrepreneurship education and self-employment. The MSME sector in the state has provided employment opportunities to about 10 million individuals with a total investment of \$23 billion. Both traditional and modern industries including automobile, auto components, textile, leather, cement, sugar and engineering units offer a promising scope for several ancillary units in the MSME sector besides their contribution to the GDP of the state. The institute has offered a compendium of successful entrepreneurs whose success is the desired outcome of the training offered by the institute under various types of programs. The list of 50 such successful entrepreneurs is shown in Table 5. The institute's strategic plan includes following primary activities:

1. Awareness Generation, Training & Workshops (Comprehensive Entrepreneurship Development Protocol for higher education institutions)
2. Business Facilitation Services (Entrepreneurs Clinic and Mentorship program)
3. Communications & Environment Building (Promotion through Media programs)
4. Incubation (Reduce the failure rates of new born enterprises, support formation and building capacities, support grass-roots innovators)

5. Inclusive Development (Special target group training programs and mobilization workshops)
6. Focus on Social Entrepreneurship (Advisory group on social entrepreneurship, Business opportunity workshops)
7. Training Quality Improvement (Develop training content, Organize regular entrepreneur training programs for trainers)
8. Ecosystem Improvement (Entrepreneurship Promotion & facilitation training workshops)
9. Mainstreaming Entrepreneurship Education (Training of trainers workshops for College and School Nodal Faculty, Embedding Entrepreneurship education)
10. Collaborations and Partnerships on Ed & Innovation (Support Entrepreneurship training in all industrial clusters across the state)
11. Support for Innovation (Startup Mission in Manufacturing)
12. Research and Documentation (Annual Enterprise sample survey on State of Micro enterprises and Entrepreneurship)
13. Infrastructure Development
14. Human Resources Development

The institute recognizes the contribution of the MSMEs to the economy, employment generation, and poverty reduction in the state and the whole country. Some of the difficulties that the MSMEs face include absence of bargaining power, inability to compete due to low revenues, inability to participate in the international marketplace, lack of market intelligence, and lack of access to credit for investment in plant and machinery. The institute promotes cooperative relations among enterprises which operate in proximity besides sharing business interests in products, infrastructure, and coping with external competition. The formation of Clusters makes the initiatives stronger, add benefits of cost-effectiveness, and fosters mutual knowledge and trust.

Table 5 Fifty Successful Entrepreneurs Trained by EDII

S. No.	Name of the Entrepreneur	Business	Employees
1	Anuraj Poopathy	Printing Professionals	18
2	Arul Prakash	Bhiravi Recycling	10
3	Aruna Thayumanavan	Sanjana Jute and non-woven bags	15
4	Ayesha	Ayesh Ethnic and beauty care	
5	Balsaji	Balaji Metal Industries	
6	Bhuvanesh	Suriya Hi Tech Engineering	10
7	Chandramohan	Sports	
8	Chandiran	CKML Paper Products	
9	Deepa	Sri Raghavendra Aqua Products	
10	Dhanapackiyam	Everest Press	
11	Dinesh	Naturals Ayur Wellness Center	18
12	Duraiamy	Star Pickles and Masala	
13	Ezhumalai	Shine Interiors	18
14	Gayathri	S M Compacting	10
15	Geetha	Sri Vigneshwara Collars	12
16	Jansathanan Babu	Annamalaiyar Sweets and Bakery	10
17	Jeyaprakash	Ayyana Polymers	
18	Kalayarasi	Ekala Studio	
19	Kanagaraj	PKP Wheel Alignment	
20	Karthikeyan	K M Knitters	
21	Karthick	Aswini UPDC	15
22	Kavitha	Le Max Spa and Salon	
23	Keerthana Rajesh Kumar	Dhana Export Garments	
24	Lalitha	Powerloom	
25	Dr Ezhil Malar	Malar Festoon and Dentistry	
26	Manikarajan	Manikarajan Powerloom	
27	Mohan	Swam Systems	
28	K Murali	The Ice Factory	
29	Nandhini	Sri Ganapathy Cashews	15
30	Nandhini	Hippo Roof Tiles	12
31	Nithya	Petals Fabric	
32	Pandian	Kathir Sodhir Automation Center	
33	Prabhakaran	Shanmuga Granites	17
34	Prabhakaran	Prabhakaran Lathe Production	
35	Nandha Kumar	Radhika Polymers	
36	Rajesh	Rajesh Powerloom	5
37	Ram Prasad	S R Metal Roofing	12
38	Saveetha Mani	Saveetha Bakery	
39	CK Shiva	CKS Solutions	15
40	Sivasudhan	Sparkray Electronics and Technicals	10
41	Subramanian	Rasee Packing Industries	20
42	Suganraj	Smart Electronics	
43	A. Suganthan	Suganthan Flour Mill	
44	Vasanthi	Om Sakthi Printing Press	
45	Veerasingam	Veerasingam Leather Furniture	
46	Vivek	J V Paper Boards	
47	Mutharaj	J M Engineering	
48	Shanthi	Sakthi Balaji Enterprises	
49	Zaheer Hussain	ARS Engineering	
50	Regan Raj	GPR Tanning	

Source: EDII, A Compendium of Winning Streaks

CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, TAMIL NADU

The Center for Entrepreneurship Development (CED) is a Public Charitable Trust. It functions as an independent state level entrepreneurship development institution. It is recognized and supported by both the Government of India at the national level and by the Government of Tamil Nadu at the state level. The Center recognizes that the foundation of entrepreneurship is ownership. Its mission is to make the trainee understand, actualize, and energize his/her inner potential for positive action and thereby develop ownership. The Center has accomplished a perfect result in its 2,000 alumni and 1,500 students in its 25 years of operation. Its primary activities include entrepreneurship awareness camps in educational institutions, sector-specific entrepreneurship development program, faculty development program in entrepreneurship, women entrepreneurship

development program, skill development courses in specific sectors, non-governmental organization capacity building program, industrial consultancy services, research assignments, and collaboration with other agencies. The CED is home to a designated Information Technology Incubator Center (ITIC) which provides support facilities to the aspiring entrepreneurs in the IT Industry. The start-up entrepreneurs in the IT sector receive all facilities for venture creation. The center grooms the start-up entrepreneurs and provides training to the budding entrepreneurs to establish ventures in the IT sector. During the five-year period 2004 to 2009, the ITIC was responsible for supporting 20 entrepreneurs and the top 12 of them helped create 818 jobs as shown in Table 6.

Table 6 Top 12 Start-up Entrepreneurs in the IT Incubator Center

S. No.	Name of the Incubatee	Number of Employees	Annual Sales Revenue (\$)
1	KSNP Chandra Mahendra Maulee	25	\$54,000
2	Dr. T. Devi Bala	100	\$135,000
3	P. Mohan	5	\$20,000
4	T. Bharath	30	\$34,000
5	Dr. R. Thiruvengada Swamy	637	\$108,000
6	Renganayaki Swamy		
7	G. Elangovan		
8	Dr. V. Thiruveni		
9	Dr. K. Kala	6	\$27,000
10	S. Ramakrishnan	5	\$41,000
11	Dr. V. Mari Venkatachalam	5	\$27,000
12	R. Satish Kumar	5	\$27,000
	Total number of jobs generated due to IT Incubator Center	818	

Source: CEDTN.org

The CED imparts all types of training through its network of ten institutions. Its global outreach extends to countries like Canada and the US, and also to the International Labor Organization (ILO) in serving the cause of women empowerment. Its flagship programs focus on skill development, entrepreneurship education, faculty development, women entrepreneurship development, start-up village entrepreneurship, agri-clinic & agri-business center, and corporate social responsibility initiatives. Table 7 lists success stories of entrepreneurs groomed by the center during the financial year 2012-2013.

The objectives of the CED to promote self-employment and entrepreneurship culture in the state, enhance employability of educated youth through industry specific skill training, women empowerment, and NGO Capacity building for mass employment generation in the rural areas are well served by its numerous initiatives.

Table 7 Success Stories of Entrepreneurs Trained by CED

S. No.	Name of Entrepreneur	Business Activity	Investment (\$)	Monthly Income (\$)	Jobs Created
1	V. Sutharsan	Mobile Repairing	\$12,000	\$500	2
2	N.J. Thamodharan	Food Processing	\$6,000	\$300	3
3	D. Kasirajan	Food Processing	\$4,000	\$300	3
4	M. Sundar	Food Processing	\$14,000	\$500	10
5	G. Sathish Kannan	Food Processing	\$6,000	\$300	5
6	M. Sowbar Ali	Food Processing	\$2,000	\$240	2
7	T. Thenmozhi	Fashion Designing	\$2,000	\$300	2
8	R. Omshanthi	Fashion Designing	\$3,000	\$200	5
9	R.Bhuvaneswari	Beautician	\$2,000	\$180	2
10	B. Susila	Photocopying	\$10,000	\$900	2
11	G. Veeralakshmi	Computer Accounting with Tally	\$1,000	\$160	1
12	V. Kamala	EDP	\$8,000	\$500	8
13	N. Sudha	Computer Accounting with Tally	\$20,000	\$700	3
14	A. Sakthivinayagam	EDP	\$10,000	\$200	3
15	M. Syed Ammal	EDP	\$1,000	\$600	10
16	K. Saranya	EDP	\$1,000	\$400	2
17	L. Kavitha	EDP	\$4,000	\$200	1
18	R. Ramesh Kumar	EDP	\$30,000	\$1,500	4
19	R. Uma Rani	EDP	\$3,000	\$300	1
20	R.Durgadevi	Fashion Designing	\$160	\$80	1

Source: Success Stories of the CED Participants during the year 2012-13

CONCLUSION

The absence of empirical evidence of failures of entrepreneurs in the regional context of Tamilnadu is mainly attributed to the local culture wherein bankruptcy is perceived as shameful and deceitful. There are anecdotal examples and newspaper reports that lack an organizational structure for the study to report and examine the root causes of such failures. The institutional support from all government and private agencies foster the start-ups and growth of entrepreneurship. Corruption is still the biggest obstacle for entrepreneurs and all businesses in India. In a survey conducted by the Times of India in 2017, entrepreneurs listed corruption as the foremost of the top five hurdles in business operations while getting approval, availability of skilled labor, quality of skilled labor, and tax policy were the remaining four hurdles. The United Nations Industrial Development Organization (UNIDO) has launched an initiative on corruption prevention to foster the development of small and medium-sized enterprises (SMEs). It aims to fill the knowledge gap regarding the dynamics of corruption in the field of smaller businesses. It also strives to identify and implement the tools needed by SMEs to successfully defend themselves in a corrupt business environment (Source: UNIDO and UNDOC). It is disheartening to note as to how some of the entrepreneurs fall a prey to loan sharks who charge about 250% interest on small loans. The anecdotal instances are periodically published in newspapers. However, empirical evidence is hard to locate.

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ENTREPRENEURSHIP ECOSYSTEMS IN THE EMERGING MARKETS: AN EMPIRICAL STUDY OF BRAZIL AND INDIA COMPARED TO THE UNITED STATES

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ABSTRACT

The success of entrepreneurship is dependent upon a conducive ecosystem that fosters inclusive growth and equality of economic opportunities. In addition to the government support in terms of infrastructure, grants, and subsidies, academic institutions and universities play a critical role in the areas of innovation, incubation, technology transfer, and knowledge addition through their research laboratories and centers of excellence. This study measures the success factors of the ecosystems of 45 countries over the period 2000 to 2021 with specific reference to Brazil and India.

Key words: Entrepreneurship, Ecosystem, Job Creation, Financing, SMEs and MSMEs

INTRODUCTION

The success of entrepreneurship is dependent upon a conducive ecosystem that fosters inclusive growth and equality of economic opportunities. In addition to the government support in terms of infrastructure, grants, and subsidies, academic institutions and universities play a critical role in the areas of innovation, incubation, technology transfer, and knowledge addition through their research laboratories and centers of excellence. The advent of globalization has given rise to the transition of many markets, particularly the BRIC countries: Brazil, Russia, India, and China. Both Brazil and India are exemplary models in value creation through being democracies and focused on supporting entrepreneurs with overwhelming financial support.

ENTREPRENEURSHIP ECOSYSTEMS: SELECT LITERATURE REVIEW

Entrepreneurship-oriented relationships grow organically beyond the geographical borders and administrative boundaries and so do the entrepreneurship ecosystems [Fischer et al, 2022]. A study of the State of São Paulo, Brazil emphasizes the importance of the knowledge of infrastructure and socioeconomic system in order to create a climate conducive to knowledge-intensive ventures [Alves et al, 2021]. Empirical evidence from a study of 1,372 firms in the same São Paulo region suggests that promotion of different ecosystems configurations is not mandatory for sustainable transitions in entrepreneurial ecosystems [Rocha et al, 2022]. Microfinance institutions can succeed only when there is an interactive relationship among complementors, suppliers, and customers thereby enhancing the concept of social entrepreneurship [Siqueira, 2014]. Presence of research-oriented universities, access to capital, and business concentration have a positive impact on the emergence, growth, and density of knowledge-intensive entrepreneurship (KIE) [Fischer et al, 2018]. Universities in a country or region contribute heavily to major innovations and also help in transmitting the knowledge and transferring technology from their academic research to the markets [Schaeffer et al, 2021]. While the success of the startup firms relies on the infrastructure and efficient management, the characteristics of interrelationships among business incubators need to be analyzed by academic researchers [Tietz et al, 2015]. India's success in its emergence and

transition are mainly thanks to the multinational corporations with global linkages that are akin to a pillar and the agile startups are like ivies aspiring to reach the top of the pillar thereby making India’s entrepreneurship ecosystem one of the largest in the world [Bhagavatula et al, 2019]. An effective startup ecosystem that integrates government initiatives ensures successful entry, growth, and a value-creating exit for startups [Saxena et al, 2021]. Technology startups in India have found a safe home in the city of Bangalore thanks to the emergence of a unique entrepreneurial ecosystem [Bala Subrahmanya, 2017]. Despite the emphasis on research on entrepreneurial ecosystems, the much-needed attention to determining the ways and means of accomplishing the United Nations’ Sustainable Development Goals (SDGs) is not still actively present [Volkman et al, 2021].

CHALLENGES IN A SUSTAINABLE ECOSYSTEM

Entrepreneurial spirit is high in individualistic cultural environments and collective societies lack creativity as there is an insufficient reward and the fear of failure is high. Among the BRIC countries (Brazil, Russia, India, and China), India is still considered a factor-driven economy whereas the other three have been elevated to efficiency-driven economies. Table 1 presents the current status of new business formation in BRIC countries. With only two metropolitan cities included, China exceeds the rest of the three countries. India’s new business density rate suggests a huge future potential to be latent.

Table 1 New Businesses Formation, 2020

Economy	Adult Population	Number of New Limited Liability Companies	New business density rate
Brazil	148,150,775	405,049	2.73
India	928,266,848	142,000	0.15
China (only Beijing and Shanghai)	27,035,300	232,064	8.58
Russian Federation	95,294,313	214,895	2.26

Source: World Bank, Entrepreneurship database

METHODOLOGY

For the entrepreneurs to succeed, the most important need is financing particularly in the growth stage. Financing is the availability of financial resources in “equity and debt” for micro, small and medium-sized enterprises (MSMEs) that may include grants and subsidies. Besides financing, there are eleven important factors that play a key role in the entrepreneurship ecosystem to register success: Government Support, Taxes, Government Programs, Education & Training, Post-school Training, R&D Transfer, Commercial Infrastructure, Market Dynamics, Market Openness, Physical Infrastructure, and Cultural-Social Norms. This study analyzed the twelve factors for 45 countries that included the following countries with a per capita GDP of less than \$10,000: Brazil, Colombia, Dominican Republic, Egypt, Guatemala, India, Iran, Jamaica, Mexico, Morocco, South Africa, and Sudan. Table 2 captures the comparative data for Brazil and India for all these twelve factors for the period 2000 to 2021. The scores for each factor are set between 0 and 10, 0 indicating total weakness and 10 stands for perfection. The scores for Brazil and India are very much comparable to each other. Each country performs slightly better than the other in certain years thus leading us to focus only on these two countries along with a comparison with the United States.

Data for the aforesaid twelve factors for 45 countries for the period between 2000 and 2021 is analyzed to understand the path to success for entrepreneurs. Table 3 displays the correlation matrix for the twelve factors. This study considers the significant correlation values above 0.3 that exists between the pairs of variables. It is ascertained that the high significant positive correlation exists between the Taxes and Government Support. Similarly, Government Programs are highly correlated with government support and taxes. The Education & Training variable is positively correlated with Government Support, Taxes and Government Programs respectively. The other variable Post-school Training is positively correlated with Government Support, Taxes, Government Programs, and Education & Training. The variable R&D Transfer has conspicuous positive relationship with Government Support, Taxes, Government Programs, Education & Training, and Post-school Training.

Table 2 Twelve Factors for Entrepreneurial Success

Economy	Year	Financing	Govt Support	Taxes	Govt Programs	Basic-school Training	Post-school Training	R&D Transfer	Commercial Infrastructure	Market Dynamics	Market Openness	Physical Infrastructure	Cultural-Social Norms
BRAZIL	2000	5.81	3.73	2.35	4.13	3.23	3.97	5.03	5.13	4.15	5.50	3.90	
	2001	5.63	3.97	2.95	4.53	3.25		4.05	4.95	5.45	4.12	5.67	4.66
	2002	5.29	3.62	2.50	4.25	2.93	4.40	3.65	4.55	5.15	3.63	5.58	4.23
	2003	4.47	3.25	2.20	3.70	2.87	4.38	3.37	4.25	5.20	3.50	5.23	4.28
	2004	4.57	3.18	2.23	3.42	2.28	3.78	3.12	4.57	4.75	3.48	5.43	4.18
	2005	5.08	2.88	2.22	3.22	2.60	3.40	2.83	3.87	5.55	3.10	4.97	3.57
	2006	5.55	3.25	2.30	3.63	2.52	4.10	3.48	4.73	5.35	3.75	5.72	4.57
	2007	6.20	3.13	2.43	3.63	2.62	4.10	3.43	4.50	5.27	3.72	5.60	4.08
	2008	3.67	3.23	2.60	4.12	2.65	4.63	3.18	4.15	5.93	3.23	5.30	4.73
	2009	3.38	3.37	2.45	4.03	2.53	3.78	3.55	4.42	6.02	3.63	5.50	4.57
	2010	3.78	3.55	2.38	3.88	2.42	4.00	3.82	4.33	6.35	3.68	5.65	4.38
	2011	3.78	3.68	2.53	4.03	2.60	4.28	3.63	4.28	5.83	3.77	5.28	4.33
	2012	4.53	3.83	2.70	3.80	2.62	4.02	3.30	4.23	5.70	3.70	4.98	4.43
	2013	4.57	4.17	2.80	3.80	2.58	4.02	3.33	3.92	5.03	3.55	5.07	4.57
	2014	4.52	4.00	2.43	3.73	2.47	4.23	3.33	4.17	5.60	3.73	4.88	3.93
	2015	4.05	3.67	2.55	3.45	2.37	3.88	2.98	4.20	5.07	3.48	4.80	3.97
	2016	2.83	3.52	2.48	3.43	2.37	4.03	3.07	4.50	5.70	3.72	4.67	3.90
	2017	3.90	3.12	2.63	3.25	2.43	4.03	3.07	4.30	6.10	3.67	5.22	3.65
	2018	5.02	2.97	2.42	3.47	2.57	4.10	3.53	4.48	5.77	3.67	5.37	3.50
	2019	3.68	4.17	3.12	4.27	2.97	4.45	3.75	4.70	5.73	4.15	5.38	4.12
	2020	4.55	3.93	3.08	4.27	3.23	4.55	3.60	4.65	6.22	4.25	5.67	4.82
2021	3.67	2.79	2.34	3.31	1.55	4.21	2.58	4.01	5.99	3.42	5.18	4.41	
INDIA	2000	6.22	4.53	3.40	3.78	3.43	3.98	5.63	4.50	4.20	4.55	3.67	
	2001	4.02	4.03	3.57	3.77	3.25		3.98	5.42	5.35	4.22	4.80	4.78
	2002	4.39	3.85	3.48	3.88	2.50	4.82	3.82	5.37	4.13	4.13	5.37	4.30
	2006	4.22	3.95	3.72	3.88	3.23	5.02	4.42	6.15	5.45	4.67	6.18	5.50
	2007	4.43	4.55	3.85	4.03	3.33	4.85	4.82	6.65	5.03	5.20	6.78	5.68
	2012	4.18	4.87	3.63	4.65	3.20	4.55	4.23	5.17	5.22	4.75	6.18	5.33
	2013	4.62	3.15	3.07	3.42	2.50	4.03	3.23	4.92	5.85	4.15	6.13	4.48
	2014	4.38	5.00	4.05	4.90	3.88	5.15	4.77	5.67	5.75	4.78	6.60	5.72
	2015	4.00	5.52	4.03	4.53	4.12	5.12	4.30	4.95	5.63	4.77	6.08	5.45
	2016	4.50	5.57	4.35	4.70	4.00	5.02	4.78	5.18	6.27	4.97	6.48	5.18
	2017	2.70	5.37	3.53	4.68	3.62	4.85	4.53	4.87	6.15	4.12	6.90	4.65
	2018	2.83	6.32	4.73	5.73	4.53	5.22	5.25	5.75	6.45	5.23	6.52	5.53
	2019	3.18	5.77	5.08	5.42	5.13	5.60	5.25	5.57	6.35	5.52	6.43	5.92
2020	6.05	5.70	5.45	5.62	5.03	5.20	5.53	6.08	6.45	5.88	6.47	6.00	
2021	4.96	5.31	4.69	4.83	3.77	4.47	4.38	5.05	6.23	4.80	6.41	5.27	
GLOBAL AVERAGE		4.36	4.33	4.06	4.40	3.41	4.72	4.04	5.10	4.97	4.40	6.23	4.78

Source: Global Entrepreneurship Monitor (various years)

The variable Commercial Infrastructure is also positively correlated with Government Support, Taxes, Government Programs, Education & Training, Post-school Training and R&D Transfer. The correlation analysis peculiarly observes that the Market Dynamics is not at all related with any of these variables whereas the variable Market Openness is positively correlated with the

variables Government Support, Taxes, government programs, education and training, , post school training, R&D transfer , commercial infra-structure. The variable physical infra-structure is positively correlated with government support, taxes, government programs, R&D transfer, and market openness. The correlation analysis revealed a positive correlation between cultural social norms and government support, taxes, government programs, education and training, , post school training, R&D transfer, commercial infra-structure, market openness. These relationship among the independent variables and the influence of the linear combinations of these independent variables is estimated in the following linear multiple regression analysis. In this regression analysis, the individual influence of independent variables over the dependent factor can be ascertained through the standardized co-efficient beta and t-values as shown in the table below

Table 3 Correlation Matrix for the Twelve Factors

	Financing	Govt Support	Taxes	Govt Programs	Education & Training	Post-school Training	R&D Transfer	Commercial Infrastructure	Market Dynamics	Market Openness	Physical Infrastructure	Cultural-Social Norms
Financing	1.000											
Govt Support	0.083	1.000										
Taxes	0.026	0.633	1.000									
Govt Programs	0.062	0.732	0.664	1.000								
Education & Training	0.104	0.466	0.453	0.469	1.000							
Post-school Training	0.061	0.363	0.366	0.459	0.551	1.000						
R&D Transfer	0.211	0.607	0.546	0.739	0.570	0.480	1.000					
Commercial Infrastructure	0.055	0.324	0.466	0.482	0.485	0.427	0.519	1.000				
Market Dynamics	0.007	0.150	0.002	-0.062	0.076	-0.087	0.028	-0.215	1.000			
Market Openness	0.129	0.500	0.553	0.593	0.580	0.385	0.714	0.574	-0.048	1.000		
Physical Infrastructure	-0.027	0.334	0.520	0.471	0.239	0.288	0.380	0.480	-0.029	0.331	1.000	
Cultural-Social Norms	0.103	0.382	0.465	0.369	0.529	0.494	0.436	0.364	0.129	0.465	0.275	1.000

Our hypotheses are presented below:

Hypothesis 1 (overall):

$$\text{Financing} = \beta_1 (\text{governmental support}) + \beta_2 (\text{taxes}) + \beta_3 (\text{government programs}) + \beta_4 (\text{entrepreneurial education}) + \beta_5 (\text{post-school training}) + \beta_6 (\text{R\&D transfer}) + \beta_7 (\text{commercial infrastructure}) + \beta_8 (\text{market dynamics}) + \beta_9 (\text{market openness}) + \beta_{10} (\text{physical infrastructure}) + \beta_{11} (\text{cultural and social norms})$$

Hypothesis 2: (India)

$$\text{Financing} = \beta_1 (\text{governmental support}) + \beta_2 (\text{taxes}) + \beta_3 (\text{government programs}) + \beta_4 (\text{entrepreneurial education}) + \beta_5 (\text{post-school training}) + \beta_6 (\text{R\&D transfer}) + \beta_7 (\text{commercial infrastructure}) + \beta_8 (\text{market dynamics}) + \beta_9 (\text{market openness}) + \beta_{10} (\text{physical infrastructure}) + \beta_{11} (\text{cultural and social norms}) + \beta_{12} (\text{dummy variable for India})$$

Hypothesis 3 (Brazil):

$$\text{Financing} = \beta_1 (\text{governmental support}) + \beta_2 (\text{taxes}) + \beta_3 (\text{government programs}) + \beta_4 (\text{entrepreneurial education}) + \beta_5 (\text{post-school training}) + \beta_6 (\text{R\&D transfer}) + \beta_7 (\text{commercial infrastructure}) + \beta_8 (\text{market dynamics}) + \beta_9 (\text{market openness}) + \beta_{10}$$

(physical infrastructure) + β_{11} (cultural and social norms) + β_{12} (dummy variable for Brazil)

Hypothesis 4 (United States):

Financing = β_1 (governmental support) + β_2 (taxes) + β_3 (government programs) + β_4 (entrepreneurial education) + β_5 (post-school training) + β_6 (R&D transfer) + β_7 (commercial infrastructure) + β_8 (market dynamics) + β_9 (market openness) + β_{10} (physical infrastructure) + β_{11} (cultural and social norms) + β_{12} (dummy variable for the United States)

The presence of the Constant as a variable in the tests yielded no significance and so regressions were run without the intercept. Table 4 presents the results of the regression analysis of the data for our hypotheses.

Table 4 Regression Results for Financing to Entrepreneurs (2000-2021)

Dependent Variable: Financing	Model 1 (Global)	Model 2 (India)	Model 3 (Brazil)	Model 4 (USA)
Government Support	0.053 (1.042)	0.063 (1.230)	0.057 (1.120)	0.054 (1.067)
Taxes	-0.143 (-3.345)*	-0.150 (-3.510)***	-0.134 (-3.091)**	-0.146 (-3.406)***
Government Programs	-0.008 (-0.130) ***	-0.018 (-0.291)	-0.018 (-0.290)	-0.013 (-0.206)
Education and Training	-0.112 (-2.085)*	-0.114 (-2.140)*	-0.105 (-1.952)*	-0.114 (0.033)
Post-school Training	0.227 (4.372)***	0.220 (4.255)***	0.227 (4.385)***	0.221 (4.239)***
R&D Transfer	0.125 (1.858)*	0.137 (2.050)*	0.127 (1.887)*	0.130 (1.932)*
Commercial Infrastructure	0.253 (4.428)***	0.257 (4.509)***	0.251 (4.396)***	0.255 (4.467)***
Market Dynamics	0.208 (7.420)***	0.210 (4.036)***	0.200 (7.018)***	0.204 (7.189)***
Market Openness	0.043 (0.625)	0.050 (0.724)	0.041 (0.600)*	0.040 (0.574)
Physical Services Infrastructure	0.106 (2.589)*	0.099 (2.419)*	0.109 (2.656)**	0.107 (2.604)**
Cultural and Social Norms	0.067 (1.683)*	0.070 (1.766)*	0.064 (1.614)	0.080 (1.903)*
Adjusted R ²	0.965	0.966	0.965	0.080 (1.903)*
Number of observations	967	967	967	967

t-statistics appear in parentheses for each variable;

* = significant at 90% confidence level

** = significant at 95% confidence level

*** = significant at 99% confidence level

DISCUSSION OF RESULTS

Our analysis indicates that financing for entrepreneurs is significantly dependent upon government support for entrepreneurs, favorable policies of taxes and regulations, education, training programs beyond formal education, intellectual property rights, presence of commercial infrastructure, market dynamics, and norms based upon cultural and social values. The variable for the availability of government sponsored programs turned out to be insignificant thereby explaining the wasteful resources of the government, the lack of knowledge of entrepreneurs in accessing and utilizing such programs, and the inability of the government to propagate the information. The analysis produced similar results in our separate analyses in the context of India and in Brazil. Taxes tend to be a huge limitation in the case of India. The regression analysis and its best fit can be identified at 95 percent and 99 percent confidence levels only. The separate 3 linear multiple regression analyses for the global level, India, Brazil, and the United States exhibited very good relationship between the dependent variable financing to entrepreneurs and the independent variables government support, taxes, government programs, education and training, post school training, R&D transfer, commercial infra-structure, market dynamics, market openness, physical services infrastructure, and cultural and social norms. It proves that the financing to entrepreneurs at global level is related at 96.5 percent level which is far more than the required value of 0.3. (Adjusted R-square= 0.965). Similarly, the financing to entrepreneurs in India as well as Brazil are depending upon the independent variables at 96.6 percent (Adjusted R-square= 0.966). and 96.5 percent level. (Adjusted R-square= 0.965). As far as the individual influences of the independent variables are concerned, the standardized coefficient beta values and t-values are considered at 95 percent and 99 percent level of confidence.

In the global case of financing to entrepreneurs the independent variables government programs, Post school training, commercial infra-structure, and market dynamics play a key role in influencing the financing to entrepreneurs. In India financing to entrepreneurs is influenced by the independent variables of taxes, post school training, commercial infrastructure and market dynamics. In the case of Brazil, the financing to entrepreneurs is influenced by the independent variables of taxes, post school training, commercial infrastructure, market dynamics and physical services infra-structure. The meticulous observation revealed that in all the three regression analyses the three independent variables post school training, commercial infrastructure and market dynamics are highly conspicuous in influencing the financing to entrepreneurs. Therefore, this leads to the testing of the hypotheses and found that among the 11 independent variables only 3 of them are found to influence the financing to entrepreneurs. Hence the three hypotheses are partially supported.

ECOSYSTEM MEASURED BY JOB CREATION

Data drawn from 47 countries pertaining to adult population from age 18 to 64 addresses the following fifteen factors: Opportunities (ability to detect and start a firm in the area they live), Capabilities (required skills and knowledge), Fear of failure (unwilling to start despite recognizing opportunities), Intentions (to start in the near future), Total early-stage Activity – TEA (having started a new business), Ownership (payroll commitments for over past three years), Activity (involvement of employees leading to new ventures), Motivational Index (improvement-driven), Gender TEA (female owners compared to males), Gender Opportunity-Driven TEA (with no other

opportunity available and to increase income), Job Creation (be able to create six or more jobs in the next five years), Innovation (a new product or service without competition), Business Services Sector (involved in professional services), Successful Entrepreneurs (commensurate with societal status), and Career Choice (treated as a desirable choice in the country). A comparative display of Brazil and India comprising these fifteen variables is shown in Table 5. The correlation matrix for these fifteen variables for the 47 countries during 2001 and 2021 is displayed in Table 6.

Table 5 Comparison of Analytical Variables for Brazil and India – 2001 to 2021

Economy	Year	Opportunities	Capabilities	Fear of Failure	Intentions	Total Early-stage Activity (TEA)	Ownership	Activity	Motivational Index	Gender TEA	Gender Opportunity-Driven TEA	Job Creation	Innovation	Business Services Sector	Successful Entrepreneurs	Career Choice
Brazil	2001	40.0	54.28	32.14		13.8	3.79			0.82		34.44			9.7	
	2002	41.42	54.87	31.68	16.71	15.53	7.76			0.7		11.85			8.46	
	2003	41.43	50.83	34.26	34.49	12.9	7.62			0.82		17.24			8.84	70.21
	2004	43.84	55.86	29.54	12.79	13.48	10.11			0.72		12.39			8.3	74.88
	2005	42.71	50.23	37.59	23.03	11.32	10.11			0.92		16.9			12.04	76.17
	2006	57.04	53.8	34.38	19.11	11.85	12.09			0.7		12.7			9.9	66.1
	2007	39.01	53.65	29.08	23.43	12.72	9.94			1		11.01			12.09	79.34
	2008	41.44	53.12	37.88	26.17	12.62	14.59			0.85		14.78			13.14	75.2
	2009	46.98	52.85	30.71	20.05	15.32	11.84			1.07		11.12			7.38	80.19
	2010	48.12	57.94	33.25	26.40	17.5	15.26		1.48	0.88		15.4			14.63	76.35
	2011	43.96	52.78	31.43	28.22	14.89	12.25	1.02	1.47	0.95		11.15	6.88		13.89	86.33
	2012	52.4	53.94	31.05	36.47	15.44	13.19		1.95	0.91		11.42	1.1		13.64	106.34
	2013	50.92	52.62	38.72	37.2	17.31	13.44		2.01	1.01	0.87	8.05	0.76		7.32	82.21
	2014	55.54	49.96	35.36	34.5	17.23	17.51	1.04	2	1.99	0.79	5.58	12.65		8.92	
	2015	42.08	58.27	44.74	24.37	20.58	18.89	0.99	1.21	0.94	0.67	8.8	19.89		3.9	80.08
	2016	40.23	52.57	36.18	23.67	19.56	16.9	1.5	1	1.08	0.82	4.4	13.4		4.96	
	2017	46.42	55.89	38.82	15.25	20.3	16.5	0.74	1.18	1.04	0.81	3.05	15.91		5.32	
	2018	31.43	54.27	32.61	28.05	17.88	20.25	0.68	1.34	0.93	0.82	8.08	3.73		13.03	
	2019	46.37	61.98	35.57	16.17	22.3	18.16	0.62		0.88		3.93			7.57	72.25
	2020	57.3	67.8	43.4	32.7	23.4	8.7	9.9		0.8		39.6			16.1	
2021	54.8	66.72	45.08	33	20.98	9.95	0.11		0.8		30.72			12.1		
India	2001	30.93	39.85	33.17		10.91	8.78			0.31		7.49			5.91	
	2002	42.4	41.9	26.99	19.01	16.04	12.15			0.63		4.75			2.44	
	2006	52.09	62.28	24.44	11.33	10.09	5.6			0.79		13.76			8.95	84.29
	2007	70.98	72.98	50.21	49.66	8.53	5.53			0.79		8.22			18.02	74.89
	2008	56.47	57.97	45.59	33.9	11.49	16.5			0.45		5.65			5.63	81.58
	2013	41.43	35.78	38.91	22.79	9.88	10.88		0.93	0.49	1	5.54	20.94		1.93	70.38
	2014	36.91	36.7	37.67	7.66	6.4	3.79	0.3	1.35	0.94	1.18	7.72	43.52		5.83	66.16
	2015	37.79	37.84	44.01	9.15	10.83	5.5	0.31	1.81	0.98	1.07	3.5	51.08		3.8	46.65
	2018	44.34	43.98	37.53	14.88	10.59	4.8	2.5	1.2	0.98	2.02	3.2	18		7	46.7
	2017	44.92	42.05	39.56	10.38	9.28	0.22	0.21	0.75	0.8	0.51	9.52	25.6		6.7	56.18
	2018	49.83	52.22	56.06	26.64	11.42	0.96	0.81	0.55	0.62	0.88	8.39	49.88		1.94	65.83
	2019	83.1	85.2	62.37	33.2	14.57	11.92	0.17		0.79		10.64			2.3	50.3
	2020	82.5	81.7	56.8	28.2	5.3	5.8	0.3		0.3		10.1			3.5	86.1
2021	89.41	85.99	54.14	18.18	16.37	8.51	1.18		0.79		5.11			1.72	87.81	

Source: Global Entrepreneurship Monitor (various years)

Table 6 Correlation Matrix of the Analytical Variables

	Opportunities	Capabilities	Fear of Failure	Intentions	Total Early-stage Activity (TEA)	Ownership	Activity	Motivational Index	Gender TEA	Gender Opportunity-Driven TEA	Job Creation	Innovation	Business Services Sector	Successful Entrepreneurs	Career Choice
Opportunities	1.000														
Capabilities	0.627	1.000													
Fear of Failure	-0.118	-0.268	1.000												
Intentions	0.519	0.667	-0.195	1.000											
Total Early-stage Activity (TEA)	0.543	0.697	-0.287	0.768	1.000										
Ownership	0.223	0.362	-0.095	0.388	0.521	1.000									
Activity	0.105	-0.105	0.109	-0.218	-0.164	-0.171	1.000								
Motivational Index	0.232	-0.234	0.050	-0.289	-0.189	-0.084	0.504	1.000							
Gender TEA	0.331	0.375	-0.079	0.344	0.503	0.329	-0.260	-0.049	1.000						
Gender Opportunity-Driven TEA	-0.034	-0.224	0.151	-0.168	-0.192	-0.193	0.215	0.251	-0.110	1.000					
Job Creation	0.602	-0.037	0.094	0.100	-0.023	-0.260	0.284	0.013	-0.235	0.091	1.000				
Innovation	0.079	-0.097	0.101	-0.106	-0.062	-0.232	0.445	0.133	-0.213	0.046	-0.239	1.000			
Business Services Sector	-0.228	-0.418	0.076	-0.503	-0.490	-0.239	0.700	0.442	-0.379	0.180	3.133	6.420	1.000		
Successful Entrepreneurs	0.451	0.349	0.004	0.341	0.250	0.252	0.006	0.025	0.080	0.076	0.044	-0.054	-0.159	1.000	
Career Choice	0.443	0.558	-0.038	0.544	0.435	0.205	-0.230	-0.183	0.228	-0.159	0.023	-0.148	-0.472	0.456	1.000

The correlation matrix indicated the qualification of 14 independent variables and their linear combination in influencing the dependent factor job growth. These 14 variables are both positively and negatively correlated to each other. The values above 0.3 are considered as significant correlation in both positive and negative direction. Any entrepreneurship venture brings benefits to the firm in the first place and above all paves the way for job growth in the region. This micro benefit adds plenty of benefits to the economy overall. Therefore, our study employed job growth

as the dependent variable with the others serving as independent variables. Our hypotheses are presented below:

Hypothesis 1 (overall):

$$\text{Job Creation} = \beta_1 (\text{opportunities}) + \beta_2 (\text{capabilities}) + \beta_3 (\text{fear of failure}) + \beta_4 (\text{intentions}) + \beta_5 (\text{total early stage activities}) + \beta_6 (\text{ownership}) + \beta_7 (\text{activity}) + \beta_8 (\text{motivational index}) + \beta_9 (\text{gender TEA}) + \beta_{10} (\text{gender opportunity driven TEA}) + \beta_{11} (\text{innovation}) + \beta_{12} (\text{business service sector}) + \beta_{13} (\text{successful entrepreneurs}) + \beta_{14} (\text{career choice})$$

Hypothesis 2 (Brazil):

$$\text{Job Creation} = \beta_1 (\text{opportunities}) + \beta_2 (\text{capabilities}) + \beta_3 (\text{fear of failure}) + \beta_4 (\text{intentions}) + \beta_5 (\text{total early stage activities}) + \beta_6 (\text{ownership}) + \beta_7 (\text{activity}) + \beta_8 (\text{motivational index}) + \beta_9 (\text{gender TEA}) + \beta_{10} (\text{gender opportunity driven TEA}) + \beta_{11} (\text{innovation}) + \beta_{12} (\text{business service sector}) + \beta_{13} (\text{successful entrepreneurs}) + \beta_{14} (\text{career choice})$$

Hypothesis 3 (India):

$$\text{Job Creation} = \beta_1 (\text{opportunities}) + \beta_2 (\text{capabilities}) + \beta_3 (\text{fear of failure}) + \beta_4 (\text{intentions}) + \beta_5 (\text{total early stage activities}) + \beta_6 (\text{ownership}) + \beta_7 (\text{activity}) + \beta_8 (\text{motivational index}) + \beta_9 (\text{gender TEA}) + \beta_{10} (\text{gender opportunity driven TEA}) + \beta_{11} (\text{innovation}) + \beta_{12} (\text{business service sector}) + \beta_{13} (\text{successful entrepreneurs}) + \beta_{14} (\text{career choice})$$

Hypothesis 4 (United States):

$$\text{Job Creation} = \beta_1 (\text{opportunities}) + \beta_2 (\text{capabilities}) + \beta_3 (\text{fear of failure}) + \beta_4 (\text{intentions}) + \beta_5 (\text{total early stage activities}) + \beta_6 (\text{ownership}) + \beta_7 (\text{activity}) + \beta_8 (\text{motivational index}) + \beta_9 (\text{gender TEA}) + \beta_{10} (\text{gender opportunity driven TEA}) + \beta_{11} (\text{innovation}) + \beta_{12} (\text{business service sector}) + \beta_{13} (\text{successful entrepreneurs}) + \beta_{14} (\text{career choice})$$

These intrinsic relationships among the variables and their influence over the dependent variable job growth is estimated for global, India, Brazil, and the United States through linear multiple regression analysis as shown in the table 7. This study analyzed Job Growth as the dependent variable with the remaining fourteen to be the independent variables. Table 7 displays the regression results for the data from 47 countries over the period 2000 to 2021.

Table 7 Regression Results for Job Creation by Entrepreneurs (2000-2021)

Dependent Variable: Job Creation	Model 1 (Global)	Model 2 (India)	Model 3 (Brazil)	Model 4 (USA)
Opportunities	-0.194 (-3.628)***	-0.185 (-3.407)***	-0.195 (-3.627)***	-0.195 (-3.669)**
Capabilities	-0.117 (-2.049)*	-0.117 (-2.056)*	-0.117 (-2.051)*	-0.122 (-2.163)*
Fear of Failure	-0.119 (-1.866) *	-0.111 (-1.740) *	-0.118 (-1.843) *	-0.106 (-1.684)*
Intentions	0.317 (5.214)***	0.310 (5.090)***	0.315 (5.175)***	0.332 (5.486)**
Total Early Stage Activity (TEA)	0.245 (1.709)*	0.235 (1.637)	0.247 (1.716)*	0.230 (1.615)
Ownership	-0.460 (-3.525)***	-0.457 (-3.501)***	-0.458 (-3.503)***	-0.460 (-3.552)***
Activity	1.340 (4.059)***	1.301 (3.921)***	1.341 (4.055)***	1.294 (3.943)**
Motivational Index	-0.106 (-0.323)	-0.127 (-0.389)	-0.108 (-0.329)	-0.183 (-0.561)
Gender TEA	-5.161 (-1.588)	-5.460 (-1.674)*	-5.136 (-1.577)	-5.142 (-1.595)
Gender Opportunity- Driven TEA	13.044 (3.553)***	13.601 (3.671)***	12.900 (3.469)***	13.673 (3.745)**
Innovation	0.068 (1.090)	0.088 (1.363)	0.068 (1.084)	0.065 (1.047)
Business Services Sector	0.239 (2.922)**	0.217 (2.587)*	0.238 (2.914)**	0.235 (2.907)**
Successful Entrepreneurs	0.072 (1.297)	0.066 (1.184)	0.073 (1.312)	0.066 (1.198)
Career Choice	0.150 (3.182)**	0.146 (3.083)**	0.151 (3.179)**	0.148 (3.149)**
Adjusted R ²	0.872	0.865	0.865	0.867
Number of observations	301	301	301	301

t-statistics appear in parentheses for each variable;

* = significant at 90% confidence level

** = significant at 95% confidence level

*** = significant at 99% confidence level

DISCUSSION OF JOB CREATION RESULTS

From the above results, the standardized coefficient value beta and t-values at 95 percent level and 99 percent are considered for the interpretation. The best fit of regression model can be ascertained through the adjusted R-square values greater than 0.3. In the case of these four regressions, it is found that the global level job growth is influenced by the independent variables at 87.2 percent level (Adjusted R-square= 0.872). Similarly, in the case of India, Brazil, and the United States, the variable of job growth is influenced by the independent variables at 86.5 and 86.7 percent level. The individual influence of the 14 independent variables is identified through the beta and t-values respectively

In the global level the job growth is highly influenced by the variables opportunities, Intentions, ownerships, activity, Ownership, Activity, Gender Opportunity-Driven TEA, Business Services Sector and Career Choice. In the case of India, the dependent variable job growth is influenced by independent variables Opportunities, Intentions, Ownership, Activity, Gender Opportunity-Driven TEA and Career Choice. In the case of Brazil, the job growth is influenced by the independent variables opportunities, Intentions, ownerships, activity, Ownership, Activity, Gender Opportunity-Driven TEA, Business Services Sector and Career Choice. Among these three cases of global. India and Brazil, the independent variables opportunities, Intentions, ownerships, activity, Ownership, Activity, Gender Opportunity-Driven TEA, and Career Choice are common in influencing the job growth. Ten of the fourteen variables turned out to be significant. Motivational Index, Gender-based Early Stage Activity, Innovation, and Successful Entrepreneurs showed no significance suggesting the potential characteristics for researchers to study further.

CONCLUSION

Universities engaged in active research may motivate entrepreneurs to start their own businesses through seminars and workshops, Research labs and Centers of Excellence could lead to identifying innovative processes and the benefits thereof. The present-day young generation (Generation-Z) considers entrepreneurship by default as a rule to adopt [Johnson et al, 2015] and many business schools have added new entrepreneurship courses in their curriculum to cater to the students' needs and demands. The University of Dayton, Miami University, Babson College, and Ohio Wesleyan University offer unique entrepreneurship programs [Shulman, 2017]. Many universities in Modes 1 and 2 engage in both knowledge production and application but a few have risen to the level of Mode 3 to offer an elevated level of learning leading to innovative thinking and contextualization of the respective ecosystems [Carayannis et al, 2018]. Entrepreneurship, that was not considered as a preferred occupation in India due to its collectivist culture, has now become a specialized discipline in several business schools with many of them ranked as one of the best in the country, continent, and the world. With enhanced education, entrepreneurship will certainly evolve globally thereby bringing the collective benefits of income equality, equity, women empowerment, sustainability, and job creation.

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DXB268

Research and development investment of senior star biotech startups at the valley of death



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On April 30, 2020, the National Association of Securities Dealers Automated Quotations (NASDAQ) brought out the Nasdaq Junior Biotechnology Index (NBIJR). However, we designate the “senior biotechnology companies” by subtracting NBIJR constituents from Nasdaq Biotechnology Index (NBI) companies because senior firms have already achieved performance. All 31 companies are analyzed using publicly available data US Securities and Exchange Commission (SEC) Electronic Data- Gathering, Analysis, and Retrieval (EDGAR) system database:

1. From the values of the Zipf distribution based on the current market capitalization, we define the top companies as star companies separated from non-star companies.
2. We classified the entire group into 15 companies with positive profits and 16 with negative earnings in July 2021.
3. Focusing on the star companies with negative yields, we analyze the behavior of companies that boldly invest in the long-term and huge cash amounts of research and development (R&D) projects, even if their net incomes are negative, from financial indicators.
4. We apply the Bayesian Markov chain Monte Carlo (MCMC) simulation to analyze the R&D productivity of star biotech firms in the negative profits from parameter inference suitable for such a small sample.

In conclusion, the cash-on-hand as the underlying asset is more necessary to overcome the valley of death under an unstable capital market rather than equity as a real option under steady-state market conditions. Second, the R&D productivity of negative profit biotech firms is higher than positive profit star counterparts. Therefore, the investment stance must be considered not only present income status but also future potential from a long-term return perspective. Third, cash-on-hand must maintain a balance between short-term deficit and long-term R&D investment. If the increase in the debt expands cash-on-hand, we must consider the optimal return period out of R&D investment from a perspective of market capitalization as the source of cash-on-hand. Bayesian MCMC can provide parameter estimation in probability, and it will support finding the hidden real parameter values by signaling function. Especially, the signal index as cash-on-hand level to R&D investment will be useful for seeking would-be star negative profit biotech firms.

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Redefining Business Practices: An Empirical Study of Shifts in the Business Model of Micro, Small, and Medium-sized Enterprises

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ABSTRACT:

The business model creates space for wider application even for micro-, small-, and medium-sized enterprises. However, the connection between the application of business modeling and the identification of the impact of changes in these groups is lacking. The post-pandemic crisis in Europe opens up new scope for changes, innovations, and redefinition of business activities for competitive positions. Therefore, the article aims to identify and determine the effect of influence on changes in orientation in individual elements of the business model based on the practical impact of changes in the three monitored three cohorts, which represent micro, small, and medium companies. The research methodology applies the EView econometric software, mainly the Mann-Whitney U test, to identify the mutual significance of elements of the business model in each monitored cohort. Data were obtained from 150 Czech firms with equal representation in the micro-, small-, and medium cohorts. The data made it possible to compare entrepreneurs 'the change in the attitudes in 2019 and 2022 employing the same methodology of the Business Model Canvas. Then, the results represent the importance of the element of Customer Relationship and Value Proposition, how the fundamental orientation for a specific activity in the post-crisis development, when companies try to maintain or acquire new customers to stabilize their incomes, adapts the offered value to it. The results of the study can overcome the current Entrepreneurship and serve entrepreneurs themselves, but also decision-makers, for innovation regional centers to overcome the post-crisis situation.

Keywords: *business model, business model elements, crisis, small and medium-sized enterprises.*

INTRODUCTION

The paper was created in response to the needs of entrepreneurs and companies that are dealing with the consequences of the COVID-19 pandemic and the resulting situation in Europe, which is caused by adverse economic influences on the side of high inflation in Europe of 10.6% (annual inflation in October 2022, Eurostat), while in Czechia 15.1% (annual inflation in October 2022, Czech National Bank). Companies must also cope with a sharp increase in inputs in the form of energy and raw materials (see ACER, 2022). Businesses must respond very quickly to these stimuli to adapt, survive, or create the principles of business sustainability. To address these developments, businesses are required to adapt their business models (Durst et al., 2021).

The study represents Czech micro, small and medium-sized enterprises (SMEs), which represent a fruitful research context for various reasons. First, SMEs have an impact on the share of creation in GDP and the impact on local economies. Second, evidence shows that SMEs represent roughly 90% of all firms and are responsible for 50% of employment worldwide, as well as up to 40% of GDP in emerging markets (The World Bank, 2022). Third, Czechia is no exception; in contrast, SMEs represent 99% of all companies and they employ 61% of all employees (Association of Small and Medium Enterprises and Entrepreneurs of the Czech Republic, 2022). Then, the study expands previous research that focused on mapping the influence of business model factors in the post-pandemic era (Adámek & Meixnerová, 2020; Adámek & Meixnerová, 2022). Therefore, the article aims to identify and determine the effect of influence on changes in orientation in individual elements of the business model based on the practical impact of changes in the three monitored three cohorts, which represent micro, small, and medium companies.

The tool for understanding the operationalization and functioning of the business is the Business Model (BM), which is a beneficial instrument for SMEs to help the owners/managers/entrepreneurs to understand the overall logic of the business. The central aspects are focused on creating and capturing value by providing a value proposition to customers (Zott et al., 2011, Zott & Amit, 2013). In addition, the BM provides visualization and understanding of the main activities, value propositions, and key resources. There are several approaches to business modeling, e.g. Osterwalder & Pigneur, 2010; Wirtz, 2011; Gassmann, Frankenberger & Csik, 2014. They provide the basic construct of BM for capturing the form of business, and it can also be extended by the concept and comparison (see Steinhöfel & Kohl, 2016). The Business Model Canvas (BMC) is used in the current literature to analyze business models from a practitioner's perspective (Müller, 2019). The study used the BMC of Osterwalder and Pigneur (2010), which allows the construction of the BM into nine elements: customer segments, value propositions, channels, customer relationships, revenue streams, key partners, key activities, key resources, and cost structure. Furthermore, business models can be used to perform analysis and evaluation of elements that represent analytical capability (Chungyalpa et al., 2016) to observe the relationships between BM elements. It has proven to be a comprehensive approach, and its building blocks (elements) create a holistic and nuanced view of business models (Wirtz et al., 2016).

The study is structured as follows. First, the literature review forms the theoretical principles for SMEs and the business model with an emphasis on the possibilities of using business modeling with the identification of elements of the business model. Theoretical approaches are a construct for the subsequent capture of empirical changes and recognition of the most significant influences of BM elements on the competitive position of firms. Next, the following part justifies the emergence of hypotheses in connection with the subject cohorts of micro-, small-, and medium-sized enterprises, and their supposed effects on the individual elements falling into BMC. Then, research is performed on a sample of 150 companies and the data is evaluated according to the consistency of normality using statistical testing of the significance of changes within the

monitored two periods in 2019 and 2022. Afterward, a discussion and parts of the research findings are presented, and the results identify the dependencies and key elements of BM in each observed cohort. In closing, the concluding remarks provide space for knowledge transfer for specific management decisions, and the study contributes to the growing literature on SMEs' practices and expands the concept of connectivity with business models and their key elements, which is essential for additional insights for SME managers, entrepreneurs, and policymakers.

THE BUSINESS MODEL AND SMEs

BM is already firmly rooted in the academic literature (Campos, 2021), but the connection between SMEs and the typology or specification of BM elements according to micro-, small-, and medium-sized enterprises is not adequately represented. BM has been investigated within a particular context for SMEs (Nielson et al. 2018), for example, see Schüle et al. (2016) and connection to the construction sector or the study by Iivari (2015) investigates how business model transformation relates to innovation strategy within SMEs. In a literature review, there is still a gap in the connection between SMEs and BM effects, and a systematic literature review is still lacking (Tulli & Tarquinio, 2021). However, the issue has not been investigated from an empirical point of view, which is why this study is unique because it employs three cohorts and examines the influence and impact on individual elements of BMC.

Generally, a business model describes how a firm operates internally and cooperates with key players, so it is a suitable resource for identifying the company's ability to achieve better performance (Spieth et al., 2016). Entrepreneurs have adopted approaches to visualize their business models due to competitiveness (Velu & Jacob, 2014). Czech businesses are no exception and must handle the difficulties associated with recovery, including focusing on appropriate strategies to ensure the survival of the business. Studies have shown that SMEs face several difficulties but also opportunities caused by the COVID-19 pandemic (Adam & Alarfi, 2021). Research emphasizes the vulnerability of SMEs, which are impacted very hard by the demonstration of the economic crisis (Latham, 2009; Robbins & Pearce II, 1993). In times of crisis, the existence of SMEs is threatened by weakening their growth (O'Reilly III & Tushman, 2011) and limiting their activities in elements of BM. SMEs, for example, in times of crisis, have limited access to financing (Cowling et al., 2012; Mason & Harrison, 2015), search for additional information, capital, or cutting cost structure, and are directly affected due to close ties to customers and employees. The consulting activities of the author have a positive impact on understanding of BM in SMEs when it helps them understand how the firm works and is a source of innovation and the emergence of new strategies. Furthermore, BM is the source of strategy and innovation (Afuah, 2019).

Several authors in business model research address the elements of BM and its impact on competitiveness. According to Adámek & Meixnerová (2020, p. 864), business success is given by the effectiveness of creating individual elements of the BM in their interconnection and the

ability to transform inputs into outputs. Furthermore, it appears that SMEs are flexible and adaptive, multitasking, less bureaucratic, and can adapt more quickly to changes and provide expeditious implementation of innovations (Arbussa et al. 2017), which is due to their size and simplicity. It seems that there is no logic in creating ideal BM patterns for each SME, but the importance of individual BM elements of BM in each cohort can be examined. The results then reflect the thinking and attitude of entrepreneurs, who must be able to adapt more quickly to the changing negative economic influences around them. However, the impact of SME cohorts on elements of BM remains a field scarcely investigated. Therefore, this study proposes the following logic to derive the research hypothesis. Therefore, the research is focused on defining the influence of individual elements of BM within the three observed cohorts (micro, small, and medium enterprises).

Hypothesis forming

Micro-enterprises represent entrepreneurs who are dependent on operational financing and may not have sufficient capital (Mason & Harrison, 2015). Therefore, it can be expected that their dominant orientation among all BM elements will be precisely on cost reduction. Based on this assumption, we hypothesize Hypothesis 1: *It is supposed that micro-enterprises (cohort 1) in the post-pandemic and current crisis adopt the most in the Cost Structure (CS) than in other elements of the business model.* We believe that micro-entrepreneurs are mostly oriented towards the speed of reducing their expenses, thus on the cost level. These entrepreneurs are looking for savings and cutting costs due to their minimization and the possibility of stabilizing the firm to overcome these negative economic factors (high inflation, sharp increase in inputs such as raw materials, materials, energy, etc.). These representatives do not have robust savings, and often their business is dependent on operational activities.

The perspective of the value proposition dimension contains a solution for customers and how they are offered (Morris et al., 2005; Johnson et al., 2008). We believe that it is small firms that focus the most on the element of value proposition and implement essential activities and strategies. SMEs try involves reinventing elements of either the value proposition (Lindgardt, Reeves, Stalk, & Deimler, 2009). Hypothesis 2: *It is supposed that small enterprises (cohort 2) in the post-pandemic and current crisis adapt the most to the Value Proposition (VP) than to other elements of the business model.* We believe that companies adapt and see the potential for major changes on the side of the value offered, i.e. they are concentrated on changes in the value provided to customer segments, try to increase their satisfying value, look for reserves to increase it, or create new ones. The concentration of companies is on offer, for example, additional services, extra services, complements to products, etc., to retain existing customers. The driving force is the concentration of the value offered.

Medium-sized companies represent businesses with a customer-driven business model innovation framework (Keiningham et al. 2020). In times of crisis, their attention is paid to detailed

investigative approaches to segmentation in specific markets to maintain them, expand, or open new market shares. Hypothesis 3: *It is supposed that medium-sized enterprises (cohort 3) in the post-pandemic situation and the current crisis adopt the most in Customer Segmentation (CS) than in other elements of the business model.* These companies are already established mostly in the existing markets and search for other opportunities to target other segments in order not to lose their customers, i.e., they concentrate on detailed segmentation, prioritize segments, know the motivators and trends in the customer segment, have acquisition strategies, customer retention, and generally approach a precise approach to the customer base and knowledge of individual segments. The following part of the study presents the focus of the investigation, data collection, and methodology.

DATA AND METHODS

The study is based on data obtained in 2019 before the pandemic and in 2022. This range of data makes it possible to compare the results before the pandemic and the crisis and to compare them with the current perception of the BM elements of individual entrepreneurs in the three monitored cohorts of SMEs. The survey was based on the BMC methodology in the form of a questionnaire in cooperation with the owners/directors of businesses in the form of a personal interview. The sample of respondents was randomly selected with an even distribution of 50 companies in each monitored cohort (Cohort 1 – micro, Cohort 2 - small, and Cohort 3 medium-sized enterprises). In this way, in total 150 Czech SMEs participated in the survey. To measure the significance of each BM element, each respondent was asked on a 5-point Likert scale (1 minimum significance, 5 maximum significance). We asked respondents a set of questions in each of the nine BMC blocks (each block had between 10 and 15 questions). Partial breakdown as not used for respondents in are of sub-criteria, e.g. field, market orientation, the scope of activity in the sector, etc. To identify the influence of BM elements, only companies categorized according to SMEs were selected. Respondent firms operate in B2B markets and offer their products or services to end customers.

Data are processed using Microsoft Office Excel and EViews econometric software (Bin Othman and Heng, 2014; Allbright, 2013). The issue and measurability of BM have not been fully answered (Saebi et al., 2017), and e.g. Clause's study (2016) shows that each area of BM can be measured individually in terms of the share of influence of an individual element of BM. To test the hypotheses, a descriptive analysis approach was used for data analysis (Shafi et al., 2020). The nature and scale of business models are normally distributed. The assumption of normality confirms the Moivre – Laplace Theorem (Allbright, 2013). Therefore, the nonparametric Mann-Whitney U test was then applied (Bin Othman & Heng, 2014). Before applying this test, the normal distribution was verified using the Shapiro-Wilk normality test (Table 1).

Table 1. Results of the Shapiro-Wilk normality test

Businesses	Micro	Small	Medium
Shapiro-Wilk test	0.00032-0.04421	0.00015-0.03200	0.00011-0.04264

Source: own processing in EViews

FINDINGS AND RESEARCH RESULTS

Table 2 shows the results for the significance of the individual factors of BM. The interdependence is represented by a comparison of the values of two periods, specifically from 2019, when firms were not affected by the crisis and pandemic, with the results from 2022, where the impacts and changes in the adaptation of businesses to the given market situation are reflected. Individual values point to the significance of the BM element for change within the BMC framework to improve competitive position.

In the first monitored cohort (microenterprises), the *cost structure* element of the BM is a significant dependency. As a result, it is clear that these companies are strongly oriented towards their cost side and it is key for them when considering specific business activities. Here, a fundamental orientation to costs and their structure, an approach to predicting payments, and modeling expenses in a shorter period are evident. Entrepreneurs are considering cheaper alternatives for operational activities and are looking for savings opportunities in both processes, inputs, and also in employees. The tendency is to be able to reduce costs more quickly so that the firm survives a short period and stabilizes. It follows from the above that micro-enterprises (cohort 1) in the post-pandemic and current crisis adopt the most in the *Cost Structure* and we can accept the first hypothesis. Furthermore, the second significant influence for cohort 1 is *customer relationships* and the third is the orientation to the *Value Proposition* when companies work to improve the value offered and try to appropriately supplement and combine products or services to match the needs of their customers.

Table 2. Significance of the Business Model Elements according to SMEs cohorts

Cohort of SMEs	Representation	Elements of the business model								
		Customer segments	Value proposition	Channels	Customer relationships	Key activities	Key partners	Cost structure	Revenue streams	Key resources
Micro	50	0.081	0.061	0.140	0.052	0.072	0.082	0.047	0.067	0,084

Small	50	0.076	0.032	0.050	0.021	0.051	0.071	0.041	0.036	0.26
Medium	50	0.047	0.052	0.052	0.037	0.072	0.043	0.088	0.046	0,061

Source: own processing in EViews, significance level 5 %

In the second cohort (small enterprises), the element of *Customer Relationships* was identified as the most significant. Firms, therefore, focus on strengthening and forming relationships with customers. There is an obvious orientation towards anchoring relations with current customer segments, which firms do not want to lose in times of crisis. They invest and focus significantly on maintaining relationships and implementing additional marketing tools. The second important factor was the identification of *key resources*, when companies in times of crisis focus on key resources, that is, on the possibilities of optimizing resources from the point of view of the cost structure and complexity of the individual resources they need to deliver value to customers. The third important factor is precisely the *Value Proposition*, meaning the concentration on refining the offered value and higher customer satisfaction to retain them and stabilize sales and revenue. On the basis of these statements, we cannot confirm the second hypothesis and must state that the *value proposition* element was only placed in the third place.

Medium-sized companies (Cohort 3) present their significant orientation to the *BM customer relationship* element. Therefore, it is possible to trace the factor that the importance of creating, maintaining or establishing new relationships with customers increases with the size of the firm. The orientation of medium-sized companies is therefore also on a strong customer base and they are willing to invest resources and implement additional services or benefits for customers to persuade or convince them to buy. *Key partners* were identified in second place, indicating the companies' orientation toward building permanent partners, especially in the area of supplier relations. Firms do not want to lose their partner and are willing to withdraw, for example, from cost management at the expense of regularity or stability of cooperation. The third influential element is *revenue streams*, where companies emphasize the sustainability and predictability of revenues and can implement appropriate pricing strategies. According to the research findings, we cannot confirm the third hypothesis because *customer segmentation* does not show fundamental importance in the third cohort under observation.

DISCUSSION

The following Table 3 summarizes the main findings according to the SMEs. As a whole, the results show the significant role of the element of the business model *Customer Relationships*, which exceeds in overall importance. At a time when firms have to adapt to new conditions caused by external influences, they are looking for a key orientation in building relationships with customers. In this way, firms distinguish their segment and types of relationship, including strengthening the provision of additional services or communication with customers. The connectivity and digitization of several processes are evident so that the customer has the opportunity to communicate or react quickly.

Table 3. Significance ranking of BM elements

Position of BM element	Micro	Small	Medium
1	Cost Structure	Customer Relationships	Customer Relationships
2	Customer Relationships	Key Resources	Key Partners
3	Value Proposition	Value Proposition	Revenue Streams

Source: own processing

On the contrary, these additional tools cost firms' additional expenses, which they are willing to accept. Here, however, there is a difference in the concept of micro companies compared to the other two cohorts, which are aware of these costs but employ more efficiently with the profitability of the costs of creating or maintaining customer segments.

Considering the results of the current situation, SMEs are concentrated on two main factors in the form of value proposition and customer relationships. In contrast to these observations, medium-sized enterprises show a strong orientation toward key partnerships, especially in connection with their suppliers. This means that they prefer permanent and permanent supplies and build approaches with their key partners, where we also include investors or banking institutions. The role and importance of partners are reinforced precisely in times of crisis or an increase in input prices when there are already cases of the collapse of companies that could not handle the sharp increase in prices, and in some energy-intensive industries, companies are already losing their permanent suppliers.

In summary, the customer relationship is the most adapted and is the source for possible innovations in this area of all elements of the business model. Thus, the firms are most focused on deepening relationships with customers, including the value offered, which means a strong orientation towards maintaining their positions within the framework of negative economic developments and the cooling of relationships on the part of customers who are starting to save more significantly and limit their purchases. Therefore, companies try to keep them to stabilize their position, have a constant income, and set the principle of business sustainability.

CONCLUSION

The results of the study can be used in the business and SMEs cohorts when entrepreneurs were introduced to important key elements and factors that each cohort considers essential. Findings can assist business innovation centers, e.g., at regional levels, where direct and targeted to individual company activities represent a fundamental orientation in BM for the competitiveness of SMEs. In this way, the consequences of changes in the behavior and orientation of entrepreneurs in the post-crisis development and the current disruption representing a sharp increase in input costs and high inflation can be a source for appropriate targeting of support from, e.g., associations of small and medium enterprises, possibly responsible ministries, which are actors for decision makers in developing strategic policies to overcome recovery challenges.

Finally, we identified Customer Relationships as a fundamental element of the Canvas business model, which dominates the influence and orientation of entrepreneurs and provides space for a wider application of marketing and communication tools in combination with the Value proposition. These two elements can be recommended as primary orientations to current crisis conditions. For micro-enterprises, there is a strong focus on Cost Structure, and entrepreneurs are fine-tuning their cost plans and reducing expenses to overcome the current market turbulence. These companies are mainly local, so the change affects them directly.

The study aimed to identify and determine the effect of the influence on changes in orientation in individual elements of the business model based on the practical impact of changes in the three monitored cohorts, which represent micro, small and medium-sized enterprises. In closing, it can be stated that the field of research covered the sample or respondents and followed the development of the change compared to 2019 with data in 2022 within the same representation of 150 businesses. In addition to the aforementioned areas, the study expands connectivity both in the field of research and in theoretical contribution to find that even SMEs play an important role and the application of BM with an emphasis on the influence of its elements can be key to innovations (see Clause, 2016) and changes in the practical activities of entrepreneurs to overcome current unfavorable economic conditions, as SMEs are a pilot resource for further economic development.

RESEARCH LIMITS AND FUTURE RESEARCH ORIENTATIONS

The results of this research should be considered in light of its limitations. First, the representation of firms in each cohort represents a representative sample. However, the study makes it possible to compare changes in the behavior of owners/entrepreneurs within a three-year cycle, so the communication and participation of the given subjects was demanding in time and willingness to participate in this study. Second, there were limitations to the author's capacity to carry out a wider research, which is planned as the next step. The presented research conclusions introduce the degree of significance of the elements but do not examine the interrelationships between the sub elements of the BM, which is a prerequisite for further statistical analysis.

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DRIVE TOWARDS SOCIAL ENTREPRENEURSHIP AMONG THE MANAGEMENT STUDENTS IN SOUTH INDIA

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Abstract:-Management education need more focus purposiveness and directiveness in India. The top management and faculty members are having differential focus towards this elite program which has had global laurels. IIM and IIT have created their own brands and student engagement has been very high towards profits and entrepreneurship. The management education students are having a modified perspective on this MBA program towards purposive social engagement and entrepreneurship. This study was conducted among management education students on an all India basis. Data was collected from numerous students pursuing post graduate management and under graduate program in various institutions. Data was analysed using SPSS as demographic, hypothesis and objective based analysis was done. Cross tabulation, ranking, Anova and factor analysis was also done and an SEM model has been given as the output of this study. It was found from this study that management students had social entrepreneurship engagement as their career choice and they needed guidance on starting of these ventures. These students did not have work experience nor did they have networking with social entrepreneurs. Industry academia interface and entrepreneurial incubator research divisions has to be established in management institutions across South India. This would create a new breed of entrepreneurs who are socially conscious as they can make socio economic contributions in India. The Indian government must take in to cognizance of these mental and attitudinal changes in Management students and support them in all means by creating program suitable for new age requirement.

Keywords: Social entrepreneurship, student engagement, motivation, dedication and commitment, career choices, entrepreneurial personality and Industry internship.

1. INTRODUCTION

The foundations of social entrepreneurship were laid by non-government social purpose enterprises' use of earned income strategies to offset government support reductions and fluctuating organizational or individual donations.(Nicolás Martínez, Rubio Bañón, & Fernández Laviada, 2019). Being socially entrepreneurial calls for exceptional behavioural and leadership qualities (Zietlow, 2001), to stand up to criticism from people who think it's wrong to pursue both social and economic goals at the same time. Some non-profits have turned to social entrepreneurship in order to improve their financial planning and management, increase their

output and performance by focusing on the market and the marketing mix, and increase their marketing capacity.(Zietlow, 2001).

More conceptual work than empirical research has been done in the field of social entrepreneurship, which has prevented the establishment of a single, context-free definition with obvious validity for the construct. It is possible to define social entrepreneurship as a construct with multiple dimensions, including the entrepreneur's moral obligation to innovate their decision-making processes, take calculated risks in pursuing social goals, and maintain their commitment to action in the face of moral or contextual challenges..(Sullivan Mort, Weerawardena, & Carnegie, 2003). Successful social entrepreneurship results from social innovation in the mobilisation and scaling up of the beneficiary groups' existing assets, leadership skills in bringing together different stakeholders, coalition-building with customers, and movement-building to generate and structure more targeted activities..(Noruzi, Westover, & Rahimi, 2010).

To get closer to a context-free definition of social entrepreneurship,(Tan & Yoo, 2015)Social entrepreneurship was characterised as an initiative to innovate, take risks, and profit society through business. According to this perspective, they saw community enterprises and socio-economic dual mission firms as social enterprises. A social business visionary must strike the correct balance between being "socially centred" and "market-oriented" in their business decisions.(Masseti, 2008). He/she would be driven by compassion(Dey & Steyaert, 2012)and would be willing to take risks, disciplined, creative, and skilled at spotting opportunities and putting together resources to challenge established social and economic structures for the purpose of creating social value.(Dacin, Dacin, & Matear, 2010). Through collaborative partnerships with a variety of stakeholders, a successful social entrepreneur would also be able to successfully connect customers to the social mission.(Goyal, Sergi, & Jaiswal, 2016). Scholars have been paying attention to social entrepreneurship because of its simultaneous goals of creating social and economic wealth.(Dey & Steyaert, 2012). Social entrepreneurs discover ways to create or distribute social value by utilizing innovation;being well aware of the dangers associated with simultaneously obtaining resources (Peredo & McLean, 2006). This explanation neglects to account for a social enterprise's liability and responsibility in relation to the beneficiaries or communities it serves.(Peredo & McLean, 2006) explains a social enterprise as a business that employs for-profit business models to produce income in order to fulfil a social mission.

Because understanding Since social entrepreneurship is context-specific, more research is needed to determine how business and social models can be transferred, as well as how this would affect different communities and regions of the world..(Hota, 2021). How the success or failure of social enterprises is determined by structural, contextual, institutional, and personal factors like compassion and motivation requires further investigation. (Gali et al., 2020). Because of this, it is necessary to measure the effect of social capital on performance in order to quantify the performance and impact of social enterprises. (Kraus, Filser, O'Dwyer, & Shaw, 2014). Research is needed to come up with trustworthy metrics that make it easier to scale up;since most plan strategies give slow development results.

Government initiatives and its Impact

In the current environment of entrepreneurship, the government has implemented numerous programs to encourage entrepreneurship among educated youth, including "Start-up India," "Stand up India," and "Make in India." These programmes offer a wide range of benefits and subsidies to

first-time business owners, SC/ST individuals, female entrepreneurs, and others. For the past few years, the country has been involved in a campaign regarding these. India wants to change from being a nation of job seekers to one that creates jobs. Given these novel circumstances, this study addresses an important research question about whether students in the Masters in Business Administration course and BBA, particularly those studying management, have changed their minds about whether they want to pursue entrepreneurship now.

New Breed of Entrepreneurship in India

In the past few decades India has made a tremendous growth in the field of IT and IT enabled services and has assumed a prominent place in the global scenario. In order to take advantages that IT and ITES sector can bring to economy many state governments are trying to attract young entrepreneurs to start their ventures in their respective states(Hutchinson & Ilavarasan, 2008). As a result of this technology boom, numerous new business owners have emerged and grown into significant players in their fields. They have grown numerous businesses into global corporations.

Research Questions

Hence the following research questions are addressed in this study.

1. Whether the Management studies have the basic entrepreneurship attitude and intention, or would like to take up salaried occupations in India?
2. How is this entrepreneurship intention formed among the post graduate business administration students? What role do motivational drives play in the formation of social entrepreneurship Intention among them?
3. Whether the changing business eco system of small start up businesses is encouraging the students of business administration to consider entrepreneurship seriously?
4. Whether the changed government policies and encouragement being given to small start up entrepreneurs is encouraging the students of business administration to consider social entrepreneurship?
5. Whether the recent success stories of first time and start up entrepreneurs in the field of IT and ITES have made an attitudinal change in the minds of post graduate students of business administration making them to prefer social entrepreneurship as a career choice?

Research Objectives

On the basis of the research gaps identified from the earlier research works the following objectives have been framed,

1. To analyse the social entrepreneurship intention among the management students in India.
2. To assess the differences in terms social entrepreneurship intention and its formation between business community students and non-business community students.
3. To analyse the effect of demographic variables towards motivational drives and entrepreneurship intention.

4. To investigate the role of Motivational Drives in intention among students influencing social entrepreneurship.
5. To analyse the relationship between motivational drives and personal attitude towards entrepreneurship, subjective social norms and perceived behaviour control.
6. To determine how personal attitudes about entrepreneurship, subjective social norms, and perceived behaviour control affect the connection between motivational drives and entrepreneurial intention.

These rigorous inquiry can provide answers to questions in quantitative and qualitative empirical research methods for theory development that can contribute to the social entrepreneurship phenomenon.

Paper Organisation:

The following section 2 describes the related works of social entrepreneurship among the management studies. Section 3 illustrates the methods of the study and analysis and interpretation of the data depicted in section 4. Finally the research concluded in section 5.

LITERATURE REVIEW

In South Asian nations, India, Bangladesh, and Sri Lanka conduct the majority of social entrepreneurship research. The search did not yield any results for Pakistan, Afghanistan, Bhutan, Nepal, or the Maldives. (Zaremohzzabieh et al., 2019) Utilizing the theory of planned behaviour (SEI), investigate the possibility of predicting the purpose of social entrepreneurs. Correlations between the TPB model's constructs and SEI were investigated in a random-effects meta-analysis of zero-order correlations found in 31 studies (37 samples, $n = 14,318$). A pooled correlation matrix served as the foundation for the meta-analytic structural equation modelling (MASEM) used to accomplish this. By altering the connections between significant TPB components and intentions, two alternative models were suggested and evaluated. The SEI antecedents were formulated differently by these models. The results demonstrated that the alternative models were able to accurately predict SEI in comparison to the original TPB model. Additionally, the findings demonstrated that the TPB's additional parameters boost the strength of the two models. When analysing the results of a variety of TPB tests, this method is one that researchers are encouraged to use.

(Sahasranamam & Nandakumar, 2020) We found that all three categories of personal capital are required for social entrepreneurs to access the market using data from the Global Entrepreneurship Monitor. The study also shows that the formal institutional context shapes this relationship, with philanthropy-oriented financial systems I having a favourable moderating effect on financial capital investment (ii) moderating investment in human capital positively (iii), educational systems (ii) moderating investment in financial capital positively (iv), and political systems (v) moderating investment in both human and financial capital favourably. The study significantly contributes to the body of knowledge on social entrepreneurship by identifying the nature of contingent impacts of the relationship between individual capital and the establishment of social enterprises in the formal institutions.

(Bozhikin, Macke, & da Costa, 2019)analyze the condition of social business venture right now and how it connects with significant non-state entertainers and the public authority. In the wake of Pittaway et al. (A corpus of 478 logical articles was incorporated through a deliberate writing survey utilizing the Scopus data set, as well as Cerchione et al. (The review was conducted from 2001 to March 20, 2018. The 102 most representative works from the papers were selected based on the counts of citations they had in the Web of Science® database. The 2015 version of Alceste® was used to organize and submit the abstracts of these selected studies for content analysis. After reading each source, the papers were categorized and a data matrix was created, making descriptive analysis possible. According to the findings, there are minimum six distinct stages of government intervention designed to encourage social entrepreneurship. It also identified eleven regulatory mechanisms and four government initiatives to support social entrepreneurship, both of which could be the subject of additional research in subsequent studies. It has also been discussed how important non-state actors are in social entrepreneurship. Based on the findings of the study, a plan for further research get develop on the subject in the following directions: i) a coordinated set of regulatory mechanisms to more effectively encourage social entrepreneurship; ii) capital social; iii) strategies for the environments of social business ventures; iv) financial support from the government.

According to (Jena, 2020), Despite having the highest youth unemployment rate in the world, India faces significant challenges. Youth unemployment is primarily caused by a lack of entrepreneurial awareness and skill. There were three main goals of this study: 1) to investigate students' attitudes toward entrepreneurship education in Indian universities and colleges from a cognitive, affective, and behavioral standpoint;

2) to determine how entrepreneurial intent is affected by students' attitudes toward entrepreneurship education; students from a variety of central Indian business management colleges and universities participated in the survey to investigate the impact of control variables on the relationship between students' attitudes toward entrepreneurship education and entrepreneurial intention (such as gender and entrepreneurial family background). The schools and colleges were chosen using a purposeful testing strategy, while the respondents were chosen using basic irregular testing. The results were obtained by analyzing the data from 59 completed questionnaires using the R programming language. According to the findings, intention to start a business was significantly influenced by one's attitude toward entrepreneurial education.

(P. Kumar, 2021)done is to look at the trends in developing a social entrepreneurship postgraduate program in India's higher education institutions (HEIs). The researcher searched the websites of Indian higher education institutions for social entrepreneurship syllabi using the terms "entrepreneurship," "social entrepreneurship," and "social innovation." The fact that various institutions have curricular differences was found to be significant by the studies. The school districts in which these classes are taught have been analysed by the researcher in order to gain more in-depth knowledge. In addition, entrepreneurship teaching pedagogies and strategies, course objectives, and content are evaluated. Social entrepreneurship educators have argued for the need for cross-disciplinary collaboration in light of these provided insights.

(Swain & Patoju, 2022) intended to assess factors impacting the choice of youth in India to pick social business venture as a lifelong choice. From three Indian universities that offer courses in social entrepreneurship, a sample of 200 students pursuing a master's degree in social entrepreneurship was selected. A 5-point Likert scale was constructed and verified using data from

in-depth interviews and a literature review to identify 16 measured variables. The principal component analysis (PCA) method was used to analyse the survey data. The four factors—personal, social, institutional, and other—that were extracted from the final factor structure. The study comes to the conclusion that in order to encourage students to pursue a career in social entrepreneurship, the state needs to create an environment that encourages this.

(Capella-Peris, Gil-Gómez, Martí-Puig, & Ruíz-Bernardo, 2020) proposed a SECS (social entrepreneurship competency assessment) instrument for higher education. 19 characteristics of competency in social entrepreneurship were identified. The SECS's validity and dependability were established by the pilot test (n = 497). A set of categories that were in line with the initial strategy was suggested by exploratory factor analysis. Corroborative element investigation showed OK connections among the scale classifications and things, while the fit lists proposed that the information fit enough to the default model. In all instances, Pearson's test confirmed significant, positive correlations between the revised categories. As a result, the scale has the potential to help research into social entrepreneurship.

According to (A. Kumar, 2019) It is necessary for educators and policymakers to have a solid understanding of the antecedents of those intentions if they want to encourage students to participate in social entrepreneurship. The theoretical framework is proposed in the study. For a survey of Indian students enrolled in Bachelor of Pharmacy, Bachelor of Engineering, and Master of Business Administration programs, paper-based questionnaires were used to collect data. The convenience sampling method was used for the sampling, and there were 347 people in the usable sample. The model and hypotheses were tested using smart PLS 3.0 structured equation modelling. Empathy, social support, moral obligation, self-efficacy, and government support are significantly correlated with entrepreneurial intention, according to the study. Students' intentions to start their own businesses are influenced most by social support, while moral obligation has the lowest impact. A college degree was a must if you wanted to run your own business. The study also reveals that male and female students have distinct entrepreneurial goals, and that students who major in business are more likely to have such goals than students who major in engineering or pharmacy. At the article's conclusion, the study's limitations and scope for future research are discussed.

The majority of studies on entrepreneurial intention were conducted in developed nations, but very little research has been done in developing nations, particularly India. Resources, employment, education, and other factors differ between developed and developing nations. Young people's intentions are affected, and students in developing countries are more likely than students in developed countries to choose entrepreneurship as a career.

2. METHODOLOGY

The proposed search follows the Quantitative study, the data collected from Management students based on Questionnaire. The primary data collected through 18 to 25 years of age .

Demography details

		Frequency		Percent	
Age	18yrs-20	19		17.4	
	21-25 years	79		72.5	
	above 25 yrs	11		10.1	
	Total	109		100.0	
Gender	Male	69		63.3	
	Female	40		36.7	
	Total	109		100.0	
Place of residence	Bangalore	21		19.3	
	Coimbatore	2		1.8	
	Delhi	3		2.8	
	Guntur	8		7.3	
	Hubli	7		6.4	
	Hyderabad	21		19.3	
	Jabalpur	2		1.8	
	Mysore	7		6.4	
	Nizam	7		6.4	
	Salem	1		.9	
	Tirupati	14		12.8	
	Vijaywada	8		7.3	
	Vizag	8		7.3	
	Total	109		100.0	
Number of people living in your household (including yourself)	2	3		2.8	
	3	37		33.9	
	4	50		45.9	
	5	13		11.9	
	6	5		4.6	
	7	1		.9	
	Total	109		100.0	
		Father		Mother	
	Primary	4	3.7	3	2.8

Parent's education level	Secondary	5	4.6	3	2.8
	Vocational training	27	24.8	26	23.9
	University	33	30.3	33	30.3
	Other	23	21.1	21	19.3
	Total	17	15.6	23	21.1
	Total	109	100.0	109	100.0
		Frequency		Percent	
Degree you are studying	BBA	30	27.5		
	MBA	54	49.5		
	PGDM	25	22.9		
	Total	109	100.0		
Expect to complete degree	current year			23	21.1
	Next year			47	43.1
	2 years			39	35.8
	Total			109	100.0

It is inferred from the above table that majority of the respondents are in the age group of 21 to 25 years. Majority of the respondents are male. Majority of these respondents reside in Bangalore and Hubli. It is found that majority of all these respondents do live in families where there are four members. It is found that majority of respondent's (both mother and father) parents have undergone some training program. Majority of the sample respondents are undergoing MBA program now.

Research Hypothesis

Accordingly, we propose

H1: Business/ Non-business community students are positively related to motivation towards social entrepreneurship intention.

H2: Relationship between Business/ Non-business community students and Motivational drive serves as a mediator between social entrepreneurial intentions.

H3: Personal attitude is positively related to motivation drive.

H4: The relationship between Personal attitude and social entrepreneurial intentions are mediated by motivational drive.

H5: The background of educational Social Entrepreneurial is positively associated with motivational drive.

H6: Motivational drive plays a role in mediating the connection between social entrepreneurial intentions and educational background.

H7: Motivational drive on social entrepreneurial intentions has a positive impact on.

H8: The relationships between Business/ Non-business community students, Personal attitude and social entrepreneurial education mediates Motivation.

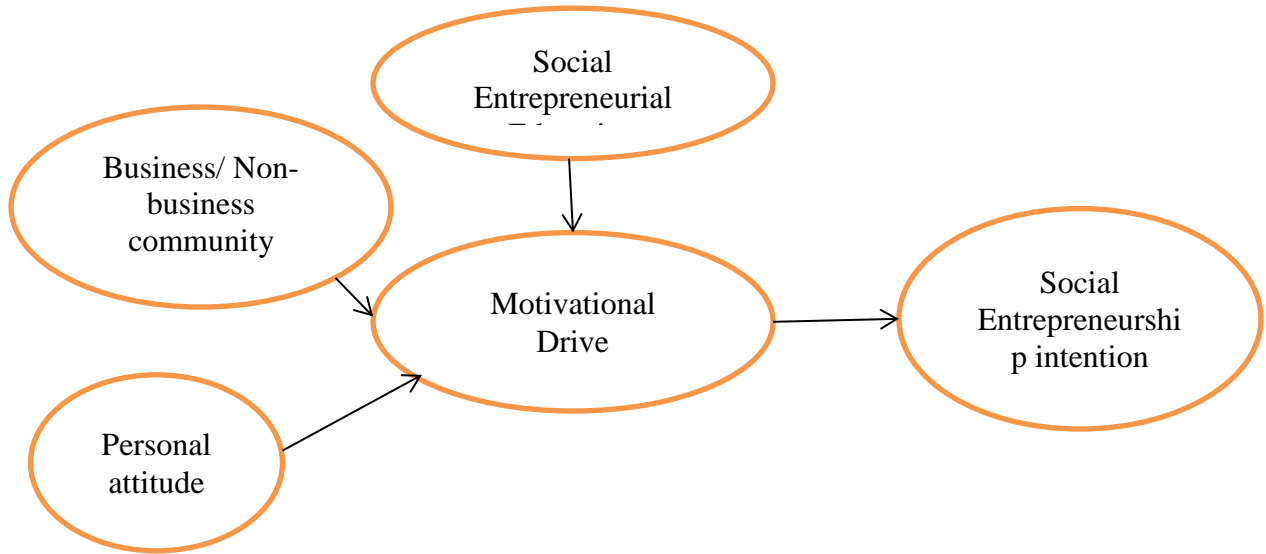


Fig.1. Research Model

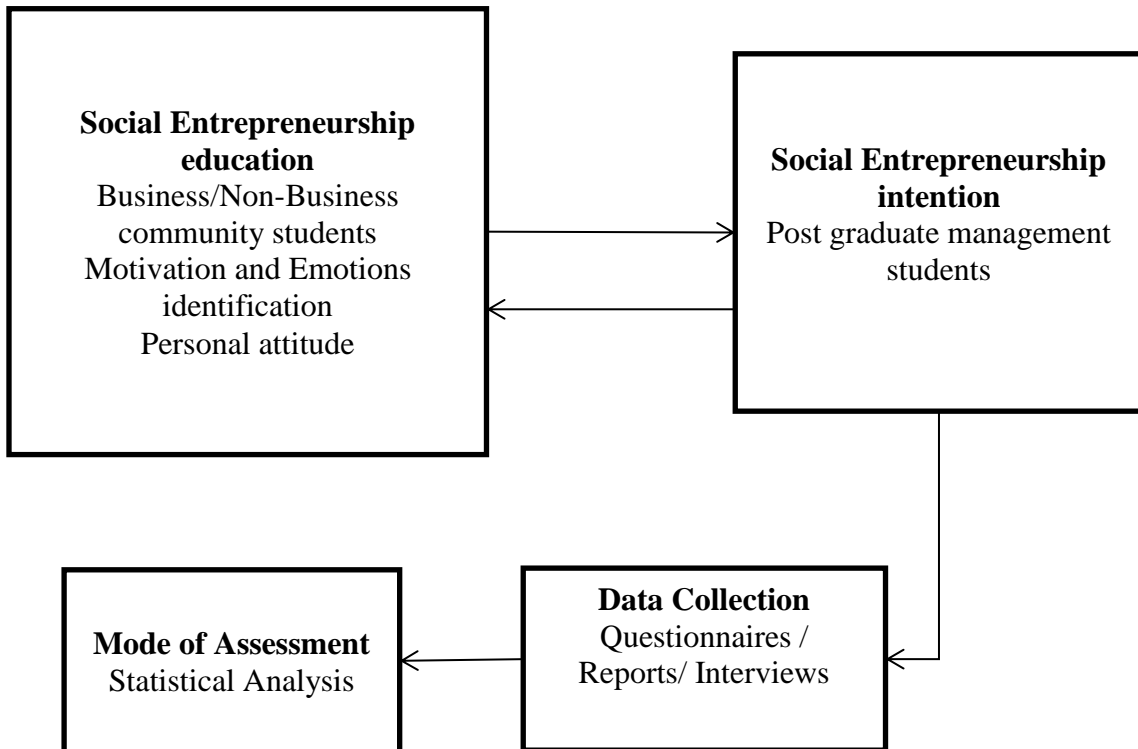


Fig.2. Conceptual Framework

The Independent variable is Social Entrepreneurship education, dependent variable is Social Entrepreneurship intention with their respect moderating variables are Business/Non-Business community students, Motivation and Emotions identification, Personal attitude.

3. DATA ANALYSIS AND INTERPRETATION

	N	Min	Max	Mean	Std. Dev
Vocation is the reasons to choose this degree	109	3	7	5.77	1.144
Career opportunities is the reasons to choose this degree	109	3	7	5.76	1.053
Advice from family or friends is the reasons to choose this degree	109	1	8	4.68	1.699
Valid N (listwise)	109				

Table 1: Descriptive statistics

It is found from the above table that majority of the respondents have chosen MBA program as it is a vocational program and it has lot of career opportunities. This is indicated with the mean score which ranges between 5.76 to 5.77 and standard deviation score which is more than one.

		Frequency	Percent		
Have you got labour experience (have worked or are working presently)		yes	49	45.0	
		No	60	55.0	
		Total	109	100.0	
Have you been in charge of other people					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	14	12.8	28.6	28.6
	No	35	32.1	71.4	100.0
	Total	49	45.0	100.0	
Missing	System	60	55.0		
Total		109	100.0		

Table 2: Work experience of respondents

Inference:

The majority of respondents do not currently have jobs because they are undergoing MBA program. The option of work and earn has to be explored in educational institutions of Bangalore which can provide more scope for practical exposure and experience in Industries which would be very fruitful for them.

It is also found that majority of them have not been exposed to be in charge of others in delegation, allocation of work, monitoring and control. As these are the prime aspects which are needed for manager MBA students must be given more exposure on these priority areas which is the need of the hour.

		Frequency	Percent
personally know any social entrepreneur	yes	47	43.1
	No	62	56.9
	Total	109	100.0

Table 3: Networking of MBA students with social entrepreneurs:

Inference:

The table above demonstrates that the majority of respondents do not network or have relationships with social entrepreneurs.. Educational institutions in Bangalore must provide industry – academia interface programs every weekend where there could be an effective interaction with social entrepreneurs which would motivate them as they would also become aware of challenges and issues associated with it.

	N	Min	Max	Mean	Std. Dev
Family member -To what extent do you know his/her activity as an entrepreneur	47	4	7	5.62	1.095
Family member-To what extent may he/she be considered a “good entrepreneur”?	47	4	7	5.72	1.097
Friend -To what extent do you know his/her activity as an entrepreneur	47	4	7	6.06	.818
Friend-To what extent may he/she be considered a “good entrepreneur”?	47	5	7	6.13	.711
Boss / foreman -To what extent do you know his/her activity as an entrepreneur	47	4	7	6.00	1.022
Boss / foreman-To what extent may he/she be considered a “good entrepreneur”?	47	4	7	5.98	.872
Others -To what extent do you know his/her activity as an entrepreneur	47	5	7	6.28	.743
Others-To what extent may he/she be considered a “good entrepreneur”?	47	4	7	6.09	.803
Valid N (list wise)	47				

Table 4: Responses regarding good entrepreneur: Personal circle

It is evident from the above table that sample respondents consider that friends & others in the social circle and general public must consider them as good entrepreneurs. This could be the motivating factor which encourages them in these activities. It is evident that social engagement and relevance are considered very important by sample respondents which are indicated in the mean score which ranges between 6.13 to 6.28. The standard deviation scores range from .71to.87.

	N	Min	Max	Mean	Std. Dev
Specific training for young entrepreneurs	109	3	7	5.96	.981
Loans in specially favorable terms	109	1	7	5.72	1.277
Technical aid to start the business	109	1	7	4.12	1.550
Business centers	109	1	7	4.77	1.519
Consulting services in favorable terms	109	1	7	5.35	1.410
Valid N (listwise)	109				

Table 5: Expectations of sample respondents

From the table, it can be deduced that all sample respondents believe they require specialized training in entrepreneurship that can also be socially engaging.. They also want information and understanding of procedures to avail loans to become social entrepreneurs.

	N	Min	Max	Mean	Std. Dev
Being a social entrepreneur implies more advantages than disadvantages to me	109	2	7	5.16	1.369
A career as entrepreneur is attractive for me - If I had the opportunity and resources, I'd like to start a firm	109	2	8	5.65	1.235
Being a social entrepreneur would entail great satisfactions for me	109	3	7	5.87	.982
Social Entrepreneurial activity clashes with the culture in my country	109	1	7	4.89	1.336
The social entrepreneur's role in the economy is not sufficiently recognized	109	1	7	4.46	1.151
Many people consider hardly acceptable to be an social entrepreneur	109	1	7	3.39	1.539
Social Entrepreneurial activity is considered too risky to be worth while	109	1	7	4.19	1.190
It is commonly thought that social entrepreneurs take advantage of others	109	2	7	4.88	1.152
Start a firm and keep it working would be easy for me	109	3	6	4.59	1.011
- I'm prepared to start a viable firm	109	1	7	3.68	1.592
I can control the creation process of a new firm	109	1	7	4.14	1.337
I know the necessary practical details to start a firm	109	1	7	3.86	1.309
I know how to develop an social entrepreneurial project	109	1	7	4.82	1.140
If I tried to start a firm, I would have a high probability of succeeding	109	3	7	4.78	1.031
Valid N (list wise)	109				

Table 6: Reasons for Entrepreneurial choice

The mentioned table reveals that the majority of respondents would like to pursue entrepreneurship as an appealing career choice. The challenge lies in resources and opportunity as both could be decisive factor to start a firm. This is indicated with the mean score of 5.65. The sample respondents also feel that being an entrepreneur would provide great satisfaction which is the most important factor for them which is indicated with the sample score of 5.87.

	N	Min	Max	Mean	Std. Dev
Opportunity recognition	109	1	7	5.50	1.229
Creativity	109	2	7	5.52	1.252
Problem solving	109	3	7	5.65	1.117
Leadership and communication skills	109	2	7	5.50	1.295
Development of new products and services	109	3	7	5.43	1.174
Networking and making professional contacts	109	3	7	5.83	1.041
Valid N (listwise)	109				

Table 7: Skills needed for becoming successful entrepreneur

Inference:

According to the table above, Management students consider problem-solving skills to be the most important skill. It is indicated with mean score of 5.65. It was also found from the sample respondents that opportunity recognition, creativity, leadership and communication skills are most important for MBA managers and training must be provided on these dimensions.

			Have you ever seriously considered becoming a social entrepreneur		Total	
			yes	No		
Gender	Male	Count	37	32	69	
		% within Gender	53.6%	46.4%	100.0%	
	Female	Count	18	22	40	
		% within Gender	45.0%	55.0%	100.0%	
Total		Count	55	54	109	
		% within Gender	50.5%	49.5%	100.0%	
			Have you ever seriously considered becoming a social entrepreneur		Total	
			yes	No		
Number of people living in your household (including yourself)	2	Count	1	2	3	
		%	33.3%	66.7%	100.0%	
	3	Count	17	20	37	
		%	45.9%	54.1%	100.0%	
	4	Count	25	25	50	
		%	50.0%	50.0%	100.0%	
	5	Count	7	6	13	
		%	53.8%	46.2%	100.0%	
	6	Count	4	1	5	
		%	80.0%	20.0%	100.0%	
	7	Count	1	0	1	
		%	100.0%	0.0%	100.0%	
	Total		Count	55	54	109
			%	50.5%	49.5%	100.0%
			Have you ever seriously considered becoming a social entrepreneur		Total	
			yes	No		
Age	18yrs-20	Count	12	7	19	
		% within Age	63.2%	36.8%	100.0%	
	21-25	Count	37	42	79	
		% within Age	46.8%	53.2%	100.0%	
	above 25 yrs	Count	6	5	11	
		% within Age	54.5%	45.5%	100.0%	
Total		Count	55	54	109	
		% within Age	50.5%	49.5%	100.0%	

Table 8: Cross tabulation on Demographic factors and implications

As can be seen from the table above, more male students than female students want to be entrepreneurs. It is also found that majority of the entrepreneurial intentions begin at a very early age for male students which start at the age of 18 to 20 years and for females it is between 21 to 25 years.

Intention to become a social entrepreneur

	Frequency	Percent
yes	55	50.5
No	54	49.5
Total	109	100.0

Table 9: Social Entrepreneurship intention

The fact that the majority of respondents, 50.5 percent, intend to become social entrepreneurs exemplifies the mindset of Management students who are pursuing careers for personal and social advancement.

	Frequency	Percent
Self-employed (no employees)	12	11.0
Micro-enterprise(up to 10 employees)	15	13.8
Small enterprise(10 to 50 employees)	19	17.4
Medium enterprise(50 to 250 employees)	24	22.0
Large enterp.(> 250 employees.)	39	35.8
Total	109	100.0

table 10: Size of firm intended to achieve

The above mentioned table suggests that the majority of the sample respondents (35.8%) want to start a business with around 250 employees. So it is evident that Management students want to have large scale start-ups which can benefit societies in a large scale.

	N	Min	Max	Mean	Std. Dev
I'm ready to make anything to be a social entrepreneur	109	3	7	5.50	1.051
My professional goal is becoming an entrepreneur	109	4	7	5.76	.980
I will make every effort to start and run my own firm	109	3	7	5.46	1.050
I'm determined to create a firm in the future	109	3	7	5.29	1.173
I have very seriously thought in starting a firm	109	2	7	5.22	1.109
I've got the firm intention to start a firm some day	109	2	7	5.33	1.089
Valid N (list wise)	109				

Table 11: Descriptive analysis on intention of becoming social entrepreneur

The above mentioned table suggests that the majority of respondents are willing to work hard to become social entrepreneurs. and it is indicated with the mean score of 5.60. majority of the sample respondents also feel that their professional goal is to become a social entrepreneur which is indicated in the mean score of 5.76.

	N	Min	Max	Mean	Std. Dev
social entrepreneurial success indicate Competing hard in world markets	109	1	7	3.57	1.377
social entrepreneurial success-Reaching a high level of income	109	2	7	4.99	1.041
social entrepreneurial success-Carrying out the kind of job you really like	109	2	7	4.51	1.111
social entrepreneurial success-Achieving great social recognition	109	4	7	5.36	1.076
social entrepreneurial success-Helping to solve the problems of my community	109	3	7	4.89	.926
social entrepreneurial success-Keeping the business alive	109	3	6	4.59	1.047
social entrepreneurial success-Keeping a path of positive growth	109	3	7	5.06	.870
Valid N (list wise)	109				

Table 12: Descriptive analysis on social entrepreneurial success

The above table suggests that the majority of respondents are interested in social entrepreneurship because it can provide high income levels, social recognition, and positive growth. This is evident from the mean score which is between 4.99 to 5.36.

Any course or module that could be considered as social entrepreneurship education

	Frequency	Percent
yes	68	62.4
No	41	37.6
Total	109	100.0

Table 13: Social Entrepreneurship education

It is inferred from the above table that majority of the sample respondents(62.4%) have felt that social entrepreneurship education must be provided as a course which can provide more awareness and effective engagement of students towards it.

	N	Min	Max	Mean	Std. Dev
possible to offer social entrepreneurship education courses which develop the Knowledge about the social entrepreneurial environment	109	3	6	4.82	.935
possible to offer social entrepreneurship education courses which develop the Greater recognition of the social entrepreneur’s figure	109	3	6	5.14	.833
possible to offer social entrepreneurship education courses which develop the preference to be a social entrepreneur	109	4	7	5.89	.906
possible to offer social entrepreneurship education courses which develop The necessary abilities to be a social entrepreneur	109	4	7	5.79	1.001
possible to offer social entrepreneurship education courses which develop The intention to be a social entrepreneur	109	3	7	5.50	1.042
Valid N (list wise)	109				

Table 14: Descriptive analysis on possibility to offer social entrepreneurship education courses

According to the above mentioned table, the majority of respondents believe that social entrepreneurship programs must foster this desire and intention. The necessary skills and capabilities required for it also has to be developed. This is indicated with the mean score which ranges between 5.79 to 5.89.

	Mean Rank
I’m ready to make anything to be a social entrepreneur	3.57
My professional goal is becoming an entrepreneur	4.00
I will make every effort to start and run my own firm	3.47
I’m determined to create a firm in the future	3.36
I have very seriously thought in starting a firm	3.17
I’ve got the firm intention to start a firm some day	3.43

Table 15: Ranking analysis on preferences of MBA students

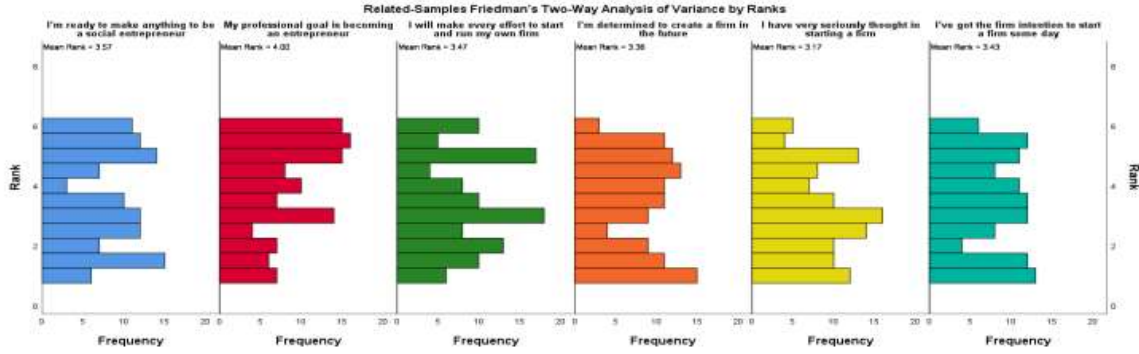


Fig.3. Mean score

It is evident from the above that the professional goal of Management students is to become an entrepreneur which is indicated with the mean score of 4.

This is a positive intent as we could see there is a dynamic shift in thinking of modern MBA students who wish to start and define their own careers rather than being a part of other’s dream, aspirations and goals.

Objective 3: To investigate the role of Motivational Drives in influencing social entrepreneurship intention among students.

Correlations			
		Motivational drive	Social Entrepreneurship intention
Motivational drive	Pearson Correlation	1	.082
	Sig. (2-tailed)		.397
	N	109	109
Social Entrepreneurship intention	Pearson Correlation	.082	1
	Sig. (2-tailed)	.397	
	N	109	109

Table 16: Correlation analysis on Motivational Drives and social entrepreneurship intention among students

There is a positive correlation(.082) associated among the Social Entrepreneurship education and Social Entrepreneurship intention so it is confirmed that the Motivational Drives are having a positive role in influencing social entrepreneurship intention among students.

H1: Personal attitude is positively related to motivation drive.

Factors of personal attitude towards entrepreneurship, subjective social norms and perceived behaviour control		Motivational drive
social entrepreneurial success-Reaching a high level of income	Pearson Correlation	.007
	Sig. (2-tailed)	.940
	N	109
social entrepreneurial success-Carrying out the kind of job you really like	Pearson Correlation	.058
	Sig. (2-tailed)	.551
	N	109
social entrepreneurial success-Achieving great social recognition	Pearson Correlation	.023
	Sig. (2-tailed)	.813
	N	109
social entrepreneurial success-Keeping a path of positive growth	Pearson Correlation	.102
	Sig. (2-tailed)	.290
	N	109

Table 17: Correlation analysis on Personal attitude and motivation drive for Social Entrepreneurship

H1: Personal attitude is positively related to motivation drive is accepted

There is a positive correlation (.007,.058,.023,.102)associated among the Motivational drive and personal attitude towards entrepreneurship, subjective social norms and perceived behaviour control. So it is confirmed that the positive relationship between motivational drives and personal attitude.

H2: The relationship between Personal attitude and social entrepreneurial intentions are mediated by motivational drive.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.000	.180		27.713	.000
	personal attitude towards entrepreneurship, subjective social norms and perceived behaviour control	.011	.036	.030	.308	.019

a. Dependent Variable: Social Entrepreneurship intention

Table 18: Regression analysis on relationship between Personal attitude and social entrepreneurial intentions

An unstandardized coefficient B value indicates how much the dependent variable varies with an independent variable and also the positive or negative relationship between the variables .positive coefficient value of Personal attitude (.011) shows that for each one unit increase in personal attitude, there is an increase in social entrepreneurial intentions among students.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.816	.305		15.803	.000
	Motivation and personal attitude	.023	.029	.076	.786	.014

a. Dependent Variable: Social Entrepreneurship intention

Table

19: Regression analysis on relationship between personal attitude and social entrepreneurial intentions are mediated by motivational drive

H2: The relationship between Personal attitude and social entrepreneurial intentions are mediated by motivational drive is accepted. There is a positive relationship between Personal attitude and social entrepreneurial intentions are mediated by motivational drive. An unstandardized coefficient B value in table 20 indicates how much the dependent variable varies with an independent variable and also the positive or negative relationship between the variables. The increase in positive coefficient value of Personal attitude (.023) than the value in table 19 shows that the mediation effect of motivational drive increases the positive relationship more among personal attitude and social entrepreneurial intentions.

H3: Social Entrepreneurial educational background is positively associated with motivational drive.

Correlations			
		Social Entrepreneurship education	Motivational drive
Social Entrepreneurship education	Pearson Correlation	1	.043
	Sig. (2-tailed)		.659
	N	109	109
Motivational drive	Pearson Correlation	.043	1
	Sig. (2-tailed)	.659	
	N	109	109

Table 20: Correlation analysis of Social Entrepreneurial educational background with motivational drive

There is a positive correlation (.043) is associated among the Motivational drive and Social Entrepreneurship education. So the **hypothesis is accepted** and it is confirmed that the Social Entrepreneurial educational background is positively associated with motivational drive

H4: Motivational drive has a positive effect on social entrepreneurial intentions.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.840	.255		19.015	.000
	Motivational drive	.040	.046	.082	.850	.007

a. Dependent Variable: Social Entrepreneurship intention

Table 21: Regression analysis on effect of Motivational drive on social entrepreneurial intentions

Positive coefficient value of motivational drive(.040) shows that for each one unit increase in motivational drive, there is an increase in social entrepreneurial intentions among students So the **hypothesis is accepted** and it is confirmed that the Motivational drive has a positive effect on social entrepreneurial.

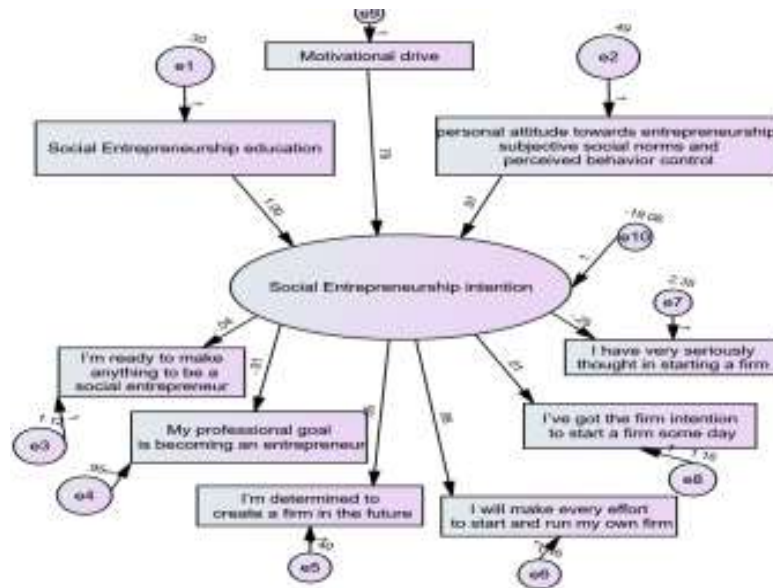


Fig.4. SEM model for social entrepreneurship engagement among MBA students

This SEM model clearly indicates the intention of respondents to become social entrepreneurs and their professional goal is to become a social entrepreneur. As respondents are willing to put efforts and they are having personal attitude to become- the support on training and resources has to be provided which is indicated.

FINDINGS OF THE STUDY:

1. It is found that majority of the respondents are not working currently as they are undergoing Management program
2. Majority of the respondents are not having networking or relationship with social entrepreneurs

3. Sample respondents consider that friends & others in the social circle and general public must consider them as good entrepreneurs.
4. They need specific training in entrepreneurship which can be socially engaging also.
5. It is found from the above table that majority of the respondents would like to pursue entrepreneurship as it is an attractive career. The challenge lies in resources and opportunity as both could be decisive factor to start a firm.
6. sample respondents stated that opportunity recognition, creativity, leadership and communication skills are most important for managers, and training must be provided on these dimensions
7. It is inferred from the above table that majority of the respondents are willing to put all their efforts to become a social entrepreneur
8. It is inferred from the above table that majority of the sample respondents(35.8%) wish to create a firm which has around 250 employees

SUGGESTIONS AND RECOMMENDATIONS:

1. It is strongly recommended that Industry academia interface must be started in Management educational institutions which facilitates social entrepreneurs and student engagement on a regular basis
2. Challenges, problems are more in resources and initial establishment of firms, so an entrepreneurial incubation centre has to be established which could coordinate all Management institutions
3. Professional research on the industry of their choice for Management students must begin in first year of program which could make them more focused and dynamic
4. Training program and support has to be provided for Management students on social entrepreneurship.

5. CONCLUSION

It is evident that Management institutions are wrongly focused and directed by considering this program as an academic course. The top management orientation and effective engagement of teachers must be oriented on training students as a program and not as an academic course. Students need practical training and internships as industrial work experience of leadership skills are not evident among them. Students have the motivation and interest to start social entrepreneurial firms in a large scale however training and resources are lagging. It is concluded that Entrepreneurial incubation centres has to be established in Management institutions which can provide impetus for the entrepreneurial spirit which is there among students. A proper care, attention and support along with resources are needed for these budding future entrepreneurs who can change the directives and future course of this country towards 2030.

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Motivation to start a sustainable business among undergraduate students’ in Oman: The mediating role of Entrepreneurship Education and Sustainable Entrepreneurship Competence

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Abstract

This research analyses the impact of motivational factors on the intention to start the sustainable business among undergraduate students in Oman. The impact of Intentional Mindset, Social Motivation, and Financial Motivation on the intention to start a sustainable business have been analysed. The researchers have also analysed the mediating effects of Sustainable Entrepreneurship Competence and Entrepreneurship Education as well. This study has been started from the paradigm of compulsory entrepreneurship courses for all undergraduate students in Oman and the importance of sustainable business in the current scenario. The research is quantitative in nature. The measurement of variables has been done using a Likert scale and interpretation using Regression analysis. The study used Hayes process Macro to analyse the mediating effects. The research concluded a complimentary partial mediation effect for sustainable entrepreneurship competence while no significant mediating effect of Entrepreneurship Education on the relationship between motivation and students’ intention to start a sustainable business. Hence the study is an eyeopener for Higher Education Institutions to review Entrepreneurship education to involve the concepts of sustainability in the curriculum

Keywords: *Sustainable Business, Motivation, Entrepreneurship Education, Sustainable Entrepreneurship Competence*

1.Introduction:

Education in entrepreneurship can be broadly defined as the process of teaching students the knowledge, concepts, and abilities necessary to identify possibilities that have been ignored and the confidence to move forward even when faced with potential danger (McIntyre and Roche 1999). By fostering technological advancements, boosting economic efficiency, and creating new jobs, entrepreneurship is crucial to the development of an economy (Shane and Venkataraman, 2000). Klandt (1993), as cited in Co and Mitchell, (2006) seems to say that there are different ways to teach entrepreneurship or how to be an entrepreneur. As mentioned by Klandt, consulting services by students and research are the most common approaches to teaching about entrepreneurship, while videos, hands-on experience, business plan writing, computer simulations, role-playing games, internships, and working with successful businesspeople are some of the most effective ways to teach entrepreneurship.

This research shows a link between sustainable entrepreneurship ability and entrepreneurial ambitions, and it adds to our knowledge of how this competency affects students' career goals in various learning environments. To better understand the impact of sustainable entrepreneurship competency in molding students' goals for an entrepreneurial career in a variety of educational situations, this study shows a connection between sustainable entrepreneurship competence and entrepreneurial intentions. Incorporating findings from the research on competencies, we may say that sustainable entrepreneurial competency entails the knowledge elements, abilities, and attitudes necessary to successfully complete tasks and solve problems pertaining to sustainable issues, difficulties, and/or opportunities (Barth et al. 2007; Wesselink et al. 2010; Ploum et al. 2018).

Entrepreneurs are crucial to the advancement of sustainability. They evaluate the environmental and social dimensions of fundamental company strategies to capture opportunities to eliminate severe damage to the global environment, and they do this while still meeting regulatory sustainability criteria of becoming more ecologically friendly (Cohen and Monica 2007). Future business owners will need to be skilled in the various sub-competences of sustainable entrepreneurship, such as analytical thinking, diversification, clarity of vision, social standards, intentions, interpersonal competence, and organizational strategy (Lans et al., 2014; Ploum et al. 2018).

Numerous entrepreneurship education programs have been identified by academics that are intended for a specific target audience (Jamieson, 1984; Lián, 2004). Students with no prior exposure to launching a business would benefit most from education for awareness. Education about entrepreneurship is meant to help students get experience in the business world and make informed decisions about their futures (Liñán, 2004). The primary goals of most tertiary education programs are to inspire students to think entrepreneurially and to better equip them for the workforce (Garavan & O’Cinneide, 1994). Students' career advancement and willingness to take risks may increase if they use the opportunities presented by entrepreneurship education, which include classes on creating new businesses and developing business plans. Furthermore, entrepreneurship education focuses on mindsets, goals, and starting a business (Liñán, 2008).

In a practical sense, the following are the primary goals of entrepreneurship education programs, as stated by (Alberti et al. 2004) :

1. to learn information that will be beneficial in entrepreneurship;
2. to develop expertise in the application of methods, the evaluation of business circumstances, and the formulation of solutions;
3. to recognize and foster entrepreneurial enthusiasm, competence, and expertise;
4. to eliminate the risk-averse uncertainty present in many analytical methods;
5. to re-evaluate one's perspective on changes;
6. to encourage and motivate new businesses and entrepreneurial endeavours;
7. In order to encourage "affective socialization," or the sharing of feelings among people; and
8. to foster understanding of and support for the distinctive features of entrepreneurship;

In addition, those responsible for formulating policies and curriculum developers in Oman's higher education institutions and other stakeholders may find the study useful when formulating and carrying out plans to promote entrepreneurial activity. Education in entrepreneurship makes this transition easier in two visible factors: boosting graduates' confidence in their ability to be successful as entrepreneurs and their willingness to take risks. More likely, an increase in entrepreneurial self-efficacy, a rise in self-employment, and an increase in risk-taking will occur if entrepreneurship is promoted within higher education institutions (Segal et al., 2005). Higher education institutions that actively encourage and promote entrepreneurship are more likely to see a significant increase in entrepreneurial self-efficacy, self-employment, and risk-taking among their students (Segal et al. 2005).

According to Arru (2020); Reyes-Rodriguez et al.(2016) very limited studies have been conducted on the sustainable aspect and entrepreneurial intentions. Most studies have focused on entrepreneurship behavioral items and entrepreneurial intentions. Zahrani (2022) have stated that there is still a gap in entrepreneurial education on sustainable aspects. Previous studies have focused on involving different aspects of entrepreneurship education as moderators. Duration and specificity of entrepreneurship education have been taken as moderators in a study by Bae et al.(2014). Very limited studies have been conducted based on Entrepreneurship Education as a mediator variable. Song, Thominathan, & Khalid, (2021) has studied the mediating effects of Entrepreneurship Education on the independent variables, namely attitude, perceived behavior control, and self-efficacy on the entrepreneurial intention relationship. This study aims to identify the mediating effect of Entrepreneurship education between motivation and Entrepreneurial intention to start a sustainable business. When the level of sustainable entrepreneurship competence is high, the intention will also increase in young individuals. According to Joensuu, Viljamaa,& Varamäki (2022) very limited studies have been conducted on the aspect of sustainable entrepreneurship competence as well.

Hence this study has the following objectives

1. To analyse the impact of Motivation on Entrepreneurial Intention to start a sustainable business among undergraduate students in Oman

2. To analyse the mediating effect of Entrepreneurial Education on the relationship between Motivation and Entrepreneurial Intention to start a sustainable business among undergraduate students in Oman
3. To analyse the mediating effect of Sustainable Entrepreneurship Competence on the relationship between Motivation and Entrepreneurial Intention to start a sustainable business among undergraduate students in Oman

2.Hypothesis Development:

2.1 Sustainable Entrepreneurship

Entrepreneurship creates a business that sells new products and services, but what does sustainable entrepreneurship mean? Sustainable entrepreneurship aims to reduce social and environmental impacts that can make life better quality. As well as creating products that can help the environment and does not harm it. Educators of Sustainable entrepreneurship are educating people who are interested in sustainable entrepreneurship how to use the current resources that they must achieve sustainable growth successfully without any risk for the people who are in interest and not hinder their ability to acquire the right resources. Sustainable Entrepreneurship is not only creating a new sustainable business it also can transform current businesses into sustainable businesses. Sustainable entrepreneurship aims to build a more sustainable and equitable society.

A distinctive viewpoint that connects the development of economic, social, and environmental values with a focus on the welfare of future generations is the significance of sustainable entrepreneurship. Innovative businesses are those that take social and environmental factors into account. Businesses committed to sustainability are aware of change when they realize that consumers are getting more concerned about these issues. Sustainable business methods are well suited to the mindset or type of conduct that is entrepreneurship. Making ensure that the new ways of doing things they develop offer value to their potential clients is a vital component for successful sustainability businesses. Entrepreneurship is extremely significant to people and organizations concerned in sustainability because it always considers new and better ways to do things.

2.2 Student Entrepreneurial Motivation and Intention to Start Business

The process of changing a regular person into a successful businessperson who can seize chances and contribute to economic growth and wealth maximization is known as entrepreneurial motivation. It is described as when a variety of variables in entrepreneurs' lives spark their passion and pique their ambitions, causing them to achieve a certain objective. Entrepreneurship is the process of discovering strengths and opportunities that assist in realizing one's aspirations of creating, developing, and operating a new firm by effectively dealing with dangers and risks. One should evaluate their prospects and strengths in the external world before starting their own business. People must first recognise their capabilities to become great leaders or powerful entrepreneurs. This helps them embrace risks and deal with uncertainty to achieve pre-described goals.

Studies in entrepreneurship are commended for their role in fostering social progress, innovation, and employment prospects, which all contribute to economic prosperity Academic economic escalation and the idea that university graduates are prospective entrepreneurs who are more likely to launch enterprises than undergraduates are tied to EE in developed nations. The creation of a professional EE program is one outcome of these observations. EE is a tool for enhancing entrepreneurial endeavours (Ahmed et al., 2020).

Hypothesis 1 (H1). Entrepreneurship motivation is positively related to the intention to start a Sustainable business.

2.3. Entrepreneurial Education and Curriculum

Entrepreneurial education fosters our students' abilities to generate social, cultural, or economic value. Enabling experiences for critical and creative thinking, complex problem solving, negotiating, communicating, and leading may all contribute to developing a student's entrepreneurial attitude. Today's civilization is dealing with a slew of social, political, economic, and environmental concerns that touch not just today's generations but also future generations. Discourses and discussions regarding sustainability and social intervention, education for green education and responsible social intervention, and the need for responsible research and innovation are frequently identified. Within the framework of the requirement for sustainability, real policies may be characterized using the model that is based on the establishment of an ecological sector that is particular to all areas of activity, as well as the integration and use of resource-saving technology. Political concerns regarding how today's generations can contribute to the environment have grown increasingly intense.

Hypothesis 2 (H2). Entrepreneurship Education (EE) mediates the relationship between Motivation and entrepreneurial intentions to start a sustainable business.

2.4 Sustainable Entrepreneurship Competence

The skills required for entrepreneurship include creativity, initiative, problem-solving, resource management, and understanding finance and technology. Entrepreneurs and entrepreneurial staff may instigate change and adapt thanks to these abilities. They may be created through entrepreneurship education and training that emphasizes fostering an entrepreneurial mentality and behaviours. Schools, colleges, and other educational institutions are fostering the development of these skills in students by adding entrepreneurship education courses to their study curricula or as stand-alone modules to their study programs. Particularly effective teaching and assessment strategies involve solving problems. The introduction of a progressive approach to entrepreneurship education throughout a student's academic career, specialized entrepreneurship education training and support for teachers, and strengthened business start-up assistance in vocational and higher education institutions are among the top priorities for public policy.

Employees who are entrepreneurs are important facilitators of SME innovation. They, together with entrepreneurs, play a three-fold function as creators, organizers, and market-makers in the ability of SMEs to stimulate and adapt to change (Schoonhoven and Romanelli, 2002). An underlying set of entrepreneurial characteristics enables individuals to discover, generate, and act on opportunities to create value through marshalling resources, displaying self-efficacy and confidence in one's capacity to accomplish, and persevering in the face of adversity (OECD, 2014). The formal education system may play an essential role in developing these entrepreneurial skills. Formal education might be beneficial in building entrepreneurship skills. On the other hand, a cultural transformation is likely to take a decade, if not more. For governments, this involves making a long-term commitment to entrepreneurial education. Key policy considerations include developing a progressive strategy to encourage entrepreneurship abilities that grows with the educational stage. Efforts to develop entrepreneurship competencies through formal education will be most effective if they are organized in a progressive manner that covers all levels of education, beginning early with laying the foundations of an entrepreneurial mindset and building on this

with targeted and specific activities as learners get closer to choosing their career paths. Teachers are being supported. Teachers must be assisted in their new tasks of promotion. Entrepreneurs and scientists rank initiative, identifying and using opportunities, and tenacity as the top three critical qualities. Except for the competency of "Information seeking," most of the competencies were ranked equally essential by the two groups.

According to Vuorio et al (2018), young adults nowadays are more entrepreneurial and environmentally sensitive than previous generations, and entrepreneurship can be considered as a way to generate value in terms of sustainability. This suggests that highly competent people in sustainable entrepreneurship can view it as a way to create value and, as a result, have stronger entrepreneurial intentions. According to research by Vuorio et al. (2018), perceived entrepreneurial desirability and attitudes toward sustainability are positively correlated with entrepreneurial goals focused on sustainability. Additionally, Wagner (2012) discovered a link between a sustainability perspective and chances for sustainable business.

***Hypothesis 3 (H3).** Sustainable entrepreneurship competence (SEC) mediates the relationship between Motivation and entrepreneurial intentions to start a sustainable business.*

3.Data Analysis:

Data collection was done using a survey questionnaire from undergraduate students in Muscat. Snowball Sampling is used to reach the respondents. As depicted in Table(3), the sample consists of 28.1% Male, and 68.8% Females, as three of the respondents(3.1%) have selected the option “Prefer not to say”. Most of the respondents fall in the age group of 18-25 years of age. Data Analysis was done using SPSS 26. Regression analysis was done to analyse the impact of Motivational factors on the Intention to start a sustainable business. Hayes Process Macro Model 4 has been used to analyse mediators' direct and indirect effects on the relationship between the independent and Dependent Variables.

The Normality of data has been tested using the Shapiro-Wilk test, and it is identified that as $p < 0.05$, there is a difference between the data distribution and normal distribution. Even though non-normality exists in data, to check the level of problematic nature of deviation from normality, the absolute values of skewness and kurtosis were checked, and it identified that all the values were less than 2. Hence, the deviation was non-problematic and can proceed with parametric tests. Randomness among the data is also prevailing. Durbin Watson test is used to confirm the data’s independence and reject the autocorrelation among the variables. As the value of Durbin Watson is 1.508, the independence of data is confirmed.

Pooled Exploratory Factor analysis was done for the variables. The correlation of original input variables is done using factor analysis (Kral et al.,2009). The dependency of the input variables was analysed using KMO criteria. Table (1) depicts the value of KMO equals 0.938. The significance ($p < .001$) of Barlett’s test of sphericity shows that the variables are related

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.938
Approx. Chi-Square	2382.269

Bartlett's Test of Sphericity	df	435
	Sig.	<.001

Table (1): KMO and Bartlett's Test

Cronbach alpha has been employed to check the reliability of the questionnaire. According to (Saunders, Lewis, and Thornhill,2009), data is said to be highly reliable when the coefficient value of Cronbach alpha is above 0.7. Table (2) depicts that the individual variables all have Cronbach alpha above 0.7.

Variable	Cronbach alpha	No. of items
M1	0.854	4
M2	0.850	4
M3	0.842	4
EE	0.893	6
SEC	0.913	6
EI	0.886	6

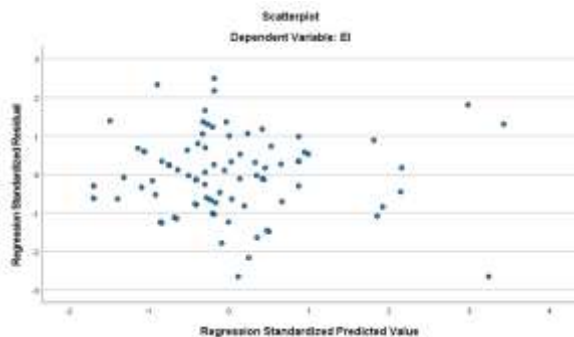
Table (2): Reliability Statistics

Variable	Item	Frequency	Percentage
Gender	Male	27	28.1
	Female	66	68.8
Age	18-25 Years	77	80.2
	26 to 35 Years	14	14.6
	Above 36 Years	5	5.2

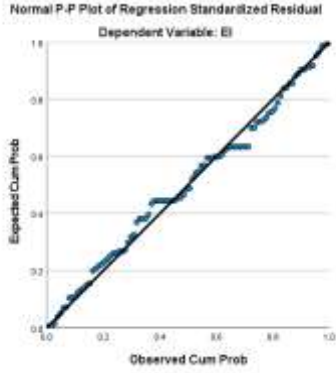
Table (3): Descriptive statistics of the sample

Linearity exists between Motivation and Entrepreneurial Intention as the significant value for deviation from Linearity is $0.193 > 0.05$.

Multicollinearity is tested among the motivational variables and identified that no autocorrelation exists between the Motivational variables (Intentional Mindset, Social Motivation, and Financial Motivation) as VIF is less than 10(3.352,3.737,3.330). Durbin- Watson test is conducted to identify the data independence, and it was identified that data independence exists as the Durbin Watson is 1.980.



Figure(1):Scatter Plot



Figure(2):Plot of Regression

Figure(1) shows that the scatter plot produced is not funnelled and is more random, homoscedasticity is absent, and error variance is constant. Figure(2) shows that most of the points are close to the diagonal line. Hence the residuals are normally distributed.

Hypothesis	Regression Weights	Beta Coefficient	R ²	F	t-value	p-value	Hypothesis Supported
H1	MOT→EI	0.752	0.568	123.746	3.420	<0.01	Yes

Table4:Regression output

Table (4) clearly shows that a significant effect exists between students' motivation and Entrepreneurial Intention. The model explains 56.8% variance the Entrepreneurial Intention.

In the current study, Levene's test has been conducted to identify the equality of variances among the gender and the intention to start a sustainable business. Based on the level of significance $P(.282 > 0.05)$, the variances of males and females (2.2654, 2.2929) are not significantly different from each other (i.e., the homogeneity assumption of the variance is met). Hence males and females have a similar level of intention to start a sustainable business.

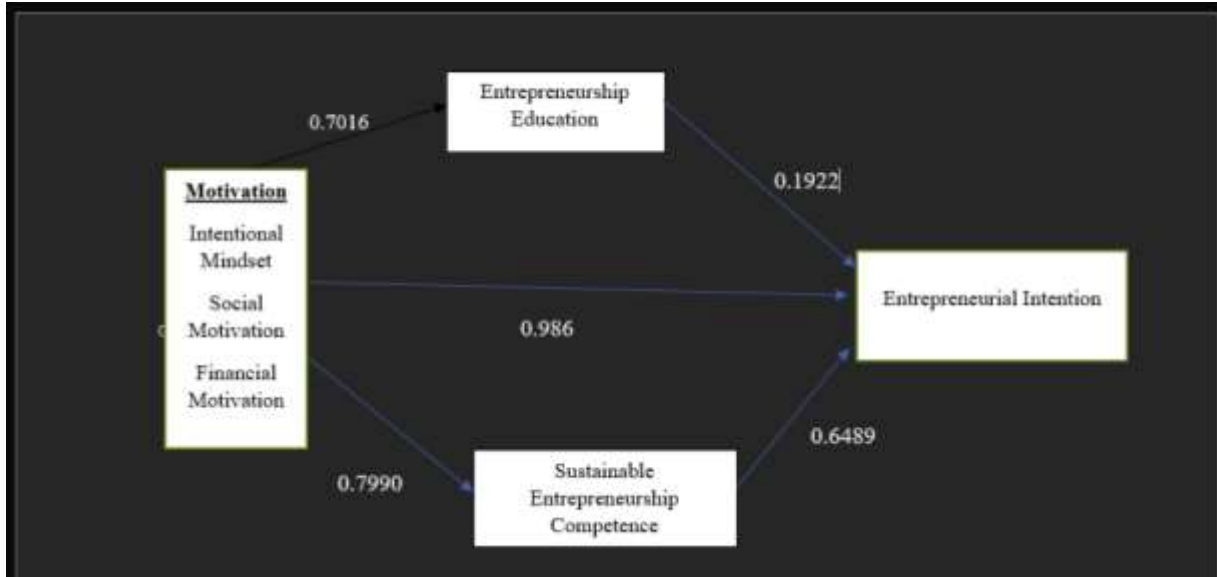


Figure (3): Mediation Summary

A parallel mediation has been studied in the relationship between Motivational factors and the Intention to start a sustainable business. Entrepreneurship education and Sustainable Entrepreneurial Competence have been taken as mediators.

Total Effect					
Effect	Se	T	P	LLCI	ULCI
.7519	0.676	11.1241	.0000	.6177	.8861
Indirect Effect					
	Effect	Boot SE	Boot LLCI	Boot ULCI	Hypothesis
SEC	.5184	.1265	.2672	0.7686	Partial mediation
EE	.1349	.1778	-.0101	.3407	No Mediation

Table(5): Total and Indirect Effects

Significant results are observed for the direct relationship between motivational elements and the intention to launch a sustainable business ($b=0.7990$, $se=.0531$, $p=0.0000$). The indirect effect is tested using non-parametric bootstrapping. However, because zero is between the Boot LLCI and Boot ULCI rejecting H2, the indirect effect of motivational factors on the intention to launch a sustainable firm through entrepreneurial education is non-Significant. Hence Entrepreneurship Education does not mediate the relationship between Motivational factors and the intention to start a sustainable business. The relationship between Motivational factors and intention to start a business mediated by Sustainable Entrepreneurial Competence is significant in accepting hypothesis H3. As the direct and indirect effects are found to be significant ($p<0.01$) and zero does not lie inside the control limits but rather in the opposite direction, a partial mediation can be seen for Hypothesis 3.

4. Conclusion:

This study aimed to analyse the mediating effect of sustainable Entrepreneurial Competence and entrepreneurial education on the relationship between motivational factors and the Intention to start a sustainable business. Firstly, it can be identified that Gender does not showcase many variations on the intention to start a sustainable business. Secondly, the study showcases a positive and significant correlation between motivational factors and students' intention to start a sustainable business. From the mediation analysis, the direct effect is significant as the motivational factors impact the intention to start a sustainable business among students. Even though previous studies have stated that entrepreneurial education will impact entrepreneurial intention, the current study states that entrepreneurial education does not mediate the relationship between the dependent and independent variables. The results of this study regarding Hypothesis 2 differ from previous research done in the same field. This may be because the current entrepreneurship education is not significant in arousing the intention to start a sustainable business. According to Lourenço, Jones, & Jayawarna (2013), entrepreneurs will use the content learned when the content learned is related to sustainable entrepreneurship. The above authors have related it to the theory of Planned behaviour, that perception of learning will impact the intentions. Another reason may be that entrepreneurial education can be considered a factor in motivating students to start a sustainable business. The findings of Hameed et al.(2021) suggest that entrepreneurship Education promotes environmental responsibility, resulting in entrepreneurial Motivation. Future studies can consider Entrepreneurial education as one of the Motivational Factors. According to Zahrani (2022), progress in including sustainability in entrepreneurship education has not been consistent among universities or nations. So the curriculum needs to be updated in this regard. Future studies can involve faculty teaching entrepreneurship courses on the feasibility of including sustainability in entrepreneurship education. The second mediator, Sustainable entrepreneurship competence, has a mediating effect on the motivation and Students' intention to start a sustainable business. Future researchers can focus on student competencies that foster the intention to start a sustainable business.

This study also has a few limitations. Firstly the study was conducted among undergraduate students in the Muscat region only. The study can be extended to other GCC countries in the future. Similarly, the sample size can be extended in future studies. The study has explored only three major motivational factors; other factors can be explored in future studies.

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Contemporary Approaches in implementing Business-related Students Teams for Developing Entrepreneurial Skills across Business Schools

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EXTENDED ABSTRACT

During the COVID-19 crisis, business schools had to be online available to keep the learning and teaching processes alive. Thus, educators and students were forced to operate differently during the lockdown periods and times of social distancing. A lot of things were now done virtually. The pandemic is therefore a game-changer for the digital transformation of higher education, causing a reinvention of traditional learning and teaching approaches (Peters et al., 2020). The rules for learning and teaching success have changed and are ever more reliant on harnessing the power of digital methods and tools to create new knowledge and experiences. Successful universities will now seize the opportunity to advance a new trajectory for digital transformation that is a powerful enabler of long-term knowledge creation for all relevant stakeholders (World Economic Forum, 2021). Thus, a proactive education strategy, an open stakeholder dialogue, and a wide range of different technological tools and innovative methods are necessary to stay competitive in the higher education market – also after the end of the pandemic (World Economic Forum, 2021). In particular, social entrepreneurship will play a key role in the recovery of the economy worldwide (Bhatia & Levina, 2020). In this context, educators are challenged to reinvent their traditional methods to enhance entrepreneurship skills development through the incorporation of technology usage to create experiential learning environments while complying with social distancing rules (Ratten, 2020).

Considering the above, the interest in enhancing social entrepreneurship to solve social and environmental problems innovatively and generate social value becomes even more relevant in challenges arising from the Covid-19 pandemic (Ruiz-Rosa et al., 2020). Besides these developments, entrepreneurship has great potential to contribute to the Sustainable Development Goals (SDGs) (Horne et al., 2020). The SDGs developed by the United Nations in 2015 is targeted to end poverty, fight inequalities, tackle climate change and the environmental protection of our planet, ensuring prosperity for all, and solving social problems in the world (United Nations, 2015). In this context, influential thinkers such as Michael Porter argue that social entrepreneurship is not just another important development. He highlights social entrepreneurship as an essential catalyst facilitating the transformation towards a new way of doing business. The consideration of social needs is becoming a key success factor for business. Moreover, he points out the relevance of education and the need for progress (Driver, 2012). In the period up to 2030, governmental organizations across the world need to move forward and initiate this global change, and universities are also compelled to implement innovative educational programs for students to

ensure a higher level of sustainability awareness and to prepare students in helping to create a better society (United Nations, 2015). Substantial changes in the curriculum of business schools and the prevention of superficial inclusions of ethical issues are most vital (Baden & Higgs, 2015). *New ways of teaching sustainability are needed.* Educational experts – like Michaelson (2016) – emphasize a narrative pedagogy. The expert recommends applying novels that incorporate ethics to ensure an enduring learning process in helping students to become responsible professionals. *Another effective approach is to offer practical CSR-projects for students in cooperation with ‘sustainable’ or ‘green’ firms. The main obstacle for higher education is the provision of authentic learning experiences and the integration of modern and innovative technology into the existing curriculum.* This development forces universities to re-think current pedagogical concepts in the classroom and to integrate innovative approaches in the ongoing learning process of their students (Adams Becker et al., 2018). Advancing and scaling technology adoption is needed to increase students’ graduate attributes, e.g. the 21st-century skills identified by van Laar et al. (2017). To accommodate this change, the role of the traditional educator must evolve towards that of a ‘modern coach’, a facilitator, or a ‘part-time adviser’. In the current times, students at universities need to work actively on their content, frequently using digital components, with input by the educator as a complemented component. When not providing input, the educator is expected to act as a facilitator, providing necessary support to ensure all students work with the content, independently and digitally (Adams Becker et al., 2018; O’Dowd, 2018).

In many countries (e.g. Germany, Switzerland, Canada, or the USA), various private initiatives and government programs have been launched in the field of higher education to integrate corporate social responsibility (CSR) as a recurring part of the curriculum in recent years. For instance, at a German university, a pilot project was successfully conducted in the classroom to enhance the awareness of teaching CSR. The multi-disciplinary approach used project-based learning and a mixture of modern learning methods to train students effectively about CSR-related subjects (Honal et al., 2018). These innovative formats in the classroom can generate applicable solutions for social as well as environmental issues while students understand that their education can have a positive impact on the world and its future (Brundiers & Wiek, 2011; Honal et al., 2018).

The current generation of students is very familiar with new technologies and they use them instinctively. By integrating digital media and innovative technologies efficiently in a sustainable and more diverse curriculum, the students can experience a more bespoke learning and teaching environment (Adams Becker et al., 2018; Barbera et al., 2014; Bigatel et al., 2012; Gabel et al., 2018; Koehler et al., 2013). Current studies showed that CSR-Awareness, creativity, innovation, and intercultural skills are associated with current pedagogical developments (Adams Becker et al., 2018; Honal et al., 2018; Sohn et al., 2015). Within this context, innovative learning and teaching approaches, a well-developed infrastructure, and an appropriate usage of digital tools all serve to attract and motivate the current generation of students. Digital skills, a global team spirit, CSR-awareness, international experience, and more flexibility are essential ingredients for efficient employees in the workforce of the 21st century (van Laar et al., 2017). Besides, for the current generation of students, it is necessary to have the option of creating a start-up. Due to the accessibility of a variety of digital tools, starting a new business is easier than in the past. People who are invested in or convinced of specific topics, can more easily start a digital initiative and cooperate with existing initiatives worldwide, e.g., social or environmental initiatives. Mostly,

those initiatives or start-ups are based on strong interests and convictions on the part of the initiators. Giving students the option of following up these interests, cooperating with peers internationally, and discussing CSR-related topics within an educational setting, are important factors in raising a new generation of more reasonable, social, and sustainable students as prior projects at different universities in Germany and Switzerland have shown. *Therefore, the goals of this online PDW are to discuss strategies and approaches, as well as best-practice-examples, to spread new ideas among the participants enabling a more adaptive, sustainable, and global learning experience in the classroom. Within this interactive workshop, two components, (1) CSR-driven student projects as well as (2) global blended learning with virtual start-up teams, will be presented and discussed in detail.*

WORKSHOP RATIONALE

Due to the current developments – amplified by the impact of the Covid-19 pandemic – there is a need for change to secure future entrepreneurs as key figures during and after the crisis (Maritz et al., 2020). The students’ perspectives of the working world, as well as their expectations of higher education systems and how students prepare for these environments, must be taken into consideration. The integration of adaptive learning environments, CSR-related lecturing units, and self-regulated approaches are acknowledged as being preferred by the current student generation (Adams Becker et al., 2018; Pimmer et al., 2016; Schuster et al., 2015). New approaches, providing students with the opportunity of virtual experience exchange, are especially noteworthy in this context. These learning environments can be enriching in respect of skills and experience for both students and educators (Bartel-Radic et al., 2015; Honal et al., 2017). All participants will become accustomed to new media and virtual communication as a result of this learning experience (Bigatel et al., 2012; Barbera et al., 2014; Dahlstrom et al., 2015). A study by Deloitte showed that most millennials regard business as a force for positive change in society and global issues. Business involvement in social issues and good causes goes beyond the tangible impact or the reputational benefits created. Being part of sustainable initiatives helps to provide a sense of empowerment among the students and raises CRS-awareness (Deloitte, 2017; Sohn et al., 2015). Aguinis & Glavas (2012) also highlight the major role educational institutions fulfill in shaping the students’ values throughout their educational development. Teaching CSR is both exciting and challenging because of the interdisciplinary nature and complexity of the topic. *Integrating CSR management in the curricula requires a new form of thinking for teachers as well as the re-design of traditional learning approaches.*

In conclusion, implementing CSR in educational curricula must take place on a flexible basis and possess an appropriate balance of theoretical input and hands-on tasks for the relevant industry. Regardless of which topic, tool, or format is recommended by the faculty or university, all educators must be trained, prepared, and informed about ongoing developments and trends on a global level (Gosler & Ifenthaler, 2014; Ostler et al., 2016). Modern and blended learning environments, in which students can independently acquire new information, but also have face-to-face exchange with their instructor, have proven to be highly effective for the new generation of students, regardless of whether CSR management or entrepreneurship is taught in the classroom (Dahlstrom et al., 2015; Thai et al., 2016). Thus, an interactive online workshop format was developed. *The workshop aims to give the participants deeper insights into these topics, including different tools to effectively operate in this context.* It is envisaged that workshop participants will leave with ‘great ideas’ of how to enrich their teaching portfolio by using the support of an experienced and working international network of colleagues.

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FINANCE

DXB228

GLOBAL NAD REGIONAL TRENDS IN FDI AND THEIR BENEFITS BUT ALSO PROBLEMS AND WEAKNESSES

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ABSTRACT

The proposed paper/presentation deal with the global and regional trends in the foreign direct investments (FDI) especially from the point of view of some potential benefits expected from them mainly by the recipient countries. On the other hand we present also some problems and weakness of FDI especially the problems with offering various kinds of incentives to foreign investors e.g. for creating new or maintaining existing jobs, discounted energies and various other perks like special housing, schooling for their kids, etc. that in total create discriminatory conditions on the domestic market especially towards the domestic businesses and in particular toward domestic SMEs. In case they would receive the same benefits, incentives, discounted energies, etc. their contribution to the national economies, jobs, GDP contribution would be often much higher and more stable than that from the incoming FDI.

It is already an undisputed fact that one of the main expected and desired outcomes of the whole ongoing globalization and regional integration has been an increased FDI inflows into the countries of their need practically all over the world. In this respect especially developing countries and countries in transition like those from the Central and Eastern Europe (CEE) have been among those who have often seen in FDI almost a “miraculous medicine” that could “cure” all deficiencies but also inefficiencies of their often very seriously undercapitalized and not the best handled national economies and thus to solve all related problems. As in various other similar cases also the whole area of FDI and their potential benefits have been accompanied by various “myths” and totally or at least partially unjustified beliefs that not always correspond to the particular reality of the potential FDI benefits.

In the next parts of this paper/presentation we will try to deal with some of the basic expected benefits but also problems and weaknesses from FDI in a more general context and will try also to justify what has to be done in order the particular FDI could bring the benefits as expected. In this respect, the main conclusions and recommendations as presented in this paper are drawn from the ongoing joint research project at our e-Europe R& D Centre at the faculty of management of the University of Bratislava.

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Saliency, fundamentals and mispricing

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ABSTRACT: This paper shows that the mispricing arises when the saliency of stock return deviates from its fundamental (we call it saliency bias) owing to that investors' limited attention is drawn to salient payoffs. When investors pay too much attention to firms with weak fundamentals, stocks are overpriced and have lower expected returns, conversely, when investors pay little attention to firms with strong fundamentals, stocks are underpriced and have higher expected returns. Furthermore, we document that the uncertainty of stock has amplification effects on saliency bias and the predictive ability of saliency bias is stronger when uncertainty is greater.

Key words: saliency theory; fundamental; asset pricing; behavioral finance

1. INTRODUCTION

Behavioral finance holds that investors have cognitive constraints, also known as bounded rationality, which is a challenge to efficient market hypothesis. One of the most important contents in behavioral finance is the limited attention of investors. The efficient market theory is based on the assumption that investors can use all available information when making decisions. However, investors' ability to analyze and process information is limited. At a given moment, investors have limited attentions and are unable to process all the information in time, and prefer to deal with the most salient and important information. Barber and Odean (2008) show that individual investors tend to purchase stocks that have first caught their attention, e.g., stocks in the news, stocks experiencing high abnormal trading volume, and stocks with extreme one-day returns.

To explain this phenomenon, Bordalo et al. (2012) propose a new risk choice theory, saliency theory, on the premise that investors have limited attention. According to this theory, the decision maker's attention is drawn to salient payoffs. This leads the decision maker to a context-dependent representation of stocks in which true probabilities are replaced by decision weights distorted in favor of salient payoffs. Saliency model provides a novel and unified account of many empirical

phenomena, including frequent risk-seeking behavior, invariance failures such as the Allais paradox, and preference reversals. Cosemans and Frehen (2021) examine the cross-sectional relationship between stock's salience and expected returns in the US market. Consequently, investors are attracted to stocks with salient upsides, which are overvalued and earn low subsequent returns. Conversely, stocks with salient downsides are undervalued and yield high future returns.

Piotroski and So (2012) propose a fundamental analysis approach and shed lights on this issue. Piotroski and So (2012) investigate the incongruity between stocks' fundamentals with valuations and proposed the concept of expectation error. They argue that rational investors have high expectations for stocks with excellent fundamentals. Similarly, low market expectations for stocks with poor fundamentals are perfectly reasonable. The efficient market theory expects that firms' valuations are congruent with their fundamentals strengths and stock prices have well reflected firms' intrinsic values and the Value/Glamour strategy generates no excess returns. On the contrary, the expectation error exists when the market expectation is incongruent with the fundamental strengths. Stocks with low fundamental strengths (low-FSCORE) and high market expectations (high-BM) tend to be overvalued stocks, and produce a relatively low return because the expectation error vanishes in long term. Stocks with high fundamental strengths (high-FSCORE) and low market expectations (low-BM) tend to be undervalued stocks, and produce a relatively high return once the expectation error vanishes.

Ample literatures conduct empirical studies and combine firm's fundamentals with valuation and other risk factors to explore market anomalies, few scholars have analyzed how the congruency between firms' fundamental and investors' attention affects the stock pricing behavior. Furthermore, compared with mature markets, the Chinese stock market is more likely to be dominated by individual investors, and has a higher risk of noise traders. This provides an ideal environment for the analysis of investor behavior bias. For these reasons, our paper takes the trading data of China A-share market as the sample, and analyzes how the limitation of investors' attention and salience preference affect the market pricing, especially when firms' fundamentals are incongruent with stocks' salience payoff.

We first form five-by-five portfolios with an independent double sort on ST and FSCORE, and find that when the salience of stock return is congruent with the fundamentals, there will be no significant abnormal returns of the stocks. And when stocks with weak fundamentals attract excessive attentions, they tend to be overpriced and obtain relative low returns in the process of salience bias correction. On the contrary, among stocks with strong fundamentals and low salience payoff, investors lack focus on strong fundamental stocks, which lead to undervaluation and positive excess returns once the salience bias is corrected. It can be concluded that the deviation of stock salience from its fundamental expectation, namely salience bias, is an important driver of mispricing. We use the incongruent strategy to construct a long-short portfolio (ST5FScore1-ST1FScore5) and empirically verify our conclusions. We construct the salience bias (ST-bias) as

the re-standardized result of the difference between standardized-ST and standardized-FSCORE to measure salience bias more accurately. The positive (negative) ST-bias indicates that the salience of stock returns outperforms (underperforms) firm's fundamental strengths. And the larger (smaller) the ST-bias, the more overvalued (undervalued) the stock price. Both the univariate-portfolio analysis and Fama-MacBeth regressions show that the salience bias is significantly and negatively correlated with the expected returns of stocks. This is the first main finding for this paper.

We exclude the potential influence of IVOL effect or turnover effect on the salience bias effect by using triple-sort portfolio analysis controlling for IVOL or turnover, or double-sort portfolio analysis on adjusted-ST and adjusted-FSCORE where adjusted-ST and adjusted-FSCORE are the residuals from a cross-sectional regression of ST (or FSCORE) on competing variables. Furthermore, the relation between ST-bias and future returns is also robust to alternative measures of ST and FSCORE and to alternative sample with all small stocks.

Furthermore, the second main finding for this paper is that the uncertainty of stock has amplification effects on salience bias and the predictive ability of salience bias is stronger when uncertainty is greater. The notion that investor irrationality will have the greatest effect in uncertain environments is consistent with a long literature in psychology that details systematic deviations from rationality under uncertainty (e.g., Kahneman and Tversky, 1973; Kahneman, 2003). In the cross-section of stocks, Hirshleifer (2001) argues that greater uncertainty about a group of stocks should lead to greater effects of investor irrationality. We find strong and robust evidence in support of our hypothesis. Bivariate portfolio analyses demonstrates that the returns of the high-low ST-bias portfolios vary negatively with the uncertainty of quintiles. We also use Fama-MacBeth regressions which include ST-bias and its interaction with uncertainty. The results indicate that the coefficient on the interaction is significantly negative in all specifications and highlight the important amplifying effects of uncertainty for salience bias.

The marginal contribution of this paper is that: Firstly, we propose a new concept, namely salience bias, which combines investors' behavior bias with stocks' fundamentals and reveals the role of salience bias in causing the mispricing. Secondly, we are the first to find that the salience anomaly still works in China's A-share market. We propose a new approach to measure the salience decision weights. The original measure of the salience decision weights in Cosemans and Frehen (2021) is effective when the number of samples on cross section is relatively small, but tend to overly focus on few samples with extreme returns for cross section consisting of thousands of stocks. We modify the salience decision weights in Cosemans and Frehen (2021) and divide all stocks into K groups according to the descending order of stock salience. This modification is the main reason to explain why the salience effect is far less robust in Cakici and Zaremba (2021).

The paper is organized as follows. Section 2 describes the data and variable definitions. Section 3 illustrates the salience bias effect. Section 4 discusses the relations between the salience bias effect and uncertainty. Section 5 discusses several robustness tests. And Section 6 concludes.

2. DATA AND VARIABLES

The data we use comes from CSMAR database. We choose all A-share stocks between January 2006 and June 2022. The data focus on the post-2006 because the uniformity for daily limit mechanism of China’s stock market and corporate accounting standards are not widely accomplished until 2000 and China completed the reform of the assorted shareholders at the end of 2005. We exclude sub-new stocks listed for no more than 12 months, and include financial stocks because they are not special in salience and lottery properties with other stocks. Furthermore, we exclude stocks under Special Treatment and Delisting Risk Warning. Stocks are included only when the effective sample period exceeds two-third of the window period. And finally, following Liu et al. (2019), we exclude the smallest 30% of stocks because they have “shell value” but no real economic value.

2.1 Definition of key variables

There are two key variables of interest in this paper: the stock’s accounting-based fundamentals and salience measure.

To measure the accounting-based fundamentals, we use the FSCORE of Piotroski (2000) in our main analyses. FSCORE combines nine indicators in three categories to measure a company’s fundamentals. Those three categories include profitability, financial performance and operating efficiency. The higher the FSCORE, the stronger the firm’s fundamentals.

To measure the salience of stock return, we use the ST from Bordalo et al. (2013) and Cosemans and Frehen (2021) (henceforth CF (2021)). We make some adjustments to the calculation process of ST in CF (2021) to better adapt to the Chinese stock market and reduce the calculation error. The process is as follows:

The salience of a stock’s return on day s (r_{is}) depends on its distance from the average return across all stocks in the market on that day (\bar{r}_s), the function is:

$$\sigma(r_{is}, \bar{r}_s) = \frac{|r_{is} - \bar{r}_s|}{|r_{is}| + |\bar{r}_s| + 0.1}. \quad (1)$$

Subsequently, we calculate the salience-weighted probabilities of returns that substitute the objective (unweighted) probability. We modify the salience decision weights in CF (2021) that we divide all stocks into K groups according to the descending order of stock salience (σ) to make it accommodate a larger number of stocks on cross section. k is the salience ranking of group ranging from 1 (most salient) to K (least salient). Given the salience function in Eq. (1), the salient thinker ranks each group’s return and replaces the objective state probabilities with salience decision weights, given by

$$\pi_k = \pi_k \cdot \omega_k \quad (2)$$

where $\tilde{\pi}_k$ is the group's salience-weighted subjective probability, π_k is the group's objective probability ($1/K$), and ω_k is the group's salience weight⁵ defined as

$$\omega_k = \frac{\delta^k}{\sum_K \delta^k \cdot \pi_k}. \quad (3)$$

It is worth mentioning that different stocks within the same group have the same salience weight equal with the weight of their group: $\omega_{iks} = \omega_{ks}$. Parameter $\delta \in (0, 1]$ measures the extent to which salience distorts decision weights, capturing the degree of local thinking⁶. Referring to Bordalo et al. (2013), we set $\delta = 0.7$.

Finally, according to CF (2021), the monthly salience-theory proxy (ST) for stock i , which are used to predict subsequent stock return, is computed as the covariance between salience weights and daily returns:

$$E[r_{is}] = -\text{cov}[\omega_{is}, r_{is}] \equiv -ST_i, \quad \forall i \in N. \quad (4)$$

We rewrite Eq. (4) as:

$$\begin{aligned} ST_i &= \text{cov}[\omega_{is}, r_{is}] \\ &= \sum_s \pi_{is} \omega_{is} r_{is} - \sum_s \pi_{is} r_{is} \\ &= \sum_s \pi_{is} r_{is} (\omega_{is} - 1) \\ &= \sum_s ST_{is} \end{aligned} \quad (5)$$

where π_{is} is the objective probability for individual stock i . ST_{is} is the ST value for stock i on day s . Eq. (5) suggests that daily ST is equal to the difference between salience-weighted and equal-weighted daily return. ST thus measures the distortion in return expectations caused by salient thinking. The monthly ST_i of stock i is obtained by summing up its daily ST_{is} .

Compared with CF (2021), we modify the calculation of ST to improve its accuracy by dividing all stocks into K groups in daily according to their salience (σ). This treatment could solve the investors' limited-attention problem by narrowing their focus from thousands of stocks to K groups. More importantly, our modification solved the problem of calculation bias in CF (2021). Due to computer rounding errors of floating-point operations, CF (2021) cannot be directly used for the calculation of salience weight in our empirical test. With a larger number of stocks included, the salience weight becomes too small to be recorded.⁷ The improved method we propose can effectively solve this measurement error problem.

⁵ The distortion factor ω_k does not depend directly on its probability, states with lower probabilities are relatively more distorted.

⁶ If $\delta=1$, the weight ω_k is equal to 1 for all group. This is the case of a rational investor. If $\delta < 1$, the investor over-weight salient returns at the expense of the non-salient ones. When $\delta \rightarrow 0$, the salient thinker considers only a most salient return and neglects all other returns.

⁷ There are currently more than three thousand stocks in China's A-share market. The method in CF (2021) can only calculate the effective salience weight for the top 300 salient stocks, while the salience weight for the remaining stocks is all zero, which is a very large measurement error.

2.2 Construction of other variables

In addition to the ST and FSCORE described above, we calculate an array of control variables broadly acknowledged in the asset pricing literature, which are briefly defined in Table A.1 of Appendix. The focal analyses throughout this article use ST and FSCORE, as well as other control variables, calculated at the end of month t , to forecast the cross-section excess returns of month $t+1$. In this paper, winsorization is adopted to eliminate outliers and exclude the samples with less than 1th and greater than 99th percentile.

3. SALIENCE BIAS EFFECT

In this section, we present our first main empirical finding: Stocks will have significant abnormal returns when investors pay too much attention to the stocks with weak fundamentals, or lack of attention to the stocks with strong fundamentals. In other words, mispricing is generated when the salience of stock return deviates from the firm’s fundamentals.

3.1.Salience and FSCORE

In this paper, we combine the irrational investment behavior of investors with the fundamentals of firm, and analyze the variation of expected returns when the irrational investment behavior deviates from the stock fundamentals. According to Barber and Odean (2008) and Dellavigna and Pollet (2009), investors tend to long stocks with salient-upside returns and short stocks with salient-downside returns due to the limited attention and cognitive limitations. As Figure 1 shows, when the salience of stocks return is congruent with its fundamentals, it is no abnormal returns as the stock prices have well reflected firms’ intrinsic values. However, when the salience of stocks returns deviates from its fundamentals, the stock prices is not longer aligned with firms’ intrinsic values. For stocks satisfied with salience-upside returns and weak fundamentals, it is overvalued because of too much attention by investors. Inversely, for stocks satisfied with salience-downside and weak fundamentals, it is undervalued because of litter attention by investors. The overvaluation and undervaluation here refer to the salience of return relative to its fundamentals, indicating that there is a deviation between those two, which we define it as salience bias. The inherent mechanism of positive or negative excess returns for underpriced or overpriced stocks is the correction of salience bias.

	Low ST Firms	Middle ST Firms	High ST Firms
Low FSCORE (Weak Fundamentals)	ST = FSCORE	Potential for overvalued firms	ST > FSCORE overvalued firms
Middle FSCORE	Potential for undervalued firms	ST = FSCORE	Potential for overvalued firms
High FSCORE (Strong Fundamentals)	ST < FSCORE undervalued firms	Potential for undervalued firms	ST = FSCORE

Figure 1 Comprehensive effect of ST and FSCORE

The simplest way to test our results is to examine portfolios from a double sort on ST and FSCORE. Specifically, at the end of each month, we form five-by-five portfolios with an independent double sort on ST and FSCORE. These 25 ST-FSCORE portfolios are value-weighted and rebalanced each month.

Table 1 presents the first main finding of this paper. Panel A reports the raw returns of the 25 ST-FSCORE portfolios. The results in Panel A show that the returns of high ST portfolios are significantly lower than those of low ST portfolios, and the returns of portfolios with low FSCORE (weak fundamental) are significantly lower than those of high FSCORE (strong fundamental), indicating that both the fundamental effect and the salience effect of stocks exist simultaneously. The comprehensive effect of both effects working together makes the expected return of 25 ST-FSCORE portfolios more complicated: among the 25 portfolios, the 10 portfolios in the top right (potential for overvalued firms in Figure 1) have lower expected returns overall than the 10 portfolios in the bottom left (potential for undervalued firms in Figure1). In addition, among the five portfolios on the negative diagonal, the average raw return increases monotonically from -1.02% for the most overvalued portfolio (ST5-FSCORE1) to 1.73% for the most undervalued portfolio (ST1-FSCORE5), with the difference of raw return between ST5-FSCORE1 and ST1-FSCORE5 (labeled ***ST5FScore1-ST1FScore5*** in bold) equal to -2.76% (t -statistic=-7.04). The results of Panel A well verify the theoretical analysis made in Figure 1.

To examine whether risks can explain the relationship between salience bias and return, Panel B of Table 1 reports the CH4 alphas (Liu et al., 2019) of the 25 ST-FSCORE portfolios. Similar to Panel A, the 10 portfolios in the top right have lower expected returns overall than the 10 portfolios in the bottom left, and among the five portfolios on the negative diagonal, the CH4 alpha increases monotonically from -1.67% for the most overvalued portfolio (ST5-FSCORE1) to 0.51% for the most undervalued portfolio (ST1-FSCORE5) with the difference of CH4 alpha between ST5-FSCORE1 and ST1-FSCORE5 (labeled ***ST5FScore1-ST1FScore5*** in bold) equal to -2.48% (t -statistic=-5.06). We also report the FF5 alphas (Fama and French, 2015) in Panel C of Table 1. The results of Panel C are similar to those of Panel A and Panel B which presents that the FF5 alpha increases monotonically from -1.72% for the ST5-FSCORE1 portfolio to 0.64% for the ST1-FSCORE5 with the difference of raw return between ST5-FSCORE1 and ST1-FSCORE5 equal to -2.61% (t -statistic=-5.27). It is worth noting that the CH4 and FF5 alphas of the 10 portfolios in the top right (bottom left) are all negative (positive), which is consistent with the theoretical analysis in Figure 1 that those portfolios are potential overvalued (undervalued) and thus have negative (positive) excess returns.

In the section of Robust, we also present one more robustness test. While we focus on all-but-small stocks in our main analyses, the salience bias effect also applies to small stocks. When applying the same ST-FSCORE double sort procedure to the small stocks, we find that the relation between salience bias and return remains the same as Table 1. Furthermore, the mispricing

magnitude is larger among the small stocks than that among the non-small stocks. The main reason for this result is the large arbitrage cost of small stocks. Stambaugh et al. (2015) and Brav et al. (2010) posit that firm size captures arbitrage costs and it has an amplification effect on mispricing.

Table 1: Bivariate portfolio analyses (Returns on %)

5*5 portfolios are formed every month by sorting independently based on ST and FSCORE. This table reports the value-weighted average monthly raw returns, the Liu et al. (2019) Chinese four-factor model (CH4) alphas, Fama and French (2015) model (FF5) alphas within a month. Newey and West (1987) adjusted *t*-statistics are reported in parentheses. The *t*-statistics of the following tables are the same.

Panel A	Raw Return (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	ST5-ST1	t
FScore1	0.57	0.49	0.42	0.13	-1.02	-1.59	(-5.51)
FScore2	1.15	0.81	0.95	0.47	0.02	-1.13	(-3.19)
FScore3	1.01	1.36	1.52	1.23	0.51	-0.50	(-1.59)
FScore4	1.97	1.61	1.83	1.78	1.07	-0.90	(-2.41)
FScore5	1.73	2.20	2.15	2.06	1.67	-0.06	(-0.17)
H-L	1.16	1.71	1.73	1.93	2.69	ST5FScore1-ST1FScore5	
t	(3.76)	(4.70)	(4.33)	(5.18)	(6.81)	-2.76	(-7.04)
Panel B	CH4 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	ST5-ST1	t
FScore1	-0.06	-0.34	-0.26	-0.61	-1.67	-1.72	(-3.52)
FScore2	0.36	-0.34	-0.01	-0.68	-1.23	-1.49	(-3.58)
FScore3	0.12	0.12	0.11	-0.25	-1.31	-1.39	(-3.54)
FScore4	0.59	0.45	0.42	0.39	-0.44	-0.85	(-1.79)
FScore5	0.51	0.93	0.81	0.40	0.10	-0.44	(-1.05)
H-L	0.60	1.26	0.90	1.00	2.03	ST5FScore1-ST1FScore5	
t	(1.68)	(3.31)	(1.94)	(2.44)	(4.88)	-2.48	(-5.06)
Panel C	FF5 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	ST5-ST1	t
FScore1	-0.12	-0.39	-0.46	-0.65	-1.72	-1.68	(-3.35)
FScore2	0.20	-0.33	-0.21	-0.71	-1.17	-1.26	(-2.92)
FScore3	0.11	0.16	0.30	-0.07	-1.05	-1.13	(-2.70)
FScore4	0.74	0.53	0.47	0.50	-0.18	-0.81	(-1.65)
FScore5	0.64	1.01	1.14	0.56	0.45	-0.23	(-0.51)
H-L	0.77	1.40	1.60	1.21	2.17	ST5FScore1-ST1FScore5	
t	(2.20)	(3.67)	(2.94)	(2.78)	(5.66)	-2.61	(-5.27)

3.2. Other competing effects

As our paper seems the first to study the impact of the interaction between the salience (ST) and accounting fundamentals (FSCORE), we concern that the comprehensive effect of ST and FSCORE on earnings, potentially driven by other competing effects related to ST or FSCORE. Indeed, there are at least two variables in the literature that are highly related with ST and FSCORE. According to the characteristics of ST-sorted portfolios (Table A.2 in Appendix), high-ST stocks are characterized by high idiosyncratic volatility (IVOL) and high turnover. These characteristics are also present in stocks with weak fundamentals. Therefore, the IVOL and turnover are increasing, from portfolio ST5FSCORE1 to portfolio ST1FSCORE5 on the negative

diagonal in Table 1, which may be the potential reason for the comprehensive effect we mentioned before.

The first competing effect is the idiosyncratic effect. Bali and Cakici (2008), Ang et al. (2009) and Stambaugh et al. (2015) show that the IVOL captures arbitrage costs and the expected returns of stocks with high-IVOL (corresponding portfolio ST5FSCORE1 in Table 1) are lower than those of stocks with low-IVOL (corresponding portfolio ST1FSCORE5). Thus, the low (high) expected return for portfolio ST5FSCORE1 (ST1FSCORE5) may potentially be driven by the high (low) idiosyncratic volatility. The second competing effect is the turnover effect. Similarly to IVOL, Liu et al. (2019) and Lee (2013) show that there is a negatively correlation between stock turnover and its expected return. A potential source of high trading intensity in a stock is heightened optimism toward the stock by sentiment-driven investors. Lee (2013) uses turnover empirically as a sentiment measure at the individual stock level. High sentiment toward a stock can affect its price, driving it higher than that can be justified by fundamentals and thereby lowering its expected future return. Thus, the low (high) expected return for portfolio ST5FSCORE1 (ST1FSCORE5) may potentially be driven by the high (low) turnover. Therefore, an important question is whether the salience bias effect still exists after controlling for the effects of IVOL and turnover.

We apply two approaches to address this question. The first approach is to use the popular triple sort to control for one of the effects at a time. We report the results of controlling for the IVOL and turnover effects in Panel A and Panel B of Table 2, respectively. Due to space limitation, we only report the results of CH4 alpha. For Panel A, we have two main observations. First, the salience bias effect is not subsumed by the IVOL effect. The 5*5 ST-FSCORE portfolio returns present the similar results as shown in Table 1, both among stocks with low IVOL (Panel A1) and high IVOL (Panel A2). Panel A1 and A2 presents that the 10 portfolios in the top right have lower expected returns overall than the 10 portfolios in the bottom left, and among the five portfolios on the negative diagonal, the average raw return increases monotonically from the most overvalued portfolio (ST5-FSCORE1) to the most undervalued portfolio (ST1-FSCORE5), with the difference of CH4 alpha between ST5-FSCORE1 and ST1-FSCORE5 (labeled *ST5FScore1-ST1FScore5* in bold) statistically distinguishable from 0. Second, we find that the salience bias effect is more significant when IVOL is high. Among the stocks with high IVOL, the CH4 alpha of *ST5FScore1-ST1FScore5* is -2.86% (t-statistic=-5.80), which is economically larger and statistically more significant than those among the low-IVOL stocks, with the CH4 alpha of *ST5FScore1-ST1FScore5* is -1.06% (t-statistic=-2.47). IVOL has an amplification effect on the salience bias, confirming the conclusion of Stambaugh et al. (2015) that IVOL captures arbitrage costs and has an amplification effect on mispricing. Finally, Panel B presents that the salience bias effect is not subsumed by the turnover effect, and the relation between salience bias and expected returns in Panel B presents similar results as Table 1, both among the stocks with low turnover (Panel B1) and high turnover (Panel B2).

Table 2: Alphas of portfolios sorted by ST and FSCORE after controlling for competing effect

This Table reports the CH4 alphas of portfolios sorted by ST and FSCORE after controlling for the IVOL and turnover. Panel A (Panel B) is the CH4 alphas of triple-sort portfolios by first sorting on IVOL (turnover). Panel C is the CH4 alphas of portfolios by sorted by adjusted-ST and adjusted-FSCORE, where adjusted-ST (adjusted-FSCORE) is the residual from the cross-section regression of ST (or FSCORE) on IVOL, turnover, ME and illiquidity.

Panel A1	CH4 alpha (low-IVOL)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
FScore1	-0.05	0.25	-0.22	-0.11	-0.54	-0.44	(-0.92)
FScore2	0.68	0.14	-0.09	0.24	-0.36	-1.05	(-2.50)
FScore3	0.28	0.34	0.18	0.06	-0.03	-0.30	(-0.75)
FScore4	0.67	0.50	0.90	0.73	0.57	-0.08	(-0.17)
FScore5	0.57	0.95	1.25	1.13	0.65	0.10	(0.23)
H-L	0.61	0.70	1.47	1.23	1.19	ST5FScore1-ST1FScore5	
t	(1.60)	(1.64)	(3.67)	(2.64)	(2.42)	-1.06	(-2.47)
Panel A2	CH4 alpha (high-IVOL)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
FScore1	-0.78	-1.01	-1.56	-1.52	-2.37	-1.61	(-3.17)
FScore2	-0.41	-0.48	-0.30	-1.53	-2.34	-1.88	(-4.21)
FScore3	0.03	0.08	-0.46	-0.71	-1.44	-1.48	(-3.15)
FScore4	0.25	0.17	0.44	-0.28	-1.25	-1.05	(-2.37)
FScore5	0.40	0.63	0.10	-0.27	-0.31	-0.70	(-1.45)
H-L	1.18	1.64	1.66	1.25	2.06	ST5FScore1-ST1FScore5	
t	(2.81)	(3.82)	(3.77)	(2.75)	(4.55)	-2.86	(-5.80)
Panel B1	CH4 alpha (low-Turnover)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
FScore1	0.01	-0.24	-0.23	-0.82	-1.97	-1.92	(-3.81)
FScore2	0.27	-0.32	0.05	-0.51	-1.38	-1.65	(-3.96)
FScore3	0.24	-0.01	0.06	-0.46	-1.24	-1.41	(-2.95)
FScore4	0.46	0.34	0.59	0.26	-0.11	-0.60	(-1.19)
FScore5	0.44	0.63	0.76	0.62	0.09	-0.35	(-0.76)
H-L	0.45	0.87	1.01	1.42	2.11	ST5FScore1-ST1FScore5	
t	(1.21)	(2.11)	(2.06)	(3.53)	(4.90)	-2.38	(-4.65)
Panel B2	CH4 alpha (high-Turnover)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
FScore1	-0.17	0.13	-0.35	-0.80	-1.54	-1.41	(-3.93)
FScore2	0.16	0.34	-0.24	-0.55	-1.34	-1.50	(-4.71)
FScore3	0.73	0.56	0.31	-0.17	-0.96	-1.64	(-5.15)
FScore4	0.63	1.37	0.64	-0.06	-0.54	-1.19	(-3.75)
FScore5	1.19	1.05	1.75	0.66	-0.30	-1.48	(-3.84)
H-L	1.35	0.92	2.05	1.48	1.24	ST5FScore1-ST1FScore5	
t	(5.34)	(3.76)	(7.42)	(4.57)	(3.03)	-2.75	(-6.68)
Panel C	CH4 alpha (adjusted-ST and adjusted-FSCORE)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
FScore1	-1.38	-0.99	-0.31	-0.13	-0.58	0.70	(1.58)
FScore2	-0.88	-0.30	-0.25	0.00	-0.47	0.44	(1.08)
FScore3	0.09	0.14	0.22	0.07	-0.69	-0.76	(-2.08)
FScore4	0.02	0.61	0.84	0.64	0.11	0.09	(0.24)
FScore5	0.55	0.78	1.25	1.06	0.68	0.15	(0.33)
H-L	1.93	1.77	1.56	1.19	1.25	ST5FScore1-ST1FScore5	
t	(4.77)	(4.98)	(3.66)	(2.60)	(3.25)	-1.11	(-2.24)

The second approach is to use adjusted ST and adjusted FSCORE. Specifically, each month we first estimate adjusted ST and FSCORE as the residual from a cross-sectional regression of ST (or FSCORE) on competing variables, and then apply the earlier independent double sort to the adjusted ST and FSCORE. Compared to the triple sort approach, the adjusted ST and FSCORE

approach allows us to control for multiple effects simultaneously. Therefore, in addition to IVOL and turnover mentioned above, we include variables such as size (ME) and illiquidity (Amihud, 2002).

Panel C of Table 2 reports CH4 alphas of the 25 portfolios sort on adjusted ST and FSCORE. The salience bias effect shown in Table 1 still holds, albeit weaker. The main reason is that the competing effects, such as IVOL effect and turnover effect, included in original salience bias effect have been controlling this time.

In sum, while the salience bias effect is weakened to some extent after controlling for other competing variables, it remains statistically and economically significant.

3.3. Salience bias

In the previous analysis, we use the ST-FSCORE double sort method and prove that when the salience of stock return dominates the fundamental, investors pay too much attention to stocks with weak fundamentals, which leads to overvaluation and negative excess returns in the process of salience bias correction. On the contrary, when the salience of return underperforms than firm's fundamentals, investors lack focus on strong fundamental stocks, which leads to undervaluation and positive excess returns once the salience bias is corrected. It can be concluded that the deviation of stock salience from its fundamental expectation, namely salience bias, is an important driver of mispricing. In order to measure salience bias more accurately and analysis the correlation between salience bias and stocks returns conveniently, we construct the salience bias as the re-standardized result of the difference between standardized ST and FSCORE as follow:

$$ST - bias = Z(Z_{ST} - Z_{F-Score}), \quad (6)$$

where Z denotes the normalized value of the variable. The positive (negative) ST-bias indicates that the salience of stock returns outperforms (underperforms) firm's fundamentals. And the larger (smaller) the ST-bias, the more overvalued (undervalued) the stock price.

To demonstrate the salience bias anomaly, at the end of each month t , we sort all stocks into 10 decile portfolios based on an ascending ordering of ST-bias. Table 3 presents the average month $t+1$ portfolio raw returns, and alphas relative to the CH4 and FF5 factor models. The numbers in parentheses are t -statistics, adjusted by following Newey and West (1987), testing the null hypothesis that the average excess return or alpha is equal to 0.

As expected, the results in Table 3 show that the average one-month-ahead raw returns of the ST bias-sorted decile portfolios tend to decrease almost monotonically, from 1.76% per month for the low ST-bias decile to -0.03% for the high ST-bias decile, with the raw return difference between decile 10 and decile 1 is -1.79% (t -statistic=-7.14). Furthermore, the CH4 alpha (and FF5 alpha) of ST-bias portfolios has the similar decreasing pattern with average returns, from 0.54% (0.74%) for the lowest ST-bias decile to -0.92% (-0.99%) for the highest ST-bias decile. The CH4 alpha (FF5 alpha) difference between decile 10 and decile 1 is -1.46% (-1.73%) with a corresponding t -statistic=-3.75 (-4.35), indicating that there is significance difference in returns between stocks with high ST-bias and low ST-bias.

The large negative raw returns and risk-adjusted alphas of the high-low ST-bias portfolio have again confirmed the first main conclusion of this paper, that the mispricing caused by salience bias is both economically strong and statistically significant in our sample.

Table 3 Returns (%) and alphas of portfolios sorted by ST-bias

Decile portfolios are formed every month by sorting stocks based on the ST-bias of stocks over the past one month. This table reports the value-weighted average monthly raw returns and alphas of each portfolio.

Decile	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D10-D1	<i>t-value</i>
Raw	1.76	1.87	1.25	1.29	0.99	0.92	0.94	0.47	0.39	-0.03	-1.79	(-7.14)
CH4 α	0.54	0.56	0.11	0.13	-0.22	-0.24	-0.04	-0.33	-0.4	-0.92	-1.46	(-3.75)
FF5 α	0.74	0.72	0.24	0.13	-0.16	-0.3	0.00	-0.57	-0.55	-0.99	-1.73	(-4.35)

Although the portfolio-sorting approach is simple and intuitive, it cannot explicitly control for other effects that could influence returns. To examine the impact of salience bias on expected returns while controlling for other variables, we continue our analysis by running Fama and Macbeth (1973) regressions of future excess stock returns on ST-bias and combinations of the control variables. The full cross-sectional regression specification is

$$R_{i,t+1} = \lambda_{0,t} + \lambda_{1,t}STbias_{i,t} + \lambda_{2,t}controls_{i,t} + \varepsilon_{i,t}, \quad (7)$$

where $controls_{i,t}$ is a vector containing the measures of all controls. Table 4 presents the time-series average of the regression coefficients, along with Newey and West (1987) adjusted *t*-statistics in parentheses. We standardize each explanatory variable to have a mean of a one standard deviation change in the explanatory variable on next month’s stock return.

Table 4 reports the results of the Fama-MacBeth regressions. Consistent with the results of the portfolios sorts, we find that ST-bias negatively predicts one-month-ahead stock returns. The coefficient on ST-bias in the univariate regression in column (1) is statistically significant at the 1% level (*t*-statistic = -7.66). Column (2) shows that the inclusion of the earnings-price (EP) ratio doesn’t change the coefficient estimate and corresponding *t*-statistic on ST-bias. Furthermore, column (3) to (5) show that the inclusion of another firm characteristic gradually doesn’t changes the coefficient estimate on ST-bias. When we control for all characteristics simultaneously, one standard deviation increase in a stock’s ST-bias value is associated with a decrease in next month’s return on the stock of 5.8 bps.

Table 4: Fama-MacBeth regressions.

This table reports Fama and Macbeth (1973) regressions results. Each month, we run a cross-sectional regression of 1-month-ahead stock excess return on salience bias and a vector of characteristic variables measured at the end of month *t*.

	(1)	(2)	(3)	(4)	(5)
	FR	FR	FR	FR	FR
ST-bias	-0.043 (-7.66)	-0.043 (-7.62)	-0.059 (-10.1)	-0.056 (-9.57)	-0.058 (-10.1)
EP		0.015 (1.64)	0.012 (1.33)	0.013 (1.41)	0.012 (1.31)
Beta			-0.002 (-0.28)	-0.009 (-1.05)	-0.004 (-0.54)

ME			-0.018	-0.028	-0.026
			(-1.56)	(-2.38)	(-2.30)
ISKEW			-0.010	-0.012	-0.013
			(-1.64)	(-1.90)	(-2.09)
IVOL			-0.083	-0.024	-0.023
			(-3.52)	(-1.22)	(-1.10)
ILLIQ				0.003	0.003
				(0.98)	(0.95)
TurnO				-0.080	-0.082
				(-8.88)	(-9.13)
REV					-0.002
					(-0.27)
Constant	0.034	0.034	0.025	0.028	0.019
	(0.61)	(0.63)	(0.44)	(0.49)	(0.34)
R ²	0.022	0.031	0.079	0.093	0.100

4. ST-bias and uncertainty

We have demonstrated the predictive power of salience bias on stocks' future return in the cross-section. In this section, we examine the cross-section variation in salience bias effect among stocks with different uncertainty, and provide evidence that the uncertainty of stock has amplification effects on salience bias.

4.1. Bivariate portfolio-level analysis

Uncertainty we are referring to encompasses the inability to forecast probabilities. In the absence of probabilities to assign to potential states of the world, investors have less of a rational foundation on which to base decisions. In these times a lack of concrete fundamentals will prove a weak counterargument to irrational behavioral forces for less-than-full rational investors.

The notion that investor irrationality will have the greatest effect in uncertain environments is consistent with a long literature in psychology that details systematic deviations from rationality under uncertainty (e.g., Kahneman, 2003). In the cross-section of stocks, Hirshleifer (2001) argues that greater uncertainty about a group of stocks should lead to greater effects of investor irrationality.

There is no perfect measure of uncertainty, but a broad range of proxies exist. We use a number of different well-known proxies for stock uncertainty that have been used in the previous literature. The first measure of uncertain is the total volatility (TVOL), the more uncertain the future information about a stock is, the more volatile the stock price is (Brown and Jennings, 2015). We calculate monthly TVOL using the daily returns in the past month. The second measure of uncertainty that we use is turnover of stock (TO). Turnover should increase when aggregate disagreement is high, capturing stocks of higher uncertainty (Birru and Young, 2022). The third measure of uncertainty is idiosyncratic volatility (IVOL) (Bloom et al., 2007). We calculate IVOL using the volatility of daily return residuals with respect to the Fama and French (1993) model in the past month.

We begin by employing bivariate portfolio analysis to assess the cross-section variation in salience bias effect among stocks with different uncertainty. At the end of each month t , we form 5*5 value-weighted portfolios with an independent double sort on ST-bias and uncertainty. Table 5 reports the raw returns and risk-adjusted returns of high-low ST-bias portfolios that is long the ST-bias 5 portfolio and short the ST-bias 1 portfolio within each quintile of uncertainty. Panel A, Panel B and Panel C provide the results when uncertainty is measured by TVOL, TO and IVOL, respectively.

According to Panel A, the raw returns of high-low ST-bias quintile vary negatively with the uncertainty, ranging from -1.08% (t -statistic=-3.33) in UC1 to -2.37% (t -statistic=-6.11) in UC5 per month. The salience effect in UC5 is both statistically and economically stronger than that in UC1. Similarly, the CH4 (FF5) alphas of high-low ST-bias are also decreasing with UC ranging from -0.61% (-0.87%) in UC1 to -1.63% (-1.89%) in UC5 per month. As a result, the high-low ST-bias portfolio has a much lower return in the high uncertainty quintile than in the low uncertainty quintile. The stronger salience bias effect in higher UC quintile is also satisfied when uncertainty is measured by TO and IVOL.

Table 5

This table reports the raw returns and the risk-adjusted returns of high-low ST-bias portfolio across the uncertainty quintile portfolios. Panel A, Panel B and Panel C present the results when uncertainty is measured by total volatility (TVOL), turnover (TO) and idiosyncratic volatility (IVOL).

	Panel A: TVOL			Panel B: TO			Panel C: IVOL		
	Raw	CH4	FF5	Raw	CH4	FF5	Raw	CH4	FF5
UC1	-1.08 (-3.33)	-0.61 (-1.46)	-0.87 (-2.07)	-0.98 (-3.09)	-0.68 (-2.06)	-0.89 (-2.67)	-1.43 (-4.35)	-0.76 (-1.73)	-0.96 (-2.14)
UC2	-1.56 (-4.51)	-1.29 (-3.51)	-1.31 (-3.46)	-1.17 (-3.33)	-0.77 (-2.02)	-1.08 (-2.80)	-1.53 (-4.23)	-1.20 (-2.58)	-1.53 (-3.21)
UC3	-1.54 (-4.45)	-1.23 (-3.30)	-1.41 (-3.45)	-1.48 (-4.20)	-1.43 (-4.36)	-1.62 (-4.77)	-1.00 (-3.02)	-1.05 (-2.72)	-1.31 (-3.33)
UC4	-1.57 (-4.24)	-1.25 (-2.82)	-1.54 (-3.29)	-1.65 (-5.29)	-1.52 (-3.39)	-1.89 (-4.06)	-2.07 (-6.09)	-1.66 (-4.64)	-2.09 (-5.45)
UC5	-2.37 (-6.11)	-1.63 (-3.74)	-1.89 (-4.20)	-2.51 (-6.57)	-1.67 (-5.53)	-1.93 (-6.19)	-2.59 (-7.04)	-1.92 (-4.94)	-2.18 (-5.44)

4.2. Fama-MacBeth regressions

In addition to the portfolio analyses, we also examine the extent to which uncertainty affects the empirical relationship between salience bias and future returns by using Fama-MacBeth regressions. In particular, we test whether salience bias causes greater mispricing among stocks contemporaneously with high uncertainty by examining how the ability of salience bias to predict subsequent corrections of mispricing depends on uncertainty. We consider the following predictive regression:

$$R_{i,t+1} = \lambda_{0,t} + \lambda_{1,t}STbias_{i,t} + \lambda_{2,t}Uncertain y_{i,t} + \lambda_{3,t}STbias_{i,t} \times Uncertain y_{i,t} + \varepsilon_{i,t} \quad (8)$$

Table 6 presents the time-series average of the regression coefficients, along with Newey and West (1987) adjusted t -statistics in parentheses. We standardize each explanatory variable to have a mean of a one standard deviation change in the explanatory variable on next month's stock return.

The first column of Table 6 reports the results for univariate regressions of future stocks returns on ST-bias. The remaining three columns add uncertainty and the interaction of uncertainty with ST-bias. Column 2 shows how salience bias effects vary for different levels of uncertainty when using TVOL as a proxy for uncertainty. Focusing on the specification in column 2, when uncertainty is at its mean level, a one-standard-deviation increase in ST-bias predicts a 5.6-basis-point decrease in the following month. However, when uncertainty is one-standard-deviation above its mean, a one-standard-deviation increase in ST-bias predicts a 7.4-basis-point decrease in the following month (5.6+1.8). The magnitude of the coefficient on the interaction term in the one-month ahead predictability regression in column 2 suggests that a one-standard-deviation increase in uncertainty is associated with roughly 1.3 times larger predictive ability of sentiment relative to the mean level of uncertainty. The last two columns of Table 6 show that uncertainty continues to have a statistically and economically significant amplifying effect on salience bias when using TO or IVOL as a proxy for uncertainty. The magnitudes are similar to those in column 2.

The evidence in Table 6 shows that the predictive ability of salience bias is stronger when conditioning on uncertainty and highlight the important amplifying effects of uncertainty for salience bias.

Table 6: Fama-MacBeth regressions.

This table reports estimation results from regressions of 1-month-ahead stock excess return on salience bias (ST-bias), uncertainty, and the interaction between ST-bias and uncertainty measured at the end of month t .

	Univariate	TVOL	TO	IVOL
	FR	FR	FR	FR
ST-bias	-0.058 (-10.1)	-0.056 (-8.51)	-0.051 (-10.45)	-0.056 (-11.49)
Uncertainty		-0.102 (-6.19)	-0.090 (-10.83)	-0.15 (-7.96)
ST-bias*Uncertainty		-0.018 (-1.90)	-0.016 (-1.75)	-0.018 (-1.74)
Constant	0.019 (0.34)	-0.001 (-0.02)	0.014 (0.27)	0.002 (0.04)
Controls	Yes	Yes	Yes	Yes
Adjusted R ²	0.100	0.095	0.094	0.090

5. ADDITIONAL ROBUSTNESS TESTS

5.1. Alternative salience measures

Since the returns of ST-FSCORE double sort portfolios depends critically on the bias between the salience of stock return and firm’s fundamentals, its useful to know how sensitive the results are to alternative measures of stock salience. We consider below two types of salience measures, which could represent different forms of salience effect, and could exclude the potential influence of the other anomalies on the results at the same time, e.g., the salience effect is very similar to the short-term reversal effect according to Cosemans and Frehen (2021).

The first we consider alternative ST measures (ST-Q), computed using quarterly windows of daily returns for the nearest month is excluded, to further differentiate the salience effect from reversal. In the baseline salience specification, we choose a relatively short window because salient thinkers may recall only the most recent returns due to their cognitive limitations. However, the

ST computed using monthly windows may pick up one-month return reversals. Thus, if the salience effect is a repackaging of the one-month reversal effect, we expect it to vanish abruptly when salience is measured over intermediate horizons at which returns do not exhibit reversal. The second is the measure of lottery-like stocks, MAX3, which is the average of the three largest daily returns over the past one month following Bali et al. (2011) and Bali et al. (2017). According to Bordalo et al. (2012), lottery-like stocks tend to attract the attention of investors due to the salient returns comparing to nonlottery-like stocks, that it is reasonable to take MAX3 as an alternative indicator of ST.

As in the previous section, we form five-by-five portfolios with an independent double sort on the ST-Q (or MAX3) and FSCORE. Panel A (Panel B) of Table 7 reports the CH4 alphas of portfolios sorted by the ST-Q (MAX3) and FSCORE. Both the results of Panel A and Panel B are similarly to Table 1, indicating that our main finding that the salience of stock return outperform (underperform) than firm’s fundamental strengths is an important driver for the overvaluation (undervaluation) of stock prices, is robust to alternative salience measure.

Table 7: Bivariate portfolio analyses for alternative-ST and FSCORE (Returns on %)

This table reports the CH4 alphas of portfolios independently sorted by alternative ST and FSCORE. Panel A uses the ST-Q, computed using quarterly windows of daily returns for the nearest month is excluded, as the alternative salience measure. Panel B uses the MAX3, which is the average of the three largest daily returns over the past one month, as the alternative salience measure.

Panel A	CH4 alpha (Value-Weighted)						
	ST-Q1	ST-Q2	ST-Q3	ST-Q4	ST-Q5	H-L	t
FScore1	0.33	0.08	-0.29	-1.10	-1.87	-2.20	(-4.32)
FScore2	0.69	0.04	-0.40	-0.61	-1.35	-1.99	(-4.23)
FScore3	0.23	0.43	0.02	-0.57	-1.10	-1.38	(-3.45)
FScore4	0.68	0.45	0.50	0.32	-0.40	-1.11	(-2.54)
FScore5	0.77	0.62	0.65	1.02	-0.34	-1.09	(-2.51)
H-L	0.46	0.48	0.95	2.13	1.55	ST5FScore1-ST1FScore5	
t	(1.20)	(1.32)	(2.39)	(5.80)	(3.66)	-2.59	(-5.13)
Panel B	CH4 alpha (Value-Weighted)						
	MAX1	MAX2	MAX3	MAX4	MAX5	H-L	t
FScore1	-0.22	-0.57	0.16	-0.66	-1.48	-1.26	(-2.50)
FScore2	0.24	-0.33	0.04	-0.10	-1.35	-1.61	(-4.03)
FScore3	0.15	0.17	0.15	-0.29	-1.02	-1.13	(-2.72)
FScore4	0.32	0.31	0.42	0.25	-0.23	-0.54	(-1.19)
FScore5	0.41	0.81	1.01	0.56	0.10	-0.34	(-0.77)
H-L	0.64	1.41	0.89	1.24	1.54	ST5FScore1-ST1FScore5	
t	(1.64)	(3.82)	(2.04)	(3.42)	(3.60)	-1.90	(-3.83)

5.2. Alternative FSCORE measures

In the literature, however, for different research purposes, firm’s fundamental can be measured differently. Here we consider below two measures as the alternative of FSCORE.

The first is the GSCORE designed by Mohanram (2005). Compared with FSCORE, which is used to measure the quality of a company’s fundamentals, GSCORE is used to measure the imagination space of an enterprise. The GSCORE can separate winners with good fundamentals from losers with poor fundamentals from growth stocks, thereby solving the problem of investors missing out on big stocks like Amazon in the face of high valuations. We extend the GSCORE to

our framework as the fundamentals measure and sort stocks based on ST and GSCORE as Table 1. Panel A of Table 8 shows that our main finding is robust to this alternative fundamental definition.

The second is the Buffett alpha (BSCORE) mentioned by Frazzini et al. (2018), constructed according to Buffett’s investment concept which takes cheap, safe, high-quality stocks as long-term investment targets. Chinese scholar, Yi and Ming (2018) continued the relevant research of Frazzini et al. (2018) and use the data of China A-share to select low volatility, cheap and high-quality stocks as long-term investment targets. In their paper, three measures of safety, cheapness and quality are combined into Buffett factor (BSCORE), which takes into account both market information and enterprise fundamental information. The higher the BSCORE, the higher the overall score on safety, price and quality, and the more in line with Buffett's investment preferences. Their empirical results show that BSCORE can bring significant excess returns, and has excellent performance in A-shares. Panel B of Table 8 shows that our main finding is robust to this alternative fundamental definition.

Table 8: Bivariate portfolio analyses for ST and alternative-FSCORE (Returns on %)

This table reports the CH4 alphas of portfolios independently sorted by ST and alternative-FSCORE. Panel A (Panel B) uses the GSCORE (BSCORE) as the alternative salience measure.

Panel A	CH4 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
GScore1	-0.23	0.22	0.14	-0.58	-1.21	-1.46	(-3.60)
GScore2	0.03	-0.49	-0.08	-0.58	-1.32	-1.39	(-3.51)
GScore3	0.07	0.30	-0.21	-0.31	-1.24	-1.19	(-3.39)
GScore4	0.19	-0.39	-0.25	-0.49	-0.98	-0.79	(-2.21)
GScore5	0.42	0.24	0.54	0.28	-1.07	-1.39	(-2.92)
H-L	0.29	0.08	0.37	0.86	0.18	ST5FScore1-ST1FScore5	
t	(0.80)	(0.22)	(0.99)	(2.08)	(0.43)	-1.66	(-4.31)
Panel B	CH4 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
Bscore1	-0.03	-0.47	-0.16	-0.49	-1.70	-1.70	(-3.65)
Bscore2	0.41	-0.32	-0.05	-0.50	-1.20	-1.60	(-4.06)
Bscore3	0.14	0.10	0.23	-0.28	-1.21	-1.31	(-3.21)
Bscore4	0.48	0.49	0.49	0.32	-0.20	-0.69	(-1.60)
Bscore5	0.53	1.06	0.95	0.25	0.14	-0.35	(-0.86)
H-L	0.50	1.53	0.97	0.73	1.97	ST5FScore1-ST1FScore5	
t	(1.42)	(4.21)	(2.16)	(1.91)	(4.98)	-2.25	(-4.79)

5.4. Alternative uncertainty measures

5.3. Small stocks with large shell values

Recent studies, such as Hou et al. (2020) and Novy-Marx and Velikov (2016), suggest that arbitrage costs are a dominant factor in driving mispricing among small stocks. In addition, Liu et al. (2019) suggests that the small stocks often have “shell value” but no real economic value. This is the reason our main analyses focus on all-but-small stocks. In the final robustness test, we examine whether salience bias effect still holds for small stocks. Different from the all-but-small stocks in our main analyses, we use small stocks, which are bottom 30% of the size distribution, as subsample to repeat the process in Table 1. Table 9 presents the results for small stocks. When

applying the same ST-FSCORE double sort procedure to the small stocks, we find that the relation between salience bias and return remains the same as Table 1 and the mispricing magnitude is larger among the small stocks than that among the non-small stocks. The CH4 alpha of *ST5Fscore1-ST1Fscore5*, for example, is -2.56% (*t*-statistic=-7.89) in Table 9, which is economic larger and statistically more significant than the -2.48% (*t*-statistic=-5.06) in Table 1. And the results of raw returns and FF5 alphas are similar to CH4 alphas. The main reason for this result is the large arbitrage cost of small stocks. Stambaugh et al. (2015) and Brav et al. (2010) posit that firm size captures arbitrage costs and it has an amplification effect on mispricing.

Table 9: Bivariate portfolio analyses for small stocks (Returns on %)

This table reports the CH4 alphas of portfolios independently sorted by ST and FSCORE using small stocks which are bottom 30% of the size distribution.

Panel A	Raw Return (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
Fscore1	1.67	1.73	1.32	0.63	-0.03	-1.70	(-8.72)
Fscore2	1.73	1.47	1.45	0.98	-0.37	-2.10	(-9.51)
Fscore3	2.14	2.21	2.26	2.00	0.57	-1.57	(-7.05)
Fscore4	2.58	2.86	2.54	1.90	1.14	-1.44	(-5.49)
Fscore5	2.72	3.44	3.07	2.75	1.91	-0.81	(-2.74)
H-L	1.05	1.71	1.75	2.12	1.94	ST5Fscore1-ST1Fscore5	
t	(4.87)	(7.26)	(7.06)	(8.25)	(6.77)	2.75	(10.34)
Panel B	CH4 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
Fscore1	-0.01	-0.09	-0.39	-1.15	-1.62	-1.60	(-5.91)
Fscore2	0.36	0.15	-0.07	-0.58	-1.77	-2.13	(-8.06)
Fscore3	0.62	0.28	0.32	-0.28	-1.49	-2.13	(-8.06)
Fscore4	0.75	0.86	0.39	-0.19	-1.00	-1.71	(-6.91)
Fscore5	0.96	1.13	0.87	0.51	-0.61	-1.60	(-4.83)
H-L	0.96	1.25	1.29	1.68	1.00	ST5Fscore1-ST1Fscore5	
t	(4.37)	(5.46)	(5.67)	(7.12)	(3.11)	-2.56	(-7.89)
Panel C	FF5 alpha (Value-Weighted)						
	ST1	ST2	ST3	ST4	ST5	H-L	t
Fscore1	-0.17	-0.15	-0.45	-1.16	-1.71	-1.55	(-5.65)
Fscore2	0.33	0.13	-0.05	-0.51	-1.74	-2.07	(-7.65)
Fscore3	0.63	0.37	0.39	-0.11	-1.38	-2.02	(-7.46)
Fscore4	0.83	0.95	0.40	-0.01	-0.84	-1.66	(-6.49)
Fscore5	1.04	1.26	1.07	0.56	-0.44	-1.56	(-4.55)
H-L	1.21	1.40	1.53	1.72	1.27	ST5Fscore1-ST1Fscore5	
t	(5.38)	(6.06)	(6.51)	(7.12)	(3.84)	-2.74	(-8.51)

5. CONCLUSION

Existing research hypothesizes that investors focus their limited cognitive resources on a stock's most salient returns, defined as those that stand out relative to the returns of other stocks in the market. Under this explanation, all stocks with most salient-upside returns are overvalued due to the excessive attention of investors. On the contrary, all stocks with most salient-downside returns are undervalued due to too little attention of investors. However, something is different when we take firm's fundamentals into account at the same time.

In this paper, we combine the irrational behavior of investors with the fundamentals of stocks, and analyze the expected return of stocks when the salience of stock return deviates from the firm's fundamentals. We find that when the salience of stock return dominates the fundamental, investors pay too much attention to stocks with weak fundamentals, which lead to overvaluation and negative excess returns in the process of salience bias correction. On the contrary, when the salience of return underperforms than firm's fundamentals, investors lack focus on strong fundamental stocks, which lead to undervaluation and positive excess returns once the salience bias is corrected. It can be concluded that the deviation of stock salience from its fundamental expectation, namely salience bias, is an important driver of mispricing. Furthermore, this paper also provides that the uncertainty of stock has amplification effects on salience bias and the predictive ability of salience bias is stronger when conditioning on higher uncertainty.

APPENDIX

1. Main Variable Definition

Table A.1 Brief Definitions of Main Control Variables

Variable name	Description
Lottery feature (MAX3)	The average of three largest daily returns (MAX3) over the past one month to minimize the impact of the limit system in China's stock market (Bali et al., 2011).
Market capitalization (ME)	End-of-month market capitalization (price × shares outstanding)
Book-to-market ratio (BM)	Ratio of the book-value and the market capitalization of the firm.
Momentum (MOM)	Total monthly stock return during the past 11 months.
Reversal (REV)	Average daily returns over the past one month.
Amihud illiquidity	Absolute daily returns per unit of trading volume (Amihud, 2002).
Monthly volume turnover	Shares traded divided by the number of shares outstanding,
Idiosyncratic volatility (IVOL)	Standard deviation of the residual from a four-factor model.
Idiosyncratic skewness (ISKEW)	Scaled measure of the third moment of the residual obtained by fitting a two-factor (<i>MKT</i> and <i>MKT</i> ²) model. (Harvey and Siddique, 2000)
Total skewness (TSKEW)	Scaled measure of the third moment of daily stock returns.
Co-skewness (COSKEW)	System skewness of stocks. Scaled measure of the coefficient of the squared market factor in the skewness regression (Harvey and Siddique, 2000).
Downside beta (DRISK)	The slope coefficient from a regression of excess stock returns on the excess market returns, using only days for which the market return was below the average daily market return during the past year (Bawa and Lindenberg, 1977).
Tail beta (TRISK)	The slope coefficient from a regression of excess stock returns on excess market returns using only daily observations in the bottom 10% of market excess returns over the past year (Chabi-Yo et al., 2018).

2. Characteristics of ST-sorted and FSCORE-sorted portfolios

Table A.2 Summary statistics for decile portfolios of stocks sorted by beta

This table reports the time-series monthly average of firm characteristics for portfolios formed on the ST or FSCORE.

Panel A	ST Deciles									
	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
FSCORE	0.001	0.003	0.005	0.007	0.009	0.012	0.016	0.023	0.035	0.189
MAX3 (%)	0.021	0.026	0.029	0.032	0.036	0.040	0.046	0.052	0.062	0.086
IVOL	0.011	0.013	0.015	0.017	0.019	0.021	0.023	0.027	0.031	0.046
ISKEW	0.06	0.02	0.00	-0.01	-0.04	-0.04	-0.05	-0.04	0.01	0.12
beta	0.99	1.07	1.10	1.11	1.11	1.12	1.12	1.12	1.13	1.13
ME (¥ 10 ⁸)	22.71	22.47	22.44	22.44	22.46	22.49	22.52	22.53	22.51	22.41
BM	0.77	0.71	0.68	0.65	0.63	0.62	0.60	0.60	0.59	0.60
MOM (%)	0.04	0.09	0.13	0.17	0.21	0.24	0.28	0.32	0.34	0.32
REV (%)	-0.007	-0.003	0.002	0.006	0.011	0.015	0.022	0.030	0.038	0.053
CoSKEW	-0.95	-1.19	-1.31	-1.32	-1.01	-1.34	-1.21	-1.13	-1.27	-1.97
TSKEW	0.26	0.25	0.28	0.30	0.33	0.35	0.37	0.41	0.47	0.65
TurnO (%)	23.0	29.7	34.7	39.2	43.5	48.9	54.9	62.9	77.2	119.0
ILLIQ	0.07	0.08	0.09	0.07	0.08	0.07	0.07	1.41	1.28	1.77

Panel B	FSCORE Deciles									
	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
FSCOR E	1.646	3.000	3.916	4.000	5.000	5.000	6.000	6.000	7.000	7.765
MAX3 (%)	0.046	0.044	0.039	0.042	0.041	0.042	0.041	0.043	0.043	0.043
IVOL	0.025	0.023	0.021	0.021	0.022	0.022	0.022	0.022	0.022	0.021
ISKEW	0.08	0.01	0.05	-0.03	0.03	-0.02	0.03	-0.02	0.00	0.00
beta	1.11	1.10	1.13	1.08	1.13	1.09	1.14	1.08	1.08	1.11
ME (¥ 10 ⁸)	22.48	22.55	22.49	22.48	22.42	22.51	22.46	22.50	22.48	22.53
BM	4	9	2	7	2	5	6	0	4	2
MOM (%)	0.67	0.65	0.64	0.63	0.62	0.63	0.63	0.63	0.66	0.67
REV (%)	0.21	0.19	0.29	0.12	0.37	0.15	0.33	0.19	0.25	0.24
CoSKEW	0.012	0.013	0.019	0.010	0.024	0.017	0.024	0.021	0.028	0.019
W	-	-1.75	-0.62	-1.28	-0.10	-1.70	-1.62	-0.44	-0.92	-0.83
TSKEW	28.35	0.45	0.28	0.29	0.17	0.26	0.17	0.26	0.21	0.20
TurnO (%)	0.82	0.45	0.28	0.29	0.17	0.26	0.17	0.26	0.21	0.20
ILLIQ	70.7	57.2	52.2	46.8	53.4	46.9	51.2	47.6	49.2	47.9
	0.78	0.38	0.09	0.15	0.09	0.09	0.11	0.10	0.11	0.09

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DXB242

The Differential Effects of Dividends on Future Earnings

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ABSTRACT

The idea that current dividend displaces future earnings assumes that dividends are paid out of productive assets of the firm and firms need to either replace these assets with equivalent borrowing or suffer a loss of productivity associated with those assets. Therefore, future earnings reduce accordingly through either the increased interest expenses or the loss of productivity. While such an assumption holds true for financial assets such as savings bank deposits, whether it is true for a real firm is an empirical question, based on the extent of unproductive or less productive liquid assets, operationalized in this study as the cash balance held by a firm, its cost of capital and leverage. In this paper, *using OLS regressions, we document that the negative association of current dividends on future earnings* is more (less) pronounced among firms with high (low) cost of capital, high (low) cash balance and high (low) leverage. Our results raise questions on the measures of earnings growth, which may need to incorporate the dividend displacement effect, akin to the concept of cum dividend price. Such hitherto undocumented empirical regularities provide new insights into the role of dividends for future earnings.

Keywords: Dividends, Dividend Displacement Property, Future Earnings.

JEL classification: M40, M41, G17, G35

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DXB261

Investor preferences in equity crowdfunding: which companies are attractive at crowdfunding platforms

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Abstract

Equity crowdfunding, a form of company financing through equity investments, has become increasingly relevant in recent years. It allows raising capital from large group of investors who put certain amounts of money in exchange for company's shares through Internet intermediaries, crowdfunding platforms. The authors conducted an empirical study to establish the relationship between investment attractiveness and the factors that impact the success of crowdfunding campaign. The study sample includes 578 projects of raising equity capital on the leading platforms in UK, Crowdcube and Seedrs, between 2011 and 2021. The results of the study demonstrated that the investment attractiveness of companies is higher if they offer a larger share of equity during the placement. Older and larger firms, non-diversified companies have a higher attractiveness for investors. This research contributes to existing studies of determinants of the success of equity crowdfunding.

Keywords: equity crowdfunding, crowdfunding, crowdfunding platforms, investment attractiveness.

1. Introduction

The development of digital technologies has resulted in the introduction of new ways of financing, including such financial innovation as equity crowdfunding (EC) (investment-based crowdfunding, or crowdfunding (Hornuf and Neuenkirch, 2017)). It is a method of raising capital from large group of investors who put certain amounts of money in exchange for company's shares through Internet intermediaries, crowdfunding platforms. A growing number of new business

ventures are in need of large capital investments to develop their projects. World EC volume is rapidly increasing. According to data from (Statista, 2019) EC funds amounted to 3.8 billion USD in 2018, rose by 16% in 2019, amounting to 4.8 billion USD, and reached 5 billion USD in 2021 (Yasar, 2021).

One of the driving forces of EC process development was the introduction of legislative regulation in many countries, followed by the rise of the number of crowdfunding platforms, amount of crowdfunders, number of investors and companies attracting investments on crowdfunding platforms (Graw, 2018; Hornuf and Schwienbacher, 2017; Mamonov and Malaga, 2020). According to some estimates an explosive growth of equity crowdfunding is expected by 2025 (The Meteoric Rise of Equity Crowdfunding (forbes.com).Dec.20, 2021). There are many academic papers and case studies on success factors of companies raising funds on crowdfunding platforms, investigating relationship between the companies' characteristics and their attractiveness to investors. Signori and Vismara (2016) were among the first to highlight this problem and look at the link between the features of companies in which investors put their money on crowdfunding platforms and their financial performance.

Among multiple characteristics of issuing companies that tend to be related to the success of crowdfunding platforms are issuers' innovative activities (Chang et al., 2012; De Vries et al., 2017; Hornuf and Schwienbacher, 2017), owners and managers characteristics, types of shares issued (Cumming et al., 2019, 2020), the size, age of the company and its industry, diversification of activities etc. (Cumming et al., 2016; Nguyen et al., 2019; Walthoff-Borm et al., 2018).

This paper aims to shed more light on the relation between the characteristics of issuing companies on crowdfunding platforms and their attractiveness to investors. We examine these links for crowdfunding campaigns conducted on the largest UK crowdfunding platforms Crowdcube and Seedrs for a period 2011-2021. The COVID impact on the success of funding campaign, as well as the possible effect of the platform type is analyzed as well.

The paper is structured as follows. Section 1 provides the concept of EC and institutional background for crowdfunding in UK. Section 2 presents theoretical background on the success factors of issuing companies on crowdfunding platforms. Empirical study results and findings are presented in section 3. The part 4 concludes.

2. Equity crowdfunding: the concept and institutional background

The main way in which crowdfunders differs from other types of crowdfunding is the fact that investors put their funds in a company's equity and obtain company's shares (Ahlers et al., 2015). The main feature distinguishing EC from conventional shares placement is the financing process itself: entrepreneurs openly appeal for financing on a crowdfunding platform, and investors make a decision to invest subject to the information available on that crowdfunding platform (Hemer, 2011). This tool of financing allows firms that are not listed at the stock market to get financing at early stage of their development. EC solves the problem of companies having a finance gap early on, enabling them to obtain the funds required to implement entrepreneurial ideas before shifting to more complicated financing forms, like investments from business angels,

venture capitalists and IPO (Lukkarinen et al., 2016). This process provides finance to start-ups that otherwise could not access capital. Prior to development of this mechanism, only professional investors such as business angels and venture capitalists could afford to invest in start-up companies not listed on the stock exchange, while for non-professional investors, the options were limited. The development of crowdfunding afforded all investors the opportunity to put their funds in any company worldwide. What motivates investors to back entrepreneurs at the equity crowdfunding platforms? This issue is of a debate in the literature. Although there could be different non-financial motives for investments including support of innovations, development of entrepreneurship and new ventures etc., investors are mainly driven by potential high returns from their investments (Cholakova and Clarysse, 2015; Kleinert and Volkmann, 2019).

Most studies have focused on the analysis of crowdfunding platforms in the UK, Germany and USA (See e.g. [Agrawal et al., 2015; Ahlers et al., 2015; Block et al., 2017; Hornuf and Neuenkirch, 2017; Hornuf and Schwiendbacher, 2015, 2017; Ralcheva, Roosenboom, 2020; Signori and Vismara, 2016; Vulkan et al., 2016; Vismara, 2016]).

United Kingdom is the most remarkable for being highly developed in crowdfunding, largely due to developed capital markets (Yasar, 2021). In 2020 UK was the third among the largest regional alternative markets, with \$12.64 bln raised through alternative financing instruments, following US and Canada (The Global ..., 2020). Securities activities are regulated by The Financial Services and Markets Act (FSMA) 2000. Crowdfunding is regulated by the Financial Conduct Authority (FCA), which published the FCA's regulatory approach to crowdfunding over the internet in 2014. UK government provided tax incentives to promote investments in seed stage startup.

Leading UK platforms are Crowdcube and Seedrs (Yasar, 2021). Crowdcube crowdfunding platform, established in 2011, is the largest in the United Kingdom. The direct participation of a great number of investors makes Crowdcube particularly suitable for studies in finance (Vismara, 2018; Vulkan et al., 2016; Walthoff-Born et al., 2018). Seedrs platform launched in 2012 is the second large in UK, and recorded £2 bln. of raised funds by the mid of 2022 (<https://www.seedrs.com>, accessed July 31, 2022). Crowdfunding platforms operate based on one of the two models. The model "All or nothing" implies that the issuer sets a funding goal in terms of the amount of money they plan to raise. Crowdcube and Seedrs platforms operate according to this model. If the goal is not reached, then the company does not receive capital and investors who bought shares will get their money back. The model "Keep it all" allows keeping all money raised whether or not the issuer reached the funding goal (Valanciene and Jegeleviciute, 2013). Platforms that operate on the principle "Keep it all" may charge higher commission fees from issuing companies (Cumming et al., 2020). Many platforms, e.g. Crowdcube, provide an opportunity for overfunding, implying that an issuer raises more funds than it was initially announced as a target amount. In this case the company issues additional shares to be placed (Crowdcube 2022). Although companies issuing equity at the platforms are non-public, and it is not possible to provide a high level of liquidity, some platforms arrange a secondary market for the shares issued. Seedrs platform allows its investors to sell and buy their interests in shares. This

provides an opportunity for investors to exit and at the same time offers shares to potential investors who did not manage to participate in initial issuances (<https://www.seedrs.com>).

There are various types of shares that a company can offer to investors on crowdfunding platforms. On the UK platforms companies may allocate A-type shares whose holders have voting rights at general shareholders' meetings and B-type shares not granting voting rights. Holders of B-type shares have no voting rights, but rank on equal footing when it comes to cash flows and the receipt of dividends (Cumming et al., 2019a).

Investing in companies on platforms is carried out through a direct ownership structure, when investors become owners of shares directly, and through nominee structure (pooled investment), when a nominal holder becomes the owner of shares, exercising rights for ultimate owners (Walthoff-Borm et al., 2018). Pooled investment could be used in favor of further follow-on financing of large professional investors, who might be not interested in non-convenient ownership structure with many small shareholders (Yasar, 2021). While Crowdcube accepts both direct and nominee shareholding structure for issuing companies, Seedrs is based on nominee structure. The platform is registered as legal shareholder on behalf of the owner and is responsible for the administrative issues that shareholder needs to do, including realizing of the right to dividends, capital returns, an exit and tax relief (<https://www.seedrs.com>).

3. Factors of success and investment attractiveness

Crowdfunding campaign success is associated with its attractiveness to investors. With all the rapid development of this method of funding, EC is less popular among investors comparing to other types of crowdfunding due to higher risks that investors face (Manthe and Herve, 2022). The volume of the equity crowdfunding is small also in comparison to debt financing, but the attention from regulators and policy makers is constantly rising (Yasar, 2021). According to *The Global Alternative Finance Market Benchmarking Report* (2019) EC represents only 2% of alternative financing market share.

Before considering the factors of investment attractiveness of crowdfunding campaigns it is important to discuss the risks that are not so strongly pronounced for other types of investments. There is a high level of information asymmetry between issuers and investors, as issuing companies are not subject to information disclosure according to the legislation, and it is left at their discretion. Companies at the crowdfunding platforms are non-public, and obtaining the information about their financial and market performance could be difficult. Given that most of investors are non-qualified, they have limited access to information and ability to conduct due diligence (Kleinert and Volkmann 2019). Platforms distribute the campaign information but in most cases they do not check and verify the information provided by entrepreneurs-issuers (Dorfleitner et al., 2018). Publicly available expertise and certification from third parties is also hardly achieved, as the process of EC does not require participation of legal advisors and underwriters. Therefore an uncertainty for investors about the firm's success in the future and the expected return on their investments is higher than in case of public equity placements. Moreover investors should realize that they may need to wait for a long time before earning any return. Since

the issuing company is not listed, companies are not obliged to pay dividends. Investors bear a risk of illiquidity and dilution of capital. Investors have a right to sell their shares one year after their investment to an interested buyer, but the liquid secondary markets mostly were not successfully arranged (Yasar, 2021). Although some platforms, e.g., Seedrs, try to provide a secondary market, therefore investors could enjoy shares liquidity in case a company is successful and attractive for investors.

The determinants of issuer's success are related to issuing company features – innovativeness, product, diversification, age, size etc. (Chan and Parhankangas, 2017; Coakley et al., 2022; Davis et al., 2017), personal characteristics of founders, executives, board members like age, gender, education, social networks (Ahlers et al., 2015; Barasinska and Schäfer, 2014; Nitani et al. 2019; Ralcheva and Roosenboom, 2020), crowdfunding campaign specifics – funding target amount, earlier funding campaigns, project description, media coverage and visualization of the project and campaign etc. (Ahlers et al., 2015; Cordova et al., 2015; Deng et al., 2022; Zhou et al., 2018). Factors of investment attractiveness could be investor-related, like investor experience in previous campaigns (Cornelius and Gokpinar, 2020) or explained by the crowdfunding platform characteristics – competition at the platform, platform age and size, platform type (Cumming et al., 2020; Shneor and Vik, 2020). Turning to issuer's characteristics, company's age is one that is related to the success of the crowdfunding campaign (Cumming et al., 2019, 2020; Hornuf et al., 2018; Nguyen et al., 2019). Hornuf and Schmitt (2017) concluded that young firms have higher growth potential, need more investment, and potential investors could expect high future rewards from these companies. Signori and Vismara (2016) identified a positive relationship between the company's age and its attractiveness to investors on crowdfunding platforms, as well as with company's financial performance measured as IRR. Older companies could send a positive signal about a sustainable business model, commitment by the founding team and could have lower risk (Coakley et al., 2022). At the same time Signori and Vismara (2016) and Ahlers et al. (2015) reported a negative relationship between the age of a company which raises equity investments on a crowdfunding platform and its future financial performance. Young start-ups could be more attractive for investors, as they perform better in the long run. Older companies could be perceived by investors as entities that attract money at the platform if they have an unstable financial performance results and aren't able to raise investments via other channels (IPO, bank loans etc.). Start-up companies in turn may raise funds for innovative projects that could have a potential high return. Hornuf et al. (2018) also found that company age is negatively related to the likelihood of further funding after a crowdfunding campaign.

Market diversification is an important strategy for companies to increase their market share and improve financial performance [Ayal and Zif, 1979]. Researchers confirm that market diversification of a company may influence investment decision made by potential investors on crowdfunding platforms. Signori and Vismara (2016) found a direct dependence between the number of codes of Standard Industrial Classification (SIC), number of investors and a company's future financial performance measured as IRR. Previous studies (e.g., Christensen and

Montgomery, 1981; Mcdougall and Round, 1984) have identified a positive link between market diversification and financial performance of companies in different sectors.

Ownership structure and concentration are less studied issues with regard to financial performance of companies that raise capital through crowdfunding campaigns than for publicly listed firms. Nevertheless it is evident that these aspects could determine investors' interest and preferences for issuers and affect company's performance. Therefore it is crucial to investigate how ownership characteristics of the company as well as the features of campaign could be related to the success of the company in the process of equity-based crowdfunding.

Relevant factor for analysis is the share of equity that the issuing company offers in the crowdfunding campaign, demonstrating to what extent the founders are willing to transfer the ownership of their company to potential shareholders. Equity share offered by a company on a crowdfunding platform is one of the key figures for investors. It may be argued that the equity share offered is higher when a company has to raise larger investments to implement capital intensive projects, or a company's financial performance is unstable.

Researchers' view on the proportion of equity offered by companies on crowdfunding platforms as the driver of success for fundraising is rather ambiguous. According to agency theory, when equity share offered is increased, ownership is dispersed among a larger group of shareholders, and agency costs could increase (Cumming et al., 2016). Vismara (2016) analyzed a sample of companies that were raising equity investments in 2014 on a Crowdcube platform and discovered an inverse relationship between the portion of shares offered and its attractiveness to investors. Ahlers et al. (2015) analyzed crowdfunding campaigns on a crowdfunding platform ASSOB in 2006-2011, and discovered an inverse relationship between the equity share offered and the number of investors putting their funds in the company. According to a signaling theory offering lower percentage of equity to potential investors can be considered as a positive signal about the confidence of founders in their business and its future performance. Therefore the attractiveness of the company for investors becomes stronger (Leland and Pyle, 1977). The authors in (Ralcheva, Roosenboom, 2016) in their study of companies raising equity on the Crowdcube platform in 2012-2015, established a direct relationship between the equity offered by a company to potential investors and the ratio of the raised funds to the initial investment stated as a goal.

Ownership concentration is another important factor related to the previously discussed feature of the crowdfunding campaign, equity share offered. According to the agency theory the separation of ownership and control of the company increases agency costs that could lead to worse performance of the firm. Based on this assumption one could assume that keeping large portion of capital in hands of major owners could be considered by investors as a positive signal and attract more investors' attention. From the other side, major shareholders could tend to extract private benefits of control at the expense of minority owners (Shleifer and Vishny, 1997).

Another factor that is not related to either investors or issuers, but worth to mention as an important external factor, is an impact of global shocks like COVID pandemic. Presumably, the development and growth of EC could be affected by pandemic lockdown as any financing mechanism at other markets. The pandemic shock changed the landscape of entrepreneurial

funding substantially (Saleh et al., 2021). In 2020 the volume of global crowdfunding fell due to the consequences of the COVID-19 pandemic, which affected all areas of business (Sabia et.al, 2022). Some equity crowdfunding platforms started collaboration with governments and crowdfunding platforms that provided debt-based models of financing (Kraemer-Eis et al., 2020). But the pandemic brought about the risk of uncertainty that could negatively impact investors attitude towards crowd investments. As reported by (Mason, 2020), platforms suffered losses and reported decrease in the investment activity. From the other side the COVID outbreak created new opportunities that did not exist before, related to social distancing and shift to online activities and non-traditional channels of communication. The interest of investors to new ways of financing increased. The delay in government support of business also promoted the search of new ways of funding for business (Fairlie, 2020). Battaglia et al. (2022) documented the rise in total volume of EC in Italy for two first quarters of 2020 as compared to the same period of 2019. Investors are inclined to support technological projects more than before (Yasar, 2021). Many business owners used crowdfunding for financial support of existing business (Saleh et al., 2021). Other entrepreneurs utilized this mechanism as an exit strategy, including leveraging through crowdfunding to raise money for funding a sale of their business to large investors (Chandler et al., 2021).

4. Empirical study

4.1. Methodology

To investigate the relationship between companies’ characteristics and their attractiveness to investors on crowdfunding platforms, the following regression model was used (1):

$$Attract_{it} = \beta_0 + \beta_1 equity_{it} + \beta_2 size_{it} + \beta_3 age_{it} + \beta_4 diver_{it} + \beta_5 platform_{it} + \beta_6 covid_{it} + \varepsilon_{it} \quad (1)$$

where $i = 1, \dots, 578$; $t = 2011; \dots, 2021$.

For equation (1) the ratio of raised funds to the initially stated amount of funds has been used as a dependent variable, characterizing the attractiveness of companies to investors on crowdfunding platforms, $Attract_{it}$. ε_{it} are random values, $\beta_k, k = 0, 1, \dots, 6$ - unknown parameters, i — number of crowdfunding campaigns, t — moment of time.

Table 1 presents a summary of variables.

Table 1. Variables used in the regression analysis

Variable	Description
<i>Dependent Variable</i>	
$Attract_{it}$	Company’s attractiveness to investors on the crowdfunding platform. $Attract_{it} = \frac{Raised_{it}}{Target_{it}}$

	where $Raised_{it}$ is the amount of funds raised on the crowdfunding platform and $Target_{it}$ is the target amount of funds a company intends to raise on the crowdfunding platform
<i>Independent variables</i>	
<i>Age</i>	Company's age calculated as a natural logarithm of the number of years since the company registered to start crowdfunding campaign on a platform
<i>Diver</i>	Binary variable that is equal to 1 if a company has at least 2 SIC codes and equal to 0 if there is one SIC code.
<i>Platform</i>	Binary variable that is equal to 1 if a company offered its shares on the Crowdcube platform, and 0 in case of Seedrs
<i>Covid</i>	Binary variable that is equal to 1 if a company conducted crowdfunding campaign in a period of COVID pandemic, 2020-2021, and 0 otherwise.
<i>Control variables</i>	
<i>Size</i>	Company's size measured as a natural logarithm of the company's assets at the time when it begins raising capital on a crowdfunding platform
<i>Equity</i>	Equity share offered by a company on a crowdfunding platform

As it was already stated, Crowdcube and Seedrs crowdfunding platform operate on an *all or nothing* principle, meaning that if a company raises any amount less than its initial goal, all funds are returned to investors. If more funds are raised than those stated as the initial goal, companies receive all the funds. This means that companies aim for maximization vis-a-vis the attractiveness index for investors.

The choice of the success ratio *Attract*, that was used in previous studies (e.g. [De Crescenzo et al., 2019; Ralcheva and Roosenboom, 2016; Vulkan et al., 2016]) among other measures of crowdfunding campaign performance metrics is explained by the fact that it allows comparing the success of issuers in different campaigns notwithstanding of their scale and size of both companies and amounts raised (Duan, et al. 2020).

The variables *equity* and *size* are included in the model as controls. The share of equity that a company offers on a crowdfunding platform is a factor that can affect the investment attractiveness of a company, and (Ralcheva, Roosenboom, 2016) found that there is a direct relationship between the share of equity that companies offer to potential investors, and the ratio of funds raised to the initial target amount. From the perspective of investors, companies attract large resources for the implementation of large-scale projects, which can be a positive signal for potential shareholders.

A proxy variable of company's size, that is included in the model as a control variable is expressed via a logarithm of company's assets book value. Some studies report a negative relationship between a company's size and its financial performance (see e.g. [Mehran, 1995]).

Signori and Vismara (2016), Bogdani et al. (2021) found a negative link between a company’s size and its attractiveness to investors.

4.2. Sample selection

The data was collected on equity crowdfunding campaigns, conducted on largest UK platforms – Crowdcube and Seedrs. The sample included 578 companies that raised investments through equity crowdfunding from 2011 to 2021. Of these, 337 companies are on the Crowdcube platform, 241 are on the Seedrs.

Three sources were used to collect data: the websites of the Crowdcube and Seedrs platforms, and the official website of the UK Companies House. Information about the company name, registration number, company incorporation date, business description, Standard Industrial Classification (SIC) codes, start date of fundraising on the platform, amount of funds raised by the company on the platform, initial purpose, the share of equity that the company offers on the crowdfunding platform to investors, was taken from the platforms' websites. Share issuance reports with data on the number of shares issued, their value and the types of shares offered by the issuer are obtained from Companies House, the UK's official registrar of companies.

4.3. Descriptive statistics

The descriptive statistics of variables is provided in Table 2.

Table 2. Descriptive statistics of variables.

Variable	Sample mean	Sample standard deviation	Min	Max
<i>Attract</i>	1,472	0,793	0	7,287
<i>size</i>	11,861	2,448	0	18,757
<i>equity</i>	0,122	0,089	0,001	0,900
<i>age</i>	3,959	3,151	0,01	21,550

The sample average value of a company’s attractiveness ratio was 1,47, that is companies managed to attract 47% more capital, than initially targeted. Vulkan et al. (2016), having studied a sample of companies raising equity investments on Seedrs platform, concluded that the average value of a measure of company’s attractiveness to investors was 1,38. It is worth noting that this value is lower than that discovered in our study, which is due to the fact that the study covered an earlier period from 2012 to 2015 when crowdfunding was less developed in the United Kingdom, fewer investors put their money on a crowdfunding platform and companies raised less funds. Yijing Li et al. (2018), having investigated companies that were raising funds on crowdfunding platforms in 2011-2015, obtained a similar result: the average value of a company’s attractiveness to investors was 120%. The authors noted that 68.7% of companies raised more funds than they had stated as their initial target amount. In our study 89% of the companies raised more cash than originally targeted. For companies issued shares on the Crowdcube platform, the average measure of *Attract* ratio was 1,454, and on Seedrs - 1,496.

For this sample all share offerings were divided into two categories: in 80% of cases, only one type of shares was offered, among them voting shares — in 77%, non-voting — in 3% of placements; in 20% of equity placements - both types of shares.

The average age of the companies in the sample was about 4 years, which corresponds to the data in (The UK crowdfunding..., 2019), according to which investments on crowdfunding platforms are mainly attracted by young companies at the first stage of their life cycle. Some companies in the sample that raised funds were only registered at the start of fundraising on the platform (minimum age 2 months, maximum 22 years). Hornuf et al. (2018) showed that an average age of a company-issuer was 2 years and 7 months. The age is low probably due to the fact that a large number of small crowdfunding platforms were being investigated on which younger companies were raising equity investments. Ahlers et al. (2015) also obtained a similar result on an Australian crowdfunding platform in 2006-2011, concluding that the average company age was 2 years and 8 months.

We found that the average portion of equity offered by companies on a crowdfunding platform was 0,12 meaning that most companies offer a small share of their equity to investors. This result may demonstrate that company’s owners prefer to retain the majority of their equity. Vismara (2016) obtained similar results investigating companies raising equity investments on Crowdcube in 2014, obtained similar results, indicating that the average share of equity offered by companies was 12.9%. This finding differs from the result reported in (Ahlers et al., 2015) for companies on an Australian crowdfunding platform, where the average share of equity was 21.3%. Presumably, companies were raising higher investments to implement more capital intensive projects or had poorer performance, and they required larger amounts of funds from investors.

17% of companies in the sample attracted investments on crowdfunding platforms during the COVID pandemic, and 19% of issuing companies diversified their activities between different industries. Most likely, this is because the companies are mostly young and focus their activities on one industry.

4.4. Regression analysis results and findings

The parameter estimates obtained using robust standard errors are presented in Table 3. Both the baseline and main models are statistically significant. Note that all variables of the baseline model are statistically significant, the signs of the parameter estimates coincided with the expected ones.

Table 3. Regression analysis results

Variable	Baseline model	Model (1)
<i>equity</i>	1,01***	1.193***
<i>size</i>	0,024***	0.025*
<i>age</i>		0,055*
<i>diver</i>		-0.159*
<i>platform</i>		0,085
<i>covid</i>		0,120
<i>cons</i>	1,060***	1.079***
<i>R-squared</i>	0,017	0,034
<i>p-value</i>	0,000	0,000

Note: ***, **, * — — significance at 1%, 5% and 10% respectively.

The *age* variable is statistically significant, the relationship of this variable with the *attract* variable is direct. It means that more mature companies are more attractive to investors. This result can be explained by the fact that investments in older companies are less risky and among investors are many individuals, avoiding significant risks. The result we have obtained is consistent with conclusions made in (Walthoff-Borm et al., 2018; Nguyen et al., 2019; Cumming et al., 2019), that a company's attractiveness to investors has a positive relationship with a company's age.

The variable *diver*, characterizing industry diversification, is statistically significant, and parameter estimate is negative. Investors are more interested in non-diversified companies, whose attractiveness on average is 16% greater than that of diversified companies. Such a result can be explained by the fact that a diversification strategy may imply significant risks and ensure return on investments only in the longer term. A diversification strategy is better for large companies which have significant cash reserves. Investors on crowdfunding platforms are mainly individuals who are risk averse, and may prefer to invest their money in companies focused in one sector.

The control variable *equity*, which represents the share of the company's equity offered to investors on the platform, turned out to be statistically significant. The share of ownership is positively related to the metric of investment attractiveness of companies. This characteristic of the issue on the platform, positively perceived by investors, demonstrates how much of the company's capital potential investors will be able to own, what are the opportunities for them to impact company's governance, decision-making, and how much cash flow they can claim. The results of this study confirm the conclusions made in (Ralcheva and Roosenboom, 2016). While the above studies have focused on ownership when examining the success of a placement on a platform, (Troise et al., 2020) also note the importance of the measure of ownership offered to investors on a platform for the growth of a firm in the period following an equity campaign crowdfunding. A study on a sample of companies that raised equity investments on Italian crowdfunding platforms between 2013 and 2018 found a positive relationship between ownership and sales and employment growth. The authors attribute this result to the introduction of new shareholders in the firm who are interested in the development of the company and have a positive impact by bringing their knowledge, competencies, and connections to the firm. However, it should be noted that, unlike most other countries, according to the legal regulation of this area in Italy, at least 5% of the capital must be acquired by qualified investors (Troise et al., 2020). This fact, related to the structure of investors, which may be dominated by professional investors who influence the company's activities, can largely determine the results obtained in the research.

The control variable *size* is also statistically significant. There is a direct relationship between the size of the company and the success of its placement on the platform. This finding may indicate that larger companies have the ability to implement larger projects with the potential to achieve high efficiency and inspire more confidence among investors. Belleflamme et al. (2014) documented that companies prefer to use equity crowdfunding for large scale investments, while projects that need less capital, are financed primarily through the reward-based crowdfunding.

The insignificance of the binary variable *covid* does not give us reason to conclude that companies that offered their shares during the pandemic were less attractive to investors than those that were placed before the pandemic.

We did not find a statistically significant difference in the attractiveness of companies for investors on the Crowdcube platform in comparison with the Seedrs platform - the platform binary variable turned out to be statistically insignificant.

Empirical findings demonstrate that there is a relationship between the success ratio of crowdfunding campaigns and a number of issuer's characteristics. We did not prove any effect of COVID pandemic on crowdfunding projects offerings from perspective of their attractiveness to investors, as well as did not report a difference in attractiveness for investors between companies that placed their shares on Crowdcube versus Seedrs platforms.

5. Conclusions

This study investigates the success factors of campaigns in the process of equity crowdfunding, determinants of attractiveness of issuing companies for investors. We found that, on average, equity offerings of companies on crowdfunding platforms were successful, since the amount of capital raised exceeded the initial target. This result is consistent with the findings of other studies and confirms the fact that equity crowdfunding is an effective financing channel for companies that attracts interest from investors. However, this fact needs further empirical investigation, since many platforms like the Crowdcube and Seedrs operate on an "All or Nothing" principle, and those companies that have not raised an initially stated amount of funds from crowdinvestors return the money collected. That raises additional risks of uncertainty for both potential shareholders and issuers. Investors could lose both their time resources and funds, according to the opportunity cost theory.

Investors should be able to target their investment in companies that will more likely raise funds of an amount at least equal to the initial goal and receive a return. Based on the results of the study, investors should be recommended to rely on certain quantitative and qualitative characteristics of issuing companies. Issuers need to take into account what factors of attractiveness are most significant for investors on crowdfunding platforms.

The findings demonstrate that investors are more interested in companies whose operations are not diversified and that focus their activities on one industry. Companies operating in several industries may bear additional risks associated with the diversification of products and services, high competition and the need to have competencies in different sectors. Companies on crowdfunding platforms offering higher proportion of equity for investors, are more successful. It could be evidence of investors' confidence in companies, that aim to attract more money for large-scale investments that could ensure a future growth. Larger and older companies are also more attractive for potential investors, that could be a signal of their trust in business that is more mature and sustainable.

Exploring of a wider range of success factors on platforms in different countries, including crowdfunding in emerging markets in the analysis, can shed new light on the study of this issue and expand the horizons of understanding crowdfunding as an important phenomenon in the world of business and finance.

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Analysis of Investors' Perception on Risk Management and Investment Decisions with Financial Derivatives

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Abstract

Over the last decade ,the business environment become more global which has lead to a growing level of competition but also enabled entities to gain access to new customers and additional resource market. Today, the financial derivatives have become increasingly popular and most commonly used in the world of finance. Financial derivatives like futures, forwards options and swaps are important tools to manage assets, portfolios and financial risks. The prices of these financial derivatives contracts depend upon the spot prices of the underlying assets, costs of carrying assets into the future and relationship with spot prices. Derivatives have shifted the speculative trading to a more controlled environment. The objective of an investment decision is to get required rate of return with minimum risk. To achieve this objective, various instruments, practices and strategies have been devised and developed in the recent past. This paper analyses the perception of investors towards derivative trading. The study was conducted to get an insight into the minds of investors to analyse their awareness and perception on investment in derivative instruments. Percentage analysis and chi-square test is used for data analysis.

Keywords: Investors Perception, Financial derivatives, underlying assets, Derivative Instruments, speculative trading, financial risk.

I. Introduction:

I.1 Meaning & concept of financial derivatives

Literal meaning of derivative is that something which is derived. Now question arises as to what is derived? .Simple one line answer is that value/price is derived from any underlying asset. The term ‘derivative’ indicates that it has no independent value, i.e., its value is entirely derived from the value of the underlying asset. The underlying asset can be securities, commodities, bullion, currency, livestock or anything else. Derivatives encompass, firstly, the trade in financial instruments or other goods at a certain point in the future, known as forward transactions or futures, and secondly, the trade in financial instruments or other goods based on a condition to be realized at a certain future point in time, known as conditioned forward transaction or options.”

I.2. Definition & Types

The Securities Contracts(Regulation) Act 1956 defines ‘derivative’ as under:’ Derivative’ includes– Security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security. A contract which derives its value from the prices, or index of prices of underlying securities. There are two types of derivatives. Commodity derivatives and financial derivatives. Firstly derivatives originated as a tool for managing risk in commodities markets. In commodity derivatives, the underlying asset is a commodity.

A derivative is a financial tool which derives its importance from the value of underlying assets such as equities, debt, currencies, index or interest rate. Derivative securities provide them a valuable set of tools for managing the risk. Risk management, the managerial process that is used to control price volatility, has consequently risen to the top level of financial agendas. SEBI appointed the L C Gupta committee to envelop appropriate regulatory framework for derivatives trading and to recommend suggestive bylaws for Regulation and Control of Trading and Settlement of Derivative Contract. A series of modifications in the financial markets paved the way for the improvement of exchange traded derivatives. It is here that derivative instruments are of utmost utility. Derivative products minimize the impact of fluctuations in asset prices on the profitability and cash flow situations of risk averse investor. A variety of derivative contracts are introduced. Such as Forward Contracts, Future Contracts, Options, Swaps etc. Each financial derivative has its own unique features.

- **Forward Contracts:** A forward contract is an agreement between parties to buy/sell a specified quantity of an asset at a certain price. In simple words, it is a simple customized contract between two parties to buy or sell an asset for a certain price at a certain time in future. A forward contract is custom designed, and hence, it is unique in terms of contract size, maturity date, quality and quantity of asset, etc. The contract is settled by the delivery of asset on the expiration date. Forward contracts being bilateral contracts are exposed to counter party risk.
- **Future Contracts:** A future contract is a standardize contract written by a clearing house that operates an exchange where the underlying can be bought and sold. In a simple language, a futures contract is transacted through in exchange.
- **Option Contracts:** An Option is an instrument or contract that gives the holder a right, without any obligation, to buy or sell specified quantity of the underlying assets at an agreed price on or before a specified future date.
- **Swaps:** Swap or Swop means barter or exchange. A swap is a derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments. Most swaps involve cash flows based on a notional principal amount such as a loan or bond, although the instrument can be almost anything.

II. Literature Review

Shah and Williams (2013) noted that derivatives markets are risky instrument for new businesses which don't have sufficient knowledge of this market. They concluded that investment in derivatives market is very risky so before enters in this market investors should understand this instrument properly and the sensitive factors of derivatives. Lack of knowledge of such factors could results in heavy losses.

Gautam (2016) noted that the perception of market participants in derivatives trading. It was observed that all participants agreed that volumes and volatility have increased significantly after introduction of derivatives and also facilitates price discovery and possibility of good returns.

Gakhar (2016) study on Impact on Volatility and Investor Perception explores that the investors awareness and investors investment decisions and risk taking ability on derivative instruments plays an important role in the development of trading activities in derivative market.

Krishna (2019) study explores that the Investors investment behavior and risk-taking ability on various investment avenues. The study concludes the ability of risk behind the particular financial instruments in capital market.

Ramanjaneyalu & Hosmani (2010). Studied, derivatives occupy an important place as a risk reducing mechanism. Derivatives are useful for reducing many of the risks mentioned above. History of financial markets has evidence to suggest that when risk management avenues are provided by means of derivatives, markets attract higher volumes of investments from savers, strengthening the markets in the process.

Sarathkumar, K., & Dhandhayuthapani, S. P. (2016). The attitude of investor's is changing towards derivative market in India for the last some years and with the introduction of behavioral finance the researcher would like to capture that. The concept of behavioral finance is growing in the capital market, there is hardly any place where its concepts aren't being applied.

Rakesh (2015) intends to find preference level of investors on various Capital Market instruments, to find out the type of risk which are considered by the investors, to find out the ways through which the investors on various minimizes their risk and lastly to find out the preferences of Investors in derivatives market.

Pallavi & Raju (2014). The derivatives market is witnessing tremendous growth in India. The statistical data reveals that the total turnover of futures and options in NSE market are Rs 67510.02 billion and Rs247820.01 billion respectively by 2012-13. The retail and institutional investors occupied a key role in development of derivatives trading in India

Kukreja (2012) aims to measure the investors' perception towards Indian capital market with reference to National Capital Region (NCR) investors of India. 120 samples are selected for this study. Major findings of this study include, age has significant impact on investment, and educational qualification has significant impact on tax advantages. 119 functional variables are used in this study to measure investors' perception.

Choksi (2010). The most significant event in finance during the past decade has been the astonishing development and expansion of financial derivatives. These instruments enhance the ability to differentiate risk and allocate it to those investors who are most able and willing to take it-a process that has undoubtedly improved national productivity, growth and standards of living.

Paraschiv, D., & Raghavendra, S. (2009, March). Introduced a stock scanner evaluator for stocks and options. In the presented work the scanner picks from thousands of stocks the most suitable

stocks for an options or stocks investor. The proposed stocks scanner evaluator suggests the stocks that have the largest positive near future change (for purchasing stocks or calls) and the stocks that have the largest negative near future change (for purchasing puts)

Tripathi (2014). Conducted a survey through structured questionnaire targeting 100 retail investors of Delhi/NCR region to understand the awareness and attractiveness of different derivative securities amongst the retail investors.

Manrai (2015) study will give the researcher a quantitative model reflecting the factors affecting the investor behavior in derivative market with load factors. Through this study the researchers would like to study the various factors responsible for the investment behavior in derivative market.

An attempt is made by the (Pasha, 2013) to know what kind of perceptions had by retail investors in India based on Andhra Pradesh State reference with a sample size of 500 respondents by using simple percentage bar diagrams. Ultimately, financial derivatives should be considered part of any investor's risk-management strategy to ensure that value-enhancing investment opportunities are pursued.

Srivastava et al. (2008) conducted a survey of brokers in the recently introduced derivatives markets in India to examine the brokers' assessment of market activity and their perception of the benefits and costs of derivative trading

Talati and Sanghvi (2010) made an attempt to identify the awareness and perception of the investors' towards hedge funds as an investment avenue with special reference to Gujarat state. It was found that the awareness level regarding hedge funds was very less in the area covered for study. The investors were not aware of the advantage that they could get by investing in hedge funds nor were they aware of the basic functioning of hedge funds. Investors in Gujarat preferred to invest in government securities and fixed deposits of nationalize banks where they had a complete safety of their funds, though they got less returns.

Fenton et al. (2011) document a quantitative investigation to find difference between high and low performing traders and studied the role of intuition in the decision making process. The emotional regulation strategies adopted by experts reveals that high performing traders are qualitatively different from low performing traders as former are inclined to cope up with negative feelings and formulate effective strategies to regulate their emotions.

Varadharajan and Vikkraman (2011) in their study has stated that an investor decides on an investment after getting opinion from family, friends and colleagues, Broker's recommendation and also other professional advice. The investor also takes into consideration the market situations like financial results of the companies, bonus issue, price earnings ratio and the reputation of the company.

Kukreja(2012) has found in his research that age, educational qualification, tax advantages, liquidity and investment attributes are mediating factor for investors' perception. Investment influences and investment benefits are having high relevance

Sahoo (2012) opens "Derivatives products initially emerged, as hedging devices against fluctuation in commodity prices and the commodity-linked derivatives remained the sole form of such products for many years". According to him the legal framework for derivatives trading is a critical part of overall regulatory framework of derivative markets. The purpose of regulation is to encourage the efficiency and competition rather than impeding it.

Kousalya and Gurusamy (2012) in their research has concluded that investors make self- decision regarding their investment. Investments are made for a period of less than three years and there is a significant relationship between age and awareness

Babaraju (2014) studied investor's perception towards derivatives as an investment avenue and found that most of the investors invest in derivative market on the basis of their own awareness, guidance from financial advisor and broker. They found that there is a significant positive correlation between age of the respondents and their decision to invest in derivatives and a negative correlation between annual income of the respondents with their decision to invest in derivatives. Hedging fund, risk control, knowledge regarding financial product and high volatility in the stock market were some of the important factors influencing the investor's decision

Savitha & Deepika (2013). This research is an attempt to find the efficiency of the sentimental indicators of financial derivatives in predicting the trend of the market (behavior of NIFTY index). Participants in the stock markets believe that the amount of open interest (OI) in a particular contract has a bearing on the behavior of the price of the contract

Nagaraju (2014) conducted study on investors' perception towards derivative instruments and markets. The study concludes that before making of investment the investor should take effective measurements and determining the factors of risk for investment decision on particular financial instruments.

III. Objectives

- To investigate the perceptions of investors towards investment decision.
- To find out the reasons for preferring derivative instruments.
- To evaluate the risk factor associated with derivative instrument.
- To identify the problems faced by the investors while making investment Decision.

III.1. Hypothesis:

H₀₁: There is no significant relation between age and investment Decision

H₀₂: There is no significant difference between the income level of investors and percentage of investment

III.2. Scope of the study

Based on the objective of the topic it is planning to cover and confine only to investors' perceptions about Financial Derivatives (Futures and Options) and risk management area to make their investments decisions.

IV. METHODOLOGY

The study is mainly based on Primary data through questionnaire. The data was collected from 120 investors. The analysis of the data was conducted using the statistical tools which includes percentage analysis and chi -square test .An extensive literature review was conducted and data was gathered from different sources like books, journals, magazines & websites.

V. DATA ANALYSIS & INTERPRETATION

Table 1. AGE WISE CLASSIFICATION OF INVESTORS

Age(in years)	No. of Respondents	Percentage of respondents (%)
Below 25 Years	22	18
26-30 Years	44	37
31-40 Years	40	33
41-50 Years	12	10
Above 50 Years	2	2

Source: Primary Data

Inference: While analyzing data we can interpret that 37% of respondents are between 26 to 30 age group. 33% of respondents are between 31 to 40 age group. 18% of respondents are below 25 years age group. 10% of respondents are between 41 to 50 age group. 2% of respondents are above 50 years age group. The age group 26 to 30 is having majority investment behavior comparing to others who are having ability to take risk.

TABLE 2: FACTORS RESPONSIBLE FOR INVESTMENT DECISION MAKING

Sl no	Factors considered while taking investment decisions by investors	Number of Respondents	Percentage of Responses (%)
1.	Maturity Period	15	13
2.	High Returns	40	33
3.	Safety of Principle	34	28
4.	Low risk	31	26

Source: Primary data

Inference: It is found that from the above table 33% responded that high returns will be considered while making investment decision. Safety of principle (28%) will be considered while making investment decision. 26% responded that low risk will be considered while making investment .13% responded that maturity period will be considered while making investment decision. Majority of the respondents responded that high return factor is considered while making investment decision.

TABLE 3: REASON FOR PREFERRING DERIVATIVE INSTRUMENT

Reason	No. of Respondents	Percentage of respondents (%)
Transferability of risk	40	33
High return	30	25
Low Investment	26	22
High liquidity	24	20

Source: Primary data

Inference: From the above table we can interpret that the Reason for preferring Derivative instrument is transferability of risk (33%).For highest returns 25%, 22% are responded that preferring because of low investment and 20% are responded that it is highly liquidate.

TABLE 4: OVERALL PERFORMANCE OF DERIVATIVE INSTRUMENT

Sl.No		No. of Respondents	Percentage of response (%)
1	Excellent	25	21
2	Good	41	34
3	Average	28	23
4	Poor	19	16
5	Very Poor	7	6

Source: Primary data

Inference: From the above table we can interpret that the overall performance of derivative instrument is good (34%),23 % are responded that it is average,21% are responded that performance is excellent,16% are responded it is poor and 6% are responded that performance is very poor.

Hypothesis Testing

H₀1: There is no significant relation between age and investment Decision

H₀2: There is no significant difference between the income level of investors and percentage of investment

H₀1: There is no significant relation between age and investment Decision

Chi-square (χ^2) Test

Table of observed Values

INVESTMENT	Age Group					Total
	Below 25 Years	26-30 Years	31-40 Years	41-50 Years	Above 50 Years	
<10 %	4	10	9	2	0	25
10% to 20%	1	5	7	3	2	18
20% to 30%	0	14	8	2	0	24
30% to 40%	8	13	10	3	0	34
>40%	9	2	6	2	0	19
Total	22	44	40	12	2	120

Table of Expected Values

INVESTMENT	Age Group				
	Below 25 Years	26-30 Years	31-40 Years	41-50 Years	Above 50 Years
<10 %	4.58	9.16	8.3	2.5	0.41
10% to 20%	3.3	6.6	6	1.8	0.3
20% to 30%	4.4	8.8	8	2.4	0.4
30% to 40%	6.23	12.46	11.33	3.4	0.56
>40%	3.4	6.9	6.3	1.9	0.31

Calculation Of χ^2

OV(O)	EV(E)	(O-E)	(O-E) ²	$\frac{(O-E)^2}{E}$
4	4.58	-0.58	0.3364	0.073

10	9.16	0.84	0.7056	0.077
9	8.3	0.7	0.49	0.059
2	2.5	-0.5	0.25	0.100
0	0.41	-0.41	0.1681	0.410
1	3.3	-2.3	5.29	1.603
5	6.6	-1.6	2.56	0.388
7	6	1	1	0.167
3	1.8	1.2	1.44	0.800
2	0.3	1.7	2.89	9.633
0	4.4	-4.4	19.36	4.400
14	8.8	5.2	27.04	3.073
8	8	0	0	0.000
2	2.4	-0.4	0.16	0.067
0	0.4	-0.4	0.16	0.400
8	6.23	1.77	3.1329	0.503
13	12.46	0.54	0.2916	0.023
10	11.33	-1.33	1.7689	0.156
3	3.4	-0.4	0.16	0.047
0	0.56	-0.56	0.3136	0.560
9	3.4	5.6	31.36	9.224
2	6.9	-4.9	24.01	3.480
6	6.3	-0.3	0.09	0.014
2	1.9	0.1	0.01	0.005
0	0.31	-0.31	0.0961	0.310
				35.572

Chi-square (χ^2) = 35.572

Degrees of freedom = (C-1)*(R-1)

=16

Table value at 5% level of significance =26.296

So the calculated value (35.572) is greater than table value, reject the null hypothesis. The study reveals that there is a significant relation between age and investment Decision.

H₀2: There is no significant difference between the income level of investors and percentage of investment

Chi-square (χ^2) Test

Table of observed Values

INVESTMENT	INCOME						
	Below 50,000	50,000-1,00,000	1,00,000 -2,00,000	2,00,000-3,00,000	3,00,000-5,00,000	Above 5,00,000	Total
<10 %	0	8	25	12	7	6	58
10% to 20%	2	2	10	4	5	7	30
20% to 30%	1	2	8	1	2	4	18
30% to 40%	1	0	2	2	1	2	8
>40%	0	0	0	1	2	3	6
Total	4	12	45	20	17	22	120

Table of Expected Values

INVESTMENT	INCOME						
	Below 50,000	50,000-1,00,000	1,00,000 - 2,00,000	2,00,000-3,00,000	3,00,000-5,00,000	Above 5,00,000	Total
<10 %	1.93	5.8	21.75	9.6	8.21	10.6	
10% to 20%	1	3	11.5	5	4.25	5.5	
20% to 30%	0.6	1.8	6.75	3	2.55	3.3	
30% to 40%	0.26	0.8	3	1.33	1.13	1.46	
>40%	0.2	0.6	2.25	1	0.85	1.1	

Calculation Of X²

OV(O)	EV(E)	(O-E)	(O-E)²	$\frac{(O-E)^2}{E}$
0	1.93	-1.93	3.7249	1.93
8	5.8	2.2	4.84	0.834483
25	21.75	3.25	10.5625	0.485632
12	9.6	2.4	5.76	0.6
7	8.21	-1.21	1.4641	0.178331
6	10.6	-4.6	21.16	1.996226
2	1	1	1	1
2	3	-1	1	0.333333
10	11.5	-1.5	2.25	0.195652
4	5	-1	1	0.2
5	4.25	0.75	0.5625	0.132353
7	5.5	1.5	2.25	0.409091
1	0.6	0.4	0.16	0.266667
2	1.8	0.2	0.04	0.022222
8	6.75	1.25	1.5625	0.231481
1	3	-2	4	1.333333
2	2.55	-0.55	0.3025	0.118627
4	3.3	0.7	0.49	0.148485
1	0.26	0.74	0.5476	2.106154
0	0.8	-0.8	0.64	0.8
2	3	-1	1	0.333333
2	1.33	0.67	0.4489	0.337519
1	1.13	-0.13	0.0169	0.014956
2	1.46	0.54	0.2916	0.199726
0	0.2	-0.2	0.04	0.2
0	0.6	-0.6	0.36	0.6
0	0.25	-0.25	0.0625	0.25
1	1	0	0	0
2	0.85	1.15	1.3225	1.555882
3	1.1	1.9	3.61	3.281818
				20.09

Chi-square (x²) = 20.09

Degrees of freedom = (C-1)*(R-1)

=20

Table value at 5% level of significance =31.410

So the calculated value (20.09531) is lesser than table value accept the null hypothesis. The study reveals that is H_0 : There is no significant difference between the income level of investors and percentage of investment

Findings of the Study:

- It is observed that the age group 26 to 30 is having majority investment behavior comparing to others who are having ability to take risk.
- Majority of the respondents responded that high return factor is considered while making investment decision.
- It is found that the Reason for preferring Derivative instrument is transferability of risk.
- It is observed that overall performance of derivative instrument is good
- The study reveals that there is a significant relation between age and investment Decision.
- There is no significant difference between the income level of investors and percentage of investment

Suggestions:

- The investors can make sensible investment decision at the right time by having right perception and awareness about the government policies and market regulation, market trend and market reforms.
- The regulating bodies have to take suitable measures to propagate the information regarding derivative products and its features, operations, merits and demerits of derivative investment in India and thereby level of awareness on derivative instrument can be increased.
- It is advisable to minimize the contract size because small investors cannot afford this much of huge premium.
- Efforts should be made to educate prospective and potential individual investors through different seminars or training programs regarding the advantages and risk factors associated with derivative instruments

V. Conclusion:

The study determines that the investor's preference in the derivative investment is different in different investment avenues. The investor's preference in derivative investments depends upon the investment objective such as Risk, Return, Safety and liquidity of the investment. Most of the investors enter the derivative investments due to the Return factor.

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DXB283

**Credit Constraints, Collusion, and Multimarket Contact:
Evidence from Colombian Exports**

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We study the effect of multi-market contact on collusion on international markets and export patterns. Using a unique data set of Colombian manufacturing exporters, we find that firms that interact in multiple product markets are more likely to charge higher prices. Furthermore, the effect gets stronger in the more credit-constrained industries. Our results show that multi-market is also associated with higher export volume: 10% increase in interaction between firms in product markets is associated with, on average, 3.8% higher export volume. The joint effect of multi-market contact and credit constraints is differentiated in this case, based on the type of financing required.

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INTRODUCTION

Globalization and technological advancements have raised the level of competition in international markets. As firms behave more competitively, economic welfare should be better off according to economic theory. However, competitive contact extending across multiple markets could lead to lower rivalry (Edwards, 1955). Firms colluding in one market are more likely to cooperate in another market in fear of retaliation. Those engaging in collusive behavior across different markets are described to have multi-market contact (MMC).

In our paper, we explore the presence of MMC across international markets and examine its effect on firm export behavior. We also study the effect of credit constraints and MMC on collusion in foreign markets. Estimating a reduced-form regression model, we find that the effect of MMC gets stronger with credit constraints. Particularly, firms are more likely to engage in collusive behavior when they face credit constraints.

Markets with high credit constraints exhibit the necessary conditions for MMC. Competitive advantages and firm heterogeneity are required to elicit gains from collusion (Bernheim and Whinston, 1990; Gimeno, 1994). Firms with easy access to external financing acquire competitive advantages since it gives them leverage in business production. The presence of credit constraints can also inhibit firm entry and performance since access to a line of credit is essential in conducting business. Under credit constraints, higher costs to external financing could increase the degree of collusion (Marjit et al., 2016).

We study firm export behavior in the presence of MMC and find evidence of the positive effect of MMC on both export prices and volume. Particularly, we observe that exporters participating in markets with MMC enjoy higher prices and export at larger volumes. Our finding supports previous research that show firms colluding in multiple markets tend to exploit higher markups (Scott, 1982, 1991) and perform better with higher profits (Kim and Singal, 1993; Feinberg, 1985).

Our paper also contributes to the growing literature of MMC in international markets. Trade research has recently examined, both theoretically and empirically, the effects of trade liberalization on multi-market collusion (Bond and Syropoulos, 2008) and the impact of MMC on exporters (Feinberg, 2013, 2015; Boohaker, 2018). Aside from empirically contributing to the literature, our paper introduces the presence of credit constraints in markets with MMC since credit constraints create favorable conditions for collusive gains.

Finally, we introduce competition angle to trade literature on credit constraints. Research in this field has established that credit constraints harm trade (Manova (2008), Manova (2013), Manova et al. (2015)), and that the effects of credit constraints varies between countries (Choi (2020)). We show that credit constraints create incentives for collusion in the export markets, as well as that the effect of short-term and long-term financing on export volume varies with MMC.

The rest of the paper proceeds as follows. We discuss our data in the section, and proceed to the empirical specification afterwards. We then discuss our results, and summarize our findings, rounding up with an outline of future research frontier.

DATA

Our main data set is the transactional-level customs data from Colombia, spanning from 2007 to 2016. This rich data set was obtained via *DataMyne* and covers every single export transaction from Colombia in the above-mentioned time range, including information on exporters, prices, volume, and more. We aggregate this data to ISIC 3-digit level, keeping only 27 manufacturing sectors, used in Manova et al. (2015). The sample includes approximately 12,700 firms exporting to over 190 countries. We calculate total dollar export by each firm in their respective industries, total net weight of export, and average price charged (Total Export/Weight). We also used gross weight of shipments and quantities of units shipped. Results are equally strong and are available upon request.

Using the aggregated data set, we proceed to calculating the measure of multi-market contact - MMC, where we follow methodology by Boohaker (2018) by counting the number of times each exporter meets its competitors in other markets:

$$MMC_{im} = \sum_{j \in N_{im}} \kappa_{ij} - N_{im}, \quad j \in N_{im} \quad (1)$$

where κ_{ij} are all export markets where firms i and j are interacting, where j comes from a set N_{im} of competitors of firm i in the export market m - ISIC sector s and country c .

Credit constraints are calculated on a sectoral level, and we follow Manova (2013) and Manova et al. (2015) by using measures computed by Kroszner et al. (2007), which calculates sectoral measures of credit constraints using the US data. Given that the US financial markets are the most advanced, these estimates will be clear of market imperfections. Our primary measure of credit constraints is external finance dependence (*ExtFinDep*) that shows the share of capital expenditures that cannot be financed through the operational cash flows, and thus, must be sourced externally. Negative external finance dependence identifies cash-rich industries, not dependent on the outside capital (for example, tobacco), while positive dependence indicates reliance on the external capital (such as, electrical machinery industry). However, we also understand that access to long-term financing is not the only source of credit constraints. Schmidt-Eisenlohr (2013) also identifies the importance of trade credit for trade facilitation and export outcomes. We include the sectoral ratio of change in accounts payable to change in total assets to proxy the dependence of the industry on the trade credit, also sourced from Kroszner et al. (2007).

Finally, we introduce a series of firm-level controls to capture firm-specific heterogeneity. Our approach is novel to the international trade literature. To account for firm-level variation, we control for differences in profitability (return on assets ratio, net income divided by total assets), liquidity (current ratio, current assets divided by current liabilities), efficiency (inventory turnover ratio, costs of goods sold by inventories), and leverage (debt to equity ratio, liabilities divided by equity). We obtain firm-level financial statements from *Superintendency of Corporations*, which is a Colombian government entity, responsible for monitoring commercial entities. According to the Superintendency, the data covers healthy medium- and small-size firms, thus eliminating unnecessary variation from bankruptcy and related costs. Not all exporting firms can be matched to the financial statements, however, the matched sample covers over 90% of the total exports of Colombia in each given year. We also obtain total sales, which include both domestic and foreign revenues, to control for heterogeneity in firms' size. We present our findings in the next section.

METHODOLOGY

Our empirical strategy is based on the estimation of the following reduced-form model:

$$\log y_{imt} = \beta_1 \log MMC_{imt} + \beta_2 \log MMC_{imt} \times FinVuln_s + \beta_3 Size_{i,t-1} + \sum_{j=1}^{K=4} \gamma_j FinControl_{i,t-1} + \phi_i + \psi_c + \tau_t + \epsilon_{imt}$$

where $\log MMC_{imt}$ is the log of MMC of firm i at the market m at time t ; $FinVuln_s$ is a measure of sector s external finance dependence; $Size_{i,t-1}$ is the size of the company proxied via lagged log of total sales; and $FinControl_{i,t-1}$ is the set of financial controls, discussed earlier, also lagged one year to avoid endogeneity (Frank and Goyal (2009)). We also account for firm-specific fixed effects ϕ_i , ψ_c country-specific fixed effects, and τ_t time-specific fixed effects. The dependent variable, $\log y_{imt}$, includes natural log of price, charged by firm i at the market m at time t , that allows us to test for collusion. We also investigate the impact of MMC on export volume, measured either in dollar value, quantities of exported products, or exported weight. Standards errors are clustered by firm, and we identify our model through firm-level controls. We present estimation results in the next section.

RESULTS

The results of our specification are presented in Table 1. First, we estimate our regression of prices on the MMC only (see Column (1)). The coefficient is strongly significant, and the log format allows to interpret our results in the form of elasticity: 10% increase in the MMC results, on average, leads to 0.7% increase in prices charged on the export market. Next, we add our measures of financial vulnerability and interact them with the MMC. In Columns (2) and (3), the effect of collusion gets stronger in the markets with both short-term and long-term credit constraints. With both variables, trade credit and external finance dependence, the larger they get, the stronger is reliance of an exporter on the outside financing. Previous evidence indicates that firms will be more vulnerable in such industries, thus, more likely to collude with their competitors in the fear of retaliation. The results persist, once we add firm-level controls (Column (4)).

Next, we proceed to estimation of the effect of MMC on export volume. Columns (5)-(7) all show consistent positive relationship between export volume and the measure of multimarket contact: on average, a 10% increase in MMC leads to approximately 3.1% increase in export volume. However, there is no consistent effect when it comes to credit constraints. If we look at the dollar export volume, the interaction coefficient between MMC and measures of financial vulnerability is insignificant. This is possibly explained by the depreciation of Colombian peso in 2013 and the following economic downturn (OECD (2016)). However, when we look at the weight of export or quantities of exported products, the effect diverges between short-term and long-term constraints. The effect of MMC on volume gets smaller for more financially constrained firms, and gets stronger when firms rely more on trade credit. The first is in-line with trade literature on credit constraints, where firms in more financially vulnerable industries tend to export less due to higher costs, associated with borrowing. The second effect comes from the liquidity aspects of trade. Industries that traditionally rely on deferred payment settlement tend to have more trade volume, Antras and Foley (2015).

Table 1: Estimation results. Impact of collusion on prices and export volume

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			<i>log(P_{imt})</i>	<i>log(P_{imt})</i>	<i>log(Export_{imt})</i>	<i>log(Net Weight_{imt})</i>	<i>log(Quantity_{imt})</i>
		ExtFinDep	Trade	Credit		ExtFinDep	Trade
							Credit
<i>log(MMC)_{imt}</i>	0.0709*** (0.00851)	0.0973*** (0.00852)	0.0507*** (0.0106)	0.0686*** (0.0150)	0.380*** (0.0521)	0.311*** (0.0539)	0.307*** (0.0618)
<i>log(MMC)_{imt} × FinVuln_s</i>		0.116*** (0.00888)	0.246** (0.0960)	0.110*** (0.0140)	0.0454 (0.0411)	-0.0643* (0.0365)	1.312*** (0.421)
<i>log(Sales)_{t-1}</i>				-0.00940 (0.0319)	0.0231 (0.0613)	0.0325 (0.0535)	0.116** (0.0464)
<i>CR_{t-1}</i>				0.00277** *	0.00420***	0.00143	0.000289
				(0.000917)	(0.00149)	(0.00128)	(0.00174)
<i>ROA_{t-1}</i>				0.200*** (0.0736)	0.103 (0.134)	-0.0980 (0.137)	-0.152 (0.131)
<i>DER_{t-1}</i>				0.000105 (0.000103)	-0.000521** (0.000208)	-0.000626*** (0.000148)	-0.000623*** (0.000137)
<i>ITR_{t-1}</i>				9.97e- 09*** (5.07e-10)	5.05e-08*** (1.02e-09)	4.05e-08*** (1.01e-09)	3.90e-08*** (9.59e-10)
Constant	2.164*** (0.0408)	2.118*** (0.0400)	2.174*** (0.0400)	2.281*** (0.562)	7.467*** (1.025)	5.187*** (0.897)	3.739*** (0.759)
Observations	319,449	319,449	319,449	108,767	108,769	108,767	108,768
R-squared	0.589	0.594	0.589	0.639	0.318	0.437	0.480
Country FE	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

CONCLUSION

We study the effect of multi-market contact on collusion in the presence of credit constraints. We show that credit-constraints strengthen the effect of MMC. We also find that is positively associated with export. Our results are robust to various measures of export volume and price. This research will benefit from a broader sample of countries and country-specific measures of credit constraints. Since latter has not achieved consensus in this literature, a formal theoretical framework is advisable for future work

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DXB284

Goldonomics: Is bitcoin the new Safe haven investment.

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Abstract:

Bitcoin vs. Gold Who is the king? In the event of a market slump, investors search for safe havens to minimize their risk of losing money. Few research concentrates on the hedging/safe-haven performance of assets versus the currency market over various time horizons, despite the fact that many studies have examined hedges and safe havens against stocks. This study analyses the interconnectedness, hedging, and safe-haven qualities of gold and bitcoin. The main purpose of this research work is multifolds. This can serve as a source of guidance to the various stakeholders in the society. It will be used for the investors to hep in the portfolio management, market participants as the sources for the selling and to the government for the policy implications. It has been found that depending upon the time periods the investors attitude is changing along. However, as the emphasis is on Digitalization of Financial services cryptocurrencies may have a brighter future for the coming up generation.

Key Words : Goldonomics, Bitcoin, Gold, safe haven, investments

Introduction:

Due to ongoing financial, political uncertainty the economic volatility lead to the transmission, spillovers and change in investment strategies have been dynamic in the global financial markets. This paper examines the perception of the investors towards different assets in order to benefit from portfolio management through hedging decisions. Recent market dynamic movements have attracted researchers, academic practitioners and the media. Though many previous studies are available they are either focused with cryptocurrencies and financial assets (Bouri et.al., 2018). In the financial markets, return on investment and risks are two sides of the same coin. Stock brokers frequently look for alternative assets that are negatively associated with or uncorrelated with their primary investments during times of crisis and recessionary panic among investors. Because of the rise of technology and the large range of investment prospects, this decade has seen a number of trends. Global market and economic dynamics as well as forecasting capacities have evolved. Forecasting risks and returns of different asset classes is becoming more crucial as fintech

usage spreads across all sectors of business and the economy. The demand for cryptocurrencies, particularly Bitcoin and Ethereum, is always rising since they have historically been perceived as offering higher profits. There is a ton of knowledge and information on the existence of those cryptocurrencies, but there is still a lot of uncertainty about their risk and investing objectives. On the one hand, it is regarded as an excellent investment in a select few nations due to its better yields, convenience, and safety, while on the other hand, it is still regarded as a risky and illegal kind of investment. Regarding use, comfort, safety, return on investment, and risks connected, there have been several points of view. The financial technology revolution has made policymakers, financial service providers, and academic researchers very interested in bitcoin and other cryptocurrencies.

Every part of life had been affected by technology, which also brought about a change in the financial sector. With the development and use of cryptocurrencies through blockchain technology, the investing sector has transformed.

Precious metals, especially gold, have historically been the best investments during economic downturns because of their strong store of value qualities and limited availability. This was especially true during the financial crisis of 2007–2009, during which time gold's cumulative performance was roughly 19%, While the U.S equities market fell by 35% and it has repeatedly demonstrated an exceptional ability to maintain value amid economic downturns. However, a new option threatens this time-honoured strategy for capital preservation. Bitcoin is proven to be an intriguing asset for investors and has been around long enough to garner recognition and support.

Literature review:

Particularly in developing countries, financial inclusion has gained importance as an issue among researchers, stakeholders, and policymakers. But just 20% of adults in the most underdeveloped developing countries have access to a transaction account, and 65% of them do not save money through a formal financial institution (Pazarbasioglu et al., 2020). In Sub-Saharan Africa (SSA), which is the least of any area in the world, only 33% of adults have a bank account at a formal financial institution, according to the Global Findex study from 2017. (Demirguc-Kunt et al.,

2018). Adults who own transaction accounts, which may be used to send and receive payments as well as save money, are the first step toward financial inclusion (Demirgüç-Kunt et al., 2017). Inconveniences and high transaction costs are associated with formal bank accounts for low-income people and households (Beck & Demirgüç-Kunt, 2008; Karlan et al., 2016; Soumaré et al., 2016), but the availability of mobile telephony has helped to ease these restrictions, particularly in rural areas (Andrianaivo & Kpodar, 2011; Pazarbasioglu et al., 2020). Corbet et al. (2018) investigate the dynamic interaction between Bitcoin and other financial assets and discover strong connectedness of cryptocurrencies. The findings showed that these assets were separate from the financial and economic assets. Markets for cryptocurrencies are seen as emerging asset classes for investments that may provide diversification advantages to investors with limited time horizons. The links' temporal volatility reflects external financial and economic shocks. Internally, buyers and sellers affect bitcoin returns, but basic economic forces do not. (Elbeck and Baek 2015).

Understanding Gold and Bitcoin:

Gold. It melts quickly into bars, coins, and jewelry and is metallic and shiny. It doesn't corrode, rust, or degenerate. Obviously, gold is golden. But why is gold considered to be such a significant asset as a global store of value and means of exchange, both in human perception and in reality? Why is silver consigned to a distant second place, and what about ole' copper, which has a lot in common with gold in terms of its physical characteristics? Join us as we investigate the solutions to these issues and many others. Let's put a damper on the excitement surrounding gold before hopping on the bandwagon and first look at some of the underlying problems with gold investing. The key issue with gold is that, unlike other commodities like wheat or oil, it does not deplete or become consumed. Gold remains in the world once it is mined. On the other hand, a barrel of oil is transformed into gas and other products that are used in the jet engines of airplanes and cars. Food that both humans and animals eat contains grains. On the other hand, gold is utilized for a multitude of purposes, including making jewelry, creating works of art, keeping it ingot-form in vaults, and more. Regardless of where gold ends up, due to its unique chemical makeup, it is a permanent substance. In the past, gold has increased portfolios' risk-adjusted returns by increasing returns while lowering losses and supplying liquidity to satisfy obligations during market stress. Gold is a representation of prosperity, safety, and financial security. A cryptocurrency, such as

Bitcoin (BTC), eliminates the need for third parties to be involved in financial transactions by acting as money and a means of payment independent of any one person, group, or entity. It is available for purchase on numerous platforms and is given to blockchain miners as compensation for their efforts in verifying transactions. By utilizing the alias Satoshi Nakamoto, an unidentified developer or group of developers presented Bitcoin to the general public in 2009. Since then, it has grown to be the most well-known cryptocurrency worldwide. Numerous additional cryptocurrencies have been developed as a result of its popularity. These rivals either want to displace it as a means of payment or are employed in other blockchains and cutting-edge financial technology as utility or security tokens. The software used to install cryptocurrency is called blockchain. Records are kept using cryptography, and each transaction is authenticated by a digital signature. Cryptocurrency employs "public keys" and "private keys" as a substitute for ATM pins, unlike banks, which use account numbers. The private key, which is only meant to be used to authorize Bitcoin transactions, is kept private just like ATM pins are. A bitcoin is identified by the 26–35 alphanumeric characters that make up its address, preserving its privacy. The data that is recorded during a transaction is kept in a "block."

Asset characteristics: It's critical to comprehend the first justification for the comparison between Bitcoin and gold. Bitcoin and gold are both in short supply. Although gold has been used for many years, there is a limited amount of it. Similar to that, there are exactly 21 million Bitcoins that can be mined, guaranteeing its ongoing scarcity as demand increases. Additionally, factors like universal approval are important. Cryptocurrencies like Bitcoin are now being accepted in a number of nations. Although it may still be early, it is undoubtedly a comparison factor. Bitcoin and gold, also have other traits in common, including durability, which makes them difficult to destroy, portability, which makes them simple to store and carry, and verifiability because both have documented transactions. Both are assets that can be used when needed.

In the past, gold has been crucial during times of adversity. People used to take their gold with them when they moved during times of conflict. Similar to this, proponents of Bitcoin have stated that they have relied on their bitcoin investments in times of distress. When you consider gold's past, you will see that it has endured. Since it has been in use for millennia, gold has come to represent value and is recognized as a valuable asset. It has served as the framework for the world

monetary system ever since the 1870s. As a result of its limited use, Bitcoin has only been around for 14 years and around a year and a half since a few nations began to adopt it as a standard.

An asset must have these 8 qualities in order to be considered the optimal store of value: Fungible, storable, divisible, scarce, verifiable, portable, with an established history and regulated. The biggest flaw of fiat currencies is their endless supply, which prevents any asset from serving as an ideal store of value. Since Bitcoin contains over 21 million minable units, it is mathematically impossible for any one of the world's 47 million millionaires to acquire a single bitcoin. One of the rarest elements on Earth, gold requires a laborious and expensive procedure to refine, as well as hefty costs for mining and exploration. Gold had a limited supply, just like all other natural resources, and there is a good chance that it will eventually run out on Earth. Bitcoin is more uncommon than gold, though. One of the reasons is that, unlike gold, which has a high likelihood of being recovered, either by the owner or someone else, Bitcoin can never be recovered once it has been lost. Both bitcoin and gold are divvy up assets. Named after its inventor Satoshi Nakamoto, bitcoin may be divided into 100 million Satoshi units, and gold can also be melted and made into coins as small as one gram or one twentieth of an ounce. Each unit of bitcoin and gold is interchangeable; they are both fungible. One ounce of gold is equivalent to another ounce of gold because the majority of gold coin mints utilize 0.999 pure gold. As a result, this could be a disadvantage for gold investors. It is reasonable to assume that bitcoin and its blockchain may be regarded as a separate asset class from Gold because they are the most significant technological advancements since the internet and because they work in tandem with smart contracts.

As a result, I believe that bitcoin and its blockchain have the potential to transform the global financial network. However, if you compare Bitcoin to Gold, you could argue that Bitcoin is more practical to hold as it is always accessible online. Gold, on the other hand, may be held securely in one's palm without concern for internet outages or hacking because it is a tangible object. Both Bitcoin and Gold are well-known assets with a long history. But Gold currently outperforms Bitcoin. Since Noah's time, gold has been recognized as a valuable asset on a global scale. Bitcoin has only existed for 13 years. Even if it is the first successful digital asset, it still has a long way to go before it can compete with the gold's standing. Furthermore Bitcoin's Value at Risk (VAR) has been substantially higher, this means that during any given week or over the past two years,

Investors had a 5% chance of losing US\$1,382 for every \$10,000 invested in Bitcoin, This is five times more than the VaR for Gold.

Bitcoin as a safe Haven

Although Bitcoin is closer to a perfect safe haven than gold in terms of attributes, some underlying issues may prevent it from overtaking gold as the ultimate safe-haven asset before it can. No, it is not differently correlated to the markets; it can be a safe haven currency in the future. It is important to note that approximately 33,000 tonnes of gold, or 20% of all gold ever mined, are held by central banks worldwide. Bitcoin will decentralize control over setting monetary and financial policy for the public, and central banks and governments won't stand by and watch that happen. In a paper published earlier this year, Goldman Sachs made a compelling case for Bitcoin by equating it to gold. According to the memo, Bitcoin has the potential to increase in value by a factor of 2.5 over the next few years, making it the new gold. The organization sees Bitcoin as having uses beyond just being a store of currency, the message continued. A store of value, such as oil or precious metals, is an asset that has the ability to hold its worth over time. (Economic Times). Wilson (2020) argues that Bitcoin plummets as cryptocurrencies suffer in market turmoil by looking at the data in which the price of Bitcoin fell by 30% from \$8901 to \$6206 in only four days from March 8 to March 12, 2020.

In the recent years Bitcoin has seen an increase in the popularity of sovereign gold bonds and digital gold, as both solutions eliminate the inconvenience of buying and keeping gold. Bitcoin is a highly transferrable asset that has performed better than gold while also being stored and valued in a way that is digital Bitcoin (BTC). BTC is often referred to as "digital gold" since it resembles gold in many ways, including availability everywhere, high demand, and limited quantity. BTC market supply and emission are determined by algorithms, hence they cannot be changed. The price of BTC is influenced by the same cause over time. As emissions are cut in half every four years, the overall amount of BTC emissions in circulation decreases over time. Due to high prices, people are quickly choosing to purchasing digital gold instead of physical gold. In contrast to gold jewelry, digital gold may be acquired for as little as Re 1, and there are no making fees. An investor can sell their digital gold whenever they need to and receive their money in a bank account, or they can exchange it for gold coins of an equivalent weight.

Possibility of negative activities due to money laundering is used through cryptocurrencies like bitcoin and other mediums of computer exchange. We see bitcoin prices react severely to such news due to its high volatility and speculative nature. Also, the conflict between Russia and Ukraine has raised international concern that Russian oligarchs might use Bitcoin to avoid sanctions.

Consumption of Energy

In addition, bitcoin is not a green asset because it requires a lot of electricity to mine it, and as we all know, the majority of the energy used today is produced by coal-powered stations. Other than as an inflation hedge, bitcoin has no other applications. Its slow transaction times make it a money that can hardly be used. Because of this, we hardly ever utilize bitcoin for anything other than as another safe-haven asset. On the other hand, gold has numerous industrial and scientific advantages and is used to create aesthetic patterns and jewelry. While some governments are establishing regulations to control bitcoin trade and use, and some nations, like El Salvador, have made it legal tender, we anticipate that bitcoin acceptance will rise over time. When governments and banks are seen as participants in the bitcoin revolution rather than victims, some of these problems can be handled.

The 2007 Crisis, Impact on Gold & Bitcoin.

The global economic downturn in the late 2000s is known as The Great Recession. Originally connected to the financial crisis of 2007–2008, it swiftly changed into a decline in real activity before becoming the European sovereign debt crisis. The recession in the United States began in December 2007 and ended in June 2009, according to the National Bureau of Economic Research, which officially declares the peaks and troughs. In other countries, however, the recession's scope and timing varied. Since the Great Depression, it was the biggest economic depression. This crisis has a number of root causes. First off, after the dot-com bubble burst, the Fed kept interest rates artificially low for an extended period of time, which fueled the housing boom. Additionally, the government implemented initiatives to encourage home ownership, even among those who could not afford it. Economic imbalances and financial instability were also a result of excessive risk-taking with toxic mortgages and derivatives, record household debt (partially brought on by too low interest rates), and other factors. The Great Recession increased unemployment, bankruptcies,

and government debt, particularly in Europe where many nations decided to bail out the banks (the U.S. federal government invested \$700 billion to buy distressed assets). In Europe, the financial crisis evolved into sovereign debt issues. The crisis was vigorously addressed by central banks. For instance, the Fed swiftly began to buy assets under its programs for quantitative easing and lowered interest rates. The Great Recession boosted the price of gold, although it declined in the very aftermath of the Lehman Brothers' bankruptcy, probably due to the forced sales in order to raise cash. However, it quickly rebounded and ended 2008 in positive territory. And in 2009 and 2010 it really shined, outperforming many other assets. Since October 2008 the gold price index has surged indicating a positive response to the intensification of the financial crisis. This is in sharp contrast to the declining value of commodity index returns over the same period. The increase in the gold price index since October 2008 indicates a favorable reaction to the worsening of the financial crisis. This stands in stark contrast to the commodity index returns' diminishing value throughout the same time period. Gold prices, in contrast to other assets, seem to respond favorably to negative market shocks.

Real gold prices reached an all-time high in 1980, when the metal exceeded \$2000 per ounce (in 2008 dollars), amid a backdrop of raging inflation and the possibility of a global recession in the wake of the 1970s oil crisis. In 2010, the biggest financial and economic crisis to hit the global economy since the Great Depression coincided with the sharp spike in gold prices during the previous 18 months. The most well-known cryptocurrency, bitcoin, was initially mentioned in November 2008, around two months after the Lehman crisis. Ten years later, the risk and return characteristics of cryptocurrencies are among the most hotly contested financial topics both internationally and in India. Bitcoin's current worth is \$6200, down around 70% from its peak of about \$20,000 in December 2017 and its first known value of less than \$1 in 2010. In 2011, as Bitcoin and the idea of a decentralized cryptocurrency gained momentum, other cryptocurrencies soon began to emerge. One of the first cryptocurrencies to emerge in 2011 was Litecoin. Another well-known one, ether or Ethereum, was created in 2015. There are already a few hundred cryptocurrencies available for trading, and new "Initial Coin Offerings" being announced on a regular basis.

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LESSONS FOR THE INDIAN BANKING INDUSTRY FROM THE BANK FAILURES IN THE UNITED STATES

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ABSTRACT: The Indian banking industry is mature and efficient. However, it has witnessed nearly 38,000 instances of fraud involving a total amount of \$22 billion in the last five years. The \$1 billion fraud using the Society for Worldwide International Funds Transfer (SWIFT) platform in Punjab National Bank emphasizes the importance of internal control within the bank and the regulator's failure in supervision. The amalgamation of the Lakshmi Vilas Bank (LVB) with the DBS Bank, Singapore was necessitated by large continuous losses in three consecutive years leading to erosion of equity. The liquidity stress faced by the Infrastructure Leasing & Financial Services (IL&FS) and Dewan Housing Finance Ltd. (DHFL) indicated the unsustainable market funding conditions for the non-bank financial corporations (NBFC). The Reserve Bank of India initiated the Corporate Insolvency Resolution Process (CIRP) in order to finalize the resolution of Dewan Housing Finance Corporation Limited (DHFL) after noticing misuse of customer funds. Despite 3,518 bank failures from 1980 to the present day, the banking industry in the United States is strong with assets valued at \$24 trillion and deposits of \$20 trillion thanks to the robust functions of the Federal Deposit Insurance Corporation (FDIC). Its coverage of 4,817 banks is a model for the Indian Banking industry that is plagued with the myth of benefits of nationalization, mounting non-performing assets, and instances of frauds. This paper offers empirical evidence of the strength of the US banking leading to suggestions of policy reforms for its counterpart in India.

Key Words: bank failure, deposit insurance, regulation, nationalization

INTRODUCTION

The Indian banking industry is mature and efficient and the country's central bank, The Reserve Bank of India (RBI) has been exemplary in its disclosure and transparency. However, it has witnessed nearly 38,000 instances of fraud involving a total amount of \$22 billion in the last five years. The \$1 billion fraud using the Society for Worldwide International Funds Transfer (SWIFT) platform in Punjab National Bank emphasizes the importance of internal control within the bank and the regulator's failure in supervision. The amalgamation of the Lakshmi Vilas Bank (LVB) with the DBS Bank, Singapore was necessitated by large continuous losses in three consecutive years leading to erosion of equity. The liquidity stress faced by the Infrastructure Leasing & Financial Services (IL&FS) and Dewan Housing Finance Ltd. (DHFL) indicated the unsustainable market funding conditions for the non-bank financial corporations (NBFC). The Reserve Bank of India initiated the Corporate Insolvency Resolution Process (CIRP) in order to finalize the resolution of Dewan Housing Finance Corporation Limited (DHFL) after noticing misuse of customer funds. Despite 3,518 bank failures from 1980 to the present day, the banking industry in the United States is strong with assets valued at \$24 trillion and deposits of \$20 trillion thanks to the robust functions of the Federal Deposit Insurance Corporation (FDIC). Its coverage of 4,817 banks is a model for the Indian Banking industry that is plagued with the myth of benefits of nationalization, mounting non-performing assets, and instances of frauds. This paper offers

empirical evidence of the strength of the US banking leading to suggestions of policy reforms for its counterpart in India.

SELECT LITERATURE REVIEW

While globalization has provided many benefits, it also has created a broader spectrum of ethical decision making for individuals and businesses wherein cultural dimension is a dominant force of influence [O'Brien, 2021]. Payments infrastructure is critical to the success of any business for both customer satisfaction and prevention of frauds [Campbell, 2010]. Bangladesh's central bank lost \$81 million from its Nostro account held at the Federal Reserve Bank, New York to the hackers in February 2016, a transaction that was authenticated through SWIFT [Boesler, 2016]. Subsequently, SWIFT disclosed that another undisclosed bank also was a victim of hacking [Crosman, 2016]. SWIFT attributes the cyberattacks and hacking to weaknesses in domain security of the respective banks and a complete lack of firewalls in their security [Katz, 2016]. Banking regulators are engaged in sorting out the issue of placing the responsibility on the right entity in case of cybercrimes [Scanio et al, 2013]. The Society for Worldwide International Funds Transfer (SWIFT) processes about 10 billion messages a year for more than 11,000 institutions. It has enhanced its security by introducing the Customer Security Program (CSP) that helps member banks in fraud detection and prevention [Gilderdale, 2017]. Certain crimes of corruption, money laundering, and misuse of letters of credit escape regulatory penalties [Swamy et al, 2017]. The RBI is resorting to numerous regulatory actions against financial institutions for noncompliance issues involving frauds, transactions of money laundering, and cybercrimes involving SWIFT [Ghosh, 2021]. A global financial center (GFC) may be a strategic solution to detect and prevent cybercrimes, frauds, and money laundering [Ng et al, 2017]. Infrastructure Leasing and Financial Services Limited (IL&FS) defaulted in payment obligations in August 2018 as a result of multiple issues such as lack of corporate governance and presence of concentration risk [Kukreja, 2021]. Customers' defaults in payments have peaked the liquidity risk in the non-bank financial corporations like Deewan Housing Finance Ltd (DHFL) and Infrastructure Leasing and Financial services (IL & FS) thereby making the market conditions hard for their continued survival [Sarkar et al, 2010]. YES Bank went into its financial turmoil due to severe credit risk as loans were granted without any assessment of creditworthiness of the prospective borrowers and unethical decision making by its top management [Deb, 2021]. The RBI audit assessed the NPAs of YES Bank seven times higher in magnitude than their stated book value [Akhtar et al, 2021].

BREWING TROUBLES FOR INDIA'S BANKING INDUSTRY

The Indian banking industry comprising of about 123,000 branches cumulatively accounted for \$2.7 trillion in assets and \$2.1 trillion in deposits as of March 31, 2021. The size of the industry is about one tenth of the US banking industry as seen in Table 1. After the country's independence in 1947, about 550 banks have failed in India. As the Government of India nationalized the bulk of the industry in stages, there have been no reports of failures in the industry despite various limitations of development banking sponsored by the central administration. The government and the RBI have been working diligently to promote modernization of the industry. The hitherto nationalized banks (public sector banks) are being merged to make their performance efficient. As the bank employees' unions have resisted mass privatization (denationalization), the government and the RBI have issued charters for more private banks. Foreign banks are restricted to offering

a whole range of products in the domestic segment and so they serve only non-resident customers and multinational corporations. Most branches of foreign banks are located only in metropolitan cities with a very narrow reach. The Indian banking industry has witnessed 37,882 cases of fraud with the total amount of about \$22 billion in the past five years. Table 1 displays the bank group-wise information of the fraudulent instances. The \$1.8 billion fraud that an employee of the Punjab National Bank (PNB) committed from 2011 to 2017 with falsified SWIFT messages shocked the entire banking industry all over the world. Any fraud to that magnitude must have compelled the institution to fold immediately as in the case of the Barings Bank. The government of India presumably saved the bank since it is a leading nationalized bank.

TABLE 1 SIZE OF THE US BANKING INDUSTRY

Size of US Banking Industry as of December 31, 2021			
Total Insured Institutions	Total Insured Branch Offices	Total Assets (millions)	Total Deposits (millions)
4,817	82,919	\$ 23,839,064	\$ 19,751,392

Source: The Federal Deposit Insurance Corporation (FDIC, US)

TABLE 2 FRAUD OCCURRENCES AND AMOUNT INVOLVED IN THE INDIAN BANKING INDUSTRY (2018 TO 2022)

(Year ending March 31, 2018 to 2022 - \$ figures are approximate)

Bank Group	2018		2019		2020		2021		2022	
	Number of Frauds	Amount Involved (millions)	Number of Frauds	Amount Involved (millions)	Number of Frauds	Amount Involved (millions)	Number of Frauds	Amount Involved (millions)	Number of Frauds	Amount Involved (millions)
Public Sector Banks	2,885	\$ 5,886.29	3,766	\$ 9,098.65	4,410	\$ 2,099.49	2,901	\$ 1,114.30	3,078	\$ 546.57
Private Sector Banks	1,975	\$ 381.27	2,090	\$ 777.87	3,065	\$ 484.58	3,710	\$ 630.41	5,334	\$ 238.64
Foreign Banks	974	\$ 39.40	762	\$ 134.74	1,026	\$ 13.77	520	\$ 44.76	494	\$ 16.36
Financial Institutions	12	\$ 25.34	28	\$ 1.06	15	\$ 29.01	24	\$ 90.65	10	\$ 17.71
Small Financial banks	65	\$ 0.95	115	\$ 0.30	147	\$ 0.16	114	\$ 0.41	155	\$ 0.41
Payment banks	3	\$ 0.14	39	\$ 0.30	38	\$ 0.03	88	\$ 0.03	30	\$ 0.01
Local Area Banks	2	\$ 0.01	1	\$ 0.00	2	\$ 0.01	2	\$ 0.01	2	\$ 0.03
Total	5,916	\$ 6,333.39	6,801	\$ 10,012.92	8,703	\$ 2,627.04	7,359	\$ 1,880.57	9,103	\$ 819.73

Source: The Reserve Bank of India, Annual Report, 2022 (page 141) and 2020 (page 123)

The country's central bank has placed several banks under moratorium for reasons of liquidity crisis, mounting losses, erosion of equity, and reports of fraud. In the last twenty years, the following ten banks in India have been placed under moratorium. The imposition of moratorium appears in parentheses after each bank's name. They are: Sikkim Bank Limited (1999), Bareilly Corporation Bank Ltd (2000), Benares State Bank Ltd (200), Nedungadi Bank (2002), South Gujarat Local Area Bank Ltd (2003), Global Trust Bank (2004), Ganesh Bank of Kurundwad (2006), United Western Bank Ltd (2006), Punjab and Maharashtra Co-operative Bank (2019) and Yes Bank (2020). The turmoil caused by the financial sector has impacted the markets negatively and damaged all stakeholders as well [Rao, 2021]. In order to increase operational efficiency, the RBI has instituted mergers of Allahabad Bank with Indian Bank, United Bank and Oriental Bank of Commerce with Punjab National Bank, Corporation Bank with Union Bank, and Dena Bank with Bank of Baroda.

THE LAKSHMI VILAS BANK (LVB)

The LVB, established in 1926, operates in 19 states in India with over 550 branches and 4,000 employees. As shown in Table 3, the bank experienced rapid financial decline due to continuous losses of \$100 million on an average in three years of 2018 to 2020. This caused in alarming lack of liquidity and erosion of equity. The RBI imposed a moratorium of one month in November 2020 thereby limiting a maximum of \$300 per customer. According to the RBI, the LVB had no strategic plan in place to raise additional capital and to collect the mounting non-performing loans. The bank could not avoid the regular withdrawal of deposits that undermined its liquidity. The RBI had to resort to a moratorium to protect the depositors in the long run and avert a run on the bank. During the one-month moratorium, the RBI arranged for an amalgamation with the DBS Bank India Limited (Indian subsidiary of the DBS Bank, Singapore). The decision to merge an Indian institution with a foreign entity is a new precedent and the prompt corrective action was prompted by noncompliance of regulations [Bhusan et al, 2022].

TABLE 3 SELECT FINANCIAL RESULTS FOR LVB (2016 TO 2020)

Description	2016	2017	2018	2019	2020
Total Revenues	\$447,226,373	\$516,999,043	\$520,640,116	\$442,767,899	\$339,553,992
Net Profit (Loss)	\$27,206,448	\$39,525,515	-\$89,866,630	-\$128,107,403	-\$110,976,306
EPS	\$0.15	\$0.21	-\$0.35	-\$0.40	-\$0.33

Source: The LVB Balance Sheet each year

BANK FAILURES IN THE UNITED STATES

The Latin American debt boom and bust era of the late 1980s through early 1990s caused substantial losses to major commercial banks in the United States. The Savings & Loan Associations (S&L) industry comprising small regional banks started facing increased interest rate risk as its short-term deposits carried higher interest rates than the long-term loans in the form of residential home mortgages. The dwindling net interest margin (NIM) further exasperated the industry due to the process of disintermediation wherein its depositors migrated to higher interest paying commercial banks. This resulted in massive funding losses initially. Besides, some managements financed huge real estate developments and construction of shopping malls and their defaults led to the failure of many institutions. The micro issues soon erupted into a macro crisis for the industry resulting in a total of 2,957 failed institutions as shown in Figure 1. The latter half of the 1990s witnessed very few bank failures but the Federal Deposit Insurance Corporation (FDIC) had to be completely revamped by the government. The stability of the industry for a decade was thwarted by the global financial crisis of 2008 with the failure of institutions such as Lehman Brothers and Bear Stearns. Sub-prime home mortgages leading to numerous foreclosures and the rapid fall in value of derivatives such as credit default swaps led to another wave of more than 500 bank failures from 2008 to 2014 as shown in Table 4. The Dodd-Frank wall Street Reform and Consumer Protection Act enacted in 2010 ensured stability in the US financial services industry. Despite the 561 bank failures, the consolidated financial characteristics of the United States banking industry records a healthy rate of growth in assets and loans with corresponding increase in net income except during the crisis as displayed in Table 5. The confidence enjoyed by

the industry from its depositors was never lost though the profitability of the industry suffered from 2008 to 2010.

FIGURE 1 BANK FAILURES IN THE US (1980 TO 2000)



Source: The Federal Deposit Insurance Corporation

METHODOLOGY

The banking industry is always keen on identifying the non-performing assets (NPAs) periodically and make provision for recognizing the losses thereof. Simultaneously, it assures the depositors that their deposits are invested in a safe and sound manner. Table 6 displays two vital ratios. The Coverage Ratio emphasizes that there is enough available provision in the banks’ balance sheet to treat the NPAs as irrecoverable losses. The US banking industry is healthy to maintain the ratio in excess of 100% except for the ten-year period 2007 to 2016. Similarly, the Reserve Ratio indicates that the fund balance is more than the value of insured deposits. In the case of the US, it is usually greater than 1 except during the six-year period of 2008 to 2013. The impact of the global financial crisis is evident from Table 6. This paper studies the banking industry’s robust health despite the global financial crisis and 561 bank failures during 2001 to 2021. The industry’s financial performance is evaluated through two important profitability ratios of Return on Assets (ROA) and Return on Equity (ROE). The industry’s profitability rests on its net interest margin (NIM) which ensures that the rate of interest charged on the loans granted to customers is greater than the rate of interest paid to the depositors and the cost of funding from other sources. These three ratios of ROA, ROE, and NIM are shown in Table 7. Banking regulators have agreed upon an 8% capital requirement for banks since 1997 as a consolidated effort to harmonize the banking standards. The US banking industry has performed on all these four parameters except during the period of the global financial crisis.

The dataset includes the fourteen variables of Insured Institutions, Percent Failed Banks, Total Assets, Total Loans, Deposits, Loans to Deposits Ratio, Net Income, Percent profitable, Coverage Ratio, Reserve Ratio, ROA, ROE, NIM, and Tier 1 Capital during 2001 to 2021. The correlation

matrix for the variables are shown in Table 8. The following models are considered in an empirical study of the US banking industry:

Hypothesis 1:

Percent Failed Banks = α (constant) + β_1 (total assets) + β_2 (loans to deposits ratio) + β_3 (net income) + β_4 (coverage ratio) + β_5 (reserve ratio) + β_6 (ROA) + β_7 (ROE) + β_8 (NIM) + β_9 (tier 1 capital)

Hypothesis 2:

ROA = β_1 (total assets) + β_2 (percent failed banks) + β_3 (loans to deposits ratio) + β_4 (net income) + β_5 (coverage ratio) + β_6 (reserve ratio) + β_6 (NIM) + β_7 (tier 1 capital)

Hypothesis 3:

ROE = β_1 (total assets) + β_2 (percent failed banks) + β_3 (loans to deposits ratio) + β_4 (net income) + β_5 (coverage ratio) + β_6 (reserve ratio) + β_6 (NIM) + β_7 (tier 1 capital)

Hypothesis 4:

ROE = β_1 (total assets) + β_2 (percent failed banks) + β_3 (ROA) + β_4 (ROE) + β_5 (NIM) + β_6 (tier 1 capital)

The regression results for the above four models are comprehensively displayed in Table 8.

TABLE 4 RECENT BANK FAILURES IN THE US (2001 TO 2021)

Year	Insured Institutions	Failed Banks
2001	9,613	4
2002	9,354	11
2003	9,181	3
2004	8,976	4
2005	8,833	0
2006	8,680	0
2007	8,534	3
2008	8,304	25
2009	8,012	140
2010	7,658	157
2011	7,357	92
2012	7,083	51
2013	6,812	24
2014	6,509	18
2015	6,182	8
2016	5,913	5
2017	5,670	8
2018	5,406	0
2019	5,177	4
2020	5,002	4
2021	4,839	0
Total Failed Banks		561

Source: The Federal Deposit Insurance Corporation

TABLE 5 FINANCIAL CHARACTERISTICS OF THE US BANKING INDUSTRY

Year	Total Assets	Total Loans	Deposits	Net Income	Percent Profitable
	(\$ billions)				
2001	7,867	4,761	4,560	86.99	91.8
2002	8,436	5,053	4,910	104.68	93.3
2003	9,076	5,435	5,219	120.62	94.0
2004	10,107	6,121	5,719	122.22	94.0
2005	10,879	6,718	6,221	133.82	93.8
2006	11,862	7,234	6,631	145.22	92.1
2007	13,034	7,906	6,913	99.94	87.9
2008	13,818	7,858	7,490	9.09	75.1
2009	13,087	7,282	7,697	(9.96)	69.2
2010	13,319	7,375	7,873	85.49	77.9
2011	13,891	7,474	8,758	118.41	83.8
2012	14,450	7,695	9,447	141.04	89.0
2013	14,731	7,893	9,791	154.31	91.8
2014	15,554	8,309	10,371	152.25	93.7
2015	15,968	8,839	10,908	163.44	95.2
2016	16,780	9,305	11,649	170.51	95.5
2017	17,415	9,721	12,081	164.09	94.4
2018	17,943	10,152	12,613	236.76	96.6
2019	18,646	10,518	13,221	232.78	96.3
2020	21,869	10,864	16,290	147.12	95.3
2021	23,719	11,247	18,189	279.13	97.0

Source: The Federal Deposit Insurance Corporation

TABLE 6 SIGNIFICANT RATIOS

Year	Coverage Ratio (Loss Reserve as a % of NPAs)	Reserve Ratio (%) = Fund Balance ÷ Insured Deposits
2001	128.80	1.29
2002	123.71	1.29
2003	140.30	1.33
2004	168.03	1.31
2005	154.70	1.25
2006	134.80	1.21
2007	91.66	1.22
2008	74.99	0.36
2009	57.72	-0.39
2010	64.47	-0.12
2011	60.98	0.17
2012	58.55	0.45
2013	65.59	0.79
2014	75.39	1.01
2015	85.97	1.11
2016	92.18	1.20
2017	106.30	1.30
2018	124.39	1.36
2019	129.89	1.41
2020	183.71	1.29
2021	178.82	1.27

Source: The Federal Deposit Insurance Corporation

TABLE 7 PERFORMANCE RATIOS

YEAR	ROA (%)	ROE (%)	NIM (%)	Tier 1 Capital (%)
2001	1.14	12.95	3.78	8.99
2002	1.30	14.08	3.96	9.20
2003	1.38	15.05	3.73	9.15
2004	1.28	13.20	3.53	10.28
2005	1.28	12.43	3.47	10.28
2006	1.28	12.30	3.33	10.52
2007	0.81	7.75	3.29	10.34
2008	0.03	0.35	3.16	9.38
2009	-0.08	-0.73	3.49	10.88
2010	0.65	5.85	3.76	11.15
2011	0.88	7.79	3.60	11.16
2012	1.00	8.90	3.42	11.17
2013	1.07	9.54	3.26	11.15
2014	1.01	9.01	3.14	11.15
2015	1.04	9.29	3.08	11.24
2016	1.04	9.27	3.13	11.10
2017	0.97	8.60	3.25	11.22
2018	1.35	11.98	3.40	11.25
2019	1.29	11.38	3.36	11.32
2020	0.72	6.85	2.82	10.17
2021	1.23	12.21	2.54	9.94
Average	0.98	9.43	3.36	10.53

Source: The Federal Deposit Insurance Corporation

TABLE 8 CORRELATION MATRIX

	Insured Institutions	Percent Failed Banks	Total Assets	Total Loans	Deposits	Loans to Deposits Ratio	Net Income	Percent profitable	Coverage Ratio	Reserve Ratio	ROA	ROE	NIM	Tier 1 Capital
Insured Institutions	1.000													
Percent Failed Banks	0.083	1.000												
Total Assets	-0.954	-0.092	1.000											
Total Loans	-0.952	-0.141	0.978	1.000										
Deposits	-0.961	-0.143	0.988	0.951	1.000									
Loans to Deposits Ratio	0.923	-0.020	-0.871	-0.796	-0.915	1.000								
Net Income	-0.684	-0.498	0.623	0.632	0.688	-0.624	1.000							
Percent profitable	-0.344	-0.795	0.255	0.272	0.352	-0.318	0.816	1.000						
Coverage Ratio	-0.059	-0.632	0.157	0.188	0.229	-0.030	0.446	0.616	1.000					
Reserve Ratio	-0.136	-0.930	0.103	0.155	0.178	-0.033	0.625	0.908	0.728	1.000				
ROA	-0.037	-0.608	-0.072	-0.052	0.029	-0.047	0.721	0.875	0.526	0.769	1.000			
ROE	0.122	-0.616	-0.206	-0.205	-0.095	0.074	0.602	0.826	0.593	0.772	0.975	1.000		
NIM	0.722	0.321	-0.845	-0.814	-0.817	0.642	-0.471	-0.265	-0.231	-0.204	0.114	0.205	1.000	
Tier 1 Capital	-0.602	0.340	0.459	0.331	0.417	-0.484	0.327	0.004	-0.463	-0.260	-0.044	-0.246	-0.229	1.000

TABLE 9 REGRESSION RESULTS FOR THE UNITED STATES BANKING INDUSTRY, 2001-2021

Dependent Variable:	Model 1 Percent Failed Banks	Model 2 ROA	Model 3 ROE	Model 4 Coverage Ratio
Constant	-0.099 (-5.058)***			
Total Assets	1.313 (3.219)**	-0.981 (-7.652)***	-0.926 (-5.291)***	
Percent Failed Banks		-0.028 (-0.431)	-0.025 (-0.280)	-0.114 (-1.041)
Loans to Deposits Ratio	0.337 (2.348)*	-0.206 (-1.058)	-0.183 (-0.689)	0.028 (0.050)
Net Income	-0.682 (-1.782)	0.821 (10.468)***	0.783 (7.313)***	
Coverage Ratio	-0.111 (-0.968)	0.185 (2.219)*	0.279 (2.456)*	
Reserve Ratio	-0.980 (-9.703)***	0.080 (0.581)	0.090 (0.479)	
ROA	-2.525 (-3.234)**			-3.771 (-3.123)**
ROE	3.397 (4.161)**			4.042 (3.404)**
NIM	-0.405 (4.391)***	0.547 (2.129)*	1.007 (2.871)*	-1.685 (-1.548)
Tier 1 Capital	0.633 (4.494)***	0.567 (1.763)	-0.042 (-0.096)	2.438 (3.238)**
Adjusted R ²	0.965	0.996	0.992	0.939
Number of observations	20	21	21	21

t-statistics appear in parentheses for each variable; * = significant at 90% confidence level; ** = significant at 95% confidence level; *** = significant at 99% confidence level

DISCUSSION OF RESULTS

The results yielded expected signs consistently. In the first model, the negative sign for the coverage and reserve ratios indicate that bank failures hamper banks from providing for NPAs and maintaining the depositors' confidence. All variables except net income and coverage ratio turned out to be significant. The highly significant variables of reserve ratio, NIM and tier 1 capital reinforces their importance for the industry's success. In the second and third models, total assets and net income turned out to be highly significant emphasizing their importance to a healthy ROA and ROE for the entire industry. The profitability ratios rest ultimately on net income. The negative sign for tier 1 capital in model 3 is a reference to the erosion of equity. In the last model, the importance of ROA, ROE, and tier 1 capital for a sustained coverage ratio is highlighted.

CONCLUSION

The empirical analysis of the US banking industry is a testimony to the robust health of the industry despite the global financial crisis and 561 bank failures. The US Federal Reserve is responsible for regulatory supervision, examination, and control of the individual banks while The Federal Deposit Insurance Corporation (FDIC) offers protection to the depositors. The RBI and the Deposit Insurance and Credit Guarantee Corporation of India are responsible for protecting 2.6 billion accounts with a total value of about \$2.1 trillion. As compliance issues are addressed and

institutions follow the principles of corporate governance, the Indian banking industry also would be efficient notwithstanding a few recent shocks in the financial services sector.

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DXB286

Private Bank Lending to Small Business in China: An Analysis of Default Rates

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Abstract: This study examines small business loans and default rates using a unique proprietary dataset from a private bank in China. As Chinese regulations preclude differential interest rates, alternative tools, such as auditing, relationship length, and group lending, are employed to mitigate default risk. Although audits in China are extremely superficial, they lower default rates as borrowers use audits as a positive signal of the firms' likelihood of success. We also find that a long relationship length reduces default risk as it likely increases the bank's soft information regarding borrowers. Group lending is another popular mechanism to reduce default rates, especially for microfinance loans. While the risk-sharing and monitoring aspects of this strategy have been widely analyzed, we focus on a free rider problem using a game-theoretic model that suggests the optimal group size may be smaller than suggested by conventional wisdom and empirically confirm this hypothesis.

Key Words: microfinance; private firm's auditing; voluntary auditing; group loan; free riding

DXB290

**A Study of Factors Influencing the Market Valuation in the Indian
Pharmaceutical Industry**

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Extended Abstract

Purpose

The aim of this study is to establish the company-related factors that have an influence on the market valuation of firms in the Indian Pharmaceutical Industry.

Methodology/Approach

Through gap analysis done by literature review, we shortlist 12 variables that are fitted into 5 components namely, ROCE, Quality of Management, Directorship, Positive Cash Flows, and Re-investment of profits. We use Leverage and Dividend as mediating variables. Market valuation being the dependent variable is represented by the Q ratio. The study employs forty pharmaceutical

companies listed on the Bombay Stock Exchange, for 12 years from the fiscal year 2008-09 to 2019-20.

The data is evaluated for reliability and Cronbach's Alpha is established. We then proceed with the descriptive statistics and correlation analysis. The independent variables are evaluated on Principal Component Analysis and then the convergent & discriminant validity of the components is evaluated. This is followed by Unit Root Test, first by visual inspection of the graphs and then by using the Dickey-Fuller Test. Finally, we do various iterations in the Structural Equation Model to arrive at the best fit.

We use the methods used by Chemmanur et al (2009) to establish the management quality, the path followed by Saravanan et al (2021) / Bird et al (2018), and the concepts used by Mukherjea et al (2021, 2018) and Mukherjea (2016) in examining the variables that impact the market valuation of firms in the Indian Pharmaceutical Industry.

Findings

ROCE, Management, Directorship, Re-investment, and Cash-flows in that order influence the market valuation. Leverage has a negative impact on Q and the dividend has a limited role to play. The Study reinforces the fact that apart from profitability, there are other factors that influence the market value of firms. The point is not what the company has, but what it can. This is clearly brought out by the importance of cash flows and the importance of re-investment of profits which are future-oriented.

Limitations & Scope

The scope of this research is limited to the Indian context and further, only to the pharma industry. The study has not touched upon other important parameters like competitive advantage, promoter holdings, and investment in intellectual capital.

Going forward, the spectrum of the study could be widened to see the impact of competitive advantage, the extent of the promoter holding in the enterprise, and the intellectual capital. A comparative study between India and other developed countries may be conducted to see if the model works in other countries as well. Further, in India, it would be worthwhile to verify the model with Nifty 50 companies to compare the impact of variables on the market valuation of a wide spectrum of industries. As regards the pharma industry, the number of years of study can be stretched to explore the variation before and after the implementation of the TRIPS agreement.

Practical Implications

The study has practical implications both for business owners and investors. The study reinforces to the business promoters that the market value of the firm would improve if they employed good quality management, concentrate on improving the ROCE year on year, improve their cash flows, and re-invest a part of their profits for expansion. On the other hand, investors can examine the above parameters from readily available online sites (www.screener.in; www.moneycontrol.com, etc.) before investing their hard-earned money in the stock market.

Originality Value

There have been many studies that deal with the variables individually. However, this is the first study of its kind in the Indian context that employs all the referred variables in one model. Chemannur et al (2009) were the first ones to quantify the quality of management. However, our study indicates that this is the first paper to use that methodology in the Indian context.

Keywords: Management, Directors, Valuation, Market, cash flow

JEL Classification: G200, G210, O150

DXB292

Sub-national Governments and their Financial Health in India

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Abstract

Across the globe the concept of decentralization in general and the fiscal decentralization in particular has been practiced in most of the developed and the developing countries. India, since 1991 has gone for the major reforms in this direction. In the present paper it is endeared to investigate fiscal decentralization at sub-national government in details.

The Panchayati Raj Institutions in India have a long history. After introduction of 73rd Constitutional Amendments Act, it has got recognition in the Constitution of India. Traditionally, a very few responsibilities were shouldered by these Institutions. With the introduction of 11th Schedule, PRIs are assigned a large number of functions as per the provisions made in the Panchayati Raj Act of the each State. In the pre-amendment period these bodies had been empowered to levy very few taxes and fees. Since there was no regular election (after 73rd CAA it became mandatory to have election every fifth year) the panchayats were ruled by the rich landlords/power groups in the rural areas. With limited or almost negligible taxation power the lords of the panchayats carried out no responsibility. The devolution of resources from the States was very limited. Since independence, the Constitution provides arrangements regarding the fiscal transfers from Centre to sub-national governments-States (and now to local governments, PRIs and ULBs). The centre-state fiscal relations and its delivery mechanism were in place developed for long but no separate provisions existed for local governments until the recent Constitutional amendments were made. The Constitution through 73rd and 74th Amendments and the article 243 I and 243 Y provides for the constitution of State level Finance Commission (SFC).. A large number of states have accepted and implemented the most relevant recommendations To support the finances of the local bodies the article 280(1)bb and c were also inserted. With this provision the Government of India have to share some responsibilities and make provisions for the devolution of resources to the local bodies through the State governments. The Tenth Finance Commission for the first time recommended for devolution of resources to the local bodies. In the total transfer for the local bodies, Rs 1000 crore were earmarked for Urban Local Bodies (ULBs) and Rs 4380.93 crore for the PRIs. The PRIs were given Rs 100 per capita and the ULBs on the basis of ratio of urban population in the total population. Similarly, the Eleventh Finance Commission had recommended Rs 10,000 crore (Rs 8000 crore for PRIs and Rs 2000 for ULBs) for the local bodies, both rural and urban. In addition to the devolution of resources from the Central Finance Commission, the State Finance Commission of the respective state had also recommended sharing of tax and non-tax revenue of the State. Some of them have recommended for global sharing of tax revenue only whereas others were in favor of sharing of buoyancies of total revenue of the States and recommended of devolution of revenue from tax and non-tax

sources. To achieve the fiscal autonomy, the PRIs have been empowered to raise revenue through their own sources, as enlisted in the respective state acts. However, the PRIs could not impose these taxes to the full potential. The PRIs are also given additional assistance for the development work in the form of Centrally Sponsored Schemes. The Rural Development accounts for about half. The MP/MLA/MLC/Sarpanch local area development funds are also directed for the development work in the constituencies of these elected bodies. The privatisation of some select services may also reduce the expenditure, which in turn help to improve the financial position of the PRIs. A Strong comprehensive computerized data base in the form of e-panchayat would also attract the investors and the tourists in the rural areas, which would lead to revenue enhancement. (The Madhya Pradesh model of e-governance and “gramsamparak”).

1. Introduction- National Perspective

There were tow major historic constitutional amendment were brought in by the Government of India during 70's. The functional and financial decentralization were the two major reforms at the subnational level governments. The Constitution through 73rd and 74th Amendments defines 29 subject matters for rural local governments (Panchayati Raj Institutions) and 18 subjects to Urban Local Governments (Municipalities), though the local governments (bodies) were functioning for long. Presently, it has provided a composite framework delineates fiscal functions among central, state and local governments. The centre-state fiscal relations and its delivery mechanism were in place developed for long but no separate provisions existed for local governments until the recent Constitutional amendments were made. The first generation state level finance Commissions were constituted in all the states and the recommendations were made in view of identifying the resources to carry out the functions enlisted in the 11th and 12th Schedule (of 73rd and 74th Amendments) for PRIs and ULBs. A large number of states have accepted and implemented the most relevant recommendations⁸. Keeping in view the requirements of Article 243 I and Y, most of the States have constituted the Second generation State Finance Commissions and some of them have submitted the reports. The impact of these recent developments of fiscal transfers on the state economy has not been assessed so far. It needs detail investigations of these reports. The issue of fiscal transfers has to be analyzed in greater detail and perspective.

⁸ See, Action Taken Report Memorandum of all the States.

Tenth Finance Commission (TFC) Approach-

The Center-states relations have been develop in India since long. Under the constitutional provisions the Central Finance Commission was constituted to transfer the funds to the States under various constitutional provisions. Till now this exercise has been carried out for eleven times since independence ⁹. With the recent amendments in the constitutional provision the CFC has been assigned another duty to extend this exercise to local governments also ¹⁰. The Article 280(3) has been amended to provide for another mandatory duty to be performed by the Central Finance Commission. At the State level also, these amendments require the constitution of State Finance Commission to recommend the transfers of funds from State to local governments ¹¹. Since these amendments were introduced at the time of near completion of TFC report, hence the Commission could not worked out transfer of funds based on any detail exercise. Therefore, it had made provision of *ad hoc* arrangements and recommended the transfers of funds to the local bodies ¹². The TFC has recommended that this fund would go to PRIs over and above the regular transfer of

⁹ Under the Constitutional provision the President constitutes the Central Finance Commission under Article 280 (3) : (a) the distribution between the Union and the States, of which the net proceeds of taxes which are to be , or may be, divided between them and the allocation between the States of the respective shares of the proceeds; (b) the principle which should govern the grants-in-aid of the revenues of the States of the Consolidated Fund of India”.

11. The Article 280(3) has been amended to provide for another mandatory duty to be performed by the Finance Commission. By the 73rd and 74th amendments to the Constitution, two new sub-clauses (bb) and (c) have been introduced in clause 3 of article 280. These sub-clauses make it obligatory upon the Commission to recommend “ the measures needed to augment the Consolidated Fund of a State to supplement the resources of the panchayats/municipalities in the State on the basis of the recommendations made by the Finance Commission of the State. (Para 10.2 of TFC).

¹¹ *The State Finance Commissions are to be constituted under the article 243-I of the Constitution. In terms of 243-I and 243-Y, the State Finance Commission is required to review the financial position of the panchayats/municipalities and recommend to the Governor, inter-alia, the principles of distribution and shares of proceeds of sharable taxes, duties, tolls and fees as between the State and panchayats/municipalities. The Commission is also required to recommend to the Governor “the measures needed to improve the financial position” of the panchayats/municipalities. (Para 10.6of TFC).*

¹² *At the time of completion of report, the recommendations of the State Finance Commissions were not available, and it could not wait due to time constraints, therefore it was decided to make an ad hoc augmentations of the Consolidated Fund of the State, keeping with the spirit of the amendments. (Para 10.9 TFC)*

The panchayats/municipalities are late entrants in the federal structure of the Country but their action or inaction is likely to affect the welfare of the people area of under their jurisdiction. Therefore, within the constraints imposed on us by our terms of reference, we are inclined to consider assistance to the States for panchayats/municipalities. (Para 10.10 of TFC).

In this context the TFC approached their task as one of making an ad hoc provision of specific grants to States. This has estimated with reference to the rural population according to 1971 Census. The rural population of all States in India was 480.93 lakhs. Most of the funding requirements of panchayats are likely to be met by transfer along with functions from the States and their own resources. TFC had made an ad hoc provision of Rs 100 per capita rural population .

funds from State to the PRIs¹³. Similarly, for the Urban Local Bodies (ULBs) the funds have been transfers for the maintenance of core civic services provided by CFC.¹⁴

Eleventh Finance Commission (EFC) Approach-

Under the Terms of Reference (ToR) of EFC, for the first time the Presidential Order required a Finance Commission to make recommendations regarding the transfers of fund to the States which further pass on to the local Governments (PRIs and ULBs) for the augment of resources of these bodies¹⁵. The introduction of these (73rd and 74th) amendments has given a place in the Constitution and recognised them as the institutions of self-governments. These amendments made it mandatory for holding the regular election, obligatory representation of SCs/STs and women, periodic constitution of SFCs for the devolution of financial resources to the sub-national governments at the local level, transfers of functional responsibilities to these bodies, so as to enable them to function as institutions of self-governments¹⁶. The particular ToR of EFC required

¹³ *This amount should be distributed amongst the PRIs, over and above their due by way of their share of the assigned taxes, duties, tolls, fees transferred activity related budgets and grants. Even in those States which are not required to have panchayats, as envisaged in the 73rd amendment of the Constitution, the additional amounts would be required to be given to supplement the resources of similar local level representative bodies. (Para 10.16 of TFC)*

¹⁴ *For municipalities (ULBs). For operation and maintenance of core municipal services a provision of Rs 1000 crores for the five year period were recommended. It would enable ULBs to meet their primary obligations. The details are given in Table...The inter-state distribution of this sum is based on the inter-state ratio of the slum population derived from the urban population figures as per 1971 Census. (paras 10.18 and 10.19 of TFC)*

¹⁵ *Paragraphs 3(c) and 3(d) of the President's Order required the Eleventh Finance Commission to make recommendations on the measures needed to augment the Consolidated Funds of the State to supplement the resources of the panchayats and the municipalities on the basis of the recommendations of the State Finance Commission (SFCs). Further paragraph 6 of the President's Order states that where the SFCs have not been constituted as yet, or have not submitted their reports giving recommendations, EFC should make their own assessment in the matter, keeping in view the provisions required to be made for the emoluments and terminal benefits of the employees of the local bodies including teachers; the existing powers of these bodies to raise financial resources; and the powers, authority and responsibility transferred to them under articles 243G and 243W read with the Eleventh and Twelfth Schedules of the Constitution. This is for the first time that the Presidential Order requires a Finance Commission to make recommendations in this regard. (Para 8.1 of EFC)*

¹⁶ *The Constitutional changes- 73rd and 74th amendments – however, envisage the panchayats and municipalities as institutions of self government. It has been made mandatory, under the Constitution, to hold regular election to these bodies under the supervision of State*

it to determine the transfers of resources to the local bodies on the basis of the recommendations of the SFCs. If the SFCs reports were not made available in that case make their own assessment in this regard ¹⁷.

Transfers of Resources to the Local Governments- Eleventh Finance Commission Approach

For effective functioning of the local governments the process of decentralisation needs to be speeded up. Keeping view the strengthening of the sub-national governments at the local level the EFC has recommended the transfers of funds for the provision and maintenance of core civic services¹⁸.

Elections Commission. Representation of SCs/STs and women has been made obligatory. The devolution of financial resources to these bodies has been ensured through periodic constitution of the State Finance Commissions that are required to make recommendations on sharing and assignment of various taxes. Duties, tolls, fees etc., and on the grants-in-aid to these bodies from the Consolidated Funds of the States. These provisions are closely related to articles 243G and 243W of the Constitution which require that the State legislature may, by law, entrust these bodies with such powers, functions and responsibility so as to enable them to function as institutions of self-government. In particular, the panchayats and the municipalities may required to prepare plans for economic development and social justice, and implement the schemes relating thereto including those which are included in the Eleventh and Twelfth Schedules of the Constitution, respectively. The operationalisation of the changes contemplated under the Constitution requires action by both the Centre and the States.

(Para 8.2 of EFC)

¹⁷ *The determination by EFC of the measures needed for augmentation of the Consolidated funds of the States for supplementing the resources of panchayats and municipalities has to be done on the basis of reports of SFCs. Infact, the SFCs recommendations should have been the basis of EFC report. But it could not be so in full measure for several reasons. These are: (i) no synchronization of the periods covered by EFC and SFCs.; (ii) Many SFCs reports have not been addressed by the specific terms listed in article 243I and 243Y. (iii) No limits prescribed for the Action Taken Reports (ATRs) on The SFC recommendations; (iv) While articles 280(3)(bb&c) required EFC to make recommendations in relations to the panchayats and municipalities of a State on the basis of the recommendation made by SFC, it does not provide for any alternative approach in respect of such States where the SFCs have either not been constituted or have not submitted their reports.. (Para 8.11 of EFC)*

¹⁸ *The maintenance of civic services inn rural and urban areas, which includes provision of primary education, primary health care, safe drinking water, street lighting, sanitation including drainage and scavenging facilities, maintenance of cremation and burial grounds, public conveniences, and other common property resources. Transfer of these responsibilities should be speeded up accompanied with the transfers of staff. The EFC has recommended grants to the States for immediately passing on to the panchayats and the urban local bodies*

Under the amended constitutional provision the PRIs and the ULBs have to maintain the accounts and get them audited. This would reduce the charges of corruption, generally, leveled against them. Keeping this requirement in view, the EFC has recommended provision of fund to meet this requirement of the local bodies¹⁹.

Since the exercise of transfers of resources to the local governments was carried out for the first time, the EFC has faced the acute problem of database at the local level. To ease out the data problem for the future Commission, the EFC has made provision in this regard. It has made recommendation and earmarked some fund for maintenance of data base at the local level, in the standard format suggested by it²⁰.

Grants for the local bodies

As a measure of augmenting of Consolidated Fund of States to supplement the resources of local bodies, the EFC has made recommendation considering the availability of resources and the limits prescribed for the overall transfers of funds to these bodies. This would help local governments for provision/maintenance of core civic services to the local citizens²¹. The EFC has recommended a grant of Rs 1600 crore for the Panchayats and Rs 400 crore for the Municipalities (ULBs) for the period of five years (2000-01 to 2004-05).

that have a primary responsibility in this sphere. No amount from this grant should be given to the intermediate or district level of panchayats where these do not have any direct responsibility for maintenance of these services. The distribution of these grants to the panchayats and the urban local bodies should be done on the basis of the principles recommended by the SFCs. These grants would be untied except that they should not be used for payment of salaries and wages. (Para of EFC)

¹⁹ Article 243J and 243Z of the Constitution expect the States to make provisions by way of legislation for maintenance of accounts by the panchayats and the municipalities. EFC has recommended that this area of accounts and audit – needs to be set right under the close supervision of the C&AG and supported by specific earmarking of funds from the grants recommended by EFC in respect of local bodies. Panchayats at the village level, and sometimes at the intermediate levels too, do not have exclusive staff for upkeep of accounts. EFC has worked out an amount of Rs 4000 per panchayats per annum for maintenance of accounts. If the staff/facilities are not available. This amount may be paid from the grants recommended for rural local bodies. Any additional funds required for this purpose should be met from the grants given to the States for the Panchayats. As far as ULBs, they generally do have accounts staff on their pay rolls.

²⁰ Third area of concern relates to non-availability of data on the finances of the local bodies. There is no mechanism for collection of data on the revenue and expenditure of the various tiers/levels of the local bodies. This could be collected and compiled in standard formats, to be prescribed by the C&AG. This will facilitate comparison of performance and state of development of local bodies among the States.

²¹ Keeping in view the availability of resources and the overall limits set for the flow of resources from the Centre to State, EFC has recommended a total grant of Rs 1,600 crore for the panchayats and Rs 400 for the municipalities for each of the five years starting from the financial year 200-01. In per capita terms, the amounts recommended by EFC for the rural local bodies are higher than those for the urban local bodies. It was done so because the urban local bodies can generate higher per capita revenue from the same taxes owing to the rural urban income differentials. This amount should be over and above the normal funds to the local bodies from the States and the amounts that would flow from the implementation of SFC recommendations.

Principle for Inter- se distribution

The transfers from the national to state governments are generally guided by four basic principles, namely, equity, autonomy, efficiency, and fiscal discipline²². In the case of local governments the EFC has selected five factors for the distribution of funds to the local governments. These are, population, index of decentralisation, distance from highest per capita income, revenue effort and geographical area. In this formula the equity aspects is taken care of by population factor, therefore, the EFC has assigned maximum weightage of 40 per cent to this factor. Next Important factor is that which should speed up the process of decentralisation at the third level of governance. The EFC has worked out an index of decentralisation by taking care of all the important factors envisaged in the provisions made in the recent amendments introduced for decentralisation. The revenue effort made by the local bodies has been assigned 10 per cent weight. The States with low SDP have been duly compensated by the weight of 10 per cent assigned to the factor of distance from highest per capita income. The geographical area has been given the weightage of 10 per cent. This would take care of the differentials in the cost of provision of basic services in the sparsely populated area, where the cost is relatively high²³.

²² See Raja Chellieah,'s comments on the Paper " Intergovernmental Fiscal Transfers for Equitable In-Country Growth", by D.K. Srivastava, ADB-NIPFP Workshop, May 2001, NIPFP.

²³ *Population should continue to be an important factor in determining the needs of the States. Therefore, the EFC has allocated 40 per cent of the amount to the States to be given to the panchayat and municipalities on the basis of rural/urban population of the State.. The additional amount recommended for being given as grants for these bodies is more for the purpose of inducing the States to speed up the process of decentralisation so that these develop as institutions of self-government as envisaged under article 243(d) and 243 (e) of the Constitution. Hence, EFC has recommended 20 per cent of the grants to the States on the basis of this index of decentralisation. Local bodies should be able to raise revenue to meet their current level of revenue expenditure as far as possible. Therefore, EFC has linked the efforts made by the local bodies to raise own revenue, with State's own revenue on one hand and with SDP from primary sector (excluding mining and quarrying) from the panchayats and SDP from (net of primary sector) for the municipalities. The average of the ratios of own revenue collection of the panchayats fro the years 1995-96 to 1997-98 with the own revenue of the State for the corresponding*

Equity Vs. Performance

While estimating the devolution to local bodies the TFC and EFC both have given more importance to the equity aspects. In determination of share of each State the population indicator has played a pivotal role. The TFC has made the allocation on the basis of per capita grants to the PRIs on the basis of 1971 population. For the ULBs the ratio of slum to urban population has been used. We have ranked the states according to their share in the total for PRIs and ULBs and computed the rank correlation. The populous states occupied the higher places in PRIs and in the case of ULBs the developed states with higher level of urbanization and industrial growth got the high position. Similarly, the EFC have used the population of 1991 census (rural and urban) for assigning the weights to the different determinants. In addition to the population and geographical criteria, the other determinants such as distance from highest per capita income, revenue efforts of

years has been worked out and assigned a weight of 5 per cent. Similarly the ratio of own revenue of panchayats for three years 1994-95 to 1996-97, with SDP for the corresponding years, is given a weight of 5 per cent.

The State with low SDP. will continue to have problems in raising revenue at the State level as well as at the level of local bodies and would therefore require additional support. The EFC has provided 20 per cent on the basis of distance from the highest per capita agricultural income, for rural local bodies. For ULBs this has been done by using SDP net of Primary sector and weighted by urban population.

The EFC has recognise the fact that the cost of providing basic services in the sparsely populated areas is relatively high, and would necessitate giving weight to the expanse of the State. Ten per cent of the grants has been distributed on the basis of the geographical area of each State- rural for panchayats and urban for municipalities.

Accordingly, EFC has recommended that the amounts of Rs 1,600 crore and Rs 400 crore provided by EFC from the panchayats and municipalities respectively, for each of the years (2000-05) be distributed among the States on the following criteria and weights:

1. Population

40 per cent

2. Index of decentralisation

20. per cent

3. Distance from highest per capita income

10 per cent

4. Revenue effort

10 per cent

5. Geographical area

10 per cent..

PRIs with respect to own revenue of the state and w.r.t. GSDP (primary sector excluding Mining and Quarrying), and the index of decentralization have been used in computation of Composite index for each state's share. The States have been ranked on the basis proportion of each share in the total. On examination of the results, it is noticed that highly populated States got the more share and the high ranks whereas the performing states with less population were deprived of their due shares and ranked at low levels.

2. State Level Developments (State Finance Commission-SFCs)

Under the provisions of article 243-I and 243-Y and the provisions made under their respective P.R. Acts, most of the States had constituted the 1st Generation State level Finance Commissions (SFCs). These SFCs worked within the stipulated Terms of Reference and submitted the reports to the State Governments. The relevant recommendations (from States' point of view), of these reports were largely accepted by the State governments.

Some of the states recommended for global sharing of total revenue (taxes and non-taxes together) and a few of them recommended for sharing of revenue from taxes only.

1st Generation State Finance Commissions Approach

Concept of Global Sharing

The TFC in its report discuss the alternative scheme of devolution. It is argued that in the tax reform period the relative buoyancies undergo changes²⁴. The centre and states should share the aggregate buoyancies of the sharable revenues. It was suggested that from the pooling of sharable revenue a certain percentage should be transfer to the states. While designing the transfers of funds from the state to local governments the concept of sharing of aggregate buoyancies was adopted by a large number of states.

²⁴ See: Interim Report of the Tax Reform Committee, Ministry of Finance Government of India.

(i) Global Sharing of Tax Revenue

The SFCs of most of the States have analyzed the issue of devolution of resources from State to Local governments. After carrying out the detailed exercises regarding transfers of funds, arrived at the conclusion to devolve the certain percentage of total tax revenues of the States. The SFCs of these States have recommended for global sharing of tax revenue to the Local Governments (PRIs and ULBs) in the states. Accordingly, the share recommended were as follows: Assam (2%), Goa (36%), Manipur (5.23%), Rajasthan (2.18%), Sikkim (1%) , Tamil Nadu (8%), Tripura (10%), Uttar Pradesh (3%-enhanced to 4%), West Bengal(16%) and Punjab (20% of five select taxes - stamp duty, motor vehicles tax, entertainment tax, entertainment (cinema show tax) and electricity duty).

(ii) Global Sharing of Total (Tax and Non-Taxes) Revenue

To share the buoyancies of all revenue sources, some of the States have recommended for global sharing of tax and non-tax revenues to the local governments. The recommendations regarding the share of local governments in these states are as follows: Andhra Pradesh (39.24%), Karnataka (36% of non-loan gross own revenue), Kerala (1%), Madhya Pradesh (2.91%), Himachal Pradesh on the basis of total revenue of LBs in 1995 and adding 10% and 7.5% for growth and inflation for ULBs and RLBs.

2nd Generation State Finance Commissions Approach

There are about 15-16 States, which have constituted the second generation SFCs in the States. Some of them have submitted their reports. It would be more meaningful to analyze the recommendations of all the reports once the SFCs submit these reports.

Subsequently, as of now most of the states have gone for 5-6 generation of state level finance commission. There is ample scope to examine the recommendation of the later state finance commission.

Estimation of Buoyancy Coefficients of revenue from own sources:

For the period from 1990-91 to 1995-96, the growth in own revenue (tax and non-taxes) of VPs has been estimated in terms of its response to the increase in the non-primary GSDP (excluding mining and quarrying) of the State. It was observed that in the States of Andhra Pradesh,

Goa, Himachal Pradesh, Kerala, Maharashtra, Punjab, Tamil Nadu and Tripura the coefficients were found to be more than unity, while in the remaining States it was less than unity. The States of Rajasthan and West Bengal had the negative coefficients. (The research is ongoing with the latest data. Once all the data will be available the detailed analysis will be done and the results will be shared in the future research),

Therefore, it can be inferred that in most of the States the devolution of financial powers to the VPs has not been taken place. The taxes, which were levied before 73rd CAA, are still continued and no new taxation powers have been assigned to them. To strengthen the sub-national governments at the lowest level of federal structure, it is needed that more and more financial powers should be transferred to the VPs, so that these bodies can meet the increased demand of basic services of the rural masses.

Additional Resource Mobilization by PRIs –1st Generation SFC recommendations

Andhra Pradesh- The SFC recommended for sharing of state revenue between state and local bodies than assignment of taxes. No taxation powers given to middle and district level of PRIs. The GPs are empowered to levy and collect taxes like, house tax, kolagaram tax (it should be levied on the entire village produce, including the paddy), advertisement tax, water tax (for maintenance of bore wells it was recommended that GP should levy the water tax compulsory), drainage tax and the lighting tax.

The profession tax existed till 1987 was taken over by the State govt. and 95 percent of profession tax was recommended to transfer to local bodies.

Assam- The Commission had recommended the fees for the preparation of various certificates to be collected by the GPs. The GPs are recommended to collect house tax on the basis of floor area.

3. Goa- The panchayats are empowered to levy a large number of taxes, such as, Taxes on buildings and land not subject to agricultural assessment, tax on entertainment other than

cinematography shows, Tax on vehicles other than motor-vehicles, tax on advertisement and hoarding, lighting, drainage, professions etc.

Himachal Pradesh- The SFC has recommended the compulsory levy of local taxes and further recommended that the compliance to collect taxes at the local level should only qualify these bodies for availing the resources transfers from the State govt. The own taxes are house tax, property tax and land revenue etc.

Haryana- The SFC had recommended that the house tax rates should be revised from Rs 11, 8 and 5 to Rs 30, 25, and 10. In addition to this, the tax should be levied on shops, commercial establishments, and institutions like schools and nursing homes etc.

Karnataka- The Zilla Panchayats have not been given any power to levy and collect taxes. The GPs are empowered to impose House tax, vacant land tax, tax on animal drawn vehicles and the tax on shanties and pilgrims, library cess etc..

Kerala- The GPs are levying building/property tax, profession tax, entertainment tax and advertisement tax. The SFC had recommended that for augmenting the finances of the LBs, additional source of revenue—tax and non-tax should be given to them. It had recommended that building tax currently collected by the State govt. may be exclusively assigned to the VPs. The Commission further recommended that the panchayats at the block and district level should also be empowered to levy some of the taxes. The tax on Operators of Cable TV as levied in the States of Tamil Nadu, Maharashtra, Karnataka, Uttar Pradesh and the West Bengal, may also be given to the Panchayats.

4. Madhya Pradesh- The GPs are levying property tax, latrine tax, light tax, and profession tax, the market fee and fees on registration of cattle. The Commission had recommended that revenue from forests and the rationalizing of fee on agricultural product market would add to the GPs' revenue.

Manipur- The SFC had recommended that for additional powers of taxation to local bodies, the amendments in laws and rules, if required, may be introduced. Presently, the GPs are levying house tax @ Rs 10 per annum.

Maharashtra – For improvement in the house tax levied by the GPs, the SFC had recommended that the System adopted by the Pune ZP may be followed in the GPs to increase its revenue from house tax.

Orissa- The GPs were levying the house tax but abolished later on. The SFC had recommended that the GP Act should be amended suitably to empower the GPs for levying of house tax on buildings both residential and commercial located in GP area, basing on annual rental value of the building with rate of 4% to 8% range.

Pujnab- (1st SFC)- The tax on professions, trades, callings and employments should be made compulsory tax to be imposed by the GPs. It had also recommended a tax on advertisement other than newspaper to be levied by the GPs. The SFC had further recommended that the property tax on non-domestic properties (such as brick kilns, rice shellers, stone crushers and petrol pumps on a lump sum rate basis of Rs2500/- per year should be levied by the GPs. The market fee on goods exposed for sale in the panchayat areas and the fee on auto stand were the non-tax measures recommended by the SFC.

Punjab 2nd SFC- The Commission was of the view that the number of commercial and industrial establishments have increased in rural areas. These include shops, *dhabas*, restaurants, petrol pumps, marriage halls, brick kilns, cold stores, industrial units etc. It has recommended that the house tax may be renamed as property tax. This new form of tax should be levied on all the properties irrespective of their use. The commercial and industrial units may be charged higher rates than the domestic ones. The levying of land holding tax on the owner of agriculture land recommended for the panchayats. The SFC has prescribed a lighting rate where the responsibility of lighting arrangements rests with the panchayats.

The major source of income from non-tax is the income from leasing of panchayat lands. No new taxes are being proposed for the block and district level of PRIs in the State.

Rajasthan- It was felt that the PRIs are not able to utilised the taxation power vested with them. The non-tax source was also not exploited to the full potential. The GPs should levy a tax on *havelis* and big *pucca* houses, to begin with. The Panchayat Samiti (PS) may impose a tax on land rent. The powers of imposition of land revenue on *barani* may be vested with ZP. The SFC had recommended a surcharge of 1% on sale of land in rural areas and half- percent surcharge on market fee, to be levied by the ZPs. The GPs should also levy a tax/fee on *Dhabas*, hotels, automobiles servicing and repairs shops, petrol pump etc.

Sikkim- The SFC had recommended *Dhuri khajana* per house, Water tax, Fee for construction of new house, and the rural marketing fee per *hat* to be realise by the Panchayat Unit.

Tamil Nadu- A House tax on plinth area basis may be levied by the GPs. The SFC had recommended for professional tax, vehicle tax and the pilgrim/tourist tax in the GP area. The GPs may levy betterment charges (after suitable amendment in PR Act) on vacant land. In addition to house tax, a compulsory levy of water tax had also recommended by the SFC.

Tamil Nadu (2nd SFC)- The Commission has recommended a surcharge of 10% of house tax may be fixed as water tax in village panchayats.

Tripura- The GPs may levy house tax on land and building, additional stamp duty on transfer of property in rural area, adult fee on visitors to places of worship, pilgrimages, fair etc.

Uttar Pradesh- The Commission had recommended for levy of property tax, water tax, and latrine tax for GPs. Fees on slaughterhouse form the part of non-tax revenue for the RLBs.

West Bengal- The Commission recommended for transferring of entertainment tax to the local bodies. The ZPs have been empowered to collect irrigation rate where the responsibility of water management and routine maintenance lies with the ZPs.

5. Transparency, Accounts and Auditing

Most of the SFCs have recommended for the development of proper accounting system at the PRIs level. The EFC has earmarked additional fund for the purpose of auditing. To reduce the corruption there is a strong need of transparency in maintaining the accounts and getting them auditing by the C&AG or their agents, as suggested by the EFC. (As of now , all the states have adopted the proper accounting system at the sub-national levels of governments.)

e-panchayat and Data Base

The EFC in its recommendation mentioned that there is a strong and urgent need to develop a comprehensive database of PRIs at one place. It has recommended separate fund for the development of database in each state. Most of the SFCs have also supported the same view. Development of a comprehensive database at the state/district/block/village level is strong felt need. The database developed by the First Generation of SFCs was supposed to be used by the Second SFCs. The question remains to be investigated whether the second SFCs have used the database developed by first SFCs²⁵. However, the State of Madhya Pradesh is the first State which has gone for e-governance. In this site the “*gramsamparak*” provides a detailed comprehensive

²⁵ Some of the SFCs members gave the impression that they could not lay the hands on first SFCs database. Hence the collection of data at PRIs level had to be done once again.

database of the village, block and the district, on line. In the time of Information technology (IT) the need of *e-panchayat* is the most urgent task for all the State governments. This would provide a friendly atmosphere for the investor and the tourists, domestic and the international. This would in turn likely to bring development in the rural areas of the country.

SFC recommendation for computerization of data base

Andhra Pradesh- The SFC has recommended for computerization in local bodies.

Kerala- The SFC had recommended for a Unique Premises Numbering (UPN) System in the State. The 16 digits UPN with ward number, street, number, premises number, sub-premises number and the use. A systematic tax mapping with a permanent identification would help in effective administration of various local as well as state taxes and also to Electricity Board and the Water Authority.

6. Madhya Pradesh – The need for the establishment of data bank was recommended by the SFC. The involvement of private sector for this task was also recommended.

Punjab-1st SFC - There should be a Data Information System for the maintenance of data on income and expenditure in simple and easy format.

(The future research will be more focused on the functional and fiscal decentralization with recommendations of 15th and the latest federal finance commission.)

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MARKETING

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The role of ProFem advertising strategies in the construction of new identities

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Abstract

This paper aims to analyze a Mexican brand's advertising campaign to explain the role of femvertising and menvertising strategies in modifying traditional stereotypes and constructing new masculine and feminine identities. A content analysis methodology is used based on the principles of femvertising proposed by Becker-Herby (2016) and adapted by Pando-Canteli & Rodriguez (2021) to analyze menvertising, as well as the characteristics of feminine and masculine identities (Montesinos, 2014; Montesinos & Carrillo; 2010). The results obtained in this research identify the representation of Mexican men assuming responsibility for household and care activities, as well as a narrative that aligns with the new masculine practices that are socially promoted and the feminine representation that continues to be linked to submission and domestic work.

With the limitations, social implications, and main contributions of the work, it is recognized that there is a small amount of empirical research that discusses the advertising strategies of femvertising and menvertising and their role in the configuration of feminine and masculine identities. The social role of advertising, the influence in modifying traditional stereotypes associated with men and women, and therefore in the construction of identities is recognized so that both strategies can be considered ProFem.

Keywords: Advertising, Femvertising, Menvertising, gender stereotypes, masculine and feminine identities.

Introduction

The inequalities generated by gender stereotypes used in advertising are one of the problems that have attracted the reflection and academic discussion of different disciplines since the 1960s. The forms of representation of women and men are strongly criticized. However, overgeneralization is thought from the dissolution of the feminine in the masculine and the over specification in the search for needs, attitudes, or interests towards a single gender (Viedma, 2003). Recently, the effects of advertising sexism have been added to this discussion, with the increase in gender violence, translated into harassment, abuse of power, and even the murder of women, which

permeates from the imposition of roles between men and women linked to attitudes, activities, and contexts, both public and private, in which both men and women develop.

From the social role theory, it is possible to explain the configuration of stereotypes used in advertising, based on the role assumed by each group in the social environment, as its beliefs, socialization and individual processes that favor differentiated behaviors between men and women, which limits the integral development of people about their aspirations, motivations, capabilities, mental and physical states, among others (Castillo & Montes, 2014). In this sense, since the beginning of the 20th century, the construction of stereotypes is focused on socially assuming dichotomies that exclude men and women, where women are shown in advertising with a lack of control, emotional instability, passivity, submission, tenderness, dependence, irrationality, little intellectual development, as a sexual object and taking the role of mother, wife, housewife, perfect or ideal woman. However, men are shown self-control, dynamism, emotional stability, aggressiveness, courage, rationality, objectivity, and dominant roles as head of the family, sportsman, or executive (Carpio, 2020; De Francisco, 2019; Viedma, 2003; Sau, 1989).

However, it is possible to recognize that in the last decade, advertising has undergone a transformation concerning the messages about the representation of men and women in their spots; some brands have joined the confrontation of traditional stereotypes as part of a social responsibility campaign, but also to ally themselves with segments of young women and men who have a different conception of life, dismissing patriarchal schemes and stereotypes attributed to both sexes. In this way, femvertising, dadvertising, and menvertising emerge as advertising strategies that seem to be linked to the growing social demands of movements such as #MeToo, the 8M, #BlackLivesMatter and the LGBTQIA+ community claims to break with stereotypes and traditional roles, therefore both international and local brands have joined this trend to legitimize with consumers.

We agree with Leader (2019), when she states that femvertising, as well as dadvertising and now menvertising, serve commercial and not cultural or political objectives, but also with Schroeder & Zwick (2004), in that gender representations are socially constructed, and this is how advertising campaigns; therefore, femvertising and menvertising are promoted as allies of the social demands for equity that have intensified in recent years and can be considered advertising strategies in favor of feminism (ProFem).

To the ProFem advertising defined by Menéndez (2019), which alludes to the ultimate goal of femvertising, we add the strategies of dadvertising and menvertising, we consider that the latter is also in favor of feminism by trying to represent men in spaces away from power and strength, in archetypes associated with paternity, inclusion, and equity in domestic work, therefore, the three strategies seek to reconfigure the image of men and women shown through their advertising messages, that is, while femvertising is postulated as a tool that promotes women's self-esteem and

self-realization, dadvertising, and menvertising seek, through their contents, to modify the traditional representation of masculinity and bring them closer to domestic contexts where emotions and family and home care activities are present.

This research contributes to the discussion on the representation of stereotypes and roles of men and women in ProFem advertising since its objective is to analyze the advertising campaign of a Mexican brand to explain the role that this type of advertising strategy has in the construction of new masculine and feminine identities that seek to modify traditional stereotypes. The work is situated at the regional level because of the role that culture, values, economy, and sociodemographic characteristics have in the construction of gender stereotypes (Connell & Messerschmidt, 2005), and a dairy brand is chosen in particular: La Villita, which since 2017 has launched a series of advertising campaigns that identify itself as ProFem.

Femvertising strategy, stereotypes, and feminine identities

Femvertising is a term coined and made known in 2014 by the SheKnows Media Agency. This advertising strategy refers to advertising that seeks to empower women and girls, challenging the traditional and negative stereotypes and gender roles associated with them and replacing them with pro-women messages that show them in real situations and scenarios (SheKnows Media, 2014; Åkestam et al., 2017). Femvertising seeks, through communication and advertising, to show women a reality that contrasts with patriarchal paradigms and to be the spokesperson for equality and female empowerment (Carrillo, 2016). Likewise, according to Becker-Herby (2016), advertisements with a femvertising approach should contain the following elements:

1. Diversity of female talent
2. Pro-feminist/ pro-women messages
3. Breakdown of the traditional roles and stereotypes attributed to women
4. Minimization of sexuality (women are not used as sexual objects).
5. Authentic representation of women

We subscribe to the clarification made by Menéndez (2019) when she points out that it is not possible for feminist advertising to exist due to the ambivalence pursued by feminism and advertising as a strategy of commercialism. However, we consider that femvertising is an advertising strategy in favor of women. Even seeking it can contribute to changing stereotypes and constructing new female identities, which move away from the inherited patriarchal model (Montesinos, 2014).

In this sense, advertising messages with identity elements related to these new femininities are observed, moving away from a simplistic and traditional representation of the protagonists, leading to a more egalitarian representation of professions between women and men, a distribution of job opportunities less segmented based on physical traits and more equitable families in the distribution of roles and responsibilities, in general, more real and less perfect women, which

reflects the social transformation of women in advertising (Montesinos & Carrillo, 2010; Castillo & Montes, 2014; Jarava & Plaza, 2017; González et al., 2018). In the same way, it is observed that within these new femininities, women retain traditional traits and roles, such as working at home or caring for children. However, at the same time, they experience changes in their actions in the public environment (Montesinos & Carrillo, 2010). That is, they fulfill both roles and are not visualized as a radical entity.

Montesinos (2014) identifies new female identities resulting from cultural and social change in recent years, highlights women with power, who are in a position of decision-making and leadership, and establishes at least the existence of six new female identities:

1. Autonomous woman: she is economically independent, generally has few children, and can decide whether or not to continue with her partner's relationship.
2. Professional woman: with a work history that generates empowerment, she does not have patriarchal ties from the past.
3. Empowered submissive: she has economic independence but is emotionally dependent on a man.
4. Despot: she oppressively exercises her power over men and women, taking advantage of her empowerment.
5. Feminist: seeks to have partner relationships based on respect and equity, has reflective and analytical capacity.
6. Fundamentalist: tends to see men as the enemy to be defeated and maintains positions that hide her misandry.

Even when there are evident changes in advertising messages and new identities are documented, gender gaps are still present in Mexico; even though there is great progress in women's participation in political empowerment and access to education and health; women's participation in the labor market does not exceed 49.1% which places it below the regional average (59%), this causes the disparity to continue in terms of income and wages, and access to high positions (World Economic Forum, 2021).

Menvertising and dadvertising strategies, stereotypes, and masculine identities.

In recent years, progress has also been made in modifying the representation of men in advertising, with male stereotypes being the most resistant to change (Pando-Canteli & Rodríguez, 2019). The research coincides in pointing out that advertising content maintains the hegemonic male representation in which white, heterosexual, middle-class men predominate in masculine scenarios such as the office, nightclubs, or sports activities (Gentry & Harrison, 2010; Humphreys, 2016; Leader, 2019; Zayer et al, 2019), however, they mark the relevance of showing men in more impartial roles and in more neutral ways to facilitate the necessary transition so that the gender roles represented in advertising become democratic (Gentry & Harrison; 2010; Leader, 2019), due to the lack of identification of men with the representation of them in advertising (Gentry &

Harrison, 2010), which forces brands to seek new strategies to address these audiences (Zayer et al, 2019).

The participation of men as fathers is a current issue in advertising (Sosenki, 2014) and its representation was one of the first changes that were modified in advertising content (Rey, 2018). Some brands seek to transform the archetypes of the role of fathers with representations of affectionate men (Leader, 2019) and physically close to their children (Morales & Gallardo, 2021), focused on showing their emotions (Humphreys, 2016) and thus presenting new masculinity (Leader, 2019). As a result of these strategies, the term *dadvertising* arises, which was used for the first time in 2015 in a digital advertising context, which seeks to show the commodification of fatherhood in promotional media and arises as part of the commodified trends of feminism (Leader, 2019), however, this is not the only male representation that has been modified in advertising content.

Recently, Pando-Canteli & Rodríguez (2019; 2021) recovered the term *menvertising*, to refer to advertising that "proposes visual and discursive models that consciously move away from hegemonic masculinity and aspire to build a masculine image oriented towards achieving greater gender equality" (2019:16). The authors acknowledge that gender constructions are not rigid, however, despite changes in traditional gender models that even move away from the binary, the hegemonic masculinity described by Connell & Messerschmidt (2005) still present, which causes tension between *femvertising* and *menvertising* strategies, since the former allows women to identify with advertising content through positive messages, while the latter challenges power relations and the heteronormativity of masculinity (Pando-Canteli & Rodríguez, 2021).

Concerning the contents of advertising that can be identified as *menvertising*, Pando-Canteli & Rodríguez (2021) recover the proposal of Becker-Herby (2016) on the five aspects that should be included in *femvertising* campaigns and formulate a tool to analyze the visual representations and discourses on masculinity presented in this type of advertising. They point out that for a campaign to be considered *menvertising* it must be present:

1. Intersectional male talent, away from the representation of white, young, heterosexual, middle-class men.
2. To put pressure on the gender stereotypes of heteronormative/hegemonic masculinity, with neutral spaces and roles away from those associated with men.
3. Real men doing everyday activities and non-idealized bodies.
4. Positive messages reclaim the privilege of participating in cultural spheres from which they have been excluded, such as care and the home.
5. Minimize sexuality, both in implicit and explicit content.

We agree with Connell (1997) when he points out that the concept of masculinity has an implicit individual and cultural connotation, so it is inherently relational and implies the position

in gender relations and its effects on bodily, cultural, and personality practices in such a way that masculinity does not represent a single man or show only the negative aspects of power, but rather presents diverse models of idealized masculine behaviors in social processes that are linked to a particular framework of local, regional and global interaction (Connell & Messerschmidt, 2005). Connell & Messerschmidt (2005) identifies a typology of masculinities:

1. Hegemonic, which responds to the predominance of the patriarchal system and reproduces the dominant dynamics between the sexes, represented by white, middle-class, middle-aged, highly educated, and heterosexual men, successful in their work, leading providers of the household, and prestigious.
2. Subordinate is represented by non-heterosexual men who consider themselves feminine, and thus a relationship of subordination is present.
3. Complicit, which is represented by men who do not respond to the hegemonic model, but are comfortable with its existence, do not abuse their power over women but are not interested in generating significant changes.
4. Marginalized, which is represented by men who belong to ethnic groups that have fewer privileges and power than male banks.

Recently, some works document alternative masculinities (Carabi & Amengol, 2015), emergent masculinities (Pineda, 2000; Messerschmidt & Tomsen, 2012), and egalitarian masculinities (Lamont, 2015), which have in common the questioning of dominant gender hierarchies that make possible the emergence of positive masculine practices, which recognize that there are diverse ways of being men, question the benefits that the patriarchal system has granted them, oppose violence as an expression of power, and promote social gender relations based on equal opportunity and rights for all.

For Montesinos & Carrillo (2010), emerging masculinities in the Mexican context can be identified as:

1. The post-antique male who plays the role of the provider without assuming violent behaviors, dependent on the role played by the traditional woman in the home, by mutual agreement;
2. The men in crisis are men who, due to economic circumstances, are confronted by their partner, propitiating a breakup or a conflictive relationship daily. Therefore, they face cultural change in permanent conflict;
3. The domesticated male, who is present in a relationship of equality because he is at an economic disadvantage with his partner, where the male figure is placed in a situation of inferiority, but the man consciously recognizes the merits of his partner and accepts to cede financial control of the family;
4. The modern male, which are those men who undoubtedly have the idea of equality between genders, value their partner for the mere fact of being their partner and are willing to participate in all productive and reproductive activities;
5. The campy male, which refers to those men who benefit from the presence of powerful

women, who allow them to be unconcerned about the family economy, are not interested in keeping a job or improving working conditions and are willing to collaborate in domestic tasks if they are unemployed; and

6. The power machine, which is used to recognize men who are always ready to seduce a woman and present themselves as conquerors alluding to the sexual liberation of women.

At this point, it is important to recognize that although there are new advertising strategies that promote a change in the representation of men in their content and messages, the heteronormative male figure continues to dominate advertising, so male identities continue to revolve around power and the economy, which is reflected in the reality of Mexico, where wage inequalities between men and women and access to decision-making spaces and power persist (World Economic Forum, 2021).

Method

This paper aims to analyze the representation of men and women in the advertising campaign "Juntos lo Hacemos Mejor" of the Mexican brand "La Villita" and its role in the construction of stereotypes and identities. For the evaluation of the advertising campaign, a content analysis was carried out based on the principles of femvertising proposed by Becker-Herby (2016) and adapted by Pando-Canteli & Rodríguez (2021) to analyze menvertising, which were grouped into five dimensions of analysis (Table 1).

Table 1 Principles of femvertising and menvertising advertising strategies by the dimension of analysis.

Dimension	Femvertising	Menvertising
Physical features	Intersectionality of women in advertising content	Various masculine traits in advertisements
Messages	Messages in favor of women, inspiring and inclusive, aiming at self-confidence	Messages in favor of new masculinities
Stereotypes and roles	Breaking gender stereotypes	Heteronormative limits of male gender stereotypes
Power and sexuality	Minimization of female sexuality	Minimizing male supremacy
Context	Authentic representation of women's interaction spaces.	Real men far removed from hegemonic masculinity

Note: Adapted from Montesinos, (2014) and Pando-Canteli & Rodriguez, (2021).

We agree with Pando-Canteli & Rodríguez (2019) when they point out that femvertising and menvertising do not function in symmetrical terms. Femvertising seeks to motivate women to break with the roles and stereotypes of domestic life, while menvertising promotes the incorporation of men in this private space, which from the dominant male roles and stereotypes are alien to them; however, this model of analysis was chosen because it allows us to compare in the same campaign both advertising approaches; from femvertising allows emphasizing women as the axis of the empowering message (Rodríguez & Gutiérrez, 2017); and from menvertising the adoption of domestic roles modifying the hegemonic traits of masculinity (Leeader, 2019), so this advertising can be considered *Profem Advertising*, whose messages invite reflection on feminism from advertising (Menéndez, 2019).

Based on the principles of femvertising and menvertising, a series of questions were established to analyze the representation of women and men in advertising (See Table 2). Subsequently, the discussion of these results is critically approached from the national context to recognize resistance from hegemonic masculinity and the importance of using ProFem advertising to modify stereotypes and gender roles and to think of an equitable topia between genders.

Table 2 Questions by the dimension of analysis and advertising strategy.

Dimension of analysis	Femvertising Questions	Menvertising Questions
Physical features	Does the spot show diverse female talents (women of different ages, classes, races, and complexion)?	Do the ads feature men of different races, ages, body features, and classes?
Messages	Does the ad contain pro-women messages (empowering women)? Does the ad contain inspirational and inclusive messages? Does the ad show women outside of private space activities such as home and childcare?	Does the advertising spot show the inclusion of men in non-traditional private activities such as care, housework, and fatherhood? Does the ad show men in non-traditional public space activities such as adventure, seduction, protection, professional success, and domination? Is masculinity that promotes equity between men and women encouraged?
Stereotypes and roles	Do the ad challenge stereotypes and gender roles traditionally associated with women (shows women in professional, sporting, competitive,	Are men presented in scenarios that are not associated with the roles and stereotypes traditionally associated with them?

	and social situations and not only in housework and childcare)?	Do the activities in the professional and domestic spaces where men present themselves to break with those associated with hegemonic masculinity?
Power and sexuality	Does the spot stop showing women as sexual objects? Doesn't the ad use the woman's body to promote the product?	Are power relations between men and women being questioned? Is the celebration of men challenged by the fact that they are men? Does sexualized change male attitude?
Context	Does the spot show the commitment to gender equality? Are the women and situations portrayed authentically? Are the product and brand presented in the context of the spot?	Are men presented away from heteronormative stereotypes of physical appearance? Are the men and situations portrayed authentically? Are the product and brand about to the context of the spot?
Identity	The ad shows new female identities (away from traditional and damaging stereotypes). Does the ad encourage the construction of new female identities that contribute to the modification of traditional stereotypes?	The ad shows new male identities (away from traditional and damaging stereotypes). Does the ad encourage the construction of new male identities that contribute to the modification of traditional stereotypes?

Note: Adapted from Montesinos, (2014) and Pando-Canteli & Rodriguez, (2021).

The questions were applied to an advertising campaign, which functions as a case study, since this method allows us to answer how a ProFem advertising strategy is developed and why they are present in current advertising content, in addition to allowing us to explore in greater depth and gain new knowledge about femvertising and menvertising, which are recently advertising phenomena incorporated into the scientific discussion (Carazo, 2006).

The brand: La Villita

La Villita is one of the dairy brands of Sigma Group with exclusive distribution in Mexico, which in 2017 launched a series of advertising spots for television, outdoor and digital media (Martinez, 2019), with a ProFem approach to make visible the household activities performed by women. The first campaign was titled "La deuda más grande de México" in which all the actions that housewives do without any pay are described, from nurses to experts in economics, psychologists, chefs, and historians (<https://www.youtube.com/watch?v=rG6zARFkTtg&t=9s>). For 2018, the campaign was called "Yo no trabajo", in which married men were asked "What

does your wife do?", and the majority answered: she doesn't work or does nothing. In the spot, it again recovers all the activities performed by women dedicated to the home (<https://www.youtube.com/watch?v=c5u9HCNlzKo>). In 2019, the brand launched "Naturalmente creemos en tí," which shows what everyday life would be like without women (<https://www.youtube.com/watch?v=vEcsLnTl4D4&t=2s>). Later, in 2020, the brand changes the context of the message, emphasizing that men should learn to do and share the housework. The campaign is called "Juntos lo hacemos mejor", while the spot is titled "La Escuela del Hogar" (<https://www.youtube.com/watch?v=GNXQJgTJwAE>); for 2021, the advertising spot "Detector de la desigualdad" is added to the campaign, which continues to promote democratic actions and equity in the home, both for men and women, but now not only includes the husband but also the sons and daughters (https://www.youtube.com/watch?v=yDO9B7_UXfs).

Case study: Advertising spot: La Escuela del Hogar.

The ad has a duration of 1 minute and 56 seconds and is divided into three parts; 1) Introduction, which shows domestic spaces; 2) Central idea, which is presented in an academy; and 3) Closing, they return to domestic spaces with the slogan of the campaign. The product does not appear at any point in the commercial. The commercial begins with a woman asking for help with household chores, followed by three more scenes in different homes. Women ask male family members to perform some domestic activity. The commercial continues with a series of reflections formulated by the protagonists. "So they do not have that ability?" (0:08) "Do they think that we were born knowing? Well, no, like everything else in life, this can also be learned" (0:23). This is followed by a scene where a classroom auditorium is observed, whose students are only men, and the phrase "Welcome to the school of the home. A school designed to do away with all excuses" (0:35). The following scenes show men taking cooking lessons, using a washing machine, feeding a baby, cleaning the home, and ironing clothes. The commercial features the men doing household chores and invites them to "Show how good you can be" (1:39). The commercial closes by saying that the best thing about this school is that it is not necessary to attend "because household chores are practiced at home because the home is no one's duty, but everyone's task" (1:49) and closes with scenes of women and men in different homes performing care activities.

Discussion of the results

The results of content analysis are presented by ProFem strategy in advertising spot; in the first one, the characteristics of femvertising and in the second one, menvertising are presented, to later give way to a discussion on the role of these strategies in the construction of identities, both in women and men.

Femvertising Analysis



Note: Available at <https://www.youtube.com/watch?v=GNXQJgTJwAE>

1. *The diversity of female talent*

The advertisement of La Villita presents women of different ages, complexion, and skin color, as well as of different social extracts, same that can be identified by the homes in which they are represented; they are also depicted in different occupations (professional women, mother, housewife), which are identified by the type of clothing and accessories they wear (Becker-Herby, 2016).

2. *Messages in favor of women (pro-women)*

The commercial seeks to encourage men's participation in household chores, "social change begins at home" (0:01). The women's discourse shows them in an empowered way, transmitting a message of strength, in which they ask men to perform some of the household activities, stating that if they can do it, so can they, "Do they think that we were born knowing" (0:21), "no, like everything in life, this can also be learned" (0:24), "because the home is not anyone's duty, but everyone's chores" (1:49). The discourse seeks to eliminate stereotypes and gender roles traditionally associated with women, replacing them with pro- women, inspirational and empowering messages (Becker-Herby, 2016; Abreu, 2016; Abitbol & Sternadori, 2016).

3. *She is breaking traditional stereotypes (challenging what a woman/girl should commonly be).*

Even though the commercial seeks to encourage empathetic, responsible, and cooperative behaviors in men in household work, it maintains the representation of women as the ones responsible and in charge of the housework, being the ones who know how to do household chores and should ask men to do things, to help—reinforcing the roles and stereotypes traditionally

assigned to women—Mainly, three roles assigned to the female figure can be distinguished: working woman, mother of the family, and homemaker, which coincide with the stereotypes identified by García (2005) and Rimbaud (2013) as the most common when representing the female figure in Mexican advertising.

4. *Minimization of female sexuality*

The commercial lacks sexualization of the female figure; the female body is not used in a suggestive way or as a sexual object, nor is it used to promote the product. Instead, the message seeks to encourage domestic activities to become a responsibility of both men and women, coinciding with the form of representation stated by Becker-Herby (2016) and Bayone & Burrowes (2019), which characterizes femvertising ads by not sexualizing the female figure.

5. *Authentic representation of women*

The situations presented in the ad revolve around everyday activities at home; women are shown authentically, without poses, in realistic situations and traditional scenarios (Becker-Herby, 2016; Paszek, 2018). They are exposing through discourse their commitment to gender equality and leaving aside the male optic as the axis or center of the advertisement.

6. *Identities*

The advertisement questions patriarchal practices about the traditional feminine identity, in which women are the ones in charge of household practices and do not work, so they are not financially independent. The construction of new feminine identities is encouraged, where women are seen in a position of leadership and decision-making, which coincides with the characteristics of new feminine identities identified by Montesinos (2014).

Menvertising Analysis



Note: Available at <https://www.youtube.com/watch?v=GNXQJgTJwAE>

1. *Diverse male talents.*

Schroeder & Zwick (2004), Luyt (2012), and Leader (2019) recover the hegemonic masculinity represented in advertising and its close relationship with power and hierarchy among men, which does not always involve the structural dialectics of class, gender, and race, but determine the relationships between men themselves, which can be analyzed at local and regional levels that give meaning to cultural reality and explain the dominance in society (Conwell & Messerschmidt, 2005). The La Villita commercial presents different male models from different generations: older men, adults, and young men; from different social extracts identifiable by the households shown: middle and high; whose explicit message is that housework is everyone's responsibility and men are not excluded because of their sex or their economic income. A particular characteristic of the commercial concerning race is that it shows the common traits of Mexicans; dark skin tone (to varying degrees), straight dark hair, brown eyes, high cheekbones, broad face, and sparse beard (Serrano, 2004), so the implicit message shows Mexican men taking responsibility for household and care activities, which contravenes the traditional representation of Mexicans in advertising that shows male domination and the celebration of men for being men (Plana & Silva, 2020).

2. *Messages in favor of new masculinities*

The commercial is a good example of how the images generated by the media can be modified and thus transform the traditional masculinity model associated with violent behavior or show male supremacy for alternative masculinities, in which men are presented with responsible and empathetic behavior with domestic work. The explicit message of the commercial focuses on generating ways of life where gender roles are demystified, starting with the distribution of domestic work in an equitable manner among household members "Sharing household chores are something that is practiced at home because the home is no one's duty, but everyone's" (1:48), accompanied by affirmative scenes of interaction among family members, which promotes the celebration of this type of masculinities (Pando-Canteli & Rodríguez, 2021).

3. *Heteronormative limits of gender stereotypes.*

The advertisement breaks the boundaries of gender stereotypes of hegemonic masculinity through the representation of men in domestic settings that are not traditionally associated with dominant masculine traits, such as the kitchen within a home, and not in public spaces of power such as offices or driving a sports car. Men are presented whit cooking, washing dishes, and ironing clothes, defying traditional gender roles and stereotypes. They are refraining from reinforcing male hegemony and launching a positive message by claiming to participate in areas from which men have been culturally excluded (Pando-Canteli & Rodríguez, 2021).

4. *Minimizing male supremacy*

The ad directly challenges the sexualized male gaze and becomes an invitation to build new masculinity that derives from a current social construction, in which domestic activities are de-feminized and become a joint responsibility, so that today more than ever, men are being encouraged to contemplate images of other men, to transform themselves (Paterson & Elliott, 2002). The commercial promotes the equity of domestic work in men and women, evoking that they can surpass themselves and be the best ironers in their homes.

5. *Real men*

Although the situations presented do not revolve around the product (dairy foods), they do revolve around the activities associated with it, such as cooking and food preparation, but the representation of men in natural situations that occur in everyday life, such as dirty dishes in the kitchen or freshly washed clothes, stands out; even, men appear wearing conventional clothing without highlighting the normative ideas about their body and physical appearance, so an empathetic narrative is adopted that seeks identification with the consumers of the new male practices (Padilla, 2016) and breaks with the idealization of bodies as an element of normalized change (Paterson & Elliott, 2002).

6. *Identities*

The spot bets on a change in masculine identities, questions the paternal practices developed in the traditional masculine identity, and sustains the emerging discourse of fatherhood (Sosenski, 2014) and involved in their care and upbringing of them. It even shows sons involved in domestic chores such as washing dishes or ironing clothes, reflecting a changing social landscape that makes less rigid distinctions between feminine and masculine (Bartholomaeus & Tarrant, 2016; Wentzell, 2013a, 2013b).

Among the main findings, it is possible to point out that even when the advertising spots do not openly declare themselves as femvertising or menvertising strategies, they comply with the principles proposed for the analysis because they show an age, ethnic and corporal diversity of both men and women; they promote positive messages about equity in care and household activities; they show men and women performing the same domestic activities, without the existence of a power relationship or sexualization of the protagonists of the spot; the situations revolve around domestic activities, through an empathetic narrative, without being placed in a male perspective, in a way that questions the traditional identities of men and women, showing emerging masculinities focused on the idea of gender equality and femininities oriented to decision making, in which the idea of the domestic and private as part of the sexual division of labor assigned is deconstructed.

When analyzing the femvertising strategy, we agree with the pillars identified by Becker-Herby (2016), women are represented in authentic contexts, with diverse physical characteristics, such as age, complexion, and skin color, with inspiring messages that promote changes to the

reality of domestic work experienced in Mexico. However, it does not modify the traditional roles since it presents women in the traditional stereotypes associated with their representation in advertising: housewife, mother of family, and working woman (García, 2005; Rimbaud, 2013). What is evident is the minimization of female sexuality in the representation of women in the spot (Bayone & Burrowes, 2019), where although it is true, the product being advertised is not the axis, and neither is the female figure. The commercial questions the traditional patriarchal practices about female identity, encouraging the construction of new female identities and placing women as human beings capable of making decisions, which coincides with the characteristics of the new female identities identified by Montesinos (2014).

The results on menvertising allowed us to discuss the works of Schroeder and Zwick (2004), Luyt (2012), and Leader (2019), which point out that male representation in advertising is related to power; however, our results allow us to identify a representation of Mexican men taking responsibility for household activities and care, accompanied by affirmative scenes of interaction between family members, promotes the equity of domestic work between women and men, an empathetic narrative that seeks identification with consumers of new masculine practices (Grau & Zotos, 2016) and questions paternal practices on traditional male identity and supports the emerging discourse of responsible parenthood (Sosenski, 2014).

Conclusions

During the selection and documentation of the advertising corpus of the research, it was possible to identify that the spots of the campaign, in addition to being available on the YouTube platform, were broadcasted on open television at night during the programming of soap operas, with very few spots during sporting events. The message is therefore received more by women than by men, and awareness of the need to transform roles and stereotypes does not occur at the same juncture, can lead to conflicts due to the gaps that are generated in the processes of social transformation, in which women demand greater equity and men do not identify or recognize the origin of these demands; In this sense, we agree with Patterson & Elliot (2002) on the need to question the true intention of advertising, as well as the scope of femvertising and menvertising, since by increasing the feminization of masculinity reflected in advertising campaigns, far from readjusting the counter-hegemonic forces of the patriarchal structure, it seems to protect the dominance of the consumer society, therefore, they can be considered as washing advertising strategies: femverwashing and menverwashing.

Concerning the role of advertising in the construction of new masculine and feminine identities and stereotypes, we consider that it plays a strategic role since advertisements influence how we think about masculinity and femininity (Goffman, 1979); however, we also believe that it is a high risk to assume that sex-differentiated strategies can modify heteronormative conceptions of identity, traditional gender roles and limit the consumer's body to new forms of masculinity and femininity.

Certainly, identities, both masculine and feminine, cannot be considered as a sexual or bodily characteristic even a personality trait (Connell & Messerschmidt, 2005; Montesinos, 2014), since these are the result of the configuration that occurs from social interaction and cultural influence, so gender identities differ in particular environments (Connell & Messerschmidt, 2005) and these interact with the consumption of images, products, and desires that are represented in advertising, so these representations play a central role in the formation of conceptions of masculinity and femininity (Schroeder & Zwick, 2004) and advertising strategies, although they may be questioned, produce and reproduce social signifiers, hence the importance of modifying the representation of men and women in commercials, since it can be a tool that not only promotes consumption but also modifies dominant gender preconceptions.

At this point, it is necessary to recognize the limitations that were presented during the research work, such as the reduced amount of empirical work that precedes the present one, because the advertising strategies femvertising and menvertising have been included in the research agenda in the last three years; additionally, the content analysis was carried out on the advertising campaign of a Mexican brand of national scope and only included the last spot; The collection of empirical data from consumers to analyze how these advertising strategies contribute to the modification of identities between women and men was also not included as part of the research objectives, because there are no scales for their measurement, so the design of measurement scales on these variables can be marked as a pending research agenda.

Concerning the practical and social implications of the research project, it is possible to recognize that by analyzing the contents of advertising strategies that promote gender equity in the roles and division of labor, as well as the modification of traditional stereotypes associated with women and men, it is possible to identify the implications they have in the formation of new femininities and masculinities, that move away from an unequal distribution of power and come closer to showing spaces of equity between both of them so that they can be used by those responsible for the design of advertising campaigns, in which it is possible to deconstruct the scope of advertising and its message in favor of a more just and egalitarian society.

Finally, we can recognize that the main contributions of the research work are found when analyzing femvertising and menvertising in single advertising content because both can be considered ProFem strategies since they promote the change of paradigms concerning stereotypes and roles of women and men. However, it is possible to discuss these advertising strategies as a washing tool to clean up the brands, which seek to legitimize their social responsibility.

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DXB211

Customer Engagement in branded mobile applications in a banking context in Mexico

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ABSTRACT

Introduction: The growing popularity of information and communication technologies and systems is forcing companies to develop new channels of communication and relationship with customers, promoting forms of interaction different from traditional models, where the customer becomes an active and important part of the production and communication of companies. Given this scenario, mobile applications are a golden opportunity for brands to be able to communicate directly with their consumer and go beyond customer satisfaction and loyalty.

Objective: Propose a model that determines the variables that generate and precede brand app engagement in the banking context of the Mexican user.

Methodology: The structural equation model was applied using PLS. The data was obtained from a survey of 148 users of Mexican banking applications.

Results: The empirical findings show that in the case of the Mexican user, perceived utility, hedonic value, and technical value have a positive and significant impact on brand app experience, and this, in turn, on brand app engagement and WOM. In addition, brand app engagement positively impacts WOM.

Limitations: In order to achieve the stated objectives, this research involved carrying out an empirical test with a cross-section and a specific segment of the consumer (banking clients who use the brand application between 18 and 40 years of age), leaving out other generational cuts that would allow comparing the different behaviors and perceptions of the client according to age. Another limitation of this study is that only one category or type of application was considered, utilitarian apps, in this case in the form of a banking app. However, this study can be extended and replicated in the future in other utilitarian applications (for example transport network companies, retail or retail purchases, and sales) or even in hedonistic applications (games or relaxation), so

that it would be possible to compare between them the differences that the consumer presents when using them.

Practical implications: This work proposes a model that explains the customer engagement of users in banking applications, identifying the impact that the customer experience has regarding the engagement that it generates both for the application and for the brand, and towards the WOM. The results help professionals and academics understand the role that brand applications play in a marketing context, facilitating the setting and implementation of the most appropriate marketing strategies concerning the customer journey according to the customer's profile and the type of industry.

DXB220

Rock en tu idioma, the nostalgia of the lost youth

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ABSTRACT

Through a historical account, this case analyses and documents the development and launch strategy of the label *Rock en tu Idioma* (Rock in your language), which is fully identified as synonymous with rock sung in Spanish among Generation X. After having enjoyed popularity with the baby boomers, Mexican rock was marginalized in the early 1970s. However, after a demographic and social change, the conditions were right to re-introduce and develop the rock music market in Mexico. Nearly 30 years after its original launch in 1986, the *Rock en tu Idioma* label has been relaunched across various products using nostalgia as a way to idealize a past. This strategy has remained profitable until today, taking advantage of the economic conditions currently enjoyed by people who are leaving their 40s behind and entering their fifties. It can be seen that the characteristics of the market are very similar to the Anglo-Saxon rock market of the boomer generation. This work was carried out by doing bibliographical and hemerographical research, including interviews with musicians and journalists who were part of the original branding set up, to trace the brand's development strategies as well as the marketing of nostalgia.

Keywords: Recording Industry, Music, Latin Music, Rock en tu Idioma, Nostalgia, Generation X, Brand Communication.

INTRODUCTION

At the end of the Second World War, a period of industrialization and economic improvements in the middle class started, leading to the emergence of a new consumer segment, the adolescents, accompanied by a "youth culture" (Feixa, 2006) which served as a basis for the cultural revolutions of the twentieth century. These social and cultural changes were manifested in youth's behaviors and customs, especially in the way of using their leisure and the free time now enjoyed by those young people (Chaparro Hurtado and Guzmán Ariza 2017). This youth culture brought a musical consumption that to this day has been a reference to cultural and social changes, and manifestations in the world (Gómez Ramírez, 2013: 18).

Teenagers (the period between the ages of 13 and 19) were now the subjects of a new market that created their own role models, such as Marlon Brando, Elvis Presley, and James Dean. This teen culture expands globally, driven mainly by the success of a popular rhythm among them: Rock and Roll, which emerged in the mid-1950s and became a musical form specific to this adolescent consumer (Gómez Ramírez, 2013).

Rock and Roll, the white version of African-American Rhythm and Blues (Britannica, n.d.), was popularized by Elvis Presley from Memphis and soon the white youth of the United States began to consume this new musical craze. New idols were born, all of them youngsters with no more than 18 years old. This new market became international, spreading throughout practically the entire world, becoming the first global popular culture (Feixa, 2006). The phenomenon did not go unnoticed by record companies, film producers, and television (which was experiencing its golden age). Soon, big corporations understood that there is a youth market behind this youth culture, and rock represented a product teenagers consume.

As these teenagers get older, their references to youth begin to idealize and awaken a nostalgia for times gone by. The idea that everything past is better is a recurring theme when we talk about times gone by, an idea that in 1979 Fred Davis defined Nostalgia as a longing for the past, or a "longing for yesterday". This idea is taken up by Holbrook & Schindler (1991), who defined it as: "a preference (general liking, positive attitude or favorable affection) for objects (people, places or things) that were more common (popular, fashionable or widely circulated) when one was younger (in early adulthood, adolescence, childhood or even before birth)".

In general, consumer nostalgia for an idealized past is a concept that corresponds to "Nostalgia Marketing", where those positive ideas for people, places, and things of the past are used by marketing (Cui, 2015), often to bring back a product that was already out of the market, or to relaunch one that still exists but to which certain changes have been made precisely to evoke that past, as happened with the updated versions of the Fiat 500, Mini Cooper or Volkswagen Beetle cars (Pattuglia, 2011; Aytakin & Ayaz Yapicioglu, 2018).

Regarding music, we can draw a parallel with the Baby boomers (born between 1946 and 1964), which as they began to get older, also started to look for objects from their past, translating into the consumption of music compilations with songs that were popular in their youth, mainly rock and roll (Shumway, 1999). Even more, as they entered retirement age and therefore had free time and some financial relief (James, 2013), some began to play again, now being able to buy musical equipment they wished they had in their youth and forming bands with their contemporaries (King, 2021).

This strategy has been recurrent, repeating itself with Generation X, which is already in its fifties and seeks to consume objects from its youth. The commercial objective of exploiting nostalgia in the music industry given the economic power of the baby boomers and generation x of an idealized image of the "best years of rock" has achieved the return of vinyl records, the return of bands that had disappeared, and now tours the world playing hits from 30 or 40 years ago, even being more profitable than many new bands (Weinstein, 2014).

First Mexican rock market

In the late 1950s, rock and roll arrived in Mexico, initially as another dance craze such as mambo or chachacha. The first attempts at rock in Mexico were made by Big Bands oriented to dance floors, almost always "rockanroles" (rock songs) interpreted by adults and not by young people (Zolov 1999: 62-66). Initially carbon copies from the records coming from the United States: a solid rhythmic base supported by blues' harmonic structures and using amplified electric

instruments (Granados Sevilla 2016). An exception was *Los Locos del Ritmo*, who in December 1958 began recording a rock and roll LP with the characteristic that 70% of the songs were originals and not covers from American bands. The record company did not see any commercial potential and the album was not released.

However, everything changed when in 1960 two groups achieved radio success, *Los Camisas Negras* with the single "La Batalla de Jericó" and *Los Rebeldes del Rock* with "La Hiedra venenosa". It was from this success in April 1960 that the record companies in Mexico began to look for new groups playing this rhythm. Soon they signed groups of young people formed between 1958 and 1960 who were already playing rock songs, translating into Spanish the hits they had on the other side of the border. In this way, success was guaranteed. Particularly the Mexican record label *Orfeón* was interested in these groups, at some point having 80% of the productions of that decade (García 2019) but also larger companies, such as *CBS*, released Mexican rock bands.

This first rock and roll was absorbed by the industries and media, which were in charge of transmitting the traditional values of the Mexican middle class. "Hiedra venenosa", a hit by *Los Rebeldes del Rock* was a cover of "Poison Ivy" by the American band *The Coasters*. In the Mexican version, the theme of venereal diseases, present in the original composition, is toned down to change it to that of a young woman who falls in love with the boys again. The rebellion was contained by the commercial interests of the record companies. They managed to get rid of the singers of the main rock groups and developed them to turn them into a new product: romantic ballad singers, aseptic and starring in movies where, after having offended their family and society by being rebels, they redeemed themselves before the omnipresent and self-sacrificing Mexican mother. Harmful elements that threatened the patriarchal family and the authoritarian state of the fifties were eliminated from Mexican rock was purged of the harmful elements (Granados Sevilla, 2016: 160).

The formula proved to be successful and soon the whole country was full of juvenile rock and roll groups, which shared bills with ranchera and tropical music singers. Mexico City concentrated most of the Mexican rock market, in addition to the fact that the headquarters of the most important record labels were located there. For the same reason, bands from all over the country arrived in the capital looking for opportunities. Especial mention should be made of the bands from the north of the country, which had begun to arrive in the late '60s, especially those coming from the border, full of other influences and new rock trends, who had made a name for themselves in the bars playing rock covers in English to entertain the North Americans who crossed into Mexico for fun. Because of their use of English, they began to be called *La Onda Chicana* (the Chicano wave) groups.

The peak of the *La Onda Chicana* occurred between 1970 and 1971 (RublÍ 2016: 8-9), then a decline began after what happened in Avándaro, State of Mexico. On September 11, 1971, the *Rock y Ruedas* (Rock and Wheels) festival took place there, with the idea of a car race and a concert with some of the hottest bands of the moment. The crowd was much larger than expected and the race did not take place, attendees were estimated by between 100,000 and half a million people (RublÍ, 2016). The concert, broadcasted live on radio, was taken off the air when one of the bands invited the audience to sing, using high-flown words, prohibited by the communication laws

of the time. Days later, radio stations stopped promoting concerts, in addition to prohibiting the places where rock bands performed and denying permits to bring in foreign bands.

In addition to these facts, the new government presented to the world a political image oriented towards the left. Rock was now seen as a movement with imperialist overtones, giving preference instead to a style of music called *canto nuevo*, heavily influenced by Cuban *trova*, Mexican folk music, and Andean music. The educated middle class readily accepted those genres, which were seen as “ours”, whose shows and presentations had the support of the government, opening doors for them in the media, while rock music was something “foreign” and undesirable (Arana 1988: 25-36; Nudelman 1987: 84). After enjoying the preference of the middle class since the 1960s, Mexican rock moved away from them, being implicitly banned by the government (Arana, 1988). By the end of the 70s disco music was the musical genre that the Mexican middle class had massively accepted.

Demographic changes

Paradoxically the new approach to rock music in Spanish began through children oriented groups. Born between 1965 and 1975, at the beginning of the 80s, a generation of children and teenagers were growing up accompanied by boybands which enjoying popularity in the first half of that decade. Those Latin Americans Gen Xers were also exposed to massive concerts thanks to the success of these boybands (Roura 1984: 1976-1986). Although the songs were not strictly rock, radio waves were filled with music containing elements close to that genre, and more importantly, they were singing in Spanish (Agustín, 1992; Arana, 2002). The repertoire of these kid's groups was composed of songs that moved away from the traditional children's themes, focusing on poppy love or school issues.

Possibly *Parchís* was the first of this new wave of children-oriented groups. Formed in Spain in 1979, *Parchís* enjoyed success first in the Spanish market and shortly after in Latin America, selling millions of records and performing throughout the continent. Almost at the same time *Menudo*, a boyband from Puerto Rico, arrived to target a female adolescent market, repeating the success of *Parchís* and having several hits on the radio. Soon, regional versions of these bands were created in Latin America and sponsored by the powerful national network Televisa in Mexico emerged *Timbiriche*, a children's band introduced to the market by the Spanish pop singer Miguel Bose (De Llano Macedo 2016: 143-151), Puerto Rico created *Los Chicos*, and Venezuela tried with *Chamos* (El País de Uruguay 2007). *Parchís*, *Menudo*, and *Timbiriche* became big record sellers in the 1980s (Agustín 1998: 93; Arana 2002: 93).

Many of the themes sung by those groups were covers of rock or disco music. Spanish versions of hits can be heard in some songs by *Parchís* ("Video killed the radio star" original from the British new wave band *The Buggles*), *Chamos* ("Canta chamo" cover of the disco song "Crazy music"), *Timbiriche* (the Spanish version of "99 red balloons" from the German band *Nena*), or the Mexican pop star Luis Miguel releasing an album of rock covers in 1983 (Arana, 2002: 463). Not coming from the Mexican rock circuit but with a "rock" sound and a modern look, big media groups promoted teen groups such as *Ciclón*, *Flans*, and *Oky Doky*, to name a few.

At the same time, in Mexico City, a small circuit was developed in university auditoriums, clubs, some discotheques, and cultural centers that opened spaces for rock bands to play. Some radio programs, especially on college radios and cultural stations, included programs airing rock in Spanish. Magazines specialized in rock dedicate issues or articles on new genres of rock music such as new wave or post-punk (Schmidt 2015: 20-21). Because of that, new Mexican rock bands started to leave the underground circuits and even more, playing in some TV programs that were broadcast nationwide (De Llano Macedo 2016) 165-167.

In 1980 the progressive Mexican band *Chac-Mool* released *Nadie en Especial*, their debut album. The market for national rock was not considered important, usually having bad store distribution and null promotion in the media, closed for Mexican rock in those years. Phillips, their record company, gave them a fair budget for the graphic work, having a double cover, and some vinyl were edited in different colors. Few years before those was something impossible for a new Mexican band. The group achieved good sales and got a contract for three more albums, always supported by major record companies: Phillips, Polydor, and Warner respectively. In a way, *Chac-Mool's* venture opened the door for the progressive rock scene that took place in the country's capital at the beginning of the decade. This modest success encouraged bands with fresher sounds to release their material, even independently (Carranco 2015) and some record labels saw commercial possibilities attracting a new public.

New attempts were made by record labels with a catalog made exclusively of modern Mexican rock. *Dangerous Rhythm* considered the first Mexican punk band, released their only LP independently, supported by the record store *Hip 70*. The album, with Afro-Latin overtones, moved away a bit from the more punk and aggressive sound they had shown in their 1979 single album. In 1981 *Polygram* signed *Sombrero Verde*, a band from the city of Guadalajara that had a sound called *New Wave*, very close to the British band *The Police*, releasing their eponymous album that year. In 1984 the transnational *Vertigo* recorded *Lynx*, a heavy metal band from Sonora. In 1985 the transnational company *Polydor* released the first album by *Botellita de Jerez*, a group that used popular Mexican language in their lyrics. These small facts allowed the middle class to approach Mexican rock again and, if a proper strategy was drawn up, it was possible to be successful with *rock en español*.

First attempt to develop a market

Although previous independent labels such as *Cisne-Raff* supported groups of the so-called "Onda Chicana" in the '70s, they also had ranchera, ballad, and tropical music groups in their roster. There was no exclusive dedication to promoting Mexican rock and, very importantly, the label disappeared with the 1985 earthquake when its offices collapsed, thus stopping his discreet support for Mexican rock. As the decade progressed, the emergence of new groups also presented a larger kaleidoscope of different styles and influences, especially since it was not only Mexico City that contributed to these groups (Paredes Pacho, 1992) 12-13. Anyway, this support for Mexican rock groups was anecdotal, since the marketing efforts to promote them were minimal. The labels were focused on more profitable artists, whether British or American rock groups or popular genres in Mexico such as ballads, pop, or regional Mexican music.

Comrock (compañía de rock, or rock company as in English) is possibly the most notable example of a company dedicated 100% to promoting Mexican rock. The founders were Ricardo Ochoa, Kenny Avilés, both from the band *Kenny & the Electrics*, Chela Braniff, and Juan Navarro, a Spaniard who had had some experience within the so-called "Movida" in Spain. A few years earlier, driven by the social and political changes that took place after the death of Francisco Franco, Spain had entered the 80's with a contracultural movement initially centered in Madrid, called "Movida Madrileña", later shortened to "La Movida" (the movement), and widespread to other cities, focused in cinema, painting and more notoriously in music, where a large number of young rock groups emerged. It was basically the arrival of "Punk" and "New Wave" music in Spain.

Navarro was confident that the same could happen in Mexico with Mexican groups. One of the first decisions of the company was to translate to Spanish the name of many of the bands they signed: *Three Souls in My Mind*, a band active since Avándaro, changed its name and be known now as *El TRI*; the punks *Dangerous Rhythm* became *Ritmo Peligroso*, where the Latin sounds and the use of instruments such as congas became a fundamental part of their songs. *Kenny & The Electrics* became *Kenny y Los Electricos*. Also, *Comrock* added three bands from Guadalajara, *Punto y Aparte*, *Mask*, and *Los Clips*. A coupled album was released with all of them but *El TRI*. The Album comprised songs in English and Spanish.

In additionally to the first bands presents in the coupled album, more groups were signed by *Comrock*, releasing a wide collection of genres of rock: Heavy Metal groups (*Luzbel* and *Ramses*), pop-rock (Alex Phillips III), electronic music (*Casino Shanghai*), jazz-rock (*Guillermo Briseño y el Séptimo Aire*), as well as two foreign bands, *Asfalto* from Spain and *WAG* from Venezuela. This diversity of styles is shown in Table 1.

Table 1: Selected *Comrock*'s discography

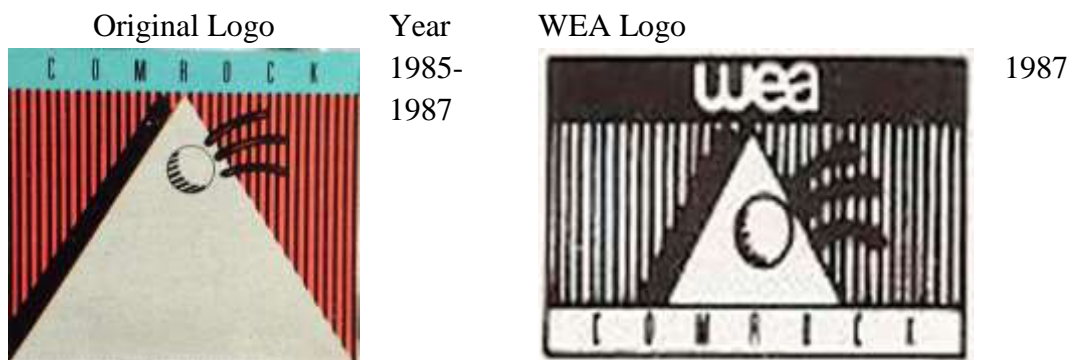
Band	Record name	Genre	Catalog number	Origin	Year
Various	Comrock	Various	CRM 2001	Mexico	1985
Luzbel	Metal Caido del Cielo	Heavy Metal	CMRM-2002	Mexico	1985
El TRI	Simplemente	Rock and Roll	CRM2003	Mexico	1985
Ritmo Peligroso	En la mira	Latin Rock	CRM 2004	Mexico	1985
Kenny y Los Electricos	Juntos por el rock	Rock	CRM2005	Mexico	1985
Mask	The Fox	Hard Rock	LMMR 2006	Mexico	1985
Casino Shanghai	Film	Synth-pop	CRM 2007	Mexico	1985
Ramses	Apocalipsis	Heavy Metal	LMR 2008	Mexico	1985
Asfalto	Cronophobia	Progressive Rock	LRM-2009	Spain	1985

Band	Record name	Genre	Catalog number	Origin	Year
WAG	Más y Más	New Wave	LRM 2010	Venezuela	1986
Montana	Quiero Más	Pop Rock	LRM-2013	Mexico	1986
Alex Phillips III	Alex Phillips III	Hard Rock	LRM-2014	Mexico	1986
Guillermo Briseño	Briseño y el Septimo Aire	Jazz Rock	LRM 2015	Mexico	1986

Source: Discogs.com and author’s private collection.

The company produced two videos, a novelty in the Mexican music industry, one for *Ritmo Peligroso* and another for *Kenny y Los Electricos*, aired nationwide through Televisa, the most important private media network in Mexico. Despite those efforts, *Comrock* faced a lack of promotion as well poor distribution in record stores. Although a great economic work was made to release the vinyl and tapes, this was not matched by the respective TV presentations and radio airplay (Nudelman 1987). In 1987 the company’s catalog was sold to WEA (figure 1), just when the popularity of *rock en español* was growing, although this time it was no longer under the work of musicians who wanted to push rock and unearth it from where it was stuck, as *Comrock* had done. Now, this impulse came from transnational record companies that saw a niche market with economic potential.

Figure 1. *Comrock’s* logo before and after WEA’s purchase



Source: Discogs.com

Rock en tu Idioma campaign

One of the ingredients that achieved this change was the “Primer Encuentro de Rock Iberoamericano” (First Ibero-American Rock Encounter) on November 28, 29, and 30, 1986, held in Madrid, Spain. There, in addition to symposiums and talks with record company executives, some bands from Argentina, Brazil, Chile, Spain, Mexico, and Venezuela performed (ABC 1986). The meeting, organized by Spanish singer Miguel Rios, analyzed the new youth markets and their economic potential. Among the panelists was Carlos Narea, a Chilean producer with experience in Spanish rock, he had produced groups that became famous inside “La Movida”. Narea saw possibilities in Spanish rock in Latin America, especially because it was a geographical area that

shared the same language and had a large number of young people, but was disconnected from each other (Alcanda, 1986).

Another key element was the Argentina case. A few years before, in 1983, Argentina went to war against the United Kingdom for control of the Falklands Islands. Among the decisions that the military junta of the South American country took to make propaganda against the United Kingdom was to eliminate British groups from the radio and instead of them, to program Argentine bands, indirectly boosting local groups (Hernández, 2012).

A demographic factor was another element, as the years passed the age of this youth market grew. If in the year 1980 those children exposed to modern music in the early 80s were 10 years old, by 1986 they were leaving childhood behind or had fully entered into adolescence, an attractive demographic moment from the point of view of sales. It was observed that some of them were interested in rock, even some singers in boybands. Original members of these youth bands embarked on the adventure as soloists or were interested in other genres. It is worth noting the case of the Venezuelan *Chamos*, now transformed into *WAG*, a synthpop band that, as mentioned above, was signed by the Mexican *Comrock*, which, anticipating that business vision, included them in its catalog of groups in 1986. This phenomenon was detected by other record companies, discovering a very attractive potential market economically speaking (Alcanda, 1986). The time seemed right for starting an Ibero-American market with groups singing in Spanish.

The strategy of recording groups in Spanish and launching them with great promotion to the Mexican market was first presented to *CBS*, but the company showed no interest. However, *BMG/Ariola* took the idea and developed a strategy of issuing a series of records enclosed under the umbrella brand of *Rock en tu Idioma* (Rock in your language) label for the Mexican market, becoming the first mover (Bravo, 2018). The marketing campaign was directed by Heber Pompeyo, an executive who already had experience in the Mexican market, he had released legendary bands like *Led Zeppelin* and *Rolling Stones* in the country. Among other works within his career was responsible in the 70s for the LP series named *Rock Power*, where he even dare to include the Mexican band *Toncho Pilatos* despite the repression after Avándaro. Later he also started the series *La Cultura del Rock* and *Rocker* (Notimex 2009).

The first step, in 1986, was to release reissues by Spanish and Argentine bands that had already been successful in their own countries, all of them having the label *Rock en tu idioma* on their sleeve (See figure 2). Four Mexican groups were added that same year: *La Cruz*, a hard-rock band from Tijuana formed in the 70s; *Asha*, a heavy metal band from Ciudad Juárez sponsored by the Mexican pop icon Juan Gabriel; Víctor Manuel Lujan, a radio DJ with wide experience in rock content in several radio stations. Finally, the fourth band was *MCC*, from Mexico City. Originally a progressive-rock band that had now switched to synth-pop. None of these Mexican bands achieved great success on the radio. Even so, the commercial potential of rock in Spanish was demonstrated with the Argentine and Spanish bands topping the Mexican charts, so in 1987 a national contest was held looking for Mexican groups.

Figure 2. Comparison between different sleeves used for *Rock en tu Idioma*.



Source: Discogs.com

Demo tapes from the whole country were sent to the contest, to select only 22 to compete. The promises of releasing albums for the first three places did not materialize, except for *Los Amantes de Lola*, winners of the contest. The second and third place, *Huizar* and *Canal X*, respectively, only appeared on the double album that came out with the 21 finalist groups (Messeguer Lamas, 2020). The long play and cassette had a bad distribution in record stores and practically went unnoticed.

The commercial risks of the label were not focused on the finalists of the contest, forcing some of the contenders to release their albums independently. Instead, the marketing effort was focused on three Mexican bands that did not participate in the national competition: *Caifanes*, *Neón*, and *Alquimia*, a female singer playing synth-pop. BMG produced their debut albums and a 12" EP for each of them in 1988, all under the *Rock en tu Idioma* series. *Caifanes* took off more commercially, achieving commercial success in Mexico, Latin America, and the Latino community in the United States. *Neón* managed to release a second album before disappearing; while *Alquimia* only recorded an EP and an LP before ending its relationship with BMG.

The New Market of Rock in Spanish

Driven by the success and realizing now that a new market with bands and listeners existed, other record companies began to imitate BMG/Ariola's strategies: recording Mexican groups, as well as bringing Spanish and Argentine bands that had been already successful in their countries. Thus, in 1988 CBS created the label *Rock en Español* (Rock in Spanish), Polydor also reissues some Spanish groups in Mexico and Polydor ventured with *Kerigma* in 1987, another group that had started in the progressive rock and was now playing pop rock. EMI created the series *La Movida esta en EMI* (The Movement is in EMI, using the famed Spanish cultural movement called “Movida” as a keyword). Local commercial radio stations began to include Mexican rock again, adding college radio and cultural stations and some independent ones. Even at the time when the *Rock en tu Idioma* brand began to boom, there was an AM station in Mexico City dedicated exclusively to rock in Spanish: *Espacio 59*.

In 1989 *La Maldita Vecindad y los Hijos del Quinto Patio*, a ska-oriented band was launched to the market, enjoying success and popularity. Previously, in December 1988, *Caifanes* recorded the single *La Negra Tomasa*, a Cuban tropical song that they used to rehearse and also to play in their concerts for fun. The single was originally thought to be a kind of Christmas present for true fans, but surprisingly the song started to be played not only in rock-oriented radio stations but also among Mexican regional music, dominating the charts in 1989 and selling 600,000 copies, an unprecedented for Mexican rock. The commercial door to Mexican rock was opened and it grew in the following decade (García, 2020), starting with two rock-pop bands who published their debut albums: *Los Amantes de Lola*, winners of the national contest, and *Fobia*. By 1991 there were more than 100 Mexican rock recordings (Paredes Pacho 1992), and although only seven were on major labels, the rest were independent. The nineties consolidated the appearance of new independent record companies and, no matter what record label they were on, *Rock en tu Idioma* became the generic name to identify the bands that sang rock in Spanish.

With the new decade, BMG Mexico launched in the year 1992 a sub-label named *Culebra* and managed by Humberto Calderon, former singer of the group *Neón* (Rock 111, 2022). The roster included Mexican bands that didn't have a massive following but did have cult popularity. A year later *Culebra* started to issue bands from Chile and Colombia, later adding Spanish and Argentinean ones. The idea was to promote them all within the American continent, not only in Mexico, so in 1994 *Culebra* was introduced in Chile (*Culebra*, n.d). A year before, in 1993, MTV began to broadcast from Miami to Latin America with content entirely made up of bands from practically the whole continent doing rock in Spanish. This boosted, even more, the exposure that the bands had, since now their coverage was continental, as MTV broadcast the signal throughout the Spanish-speaking zones of America.

The Mexican market was dominated by groups from Mexico City, or sporadically some from Guadalajara until 1995 when a band from Monterrey, *Zurdok Movimiento*, later only *Zurdok*, won the traditional Battle of Bands contest in Mexico City (Notimex 2019). Record companies approached Monterrey to see what was happening in the city and found a music scene where groups from different genres, as disparate as hip-hop, rock, ska, pop, or cumbia, coexisted and shared spaces to play. All of them were pigeonholed with the label of *Avanzada Regia*, (*Regia's* Advanced, being *regio* or *regia* the demonym for the people from Monterrey). This label is

attributed to the journalist Ricardo Bravo, who used it as a way to identify groups of various genres that came from Monterrey and broke into the Mexican market (Ontiveros 2020). The first group to be signed by a large label was a hip-hop trio named *Control Machete* in 1996 by Polygram (Notimex 2019).

Most of the groups from *Avanzada Regia* were signed by the multinational Universal, which launched them within the sub-label *Discos Manicomio*. As BMG had done 10 years before, Universal also released a couple of albums by Spanish and Argentine groups, although the label concentrated on Mexican groups. Given the popularity rock in Spanish was enjoying, Universal included reissues of out-of-print Mexican records from the 1970s, from the post-*Avandaro* years.

Market changes and Nostalgia

In the second half of the 90s, the musicians who started within *Rock en tu Idioma* were now over 30 years old on average, giving way to new bands in their twenties. At the same time, the original listeners who grew up with the brand were no longer teenagers. The CD was still the most popular recording medium (Waniata, 2018), and its price was not cheap for the standard of living in Mexico, so the appropriate target market was those nostalgic for their younger years who now enjoyed a comfortable economic position as many were already in the workforce and had the resources to buy records and attend concerts.

The conditions for nostalgia marketing were in place and were not wasted, releasing the compilation as a celebration of 10 years of the label's launch. In 1997 BMG released three compilations on CD that brought together hits from groups from the 80s, 10 years after the release of the first generation of *Rock en tu Idioma* bands. Included in these albums were bands that had not been part of the original campaign, even those who recorded for other companies, but who were identified with the label since they sang in Spanish and had been constantly played on the radio in those years.

By the end of the 90s, musical tastes began to change, and rock in Spanish was losing popularity with the arrival of other popular genres, such as electronic music. Some of the most popular groups disintegrate and their members start other projects that do not reach the expected popularity (Domene, 2017). Another important factor that begins towards the end of the 20th century is the arrival of mp3 files and the ability to make copies of CDs, so the music industry begins a crisis that increases even more in the 21st century with digital downloads (Lynch, 2022).

In the 90s, music sales were high, initiating the major labels to acquire independent labels with popular or top-seller artists. By the end of the century, as sales had plummeted, there were only six dominant players: Warner, Universal, Sony, BMG, EMI, and Polygram. By 2012 only three big labels are still dominating the market: Sony-BMG, Universal, and Warner (University of Minnesota, 2016). As record sales dwindled, record companies were reducing their roster of bands, causing the groups that remained active to seek refuge with independent labels, or through streaming, although without having the marketing campaigns they enjoyed when they were wrapped up with the big record labels.

The demographic change was also noticeable in the tastes of the youngest generations, who were taking over from Gen X. The entrance of video platforms such as YouTube practically ousted MTV, which modified its traditional video programming to focus on reality shows, alienating its target market, generation X. MTV's influence in Gen Y and younger was decreasing and at the same time distancing from its original audience.

Despite those elements, an entire music industry had already been created and consolidated in the country, with professional venues for concerts, massive festivals, and Mexican cities included in the international tours of bands that were the top hits in the world. In addition to this, an international circuit of rock groups in Spanish was created, starting to be something common the visit of bands from South America and Spain, in addition to the national tours of Mexican groups. Somehow replicating what was happening in the U.S. and the United Kingdom, in Mexico, main rock festivals started to feature well-known acts from years ago, even as headliners. Tickets for consolidated bands from the past were more expensive than younger ones, and music in physical format had still healthy numbers among Gen-Xers and Baby Boomers. Even within large U.S. festivals such as Coachella, in California, where the return of *Caifanes* in 2011 broke the record in terms of ticket sales, driven by Mexican buyers and the Hispanic community (Notimex, 2011).

The nostalgia from those “golden years” of rock in Spanish was deeper when Bassist Sabo Romo, formerly from *Caifanes*, created in the year 2015 an orchestral project that instrumentally revives the music of the generation called *Rock en tu Idioma*, under the name *Rock en tu Idioma Sinfonico* (Symphonic rock in your language). He assembled a symphonic orchestra with a rock group formed by Mexican musicians along with Spanish and Argentineans who were members of those popular bands in the 80s and '90s. A national tour performing with a symphonic orchestra was included in the project as well as a DVD and CD with the recordings from Mexico City's concert. Even more, following the trends, a vinyl version was put on sale, as this format is gaining popularity again.

This “mediated nostalgic remembering” (Weinstein, 2014) proved to be economically successful in such a way that the product extended its life cycle even more through the edition of the second volume in 2018. A couple of years later a “best of” CD was put on sale, and that same year, Sony BMG Music Entertainment released *Rock en tu Idioma, Electrico* (Electric Rock in your language). This time the songs were recorded without symphonic accompaniment, and new “electric” versions were put up for sale through Sony's “Strategic Marketing” label. Figure 3 shows the four editions and the year of each record, and the logo is kept.

Figure 3. *Rock en tu Idioma* editions.



Source: Discogs.com

The musicians from Monterrey also organized themselves in 2019 to do a series of tours under *Avanzada Regia Sinfonica*, replicating the same concept. Just as Weinstein (2014) stated, “an empirical past of rock” was brought back to the present, “mediated and then remediated to create”, in this case, *Rock en tu Idioma*, “as a set of selective representations in which some artists, music, and events are highlighted and others eliminated”

CONCLUSIONS

Bands that were successful more than 30 years ago still represent an important revenue for the music industry, being Generation X yet a demographic segment with purchasing and cultural power. The pattern is very similar to the previous generation, the baby boomers, whose musical and cultural background, rock music, today is alive in classic radio format, headlining massive concerts. Currently, the most successful *Rock en tu Idioma* songs are played in small classic-theme bars, they are programmed on the radio, they are covered with new groups, and the groups that formed them are still present in the rock circuit in Mexico, Latin America and even in the U.S.

Rock en tu Idioma was, and still is, a market label that belongs to generation X, growing up together and continually relaunched to stay on the market. Its identity elements have remained intact, beginning with the logo and the connection that is made about that specific musical period, thus extending its life cycle. The great challenge it faces is that this population is aging. Currently, Gen Xers are leaving behind their 40 and entering their fifties. Their purchasing power has still some years of life, expending their money in the constant nostalgic tours that have emerged in recent

years. There, it is possible to observe young people accompanying their parents to see those classic bands. Even so, it is an undeniable fact that there will be no generational change, as the musicians who forged *Rock en tu Idioma* will disappear for natural reasons sooner or later, will the brand disappear with them?

It seems that *Rock en tu Idioma* will follow the same path as happened with the music of the baby boomers, although many of the leading musicians from the 50s and 60s have disappeared, their music is still present through advertisements, soundtracks, tribute groups, thematic shows (i.e. Soleil Circus' Get Back), for a young segment that wants to experience that era they did not live in, even if it is within an imaginary created by the media, that is, a neo-nostalgia, a “pseudo-historical appeal of a bygone aesthetic”, as defined by Stephen Brown (2001).

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DXB224

***Hallyu* as a Country Image transformer and the impact on Product Image and Korean brand knowledge in Brazil**

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ABSTRACT

Purpose – This paper aims to analyze the relationship between the cultural products of the Korean Wave (*Hallyu*) and the country image of South Korea. Furthermore, it investigates how this country's image influences Brazilians' product image regarding Korean products and brands.

Design/Methodology/Approach - We conducted a quantitative study based on data collected from an online survey with people who had and did not have contact with *Hallyu*, which allows a comparison between the groups. We used a statistical analysis through structural equation modeling via Smart-PLS.

Findings - The results show that the Country Image is relevant in Product Image construction. However, in the Brazilian context, the *Doramas* construct had little influence on Country Image, while K-Pop and Celebrities had a moderated effect on the same object.

Originality/Value - This study provided relevant managerial and academic implications as it studies the theme through a less-explored point of view: the *Hallyu* in Brazil and the knowledge of Korean products and brands in the country.

Keywords - Marketing; Korean Wave; Country Image; Product Image; Brand Knowledge; Brazil.

1. INTRODUCTION

A cultural expansion process from Asia occurs with two leading exponents: Japan and South Korea (hereafter referred to as Korea). The first refers to the phenomenon of Japan-Mania that spread to East Asia (Huang, 2011) and 'Cool Japan' for Euro-American markets (Iwabuchi, 2015). The latter is a movement known as *Hallyu*, a synonym of the Korean Wave (Lee et al., 2015), which defines the Korean popular culture (KPC) expansion in East and Southeast Asia, extending to the Middle East and Central Asia (Hong & Kim, 2013), as well as in Europe and America (Marinescu, 2014). It is an interesting cultural phenomenon. It came from a peripheral nation compared to the unidirectional cultural flow from the center to the periphery or from America/Europe to the rest of the world (Jin, 2015).

This article will focus on the *Hallyu*, a cultural content that includes television dramas (dramas), K-pop music, movies, and associated celebrities (Shim, 2006). For instance, the Korean drama "Winter Sonata" was exhibited by the Japanese television channel NHK in 2002, becoming a tremendous audience success and re-exhibited three times. Later this drama was exported to Egypt, Ghana, Thailand, Taiwan, Hong Kong, China, and the United States (Kim et al., 2007). Together with other Korean dramas such as "What is Love All About?", "*Dae Jun Geum*" and "Autumn in My Heart" are considered the pioneers of Korean cultural products (Hong & Kim, 2013).

The popularity of *Hallyu* evoked several studies focusing on different literature. One perspective associated *Hallyu* with globalization (Iwabuchi, 2002) and soft power (Huang, 2009; Nye & Kim, 2019). Another viewpoint investigated marketing aspects of cultural consumption (Huang, 2011; Hong & Kim, 2013) and the impact of *Hallyu* on tourism in Korea (Choi et al., 2011; Kim et al., 2012), preferences of Korean restaurants (Lee et al., 2015), exports of Korean products (Chen, 2016; Huh & Wu, 2017), and so on. Studies based on the marketing standpoint have mainly focused the investigation on the Asian context (East and Southeast Asia) and Western developed countries such as the USA and Europe, providing essential contributions to the literature. However, little is known about the influence of *Hallyu* in the context of emerging Western economies, particularly in an emerging country of the BRICs, which has a great interest in international marketing (Paul, 2019).

The present study considers the consumption and marketing perspective. Therefore, it adopts the Korean Wave as the central aspect to be analyzed, with consumers from one emerging Western country as the target. Brazil is the country selected for this investigation. It provides an interesting context since it is one of the BRICs economies and presents cultural dimensions (Tang & Koveos, 2008) and development indicators very different from South Korea (Sant'Ana et al., 2021). In this way, this article intends to answer whether a cultural movement such as *Hallyu* can impact the Korean national image and the Korean product image and brand knowledge among Brazilian consumers.

Our study contributes to the existing literature on the marketing and consumption of cultural products, particularly for *Hallyu* studies, in four main aspects. First, the study examines the influence of *Hallyu* on knowledge of Korean products and brands through a country's (national) image of Korea. In other words, it considers *Hallyu* a transformer agent for the national image that impacts other factors. Second, while most prior research considers *Hallyu* as a composite indicator of KPC or investigates one specific segment of KPC, this study adopts three major KPC segments (TV dramas, celebrities, and K-pop) proposed by Lee et al. (2015). Therefore, it verifies the relative impact of each segment on the Korean national (country) image. However, Lee et al. (2015) focused their investigation on Korean restaurants. Our study advances it by referring to the idea of *Hallyu* 2.0 (Choi, 2015), which considers that *Hallyu* has evolved by "traversing other cultural domains" (p.32). It means considering *Hallyu's* essential content, such as TV dramas and K-pop, and the effect on the country and product images. We will verify how *Hallyu* segments impact the country's image and, consequently, the effect of this national image on the Korean product image and brand knowledge of products such as cosmetics, electronics, and automobiles. Third, it will compare the perception of consumers who know *Hallyu* with others who do not have any knowledge of *Hallyu*. Finally, this study collected data from an emerging Western country (Brazil), distinguishing it from prior studies that mainly focused on Asian countries or developed economies in North America and Europe.

This article is organized into the following sections. After the introduction, we will present the literature review about *Hallyu*, country, product images, brand knowledge, and respective hypotheses. In the following, we explain the methods regarding variables, data collection, and statistical techniques. The empirical analysis highlights the relevant findings in conjunction with the discussion. Finally, we provide some concluding remarks, contributions, managerial implications, limitations of the study, and directions for future research.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. *Hallyu* (Korean Wave) and Country Image

Korean pop music, K-Pop, is also one of the pioneer agents of *Hallyu*. K-Pop had its first group, the quintet H.O.T, in 1996, considered the starting point of this musical genre. With the national success of this and other new groups, K-Pop spread to other countries. In 2009, the girl group Wonder Girls became the first K-Pop group to figure in the Billboards Top 100, demonstrating the expansion of the genre beyond Asia (Mesquita, 2015).

In light of this expansion, studies have sought to understand the popularity and participation of K-Pop in the construction of the South Korean Country Image. Dias (2014), in his research on the spread of K-Pop on a global scale, submits a questionnaire to verify within the Portuguese community the influence of Korean music on the Image of the Asian country. The author obtains that about 70% of the interviewees had their first contact with *Hallyu* in K-Pop. He

found an important influence of the musical genre on the Image and the interest in respect for the Asian country.

Therefore, this study aims to verify the influence of K-Pop on the Korean Country Image in a reality that is not Asian but Brazilian. Thus, we propose our first hypothesis:

H1: *K-Pop positively influences the Brazilian's construction of South Korea's Country Image.*

Korean series (called *Doramas*) is the pioneering aspect of *Hallyu*. The Drama Winter Sonata was the starting point of the phenomenon when broadcast in Japan in 2003, significantly impacting the Image of South Korea in Japanese society (Sung, 2010). The drama's popularity was such that, in a survey by the Japanese television channel NHK, 26% of the 2,200 Japanese interviewed stated that the series changed their perception of Korea. In addition, 22% said it increased their interest in the country (Park, 2008).

Based on this reality, many studies have explored the influence of dramas on the Korean country's image or directly on aspects such as tourism and Korean products. For example, Kim et al. (2012) studied the impact of *Doramas* on a Country Image through a case study with the drama "*Dae Jun Geum*", a culinary theme presented in 2003 in South Korea and exported in the following years to 50 other countries. The study demonstrates through a questionnaire applied in China that the drama arouses culinary interest in its theme in those who watch it, generating a positive image of Korea and an interest in its cuisine, tradition, history, and culture. Therefore, as in the other named studies, this study seeks to verify the influence of the *Doramas* on the Korean country image and, consequently, the Product Image in Brazilian reality. Hence, we proposed the following hypothesis:

H2: *Doramas positively influence the Brazilian's construction of South Korea's Country Image.*

Studies in the literature demonstrate and prove the existence of a positive relationship between celebrities and the product's image. Therefore, using these strategies to promote products generates more significant interest. For example, McCracker (1989) defines Celebrities Endorsers as anyone who enjoys public recognition and uses it for the sake of a product in advertising. Still, Misra and Beatty (1990) tested the effect of the brand and celebrities on the product's image with an experiment using two celebrities and three non-existent brands that were linked differently to one or none of the celebrities. As a result, they found a positive effect of celebrities on a product, especially if the celebrity has some level of unity with the brand/product.

Similarly, our study seeks to understand if the effect of celebrities on brands and products can also be observed concerning the Country's Image. In other words, the characteristics of a celebrity can shape an individual's perceptions about a specific country, making them have some affection or disaffection towards this country. Therefore, we hypothesized:

H3: *Korean Celebrities positively influence the Brazilian's construction of South Korea's Country Image.*

2.2 Country Image, Product Image, and Brand knowledge.

Country Image is defined as an individual's cognitive representation of a given country, which the latter believes to be true about a nation and its people (Sung, 2010). Papadopoulos and Heslop (1993) further postulate that the image attributed to an object results from a person's perception of it and the context surrounding it. This study seeks to observe the effects of *Hallyu* in the Image Country Korea for the Brazilian context, considering three branches of *Hallyu*: Doramas, K-Pop, and Korean Celebrities.

Similarly, some studies have already linked these three constructs to the idea of Country Image, however, prior research aimed at different businesses and/or regions. For example, Son and Kijboonchoo (2016) researched the impacts of Korean music and series on Korean cosmetics shopping intentions in two major Thai cities, Bangkok and Chonburi. They demonstrated that Korean Country Image positively affected the purchase intention of Korean cosmetics. Product Image can be defined as the beliefs and/or general perceptions consumers hold regarding products from a specific country (Nagashima, 1970; Parameswaran; Pisharodi, 1994).

The concept of Product Image was related to Country Image. For instance, Jin et al. (2012) studied the effects between Country Image, Materialism, and the Quality evaluation of Korean products. The authors concluded that the country's image and materialism positively impact the assessment of the quality of Korean products. Another study by Moslehpour et al. (2017) shows that among the factors that motivate Thai people to repurchase beauty products from Korea, the Country of Origin is a substantial factor due to the positive Korean Country Image among Thai citizens.

Our study seeks to verify, in the Brazilian environment, if the Product Image for Korean products is affected by the Country's Image of South Korea, thus providing a business opportunity for Korean companies in Brazil. In addition, it also seeks to verify the influence of both Country Image and Product Image on the knowledge of Korean brands in Brazil. Hence, we proposed the following hypotheses:

- H4:** *The South Korean Country Image presented by Brazilians positively influences the Product Image of Korean products and the intention to consume them.*
- H5:** *The South Korean Country Image presented by Brazilians positively influences the knowledge of Korean Brands in Brazil.*
- H6:** *The Product Image of Korean products presented by Brazilians positively influences the knowledge of Korean Brands in Brazil.*

3. METHODOLOGY

The paper's approach is quantitative, through data collection through an online survey application and subsequent statistical analysis. We collected our sample through an online survey encompassing Brazilian communities on social networks that discuss the issues of *Hallyu*. We also considered a group of people not included in the context of *Hallyu*. Therefore, we compare the ways of looking at South Korea between these two groups, allowing an analysis of the influence of *Hallyu* in the formation of the Korean Image in Brazil. We intend to test our hypotheses with a proposed framework according to the knowledge of *Hallyu*. Model 1 (Figure 1) comprises people with previous *Hallyu* knowledge, while Model 2 (Figure 2) refers to people without *Hallyu* knowledge.

Figure 1. Proposed Framework (Model 1) – People with Hallyu knowledge

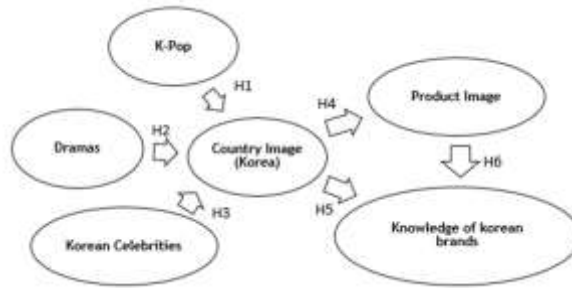
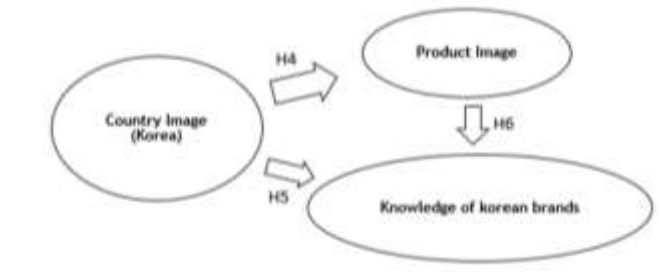


Figure 2. Proposed Framework (Model 2) – People without Hallyu knowledge



Based on this data collection, we performed a descriptive analysis and applied structural equation modeling (SEM) to test our hypotheses. We ran SEM via Smart-PLS after proceeding with several tests to validate SEM. For instance, we performed CFA (confirmatory factor analysis), composite reliability, average variance extracted (AVE), convergent validity, and discriminant validity, among others.

Finally, to measure the knowledge of Korean brands in Brazil, we selected three product categories (Electronics, Automobiles, and Cosmetics) and three brands of each. We based our selection on consulting experts on Korean studies. As a result, we used the brands Samsung, LG, and Pantech Curriel for electronics; Hyundai, KIA, and SsangYong for automobiles; and Amore Pacific, Missha, and Clio for Cosmetics.

Table 1 depicts the questions related to each construct used in our research. Based on the literature, we measured our constructs on a 4 and 5 points Likert scale (see Notes on Table 1). For example, Kim et al. (2012) measured the influence of the *Dorama "Dae Jun Geum"* on the Korean Country Image and the intention of visiting the country using 5 points Likert scale. Similarly, Lita e Cho (2010) also used this scale to measure the influence of the media on the acceptance of cultural products.

Table 1. Construct Questions

Construct	Question1	Question2	Question3	Question4	Question5	Question6	Question7	Question8
Celebrities*	[Celeb01] I am attracted to Korean celebrities	[Celeb02] I am impressed by actors performing cultural activities	[Celeb03] Celebrities are good looking	[Celeb04] Celebrities have attractive habits	[Celeb05] I like Korean celebrities' customs and skills	[Celeb06] I perceive Korean celebrities as representing the Country Image	[Celeb07] Korean series is more interesting because of the actors	
Doramas*	[Dor01] I find the scenarios pleasant	[Dor02] I find the soundtrack pleasant	[Dor03] Scenarios demonstrate cultural progress	[Dor04] The colorful Korean nightlife excites me	[Dor05] I like the brilliance of Korean cities shown in the series	[Dor06] The contents are realistic	[Dor07] There is an appeal to Korean traditions	[Dor08] Focus on human life and society
K-Pop*	[Kpop01] Lyrics are realistic	[Kpop02] Lyrics focus on life and society	[Kpop03] Lyrics present diverse contents	[Kpop04] The clips feature various environments	[Kpop05] Clips show an attractive image	[Kpop06] The songs show interest in Korean tradition	[Kpop07] The songs show interest in other countries	
Country Image*	[Count01] South Korea is economically developed	[Count02] South Korea has a good standard of living	[Count03] South Korea has advanced technologies	[Count04] South Korea is a peaceful country	[Count05] South Korea is a friendly country to us	[Count06] South Korea is a pleasant country		
Product Image*	[Prod01] Korean products have high quality	[Prod02] Korean products are well-finished	[Prod03] Korean products are reliable	[Prod04] Korean products are well designed	[Prod05] Korean products and brands have a global presence			
Brand Knowledge**	[Auto01] Hyundai [Eletro01] Samsung [Cosme01] Amore Pacific	[Auto02] Kia [Eletro02] LG [Cosme02] Missha	[Auto03] SsangYong [Eletro03] Pantech Curiel [Cosme03] Clio					

Notes: * 5-point Likert scale (1= Strongly disagree; 5= Strongly agree); ** 4-point Likert scale (1= Not at all aware; 5= Extremely aware).

4. DATA ANALYSIS

4.1. Descriptive analysis

Our final sample comprises 207 complete and valid responses for the empirical study. Table 2 shows a descriptive analysis based on the socioeconomic division of our sample:

Table 2. Socioeconomic Profile

Socioeconomic Factor	Most Present Group	Percentage
Gender	Woman	64.7%
Age	17 to 20 years	40.6%
State of Residence	São Paulo	69.6%
Education	Incomplete Higher Education	44.0%
Professional Status	Student	66.0%
Civil Status	Single	77.0%
Average Monthly Income	4 to 10 Minimum Wage*	29.7%

Note: Brazilian minimum wage (BRL 1,100 equivalent to approximately USD 215)

Of the 207 respondents, 133 (64%) had already contacted Korean culture and assessed their knowledge about *Doramas*, K-Pop, and Korean celebrities. Therefore, based on 4 points scale, our findings show that K-Pop (2.918) is the most knowledgeable *Hallyu*, followed by Doramas (2.472) and Celebrities (2.434). When comparing groups, we found no difference with the construct of Country Image (5 points scale). People who have already contacted Korean culture achieve an average of 3.793, while it reaches 3.795 for those who have never got the culture's contact. The Product Image (5 points scale) shows a difference in knowledge between both groups. It achieves 3.813 for those who have already contacted Korean culture and 3.667 for another group.

We performed the structural equation models (SEM) for a more robust analysis via Smart-PLS. But first, we proceeded with reliability, discriminant, and convergent validity tests. Thus, as mentioned earlier in our proposed framework, we created two models. The first comprises the responses of those with the previous contact with the Korean culture (Model 1). The second analyzed the responses of those who had never had contact with it (Model 2).

4.2. Model 1 - People with *Hallyu* knowledge

The model concerns those with previous contact with Korean culture based on the proposed framework shown in Figure 1. After analyzing the External Loads of each construct, we adjusted the model by eliminating loads of low reliability. It means those with a Factor Load value lower

than 0.4 and/or VIF (Variance Inflation Factor) higher than 5. The red color shows the constructs eliminated in this test (Table 3).

Table 3. Model 1 – VIF and Loadings

Construct	VIF	Loadings					
		Celeb	Dorama	K-Pop	Country Image	Product Image	Brand Knowledge
Celeb01	5.307	0.877					
Celeb02	7.317	0.952					
Celeb03	12.234	0.762					
Celeb04	5.483	1.192					
Celeb05	6.562	0.641					
Celeb06	4.016	0.766					
Celeb07	3.332	0.961					
Dor01	7.379		0.027				
Dor02	8.180		0.069				
Dor03	5.122		0.727				
Dor04	5.336		1.074				
Dor05	9.159		0.479				
Dor06	3.652		0.924				
Dor07	6.160		-0.246				
Dor08	7.730		0.748				
Kpop01	3.902			0.084			
Kpop02	5.389			0.151			
Kpop03	3.924			-0.112			
Kpop04	5.200			-0.115			
Kpop05	5.172			-0.017			
Kpop06	1.801			0.239			
Kpop07	2.162			0.239			
Count01	1.606				0.863		
Count02	1.835				0.428		
Count03	1.289				0.600		
Count04	1.499				0.442		
Count05	1.622				0.368		
Count06	1.803				0.647		
Prod01	2.396					0.726	
Prod02	2.964					0.738	
Prod03	2.150					0.830	
Prod04	1.323					0.583	
Prod05	1.175					0.528	
Auto01	1.349						0.527
Auto02	1.470						0.566
Auto03	1.624						0.546
Cosme01	1.818						0.506
Cosme02	1.750						0.322
Cosme03	1.997						0.451
Eletro01	1.220						0.477
Eletro02	1.300						0.322
Eletro03	1.642						0.433

After eliminating these constructs, we tested the external loads again. Given their validity, we adjusted it, proceeding with the tests of the Outer and Inner Models (Table 4):

Table 4. Model 1 - Loadings

Construct	Celebrities	Dorama	K-Pop	Country Image	Product Image	Brand Knowledge
Celeb01	0.922					
Celeb06	0.778					
Celeb07	0.901					
Dor03		0.830				
Dor06		0.911				
Kpop03			0.910			
Kpop04			0.816			
Count01				0.807		
Count02				0.442		
Count03				0.564		
Count04				0.487		
Count06				0.590		
Prod01					0.700	
Prod02					0.734	
Prod03					0.832	
Prod04					0.574	
Prod05					0.558	
Auto01						0.512
Auto02						0.543
Auto03						0.524
Cosme01						0.478
Cosme03						0.428
Eletro01						0.468
Eletro03						0.428

Table 5 shows the internal consistency reliability test. It considers Cronbach's Alpha and Composite Reliability, where both values must be between 0.700 and 0.900. We also obtained the extracted average variance (AVE). When $AVE > 0.50$, the constructs explain more than 50% of the construct's variance (not the errors) to measure the Convergent Validity of the constructs. However, we should not exclude values lower than 0.50 from the analysis. It is only emphasized that the probability of errors in these cases is greater than in the others, which can influence the analysis results.

Table 5. Model 1 - Cronbach's Alpha, Composite Reliability and AVE

Variables	Cronbach's Alpha	Composite Reliability	AVE
Celebrities	0.901	0.902	0.755
Dorama	0.861	0.863	0.760
K-Pop	0.852	0.855	0.747
Country Image	0.732	0.720	0.350
Product Image	0.802	0.814	0.472
Brand Knowledge	0.681	0.681	0.235

To conclude the analysis of the Outer Model, we tested the Discriminant Validity using three models that complement each other. We used the cross-load analysis, the Fornell and Larcker (1981) test, and the heterotrait-monotrait ratio of correlations (HTMT). We obtained all values in line with the three criteria, conferring the uniqueness of each construct. Table 6 demonstrates the Fornell-Larcker test results.

Table 6. Model 1 - Fornell-Larcker Test

Variables	Celebrities	Dorama	K-Pop	Country Image	Product Image	Brand Knowledge
Celebrities	0.869					
Dorama	0.733	0.872				
K-Pop	0.508	0.458	0.864			
Country Image	0.233	0.165	-0.044	0.592		
Product Image	0.302	0.292	0.149	0.553	0.687	
Brand Knowledge	0.312	0.315	0.195	0.308	0.447	0.485

For the Inner Model (Table 7), we performed the collinearity tests, relevance, and significance of the relationships in the model (R^2 and F^2). Collinearity is similar to the VIF used in the Outer Model and must present a value of less than 5 for the construct to be valid. Therefore, the results confirmed the constructs' validity since the values do not exceed 5 points. To measure the relationships between the constructs, we used path coefficients whose values close to 1 indicate strong relationships.

The constructs of *Doramas* and the Celebrities showed a positive role in the change in the Country Image. But on the other hand, the K-Pop presented a negative relationship in transforming the same Country Image. However, it was influential in the knowledge of the Brands and the Image of Korean products.

R^2 expresses the model's predictive power and represents the effects of exogenous latent variables on endogenous ones. In academic research focused on marketing, the R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables are described as substantial, moderate, or weak.

However, the R^2 values of 0.20 are considered high in disciplines such as consumer behavior (Hair, Ringle, & Sarstedt., 2011; Henseler et al., 2009).

Our findings show that the R^2 values demonstrated that the Country Image is a substantial latent variable while the Product Image is characterized as weak and that knowledge is irrelevant. In addition, to evaluate R^2 , it is also necessary to analyze the F^2 (effect size) that evaluates the amplitude of the R^2 value change when an exogenous construct is omitted. The literature shows that F^2 values of 0.02, 0.15, and 0.35 represent the exogenous latent variable's small, medium, and large effects (Cohen, 1988). Our results show that the effect size value is less than 0.02 indicating no effect.

Based on our findings, the effect of K-Pop on the Country Image presented an F^2 characterized as weak but still valid. However, this effect's value is negative, indicating that the perception generated by K-Pop in the Country Image is not favorable. In this way, H1 is not supported. Also, we could not support H2 since its null F^2 demonstrates no influence of *Doramas* on the South Korean Country Image in the Brazilian context. Nevertheless, the result is noteworthy as *Doramas* are the pioneering factor of *Hallyu*, and several studies in the Asian context demonstrate their importance in the Image of Korea. Finally, Celebrities presented the best effect on Country Image. Therefore, the F^2 between 0.02 and 0.15 shows a weak positive relationship between Celebrities and the Image of the Asian country, supporting H3.

The effect of Country Image on Product Image shows a strong result ($F^2=0.44$). The findings follow the trend of other studies on the same theme, where Country Image shapes the Image of Products from that country. Wang et al. (2012) studied the relationship between Country Image, Product Image, and Purchase Intention, and the results suggest an influence of Country Image on Product Image. Thus, we support H4. However, when inserting brand awareness (Brand Knowledge), Country Image has a low influence ($F^2=0.01$) which leads to not supporting H5.

Finally, Product Image has a moderate effect ($F^2=0.14$) on Brand Knowledge, with indicates that product image is associated with awareness of Korean brands in the Brazilian context. Hence, we can support H6.

Table 7. Model 1 - Path Coefficients and F^2

Relationship	Effect (R^2)		F^2	
	Direct	Indirect	Total	Value
K-Pop > Country Image	-0.22		-0.22	0.04
<i>Dorama</i> > Country Image	0.03		0.03	0.00
Celebrities > Country Image	0.32		0.32	0.05
Country Image > Product Image	0.55		0.55	0.44
Country Image > Brand Knowledge	0.09	0.22	0.31	0.01
Product Image > Brand Knowledge	0.40		0.40	0.14

4.3. Model 2 – People without previous *Hallyu* knowledge.

The second model concerns people who have never had contact with Korean culture. In this way, we analyzed only the relationship between Country Image, Product Image, and Brand knowledge (as shown previously in Figure 2). We also proceed with modeling tests before running the SEM analysis, obtaining the external loads for each construct, and reassessing the model according to the same criteria used in the first model. Table 8 presents the VIF and Loadings for all constructs, and Table 9 demonstrates the remaining constructs after the first tests.

Table 8. Model 2 - VIF and Loadings

Constructs	VIF	Loadings		
		Country Image	Product Image	Knowledge Image
Count01	2.208	0.831		
Count02	2.130	0.702		
Count03	2.158	0.716		
Count04	1.641	0.396		
Count05	1.874	0.537		
Count06	1.998	0.650		
Prod01	2.924		0.746	
Prod02	3.646		0.866	
Prod03	3.000		0.885	
Prod04	1.963		0.682	
Prod05	1.096		0.431	
Auto01	2.578			0.755
Auto02	2.236			0.616
Auto03	1.595			0.157
Cosme01	1.195			0.425
Cosme02	1.072			0.195
Cosme03	1.100			-0.228
Eletro01	2.449			0.572
Eletro02	2.377			0.507
Eletro03	1.663			-0.031

Table 9. Model 2 - Loadings

Constructs	Country Image	Product Image	Brand Knowledge
Count01	0.831		
Count02	0.702		
Count03	0.716		
Count04	0.396		
Count05	0.537		
Count06	0.650		
Prod01		0.746	
Prod02		0.866	
Prod03		0.885	
Prod04		0.682	
Prod05		0.431	
Auto01			0.755
Auto02			0.616
Cosme01			0.425
Eletro01			0.572
Eletro02			0.507

We should note that the steps used for the Outer and Inner Models were similar to those used in the first model. Also, for this model, all values of Alfa de Conbrach, Composite Reliability, and AVE become adequate to the criteria (Table 10).

Table 10. Model 2 - Conbrach's Alpha. Composite Reliability and AVE

Variables	Cronbach's Alpha	Composite Reliability	AVE
Country Image	0.813	0.810	0.427
Product Image	0.828	0.852	0.547
Brand Knowledge	0.736	0.758	0.394

Finally, we performed three tests that make up the discriminant validity: Cross Load Analysis, the criterion by Fornell and Larcker (1981), and heterotrait-monotrait ratio (HTMT). Once again, it does not present errors (Table 11). Therefore, it proves the discriminant validity of the values in our analysis.

Table 11. Model 2 - Fornell-Larcker Test

Variables	Country Image	Product Image	Brand Knowledge
Country Image	0.654		
Product Image	0.549	0.740	
Brand Knowledge	0.324	0.233	0.628

The Inner Model analysis (Table 12) was also done similarly to the first model, with the tests of collinearity, path coefficients, and the values of R² and F². As for path coefficients, Country Image presents a more significant influence (R²=0.549) on the Product Image than on Brand Knowledge (R²=0.324), even considering this last relationship's direct and indirect effects. Furthermore, when considering the F², it shows that evaluating people without any previous contact with *Hallyu*, the Country Image significantly impacts Product Image (F²=0.432) and Brand Knowledge (F²=0.062), leading support to H4 and H5. However, the impact of Product Image on Brand Knowledge shows a low effect (R²=0.079) and irrelevant value (F²=0.005), which does not support H6.

Table 12. Model 2 - Path Coefficients and F²

Relationship	Effect (R ²)		F ²	
	Direct	Indirect	Total	Value
Country Image > Product Image	0.549		0.549	0.432
Country Image > Brand Knowledge	0.281	0.043	0.324	0.062
Product Image > Brand Knowledge	0.079		0.079	0.005

4.4. Discussion

Given the two models presented and comparing the findings, it is possible to verify some critical points about the hypotheses of this study. First, regarding the relationship between Country Image and Product Image, there were no relevant differences between both groups. Therefore, it implies that people with contact with Korean culture and those who have never had contact with that culture presented the same impact related to the country's image on the product's image, which is supported by the literature.

However, in the Brazilian context studied, contact with Korean culture generates differences in the relationship between the country's image and the product's image when interacting with awareness of Korean brands. More specifically, for those who already have contact with *Hallyu*, Country Image does not influence Brand Knowledge, but Product Image does. The relationship is reversed for those who do not have contact with *Hallyu*. It means Country Image is the one that brings brand awareness and not Product Image.

A possible explanation for these findings is that contacting *Hallyu* can bring more precise ideas about the products. They will attract people, giving knowledge of the companies that produce them, while without contact with *Hallyu*, the products go unnoticed. The brand's relationship is made directly by their image of their country of origin (i.e., Korea).

5. CONCLUSION

This study aimed to analyze the influence of three factors of *Hallyu* in the construction of the Country Image of South Korea and the Product Image and Korean brand awareness in the Brazilian context.

We obtained findings that confront the literature regarding each construct and its relationship. It means that the most attractive characteristics of the constructs for Brazilians are different from those considered more attractive in other countries, as demonstrated by prior research that stands out the null effect of the *Doramas* in Country Image. Kim et al. (2012) and Park (2008) studied the influence between these two constructs in two different contexts, with positive results for the impact of *Doramas* on Korean Country Image. Our findings also show that the relationship between *Hallyu* and Country Image is irrelevant and goes opposite to elsewhere studies.

In addition, we also found differences between people with and without contact with Korean culture. More specifically, the main factor influencing brand awareness (Brand Knowledge). Product Image has become more influential in knowledge for those who already have contact. On the other hand, Country Image shows a more significant effect for those without contact with Korean culture.

These results contribute to a better understanding of the influence of a country's soft power (through pop culture constructs) on the knowledge of the country's image, product, and respective brands. Furthermore, these factors indicate a profile of people more open to consuming Korean products, therefore, a potential target audience for Korean companies in Brazil.

However, it is essential to note that this study has its limitations. Most respondents are concentrated in the Southern-Southeastern region and may not reflect the reality of Brazil as a whole. Future research may focus more on a specific region, seek an equivalent distribution among the regions, or obtain the exact representation of the regional distribution of the Brazilian population in its sample.

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DXB208

Influence of Pre-Purchase Promotions and Post- Purchase Service Assurances over Consumer Buying Intentions: An exploratory study

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1. Introduction:

Attracting consumers to buy a particular product/service/brand has become a major challenge to offline B to C marketers due to mounting competition from omni and online channels. Competing companies vying for the mind share and money share of target consumers, and use innovative marketing and promotional strategies to achieve the same. Albeit the use of promotions and services have been an integral part of business such practices have become more intense with the advent of online shopping. Online marketers offer aggressive promotions and services than that of offline marketers. However, in order to match online competition, offline marketers too are involved in aggressive sales promotions and post-purchase service assurances. In order to assess the degree of difference between pre-purchase promotions such as price discounts and gift vouchers post-purchase service assurances such as customer care, warranty and return policy/buy back offers over consumer buying intentions this exploratory study test both the constructs such as pre-purchase promotions and post-purchase services to determine which of the two have a greater impact on consumer buying intentions in an emerging market context.

Hoekstra, Huizingh, Bijmolt, and Krawczyk (2015) distinguished the impact of Website information as promotional and transactional services offered to enhance consumer loyalty and retention in an online context. The authors conclude that both the informational and the transaction-related website functions have a significant positive impact on website success, but that the impact of the informational function is considerably larger. Although several studies have already developed models explaining user satisfaction and behavior in different virtual environments, little empirical research has been carried out to investigate the impact of pre-purchase promotions and the offer of post-purchase (transactional) services on customer buying intentions. Therefore, this exploratory study is framed to test both the constructs to determine the degree of the impact of pre-purchase promotion and post purchase transactional services on consumer buying intentions in an offline context. Results of this exploratory study will not only make a contribution to the existing literature and also provide some direction to further research on promotional strategies of offline marketing.

2. Research Objectives and Hypotheses Formulation

2.1 To identify the impact of pre-purchase promotions (sales promotions, discounts, price off offers, gift voucher, add on benefits) over consumer buying intentions towards products/services

H1: There is a positive impact of pre-purchase promotions (sales promotions, discounts, price off offers, gift voucher, add on benefits) over consumer buying intentions towards products/services

2.2 To identify the impact of post purchase services (customer service, customer care and complaints, warranty, loyalty points, buyback offer) over consumer buying intentions towards products/services

H2: There is a positive impact of post purchase services (customer service, customer care and complaints, warranty, loyalty points, buyback offer) over consumer buying intentions towards products/services

3. Research Gap and Research Problem

Not much of studies attempted to find the impact of the selected constructs i.e. pre-purchase promotions and post purchase services as one comprehensive study and ascertaining the influence of such variables over consumer buying intentions. Several studies attempted to find the impact of the selected constructs as individual variables and tested through independent studies such as Dodson et al, 1978; Gupta, 1988; Blattberg & Neslin, 1989; Chandon et al, 2000; Neslin 2002;

Shiv et al. 2005). There were several studies attempted to find the influence price, promotions etc. over consumer buying intentions (Sakkthivel et al, 2010; Sakkthivel, 2011a, 2011b; Sakkthivel & Rajev, 2012; Sakkthivel, 2012; S A Manickam & Sriram, 2013; Sakkthivel, 2014). Numerous studies attempted to identify the influence customer services over a period of time (Wolfenbarger & Gilly, 2003; Pujari, 2004; Otim & Grover, 2006; Buil et al. 2010; Diamantopoulos & Papadopoulos, 2010; Brohman, Parasuraman, Watson, & Piccoli, 2015). However, the aforesaid studies failed to provide a comprehensive view of the impact of the selected constructs over consumer buying intentions. Thus, the authors embarked on a comprehensive study to bridge the gaps identified and the proposed study would attempt to bridge the gaps found. Also, the outcomes of the study would significantly contribute to the extant literature relating to pre-purchase promotions and post purchase services and their impact over consumer buying intentions.

4 Methodology

The study used the descriptive approach as it intends to identify the impact of selected constructs such as pre-purchase promotions (sales promotions, discounts, price reduction offers, gift vouchers, add-on benefits) and post-purchase services (customer service, customer care and complaints, warranty, loyalty points, buyback offers) over consumer buying intentions towards products/services. The study was conducted among consumers of different products/services (male and female) residing in selected cities of Oman such as Muscat, Sur, Nizwa, Salalah, Sohar etc. which represented the target population selected for the study. The quota sampling technique has been used to collect primary data from the target respondents based on the occupation age, marital status, literacy, occupation, employment status, income, family size, place of living). The primary data had been collected from 200 respondents and finally 184 (N=184) respondents had been selected for the analysis. 16 respondents were eliminated from the final analysis due to submission of incomplete data pertinent to the constructs developed for the study. Structured questionnaire had been used to collect the response from the target respondents. The collection tool has been translated to local language (*Arabic*) in order to ensure that respondents understand and respond to the queries. It ensures the face validity of the study. The trained investigators (male and female) had been used to approach and conduct personal interview with the selected respondents. We used multiple linear regression model to identify the impact of the selected constructs (Sakkthivel, 2013). The model also used to check the consistency of the selected constructs and model fit. Cronbach's's Alpha Reliability Analysis had been conducted to test the validity of overall collection instrument which produced 0.757 and attitude scale secured 0.895 which proved high reliability.

Discussions, Conclusions and Implications

The study attempted and found the influence of pre-purchase promotions and post-purchase services towards consumer buying intentions. With reference to finding the impact of pre-purchase

promotion variables, the multiple linear regression used to find the impact of the following variables such as gift vouchers, price reduction offers, sales promotions, and add-on benefits on consumer purchase intentions. Assured buyback offers, prompt and effective customer service, and excellent warranty offers are the post-purchase services found to have higher influence. However, it is imperative to portray that effective customer care and response and attractive loyalty points found to elicit a lower impact over consumer buying intentions. In order to find the influence of the selected variables, further analysis has been done and the results revealed that post-purchase services found to elicit higher impact over consumer buying intentions than that of pre-purchase promotions. It is vital to understand that the respondents value more of post purchase services/relationship than that of promotions offered before the purchase. The outcomes would be valuable for the different stakeholders especially practicing managers to focus more on building relationship with consumers through setting a robust post purchase service offering system along customer relationship management system. The outcomes would also open new vistas in research related to the variables impact consumer buying intentions before and after the purchase.

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DXB234

The Dark Side of Branded Service Encounters: Why Consumers are Less Likely to Dismiss Service Failures When Employees are Brand-Congruent (vs Incongruent)

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INTRODUCTION

Imagine that you have just been seated at a western-style barbeque restaurant your server, who is dressed in cowboy boots and jeans, introduces himself with a country accent. Initially, you are delighted that the server's style and personality match the atmosphere of the restaurant. However, as the meal progresses, you begin to notice that he is not doing a great job...your order got messed up, your food came out cold, and your drinks are not being refilled. How would you react to this poor service? More specifically, would the fact that your server's personality is congruent with the barbeque restaurant's brand image make you more or less forgiving of the service failures?

The importance of branded service encounters has received increased attention from researchers in recent years. Several studies have found that consumers have more favorable responses to brands when a frontline service provider's behavior and personality are congruent (vs. incongruent) with a brand's positioning (Siriani et al. 2013; Ward and Dahl 2014). For instance, Siriani et al. (2013) showed that participants gave higher evaluations to sophisticated brands when they were represented by a sophisticated (vs. rugged) employee and vice versa. Additionally, Ward and Dahl (2014) demonstrated that salespeople whose appearance matched the image of an aspirational brand were better able to influence consumers to purchase the brand. However, does having brand-congruent service providers always improve outcomes? The present research investigates how consumers respond to service failures that involve brand-congruent (vs. incongruent) service providers. Across two studies, I find that hinders consumers' tendency to dismiss negative service encounters.

Consumers are more likely to dismiss negative (vs. positive) service encounters as isolated events (Folkes and Patrick 2003). This positivity bias in the domain of services exists because consumers generally have positive expectations of service performance (Johnson 1996). These

expectations, combined with perceptions that service performance is heterogeneous, lead consumers to view negative (vs. positive) service encounters as less diagnostic and dismiss them as isolated or one-off events. Such dismissal provides a buffer between negative service encounters and overall judgments of the brand (Hess 2008). Critically, we theorize that this buffer is *less* likely to hold -- e.g. consumers are less likely to dismiss a negative encounter -- when the service provider is congruent (vs. incongruent) with the brand. Specifically, research indicates that people do not dismiss (or subcategorize) other individuals when their behavior and character is consistent with a social group's stereotype (Weber and Crocker 1983). Similarly, we hypothesize that when a service provider is congruent (vs. incongruent) with a brand, consumers will be less likely to dismiss a negative service encounter as an isolated event and more likely to generalize it to the overall brand. In turn, we predict that negative service encounters with congruent (vs. incongruent) service providers will lead to lower (vs. higher) brand evaluations.

We ask participants to imagine a scenario in which they are at a “sophisticated” restaurant and have a negative service encounter with a service provider who is either “sophisticated” or “rugged.” We predict that participants with the “sophisticated” (congruent) server will rate the service lower following the negative encounter than participants with the “rugged” (incongruent) server. Further, we predict that this effect will be driven by decreased dismissal of the negative encounter as an isolated event when the server is sophisticated (vs. rugged). Our findings suggest a “dark side” to branded service encounters and call practitioners’ attention to the potentially damaging effects of having a brand-congruent employee involved in a service failure situation.

DXB250

**‘Shocks’, Lead Firm Responses and Global Production Network Effects:
Analysis of the Upstream Oil Sector**

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ABSTRACT

The bullwhip concept, capturing an important aspect of how networked organisations react to the demand variance of shock events, implies an asymmetric impact upstream in supply networks. The focus of bullwhip research tends to be on the optimization of demand-production variance and inventory costs. Adopting a global production network approach this study highlights the importance of shock propagation effects beyond the operational considerations of the inventory bullwhip. Examining the impact of the 2014 oil price shock, we identify a range of asymmetric effects of price-demand shock effects, beyond inventory effects, in upstream oil production networks. The results suggest that, in response to black (or grey) swan events, the network governance strategies of lead firms switch from cooperation to control, with significant implications for network actors and configurations. Our analysis also suggests that the cost-capabilities of supplier firms, rather than personal relationships represent the critical determinant of network resilience. However, the state, in playing various roles, can also represent a significant mitigating factor either in promoting network resilience or in shaping the reconfiguration of networks following a shock event.

Keywords: *asymmetric shock propagation; global supply chains/ production networks; value capture; crisis strategy, upstream oil sector*

INTRODUCTION

The significance of global supply chains (GSCs), global value chains (GVCs) and global production networks (GPNs) in the world economy grew rapidly from the 1990s until the late 2000s. According to the World Bank (2020), while this growth stalled following the 2007-8 Global Financial Crisis, around half of global trade remains linked to GVCs. Unsurprisingly, given that the transnational organization of production represents the primary conduit for the transmission of economic crises around the world (Cattaneo et al., 2010; Tanaka, 2009), various types of shock and their propagation (or transmission) have been analysed in the supply chain management (SCM) and GVC literatures.

The supply chain management (SCM) literature tends to focus on the operational aspects of the bullwhip effect - as demand variations oscillate upstream in the supply chain (Cachon et al, 2007), the ripple effect associated with supply disruptions downstream in the chain (Ivanov *et al.*, 2014) and how these operational risks can be managed to optimise system performance and chain (or network) resilience to shock disturbances (Kim *et al*, 2015). A GVC approach has been adopted in the development economics literature, to examine the impact of the global financial crisis on trade (e.g. Altomonte et al, 2012). However, previous studies tend to adopt either a micro- or macro-perspective and, as a result often fail to capture the full extent of shock propagation (micro) or fail to provide sufficient explanation of the factors underlying patterns of shock propagation (macro). We argue that, in order for businesses engaged in GSCs to effectively plan for, mitigate and manage shock event risks, it is necessary to understand the full range of shock propagation effects and their mediating factors.

The key contribution of this paper involves a novel approach to our understanding of the asymmetries of shock propagation in GSCs, that recognises the roles of power and embeddedness in value capture dynamics. Our paper adopts a GPN approach, primarily associated with Henderson et al. (2002) and Coe and Yeung (2015), which extends the GVC perspective by providing an analytical framework for the geographical analysis of the link between vertical specialization, the spatial dispersion of production. Breaking from the largely ‘stateless’ and linear conceptualizations associated with the GSC and GVC literatures, the GPN framework foregrounds the dynamic networked intra-firm, inter-firm and extra-firm relationships between actors that influence the organization of economic activities at various geographical scales. Moreover, while the World Bank (2020:1) suggests that, “interactions between firms [in GVCs] typically involve durable relationships” our case analysis - of the propagation of the 2014 oil price shock throughout upstream oil GPNs - highlights the vulnerability of network actors to crisis induced by shock events. We find that, that despite attempts to mitigate supply chain risks and enhance network resilience, GPN firms are still likely to be highly vulnerable to particular types of shock events and - reflecting asymmetries in shock propagation – that some network actors will be more exposed to those risks than others.

The remainder of our paper begins with a review of previous research exploring the propagation of shock effects in international businesses and their global supply networks. This informs the subsequent analytical framework and research methods adopted. These are then applied to our analysis of the impact of the 2014 oil price crash on upstream oil GPNs, focusing on activities located in Southeast Asia - specifically, Indonesia, Singapore and Vietnam. We end with our conclusions and a discussion of the main implications of our findings.

SHOCKS, SHOCK PROPAGATION AND ASYMMETRIC NETWORK EFFECTS

Shocks and the Bullwhip Effect

A popular approach in the international business field is to characterise shock events as black, grey or white swan events, while an alternative involves the concept of business tsunamis (Akkermans and Van Wassenhove, 2013). Underlying these, and other, shock typologies are the characteristics of unpredictability and impact significance, which give rise to uncertainty and risk. In the context of demand-side shocks, the supply chain management (SCM) literature focuses on the bullwhip hypothesis (Cachon et al, 2007; Bray and Mendelson, 2012) – a situation by which small changes in demand cause “oscillating and increasing reverberations in production, capacity and inventory”, along the supply chain (Jacoby, 2010: 20). This hypothesis suggests that the mismatch between production and sales – leading to higher inventory costs – will be greater the further the firm is from the end-user in the supply chain - primarily as a result of information distortion. Empirical evidence from SCM suggests that there is evidence of a significant bullwhip at the firm level (Cachon et al, 2007), but that aggregation at the industry level tends to mask this effect (Chen and Lee, 2012) and that the magnitude of the bullwhip effect has reduced over time (Shan et al, 2014). Evidence of a bullwhip effect has also been identified in the trade literature (Altomonte et al, 2012; Escaith et al, 2010). Altomonte et al (2012), for example, adopt a GVC framework to examine the transmission effects of the 2007-2009 financial crisis and consequent trade collapse, using aggregate trade data for French multinational corporations (MNCs). They find evidence of a bullwhip effect that is more pronounced in GVCs characterized by arm’s length (market-based) transactions relative to intra-group (partnership-based) trade. While they do not rule out a potential role for trade credit constraints in their results, they suggest that the superior performance of the intra-group model is associated with the enhanced coordination afforded by vertically integrated control.

Akkermans and Van Wassenhove (2013: 6749) suggest that the bullwhip can now be described as a ‘white swan’, the “drivers of the bullwhip effect are well-known, we can attenuate and anticipate bullwhips and react appropriately. That does not make it any less important to manage the bullwhip effect properly in any given context, but the frontier of knowledge by now lies elsewhere.” However, while our knowledge and understanding of the traditional supply chain bullwhip, in both business research and practice, are well developed, we argue that the bullwhip cannot necessarily be described as a white swan. While the bullwhip concept can highlight particular aspects of network relationships, the SCM approach fails to provide a comprehensive framework for analysing the role of actors, mediating influences and impacts beyond those immediate inter-firm relationships in the chain (or network).

The GVC approach can shed light on the influence of network governance on the asymmetric effects of oil price shocks. However, GVC work favours a linear chain model and tends to down-

play the role of extra-firm actors, thus failing to capture the complex network characteristics of the upstream oil segment and the, often critical, role of the state therein (Bridge, 2008). The GPN framework, associated with Henderson et al (2002), has been developed in response to the dominance of this overly deterministic linear approach in the global value chain (GVC) literature. Not only does GPN theory address the networked nature of inter-firm relationships and incorporate a range of extra-firm actors, but more recent GPN theorizations (Coe and Yeung, 2015) explicitly attempt to open the ‘black-box’ of the firm (Hervas-Oliver and Boix-Domenech, 2013). This links competitive dynamics to lead (or focal) firm strategies and resultant network relationships. These network relationships are associated with firm strategies of internalization, inter-firm control, inter-firm partnership and extra-firm bargaining. The importance of considering the impact of lead firm strategic responses to crisis, and the associated intra-firm dynamics between corporate headquarters, regional headquarters and operational activities, is critical to our understanding of how shocks propagate within GSCs (Jeon et al, 2013).

Power, Value and Embeddedness

The GPN approach foregrounds the issues of power, value and embeddedness in the relations between network actors and hence the governance and configuration of GPNs. The GPN framework is inherently concerned with value, the distribution of value between network actors in particular, and explicitly links these value dynamics to asymmetries in bargaining power between actors within the network. Value created through GPN activities is unlikely to be distributed equally across network actors. Power asymmetries between lead firms, strategic partners, specialist suppliers, generic suppliers and extra-firm actors within the network will ultimately determine value capture (as well as value creation and enhancement opportunities). Power in the GPN framework is multipolar, with power structures at a given point in the network affecting, and being affected by, power structures elsewhere in the network. Moreover, in a key departure from earlier theorizations, the GPN framework foregrounds the possibility that extra-firm actors (e.g. the state) represent alternative sources of power in the network (Ponte and Sturgeon, 2014; McGregor and Coe, 2021). Power relations in the network are not static and the dynamics of these power asymmetries will mean that network configurations will also evolve (Dicken et al., 2001).

Resource-dependency theory (Pfeffer and Salancik, 1978) views power as a zero-sum game with self-interested more powerful firms acting to the detriment of less powerful firms. However, the embeddedness perspective, associated with Granovetter (1985), identifies the potential for mutual benefits arising through inter-firm cooperation even in the presence of power asymmetries. Moreover, different forms of network power exist simultaneously such that the negative effects of activated power may be offset by the positive effects of passive power (Huo et al, 2017). Inter-firm relationships can, therefore, be viewed on a spectrum from contractual (inter-firm control) to relational (inter-firm collaboration/ partnership). This perspective is explicit in the conceptualization of power and the identification of actor-network strategies (i.e. inter-firm control and inter-firm partnership) in the GPN framework.

A network governance strategy based on inter-firm control is associated with a contractual approach involving formal contracts, unilateral resource commitments and a focus on short-term benefits. Relational governance, on the other hand, involves long-term agreements based on personal relationships and social norms, such as trust and mutual commitment. This approach reflects an expectation of continuity, enhanced knowledge exchange, joint resource commitments and risk-sharing. The concept of embeddedness in GPN theory encompasses three elements - network, territorial and societal (Coe and Yeung, 2015; Weller, 2006). The stability (or resilience) of network configurations in times of crisis will therefore reflect the degree of (network) embeddedness of actors in the network itself and the (territorial) embeddedness of the network in specific places, as well as being influenced by the cultural, institutional and historical origins of actors (societal). In the context of our study, embeddedness broadly corresponds to the resilience of network relationships in times of crisis.

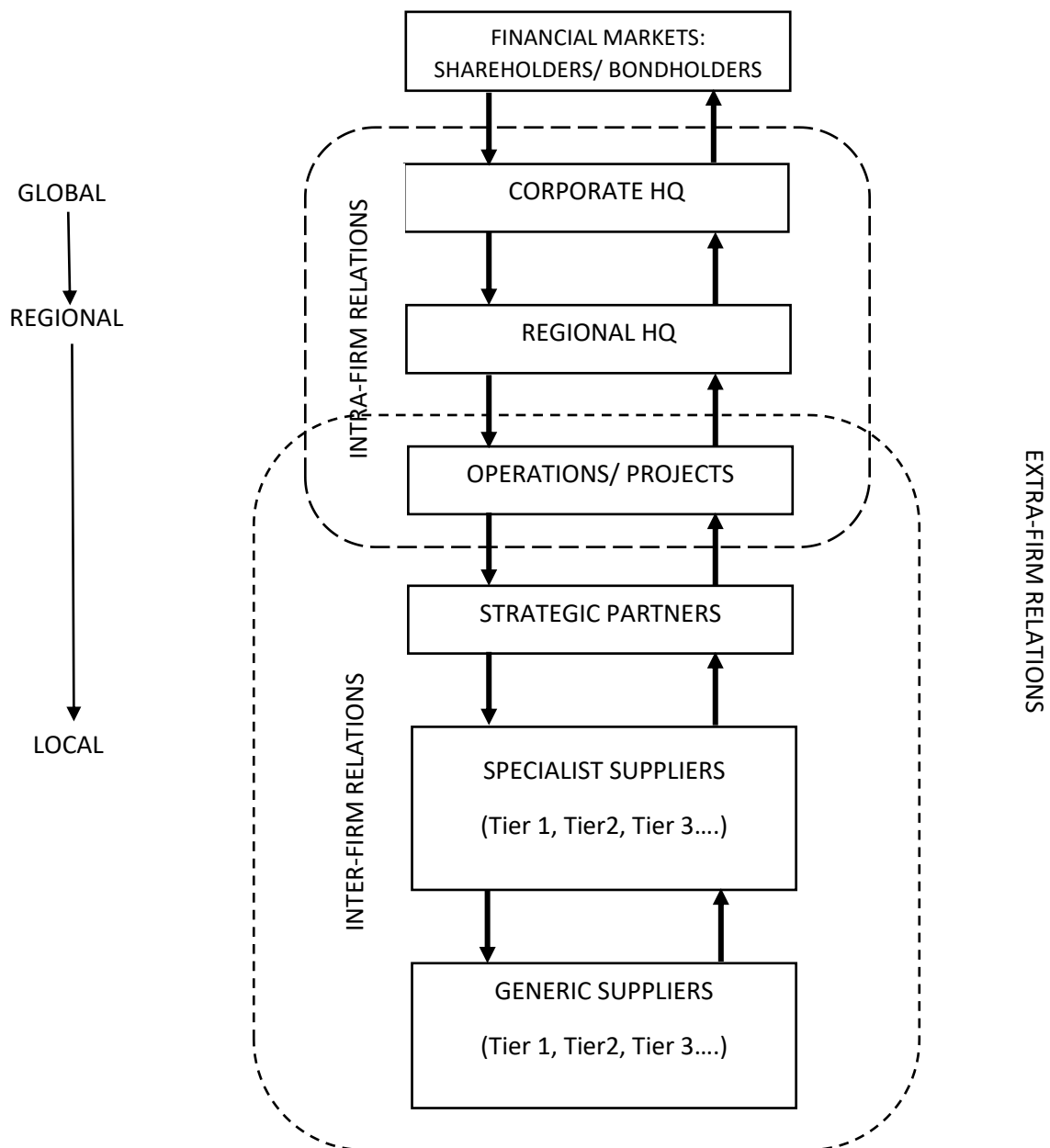
One of the benefits of participation in network alliances is that it should help actors cope with turbulence and uncertainty in crisis situations (Anderson and Buvik, 2001). Following a shock event, the likelihood of continuity in network relationships and stability in network configurations beyond formal contract time horizons would, therefore, be expected to reflect the degree of network embeddedness (i.e. trust, commitment and mutual interdependence) between network actors. Power relations, however, are unstable. In the context of crisis, there may be dynamic shifts in network power, as a result of the new, post-shock, environment. In uncertain environments, firm performance and survival may depend on the strength and stability of cooperative network relationships (Landeros and Monczka, 1989). However, relational stability may require participants to make short-term sacrifices in order to maintain the relationship over the long-term. In such circumstances, it is unlikely that personal relationships and reciprocity will be sufficient to ensure network resilience through a crisis (Yang et al, 2008).

We suggest that one reason for this relates to intra-firm relations, that is the internal, hierarchical, structures of global lead firms themselves. Ultimately, at the upper level of this vertical chain of control (or governance) within lead firms are the owners and investors in the firm. These owners (e.g. shareholders) and other investors (e.g. bondholders) react to the crisis (i.e. oil price shock) by exerting increased pressure for improved financial performance on the senior management team (corporate HQ) of the lead firm. This increased financial discipline generates a review of global activities leading to the structural and operational strategy dynamics that then flow down the organizational hierarchy to regional HQs and, ultimately, to the project/ operational level (Hoenen, and Kostova, 2015). The vertical transmission of intra-firm directives to both reduce activity levels and cut costs will put intense pressure on the stability of inter-firm relationships. Specifically, the vertical (intra-firm) transmission of the new structural and operational imperatives within the lead firm will tend to over-ride the desire to maintain cooperative partnerships at the local/ regional level if they are predominantly based on personal relationships and reciprocity. Network partnerships based on relational governance, i.e. commitment, trust and a clear understanding of

the significant mutual benefit of partnership over the long-term (Yang et al, 2008) are more likely to survive a significant and prolonged crisis event.

Bringing these various factors together introduces significant complexity in understanding the propagation of shock effects in GSCs and GPNs. However, we propose that a framework (Figure 1), which integrates the various intra-, inter- and extra-firm dynamics involved, is necessary to fully understand the propagation of shocks (such as black swan events) in global supply chains/ production networks.

Figure 1: Actors and Multi-Scalar Governance in GPNs



METHODS

We apply the framework presented in Figure 1 to explore the impacts of the 2014 oil price shock on upstream oil GPNs. Oil (and gas) represents the most significant element in global trade (Tordo et al, 2011). Oil is not just any commodity, it has a strategic importance – socially, economically and militarily – that sets it apart from other commodities, products or services (Yergin, 2008). The products derived from oil and gas (petrol, diesel, aviation fuel, electricity, chemicals and plastics etc.), represent, or at least are perceived to represent, strategically critical inputs to the socio-economic welfare, security and stability of nations (Bradshaw, 2009). The upstream oil sector involves a complex set of relationships across various spatial scales. Despite multi-scalar dimensions being central to GPN theory, critiques of GPN empirics (such as Sunley, 2008) suggest that there has been an over-emphasis on the analysis of micro-scale network relationships that down-plays a range of other important factors, such as geopolitics (Glassman, 2011). As suggested by Yeung (2016b) these ‘blind spots’ in the explanatory power of GPN analysis can be addressed through a synthesis of quantitative and qualitative methods.

Information contained in published corporate, specialist media and industry reports has been utilised. An analysis of the corporate annual reports of 50 upstream oil firms operating in Southeast Asia yielded a range of data on various corporate performance metrics (e.g. ROCE), crisis-response strategies and evidence of bullwhip effects. Adopting the approach used by Cachon et al (2007), that provides evidence of a bullwhip effect if Production Variance/ Demand Variance >1 , we conducted three bullwhip tests that differentiated between 1) business activity 2) supply chain position (Tier 1, Tier 2 etc.) and 3) GPN role (lead firm, strategic partner, etc.). Additional secondary sources including global, supra-national regional, national and sub-national oil industry data e.g. OPEC (Organisation for Oil Exporting Countries), the International Energy Agency (IEA), BP Statistical Review of World Energy and the Baker Hughes Rig Count Database, were also utilised in order to explore the asymmetries of shock propagation in upstream oil GPNs.

While this data provides significant insights to the asymmetric effects of the price shock, we supplemented these sources with data elicited via face-to-face interviews with 40 senior level executives representing actors operating in the upstream segment and located in Singapore (16), Indonesia (14) and Vietnam (10). Held over the September 2016 to May 2017 period, these field interviews involved close dialogue (Clark, 1998) with a variety of upstream firms including international oil companies (IOCs), national oil companies (NOCs), oilfield services companies (OFSCs), drilling companies and other suppliers to the upstream segment as well as two upstream business organizations (BO) and one public sector (PS) agency. Interviews were semi-structured and adopted an open-ended approach. Our sample, which includes large multinational companies as well as local small and medium-sized enterprises, incorporates firms that specialize in particular aspects of the upstream oil segment (i.e. oil exploration, extraction, manufacturing and service firms). Our sample also included firms specialized in particular aspects of the upstream oil,

horizontally integrated firms operating across a range of upstream GPN functions and vertically integrated firms involved in various stages along the crude oil value chain. Our analysis, presented in the following section, is thus informed by a wide-range of quantitative and qualitative data focused on understanding the impact of the mid-2014 oil price shock in upstream oil GPNs.

CASE ANALYSIS: UPSTREAM OIL & GAS

The oil (and gas) industry involves a set of complex and dynamic multi-scalar, multi-actor networked relationships. Bridge (2008) conceptualizes the underlying structure of generic oil GPNs, which he terms the hydrocarbon commodity chain (Figure 2), as involving relatively few links, despite often being geographically extensive. However, Bridge (2008) points to the density of actor networks at each of the key stages in the ‘hydrocarbon chain’ – particularly in the upstream and downstream segments. This hydrocarbon chain can thus be extended to a network conceptualization (Bridge 2008) or viewed as a network of networks (Stephenson and Agnew, 2016), which recognizes both the linkages within the chain itself as well as the actor networks operating at each stage in the chain.

Upstream Oil Networks

The upstream segment comprises a wide range of firm actors in the extractive, manufacturing and service sectors as well as hybrid (i.e. public-private actors, such as NOCs), states and other extra-firm actors. While some vertically integrated IOCs are still involved at each stage of the linear hydrocarbon chain, the oil industry, like many other industries in the post-Fordist era, has experienced a process of vertical disintegration as corporate strategies shift towards a focus on core competencies (de Graaf, 2012; Inkpen and Moffett, 2011). IOC strategies have, for example, involved focusing on core advantages in reserve access, knowledge and marketing networks as well as increasing involvement in areas of higher value-added activity such as oil trading and specific product segments. This fragmentation has led to the emergence of specialist upstream suppliers such as the oilfield services companies (OFSCs) (e.g. Halliburton, Schlumberger) and drilling companies (e.g. NOV, Parker Drilling).

There is likely to be a dense network of product and service suppliers involved in upstream oil networks. Typically, two or more oil companies, with concessions or licenses to explore and produce crude oil - operating through a risk-sharing joint-venture agreement - are represented by one lead producer (or operator). At the heart of the upstream oil segment is the relationship between the producer - either an IOC (international oil company, e.g. BP, Exxon-Mobil), a smaller independent operator (e.g. Maersk Oil, Kris Energy) or a NOC (national oil company e.g. Saudi Aramco, CNOOC, Pertamina or PetroVietnam) - and the state, or the NOC acting on behalf of the state. Actor networks in upstream oil projects typically involve as many as fifty additional participants supplying specialized products and services (Crabtree et al, 1997). Moreover, each of

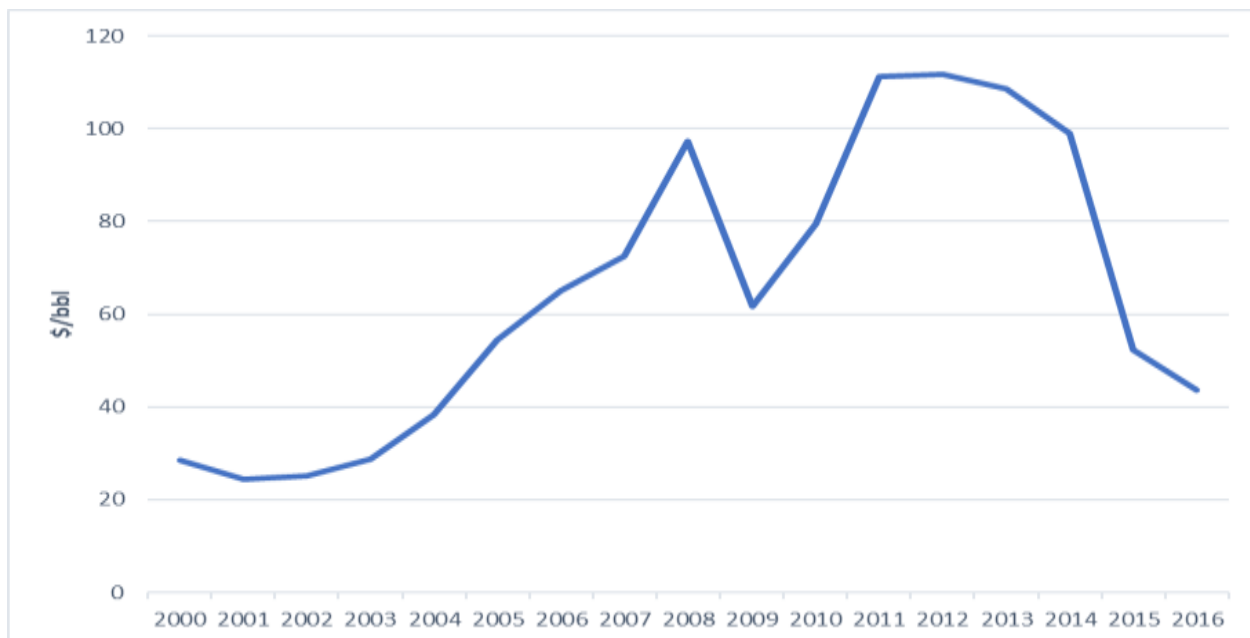
the product and service inputs to the upstream segment will involve a further sub-network of suppliers and extra-firm actors.

The crude oil price shock of mid-2014 has led to major changes within the global oil industry and the upstream segment (i.e. exploration, development and production) in particular (McKinsey, 2016). Previous research, such as Jacoby (2010, Cigolini and Rossi (2010 and Ramos and Veiga (2011), points to a likelihood that the effects of crude oil price shocks will be felt asymmetrically by different network actors. In the case of oil supply chains, for example, Jacoby (2010) suggests that the impact of an increase in demand for oil on excess output (inventory) is more pronounced for component manufacturers than original equipment manufacturers (OEMs); higher at OEMs than refiners; and higher at refiners than oil producers. Similarly, Cigolini and Rossi (2010) highlight the importance of supply chain risk in the oil industry and, in disaggregating the oil supply chain into drilling, transport and refining activities, point to a bullwhipped operational risk effect. More recently, however, Zhu et al (2020) suggest that existing theorisations of the bullwhip effect may have limitations in explaining bullwhips in integrated oil firms.

The 2014 Oil Price Shock

Upstream oil projects are capital-intensive, have long lead-times, are characterized by a high degree of technological complexity and organizational interdependencies involving networked intra-firm, inter-firm and extra-firm relationships across various spatial scales (Badiru and Osisanya, 2013; Børve et al, 2017; Bridge, 2008; Yusuf et al, 2012). Investment decisions in upstream oil are often irreversible, have high initial capital requirements and associated high sunk costs, involve long-term planning horizons (typically 10-25 years) and are influenced by uncertainties surrounding a range of economic, geological, technological, (geo)political and environmental factors. However, despite significant efforts to address risk in the upstream oil segment, critical uncertainties remain – particularly those surrounding oil price volatility. As illustrated in Figure 2, the price of Brent crude fell by around 56%, from an annual average of around US\$100/barrel in 2014 to just over \$40 in 2016.

Figure 2: Average Annual Price of Brent Crude (US\$ per barrel), 2000-2016



Source: Platts (2017), BP Statistical Review of World Energy, June 2017 (2017)

Baumeister and Kilian suggest that, “It remains an open question what caused the decline in the price of oil after June 2014, the severity of which surprised even industry experts [...] the causes of the decline in the second half of 2014 are not immediately obvious.” (2016:133). Various reasons for the 2014 price shock have been forwarded: including that it was triggered by volatility in the US\$/Euro exchange rate (Tokic, 2015) or a speculative financial bubble (Fantazzini, 2016) and that demand-supply fundamentals only acted to exacerbate the price slump. However, a number of studies view the underlying cause of the 2014 price shock as a geopolitical-geo-economic price war between OPEC (Organization of Petroleum Exporting Countries) and the US (Ansari, 2017; Behar and Ritz, 2017; Jacobs, 2016). In the context of significant increases in non-OPEC output, particularly expansion in US tight (unconventional) oil production, OPEC and Russia failed to cut crude oil production levels sufficiently to prevent excess supply in world markets. This (in-)action by OPEC is viewed by Behar and Ritz (2017), amongst others, as a deliberate attempt by OPEC to regain global market share by forcing prices below break-even levels for unconventional production, which are generally higher than those for conventional oil (Verbruggen and Al Marchohi, 2010), and thus force shale oil producers out of the market. While the US shale oil sector clearly suffered from the resultant price shock (Jacobs, 2016), operators in US tight oil were able to significantly reduce their break-even price levels and - in the context of a more favourable domestic regulatory environment - were not only able to survive but also expand production.

Figure 2 illustrates that, excluding the short-lived price fall following the global financial crisis, over the period from 2002 to 2014, crude oil prices were relatively high and, more often than not, rising. In the context of the oil price shock of 2008, Labban (2010) suggests that, in a low-price environment, the pressure to maintain shareholder value on profitability, translates into cost-cutting through “paring operating and investment costs and slashing jobs.” (2010: 551). The 2014 price shock has led to significant changes in upstream oil and has framed the strategic structural (reduced capital investment) and operational responses of upstream oil GPN lead firms (McKinsey, 2017b). As discussed in the following section, however, there are a number of reasons to expect that the effects of oil price shocks will be asymmetric across GPN actors (and spatially).

Shock Propagation Part I: Lead Firm Impacts and Strategic Responses

The persistent low-price environment following the price shock impacted the financial performance of upstream actors. Based on return on average capital employed (ROCE) data, a key indicator of overall financial performance, our sample of IOCs on average experienced a reduction from 9.2% in 2014 to 1.9% in 2016. This compares with a sample of NOCs who saw ROCE fall from 7.4% to 6% and for specialist upstream suppliers who exhibited a ROCE of 7.1% in 2014 compared to -6% by 2016. The more volatile pattern in ROCE ratios for specialist suppliers, at least in part, is likely to reflect the focus of activities in upstream oil and in less geographically diverse markets than the IOCs, but may also reflect decoupling processes, resulting from lead firm structural responses to the price shock, and reduced operating margins for suppliers as a result of the cascading effect of lead firm cost-cutting strategies within the network.

The impact of the price crash on financial performance, led to significant changes in the strategies of lead firms in the upstream oil segment, specifically the major producers, i.e. the IOCs, NOCs and independent operators. As one foreign NOC operating in Indonesia put it, “oil was at US\$120, now it is US\$50, that is why headquarters is trying to reshape projects - to optimize some and maybe to postpone others.” *NOC-INV1*. In the context of the 2014 oil price crash, many on-going upstream development and production projects had already reached a stage whereby they could not simply be halted. In other cases, projects were either downscaled, delayed or were scrapped entirely (Braemar Offshore, 2017). This structural response to the oil price crash meant that on-going crude production could not immediately adjust to lower price levels. However, planned capital expenditure was slashed by 44% over the 2014-16 period across the global upstream segment (Barclays, 2017). Our data on upstream capital expenditure for a sample of lead firms (operators) similarly indicates that, on average, upstream CAPEX fell by 40% over the 2014-16 period (21% in 2015 and by a further 24% in 2016). This is supported by our interview results, such as one respondent stating that: “The immediate effect of the [price] crash is the CAPEX, so we have been reducing our investments drastically. You can see that in our accounts over the last three years. We are still investing but we are now trying to focus the company more on the value generated than on the volume and the size and we are not the only one to do it.” *IOC-SG3*.

The strategies of lead firms, reflected in corporate report information, have been to significantly reduce exploration investments, reorganize their activities to focus on oilfield characteristics and geographies, often achieved through major divestment programs. On-going production in some oilfield locations has also been put on hold. However, the disaggregation of CAPEX data by region suggests that not only were some parts of the world less affected by the price shock (e.g. the Middle East) but the timing in the recovery of investment activity also shows considerable spatial variation. According to data produced by Barclays (2017), while Africa (-9%) and Latin America (-4%) experienced continued reductions in upstream investment in 2017, the global total rose by 3% (reflecting increases of 4% in the Middle East, 6% in Russia and 53% in US shale investment). The spatial variation in investment activity reflects several factors. Widely used capital budgeting methods in upstream oil firms involve the adoption of different discount rates for different geographies by one independent oil producer, for example, is indicative of territorial asymmetries in risk environment. While the firm uses a discount rate of 8% for projects in Norway, the UK and the US, the rates used in Brazil (11%), Angola (11.5%) and Kurdistan (14.5%) are significantly higher. In a crisis, therefore, the draw-back on capital spending is likely to be more significant in some locations (e.g. Kurdistan) than in others (e.g. Norway). While breakeven oil prices (see Appendix 1) have a role to play in this spatial reorientation of upstream oil activities, it is evident that other factors (such as energy geopolitics) are also significant.

One IOC interviewee stated that, “the oil price has been going down to a level which really hits the company in a sense that we have reduced our operations drastically. We used to operate with 9 to 10 rigs [in Balikpapan, Indonesia]. That is a big operation. But now we are reducing activities and are left with one rig - even now that rig has been put on suspension - we are waiting until the oil price goes up and then the business environment will improve.” *IOC-INI*.

In addition to the strategic structural responses by upstream actors, the emerging risk environment associated with the price shock also created a drive for operational efficiencies. In the low and falling price environment faced by upstream operators following the price shock and the associated convergence of oil prices towards production costs, efficiency gains became increasingly critical in order to maintain margins. The relationship between per barrel production costs and the oil price has a significant impact on financial performance - reflected in the identification of firm- and project-level break-even oil prices for lead firms in upstream oil GPNs.

During the generally high and rising prices of the pre-shock environment, there had been a simultaneous increase in upstream project costs, only 30% of which can be explained by inflation (McKinsey, 2017a). “The good times resulted in multiple years of cost inflation, with expenditure per barrel rising between 5 and 15 percent each year since 2009, depending on the service and the geography.” McKinsey (2016: 1). During 2015 and 2016, however, per barrel production costs fell by an estimated 29% (McKinsey, 2017b). Our data for the same period, derived from corporate annual reports, illustrates similar cost reductions averaging 28% - ranging from 24% to 36% - for

a sample of global IOC lead firms. A similar pattern, however, is not necessarily demonstrated by smaller independent operators, some of whom saw production costs rise significantly over the same period. A NOC operating in Vietnam stated that, in response to the low-price environment, “a cost reduction project has been run, along with the identification of synergies among subsidiaries’ activity in the region” *NOC-VNI*. The achievement of operating efficiencies in the upstream sector over the period since the price shock is similarly reflected in Maersk’s 2016 annual report, “[In 2016] Maersk Oil reduced operating costs...by 20% ... through a headcount reduction of approximately 400 employees equal to 8% of the workforce, primarily in headquarters, Kazakhstan, Norway, USA and Angola. Offshoring of back-office finance activities... was executed according to plan. Further reductions came from contract renegotiations, optimized logistics and continued improvement of maintenance planning and management of late-life assets.” (Maersk, 2017). Other cost-cutting measures by lead firms identified through our interviews include workforce reduction via non-renewal of contracts; optimizing the workforce by increasing productivity or by reducing salary; renegotiating contracts with contractors/suppliers and centralizing regional HQ functions.

Shock Propagation Part II: Supplier and Network Effects

Overall, the structural and operational responses of lead firms in the upstream segment point to a simultaneous reduction in *value creation* opportunities (via structural strategies focusing on reducing investment in upstream activity) and a squeeze on *value capture* opportunities (via operational strategies focused on efficiency gains in on-going activities) in upstream oil GPNs. Our GPN framework suggests that the impact of these strategies will cascade throughout upstream oil GPNs but that these network impacts are likely to be asymmetrical based on the differences in economic, material, relational risks that combine to create territorial differences in risk environments. Braemar Offshore (2017) report that “the fall in oil price resulted in markedly lower exploration and construction activities in the offshore energy sector as oil companies seek to reduce their own costs.” As lead firm operators pulled back from new investment projects, this has impacted on other firms in upstream oil GPNs as are captured in global rig count data, a key barometer of upstream activity, which fell by 55.5% in the 2014-2016 period (Baker Hughes, 2018). As Table 1 illustrates, however, there are significant variations across global regions.

Table 1 Rig Count Data by Global Region (% change), 2014-2017

	S & C America	Europe & Eurasia	Africa	Middle East	Asia Pacific	Canada	U.S.	Total World
% change 2014-16	-50.1	-33.8	-36.6	-3.9	-26.4	-66.3	-72.6	-55.5
% change 2016-17	-6.6	-4.2	-2.4	-0.5	7.5	61.7	71.6	27.4

Source: Baker Hughes/ author analysis

Analysis of the Inventory Bullwhip

The reduction in upstream capital expenditure by lead firms has had an immediate and significant impact on firms supplying specialist exploration services. The demand for outsourced exploration services fell dramatically, as identified by one IOC, who stated that “...there were only two 3D-seismic surveys in Asia last year [2015]... it has basically stopped.” *IOC-SG2*. However, reductions in lead firm CAPEX not only affected exploration activities. As stated in their 2016 annual report Apexindo (2017), an Indonesian drilling company, suggest that, “the sequential impact of reduced investment in upstream oil and gas is the significant decrease in activity in the supporting industry, including in drilling. As a consequence...tighter competition among drilling companies could not be avoided.” Moreover, despite a more recent upturn in operator activity Oil & Gas UK (2018) suggest that “many areas of the [UK Sector-North Sea] supply chain are still dealing with the consequences of the downturn and have yet to benefit from any upturn in activity” (2018: 5). This points to a potential bullwhip in upstream networks, as suggested by Jacoby (2010). Table 2a indicates that, based on upstream activity, we are most likely to see excess inventory levels among offshore equipment manufacturers (1.60) followed by oilfield services companies (1.17), with no evidence of a bullwhip for operators or drilling companies. This result is as expected given that operators are the lead firms and that drillers are less likely to be required to hold inventories than those firms focused on manufacturing of oilfield equipment. OFSCs, while outsourcing a proportion of their manufacturing also tend to maintain a mix of manufacturing and service offerings, as well as holding stocks of bought-in products for just-in-time delivery to field sites.

Table 2b follows the SCM approach of identifying the position of firms in the supply chain relative to the consumer/ end-user, i.e. the operator. The results are broadly as expected with no evidence of a bullwhip effect for end-users. There is evidence of a slight bullwhip for 1st tier suppliers but this is more significant for 2nd tier suppliers. Finally, Table 2c identifies the bullwhip effect based on actor roles in upstream oil GPNs. As we identify operators as lead firms and all other firms in our sample are best classified as specialist suppliers this only gives us two categories for comparison. Again, the results are as expected with lead firms displaying no bullwhip effect, while their suppliers, on average, experience a significant bullwhip, although there is significant variation within the sample. One major rig manufacturer, for example, demonstrates a bullwhip effect significantly above the average for our sample of specialist suppliers. This can be explained by the cancellation of a significant order (directly because of the oil price shock) that left the supplier carrying significantly higher inventory levels than normal.

Table 2a Bullwhip Effects by Business Activity

Business Activity	Operator/ Producer	Exploration Services	Drilling Companies	Offshore Equipment Manufacture	Offshore Services	Oilfield Services
Bullwhip Effect	0.96	n/a	0.95	1.60	n/a	1.17
Range	0.81-1.04	n/a	0.84-1.09	0.98-2.53	n/a	1.08-1.25

Table 2b Bullwhip Effects by Supply Chain Position

Position in Supply Chain (Steps from End-user)	0	1	2	3
Bullwhip Effect	0.96	1.06	1.60	n/a
Range	0.81-1.04	0.84-1.26	0.98-2.53	n/a

Table 2c Bullwhip Effects by GPN Role

GPN Role	Lead Firms	Specialist Supplier (Industry-Specific)
Bullwhip Effect	0.96	1.24
Range	0.81-1.04	0.84-2.53

These results support our prediction of a causal relationship between lead firm strategy reformulation and asymmetric network effects in the upstream oil segment. However, we are unable to differentiate between the SCM hypothesis that this is because of information distortion, the asymmetric bargaining power perspective of GPN theory or whether the results are related to the material differences between firm activities that influence their need to hold inventories. The results of further qualitative analysis can, however, shed additional light on the network practices emerging in response to the lead firm strategies emerging following the price shock.

Analysis of the Bullwhip Beyond Inventory: Contract Renegotiation, Discounting and Risk Transfer

While the inventory cost implications of demand-production variance are well known, the analysis of the wider asymmetric effects of demand variance have been less widely studied. Our GPN approach identifies a range of other factors that illustrate the full range of network impacts, as well as the factors mediating the significance of these impacts, on network suppliers.

One result of lead firm strategies in response to the low oil price environment has been heavy discounting of products and services throughout upstream oil GPNs. As one specialist supplier in the seismic survey sector stated, "everyone is fighting for less work and that clearly has downward pressure on pricing." *SS-SG1*. A similar situation is apparent in the rig leasing market and the offshore supply sector. The reduction in upstream activity has led to over-supply in global and regional rig markets, with many rigs being either *cold* or *warm stacked* [endnote?] and rig lease contracts being agreed at significantly reduced rates and with more favourable terms to the operator. As one interviewee revealed, "At the beginning, the [rig] contract was US\$198,000 a day - by the end of the contract, they had reduced their price to \$89,000 a day. That same company has now offered the rig for any length of time for \$43,000 a day. And they said you do not have to pay us until you start producing out of those wells." *IO-SG1*.

While discounting may be a supplier-led practice (in order to reduce inventory levels) our evidence suggests that the power of lead firms in upstream oil GPNs has driven the price discounting. This is evident in the statement that, "If you think of the value chain, the operators are really the kings. They dictate everything that goes on. And the position we are in, we are very much towards the end of the value chain - so our bargaining position, particularly recently has changed quite a lot." *SS-SG2*. As a representative of one Singapore-based drilling company stated, the situation is now one of, "Take it or leave it - the simplest way to put it is that previously there was a negotiation, now you are lucky if you get a negotiation." *DC-SG1*. The link between inter-firm bargaining dynamics and the oil price shock is evident in the one specialist supplier's suggestion that, "Currently, it is a buyers-market. When it starts up again and they [*global OFSC*] need hundreds of pieces then it is our market again where we say 'You can have it. At that price.' And they say 'Yes, as long as you can deliver it, I'll pay you whatever you want.' But right now, that's not how it is. At the moment they only demand a limited amount and the limited amount is of course bargained as much as possible" *SS-VNI*. Other interviewees also indicated a change in contractual terms, including the transfer of liabilities from lead firms to suppliers. Other specialist suppliers appear less willing to offer discounts: "To be frank we do not really want to compete on price. We do not want to take the risk associated with very low margins. And we believe that our reputation and capabilities do not deserve a low margin price." *SS-SG3*.

Another aspect of the downturn, highlighted by a global OFSC operating in Vietnam, points to an emphasis on inter-firm partnership, "You have to be closer to the client to understand how we can go through the crisis together by closer collaboration to reduce the costs and optimize the costs, so that both sides can survive." *OFSC-VNI*. We find evidence that a partnership-oriented model has been sustained over the downturn but only for some specialist suppliers. An oilfield equipment manufacturer operating in Vietnam, for example, stated that: "Our customers and our company have long historical collaborations... we are a key supplier for [*global OFSC*]. Of course, they also know about the importance of our company and they understand that too. They are of course tough and want to negotiate as much as possible to get a better price, but they know very well that they

still have to help us, so that we are able to maintain our production.” The interviewee went on to state that, “In principle, they then steer other products, product groups and parts that could be made by other manufacturers, in our direction....We are able to cover all the product groups...that they will require - that has just left other companies more or less dying.” *SS-VNI*.

As identified by McKinsey (2017a) only 30% of the pre-shock increases in lead firm operating costs can be attributed to inflation. The remaining 70% points to the increased bargaining power of suppliers in upstream oil networks during the ‘good’ times of high and rising crude oil prices. However, the strategic response of operators to the 2014 price shock – in the ‘bad times’ - highlights a (re-)activation of lead firm power over (Tier-1) suppliers and strategic partners, which cascades upstream in (upstream) oil GPNs. While a small number of suppliers in our analysis, by virtue of their unique capabilities, appear able to maintain relationships and hence margins, the majority of suppliers have experienced significant declines in performance, if not insolvency.

We suggest that there are two key factors in the activation of lead firm power. Firstly, increased levels of discipline from the financial markets creates a risk environment that motivates this power activation (associated with intra-firm flows) and, secondly, the excess supply (and low demand) in the market further enhances the conditions by which lead firms can activate their bargaining power advantages within the network. The extent to which lead firms, or the buyer in other buyer-supplier relationships within the network, are likely to decouple, however, will depend on the resilience of the network relationship. Personal relations and reciprocity are not sufficient to guarantee network stability, rather the conditions associated with relational governance (trust, commitment and mutual benefit) appear necessary for network stability. In our analysis, however, network resilience appears to be relatively low in all but a few cases. In such circumstances the activation of power by lead firms pushes supplier prices lower and lower with lead firms also able to further exploit the heavy discounting culture in the network by playing suppliers off against each other. The combined effects of these network processes on cashflows may also lead to systemic late or delayed payments further exacerbating cashflow and liquidity problems for network actors. The low oil price environment, and the consequent reductions in financial performance, also act to squeeze lines of credit to distressed firms, potentially leading to bankruptcies and associated job losses.

Mediating Role(s) of the State (and NOCs)

Failure to recognize the significance of the state in any analysis of the impact of oil price shocks on the upstream oil segment would represent a significant omission (Vivoda, 2009). It is clear from our analysis that the state, either acting directly or through its NOC, has reacted to the downturn in the upstream sector caused by the price shock and has, to varying degrees, mediated the negative socio-economic impacts of the price shock. States in oil-producing countries have a particular incentive to intervene not only from an energy security and national development perspective,

since the reduction in oil revenue has implications for fiscal budgets and, ultimately, political stability.

In Indonesia the state primarily acts through its NOC. At one level, the void left by the departure of major IOCs, such as ConocoPhillips and Total from specific projects, has been filled by the NOC (Pertamina). In addition, however, the reconstitution of the production networks involves a preference for local suppliers. As Apexindo (2017) highlight in their 2016 annual report, in relation to the transition of the Mahakam Block from Total (E&P) Indonesia to Pertamina Hulu Mahakam, “[Apexindo] expects to be actively involved again in supporting the exploration and production activities in the block. Previously, the Company had been involved for 25 years in the Mahakam Block, which of course will be an added value for Pertamina and for the country”. This shift towards local suppliers is also apparent in Vietnam, “Actually the government is encouraging local companies to build the rig right now” *DC-VNI* and “For example they [the state] strictly require you to give priority to domestic companies, to give the contract to the domestic company. For example, if something can be produced in Vietnam you cannot bid internationally. You cannot undertake an international bidding process” *NOC-VNI*. Moreover, the Vietnamese NOC also seems to be fulfilling a similar role to that of Pertamina in Indonesia, “In *IOC-VNI* we used to have both the upstream and the downstream activities. We did discover a very big reserve. But it seems that the deal on the price with the Vietnam government wouldn't work so *IOC-VNI* decided - because of the oil price slump - to walk away from that project and they sold that project to PetroVietnam.” *IOC-VNI*. While upstream suppliers may benefit from such practices in their home states, the existence of such practices elsewhere will act to their detriment. “So to find work in an overseas country is not easy. In Southeast Asia, especially in Malaysia and Indonesia, the local content policies are very stringent. So to break into that new market is not easy - all the countries are trying to protect for their local contractors.” *DC-VNI*

In Vietnam, the provision of support to upstream businesses seems to be more opaque. A representative of an upstream business organization suggests that, “So far, no supportive measures have been introduced by the state, although “unofficially” they may release the local content requirement in order to attract foreign activities.” *BO-VNI*. Another respondent supports this view, but does not see the lack of state support as a problem, “I don't think we see much of that [state support], but basically the business environment is okay. This is why we are here.” *OFSC-VNI*. Contrary to this apparent lack of state intervention in Vietnam, however, is an indication of state involvement through its NOC, PetroVietnam: “There is some support.... Some oil and gas fields, even if they produce, they will make losses. So now we invent a non-profit operation at the oilfield. So, the government will take over the oilfield and then hire the oil company to run the operation. So, there is money to pay the workers, to make the facility work and whatever (oil or gas) is produced is then owned by the government. Other aspects of support are allowing the delay of tax payments and assistance in seeking funding if necessary – but that is only available to domestic companies” *PS-VNI*. In fact, it is apparent that the non-profit operation is also geared towards the

domestic actors, “normally the foreign company has already quit, they do not want to continue production anymore. We take it and give it to a domestic company to run [the operation]” *PS-VNI*. In Singapore, which does not possess oil reserves of its own but still plays a significant role in upstream oil GPNs, the state enacted targeted support measures to sectors adversely affected by the oil price shock. In 2016, for example, the Singapore Ministry of Trade and Industry, introduced support measures for marine and offshore engineering companies to access working capital and finance.

Beyond Southeast Asia, we also find state support for upstream oil in response to the price shock. In the US, for example, the state appears to have been integral to the boom in unconventional oil production. The US Energy Policy (White House, 2017a; 2017b) signaled a shift from energy *independence* to energy *dominance* and the essential role of “the prudent development of natural resources in ensuring US geopolitical security” (2017a: 1). Alongside this aim, the new Energy Policy also involved specific actions to rescind, revoke or review several regulatory measures relating to resource development and climate change – reflecting a relaxation in the regulatory environment for shale and other tight oil producers in the US. This state influence, alongside improved field development and production technologies and associated reductions in break-even prices, represents a significant factor in the increased levels of US tight oil production. The direction of state policy may also be tied in with the US shale-OPEC oil price war hypothesis (Behar and Ritz, 2017).

A similar pro-oil stance is reflected in the UK. Oil & Gas UK (2018), for example, state that, “Working closely with HM Treasury and the [*industry regulator*], we have delivered a much more globally competitive fiscal and regulatory environment...” (2018: 5). Maersk (2017) report on the improved fiscal conditions in their UK North Sea operations, “The authorities in the UK enacted a more beneficial tax legislation.... This comprises a reduction of the Supplementary Tax Charge from 20% to 10% (resulting in a reduction of total income tax from 50% to 40%) and abolition of the Petroleum Revenue Tax”.

States adopt various measures designed to improve the risk environment including improved fiscal regimes, reduced regulatory burdens, targeted business support (e.g. working capital) and relaxation of local content agreements. In addition, it is evident that NOCs have played a pivotal role in buffering the impacts of the crisis in some regions. The NOC can be used to fill the void as IOCs and other independent operators decouple from particular regions. The NOCs are often constituted to promote national socio-economic development objectives and are therefore less encumbered by the discipline of financial markets, affording them the motivation and capacity to step in to maintain production and employment as lead firms exit. Moreover, NOCs are focused on contracting local firms and local workers than other operators, thus reducing opportunities from non-local firms to diversify into these markets.

CONCLUSIONS

Table 3 provides a summary of the pre- and post-shock environment for global lead firms and their suppliers in upstream oil. The response of all upstream lead firms to the price shock has involved significant strategic structural and operational change. This is intrinsically linked to financial risks associated with weak shareholder returns and increased credit default risks. As a result of pressure from financial markets lead firm global HQs will initiate directives to regional HQs that necessitate improved liquidity via reduced capital spending and improved efficiency in project-level operations. Reduced levels of capital investment, lead to reduced levels of demand for product and service inputs in upstream exploration, development and production. Exploration activities in particular experience the most immediate and significant falls in activity.

Table 3: Lead Firm Strategic Response and GPN Firm Performance

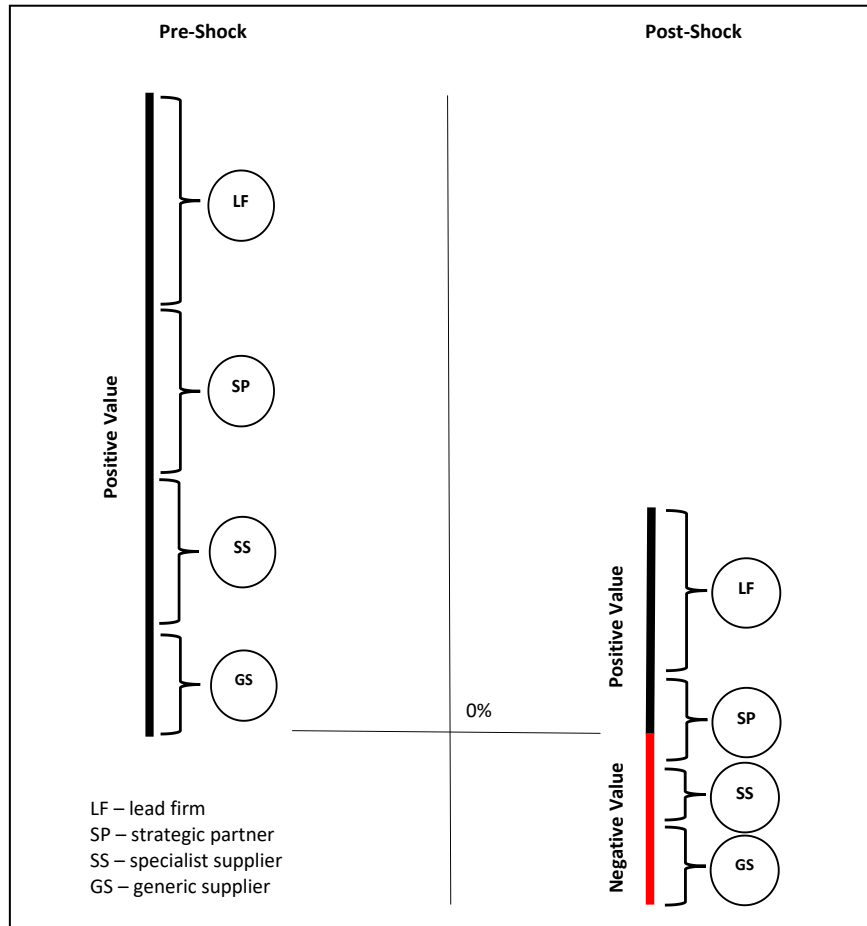
	Pre-Shock	Post-Shock	
		Lead Firms	Suppliers
Strategic Approach	Cooperative/ Relational	Control/ Arms-length	Control/ Arms-length
Value Creation	Significant opportunities High ROCE across GPN High shareholder returns	Rapidly declining opportunities Value-added focus (portfolio management/ divestment) Low ROCE Low shareholder returns	Low/ negative ROCE Low/ negative shareholder returns Insolvency
Value Enhancement	Increasing activity (rising operational costs)	Rapidly reducing activity (CAPEX) – contract cancellation Operating efficiencies (OPEX) Asset utilisation (divestment) Organisational restructure (centralisation)	Rapidly reducing activity (CAPEX) – contract cancellation Operating efficiencies (OPEX) Asset utilisation (divestment) Contract bids at below-cost Diversification efforts
Value Capture	Shared value Power (passive/ latent)	Risk and cost transfer Power (activated/ exercised) Little or no bullwhip effect	Power (activated/ exercised) Asymmetries propagated upstream - bullwhip effect plus discounting etc.

While the demand for upstream development and production services remain, on-going activities may be re-scaled and planned activities are either delayed or scrapped entirely. This strategy also

involves review of asset portfolios in the new risk environment that often result in decisions to decouple from particular regions through divestment and asset swaps strategies. This reduced demand from lead firms cascades throughout the supply network. The observed pattern appears to be consistent with a bullwhip effect although the implications go beyond simply an impact on inventory levels. Increased levels of competition between suppliers for fewer and fewer contracts, coupled with high inventory levels, often leads to heavy discounting.

Lead firm efficiency strategies also have a cascading effect throughout the network. As lead firms seek better terms in existing arrangements with key suppliers, in many cases there is a shift from inter-firm cooperation to inter-firm control. In the pre-shock environment the bargaining power in dyadic buyer-supplier relationships appears to have been more even. The onset of the crisis, however, has clearly led lead firms to activate, what were previously, passive power asymmetries. This activation of power in lead firm-strategic partner relations then filters throughout the network across lower tier dyadic relationships. Based on our analysis we suggest that the generic impact of a significant black swan price-demand shock in GPNs can be characterised as shown in Figure 3.

Figure 3: Price-Demand Shock Effect on Value Capture Dynamics



The combined effects of structural and operational strategies will either see lead firms decouple from particular regions as they review their asset strategies, or they will continue operations but attempt to capture a greater share of network value which will force some suppliers out of business. Our analysis points to asymmetric effects on actors that extend beyond the information distortion effects associated with a supply-chain inventory bullwhip. These asymmetric propagation of the price shock in upstream oil GPNs, beyond the inventory bullwhip, are largely governed by network power relations, as the demand-supply conditions – for equipment and services - in the market for upstream production respond to the price shock. Moreover, as a result of territorial differences in risk environments, we also identify spatial asymmetries in the impact of the price shock. In particular, these differences involve a complex interaction between material risk (e.g. spatial differences in break-even prices), economic risk (e.g. the importance of portfolio diversification to lead firm strategies) and relational risk (e.g. inter-firm, state-firm and geopolitics). However, despite the ongoing energy transition and decarbonisation efforts state responses have mediated price shock effects and helped to sustain upstream oil activity during the ‘bad times’.

APPENDIX 1

As illustrated in Table A1, material factors give rise to significant global and localized differences in production costs and associated breakeven crude oil prices. Based on data for 2014, for example, the average breakeven price for onshore crude oil in the Middle East was US\$27 per barrel compared to US\$75/bbl in the Arctic. However, it is important to note that the data in Table 4 was published in 2014, at a time when the upstream segment had suffered from a period of significant cost inflation. More recent estimates for North American Shale (Jacobs, 2016) suggests an average break-even price of around US\$45/bbl in 2016, significantly below the \$65/bbl reported in the 2014 data, reflecting the operational cost reductions in North American Shale production.

Table A1: Breakeven Price Thresholds, 2014

Oilfield Material Characteristics	Brent-equivalent Breakeven Price (US\$/bbl)		
	Low	Average	High
Onshore Middle East	10	27	38
Offshore (Continental Shelf)	12	41	68
Heavy Oil	33	47	57
Onshore Russia	27	50	70
Onshore Rest of the World	21	51	74
Deep water	21	52	70

Ultra-deep water	39	56	63
North American Shale	52	65	70
Oil Sands	50	70	80
Arctic	43	75	86

Source: Rystad Energy/ Morgan Stanley (2014)

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DXB254

**EXPLORING CONSUMER USAGE OF BUTTON- VERSUS TEXT-
INPUT LIVE CHAT INTERFACES**

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ABSTRACT

Live chat systems have become an important part of the financial services ecosystem. To accommodate the rise of smart chatbots, many financial firms have turned to button-input live chat interfaces that simplify the user-agent interaction. While prior work suggests that these interfaces do indeed increase the efficiency of communication, the present research investigates whether such efficiency comes at the cost of some consumers' satisfaction. Specifically, the current research draws on research in gender- based communication styles to explore whether females versus males react differently to button-input interfaces. Across two studies, results indicate that females view button-input interfaces more favorably than males, and that this preference is reversed for more traditional text-based live chat interfaces.

Underlying this effect, males perceive less control over button-input live chat interactions than do females. These findings are the first to indicate that consumer demographics (such as gender) can influence usability perceptions of different live chat interfaces.

DXB260

ANTECEDENTS OF RETAIL MERCHANDISING: EMPIRICAL EVIDENCE FROM UAE

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ABSTRACT

Purpose

The entire eco-system of UAE retail industry is poised for continuous growth, which is recently encountered setback due to COVID 19. Synthesizing the critical factors influencing the retail merchandising is one of the successful strategy in retail sectors in UAE. The purpose of this paper is to identify the key driving force behind the increased footfall in retail sectors for positioning the market and also to examine the role of moderating variables which leads to reinforce or vulnerable to the scenario.

Research methodology

Survey method has been used in this research. For identifying the influenced driving factors and moderating variables, the researcher has used judgement sampling method for selecting the target respondents. That means the respondents who have been purchase products or visiting the particular retail shops at least past six months. For collecting their opinion about the retail shop, a well-framed questionnaire has been used. Hypothesis framed and tested by using correlation analysis and Multiple regression analysis. Also, confirmatory factor analysis used to examine the highly influenced factor.

Findings

It's found from the research that, the impact of scent and ambience influenced highest in terms of customers spending and engagement followed by background music, merchandise display etc. Also, this research revealed that, parking space, storefront, interior, lightings and architectural settings had a major impact in shopping.

Practical implications

The findings of this study highlight the need for positioning and promoting the retail sectors in diversified economies.

Originality

This study represents a significant impact in retail marketing literature in the study area along with the practice for diversified population segments.

Keywords: Retail merchandising, Antecedents, driving factors, UAE

DXB267

Factors influencing the behavioral intentions of user and provider to participate in peer-to-peer sharing economy: A Study on rideshare services in India

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ABSTRACT:

In the platform-based sharing economy, provider provides the service and consumer uses the service from a two-sided market. However, there is a lack of studies that cover the both sides of platform based sharing market. This study aims to examine the effect of Indulgence, trust, economic benefit, social interaction, enjoyment and sustainability on user and provider intention to engage in peer-to-peer sharing. This study uses quantitative methodology involving data collection through structured questionnaire from service users (n=220) and providers (n=205) of Uber and Ola, which are ridesharing services in India.. Structured Equation Modeling was applied to analyze data. The empirical results of this study indicate that indulgence, social interaction, economic benefit and enjoyment have significant positive association with user and provider intention. Further, a positive relationship was found between provider trust in user and provider intention to engage in peer-to-peer sharing. This study makes its significant contribution by providing new insights to literature and practice by studying two sided market. The study explored the effect of indulgence on sharing intention which is found yet to be explored in the literature. This study suggests practical implications for marketers to develop effective platform strategies and marketing campaigns in accordance with the individuals' intention to engage in sharing.

Keywords: Sharing economy, peer-to-peer sharing, intention, Indulgence, sustainability, economic benefits, social interaction.

INTRODUCTION

In the aftermath of the global economic recession in 2008, the economic concept called “sharing economy” has captured the attention for the development of network and communication technologies by challenging the conventional thinking about how idle resources should be

provided and consumed (Perfili, Parente et al. 2019). With this technological development, the business and economic system brings innovation in the consumption model by changing it from personal possession to the goal of shared access to products and services (Lamberton and Rose 2012, Cheng 2016, Hamari, Sjöklint et al. 2016, Habibi, Davidson et al. 2017). The sharing economy has appeared as contemporary economic model which can be defined as uncommon social and economic interactions that collectively shares assets with other people to decrease spending and primarily gives the rise of ordinary interest in society (Belk 2007). This is a phenomenon in which the consumers act as sellers giving services that were provided by professional sellers (Sundararajan 2016). Sharing economy reached the new heights by providing individuals the opportunity to earn from their underutilized resources, as reported by Hathaway and Muro (2016), in United States the number of non-employer occupation has increased from 15 million in 1997 to approximately 24 million in 2014 (Yaraghi and Ravi 2017). Researchers at Price Waterhouse Cooper (PwC) studied and estimated that within ten years, the most important sharing sectors, including peer-to-peer sharing, online staffing, car sharing, sharing the accommodation and music streaming will make more than half of the total worldwide income (PwC 2015). The global revenue of sharing economy will grow to US\$335 billion by the end of 2025, compared with US\$15 billion in 2015 (PwC 2015). The United Kingdom national statistics office found that in 2016, more than 270 European sharing platforms caused \$5 billion (Yaraghi and Ravi 2017).

Sharing economy is turned into prevalent proceeding in multiple fields. Hospitality, transport, and retailing are the examples of those areas which are affected by sharing economy. With significant growth, the sharing economy provide a chance to households, individuals, businesses and other non-government or government associations to engage in collaborative process of production, distribution and utilization (Stokes, Clarence et al. 2014). “Collaborative consumption” (Botsman and Rogers 2010) “access-based consumption” (Bardhi and Eckhardt 2012) and “commercial sharing systems” (Lamberton and Rose 2012) are the concepts which are subsumed under the parasol of sharing economy. Within the scope of this research work, we spotlight a particular concept of peer to peer exchange, which also comes under the parasol of sharing economy. The sharing economy is predominantly characterized by peer-to-peer exchanges for renting goods and services using digitalized platforms (Ganapati and Reddick 2018). In transportation sector Uber is an example of providing transportation services by employing the unused resources of common car owners. Uber started its business in 2009 and became an entrenched transportation option today

valued at US\$ 68 billion, which is greater than of Chrysler, Ford, and General Motors (Chen 2015). The consumers can travel at cheap rates than other transportation options and it is significantly more economical than owning a vehicle.

The continuous rise in gig economy has changed the consumer's behavior and mentalities in online context. The consumers are concerned about participation in peer-to-peer exchange, trading their unused or under-utilized resources with unknown individuals or groups (Botsman and Rogers 2010). Today advanced technological innovation and increase in usage of smart phones and market expansion has converted this phenomenon of sharing economy into a business model able to achieve economies at large scale (Belk 2007), by providing consumer multiple options to search for providers at lower cost on sharing platforms (Zervas, Proserpio et al. 2017). Peer-to-peer sharing continues to emerge around the globe, some researchers have anticipated that peer-to-peer sharing could be as big as the industrial revolution (Cusumano 2015). In previous studies, researchers have studied either the user or provider with regard to encouraging aspects of sharing economy (Böcker and Meelen 2017, Mao and Lyu 2017, Liang, Choi et al. 2018). But it is not a complete strategy to understand the sharing economy by studying only user's intention or studying only the causes of participation of service provider in peer-to-peer sharing. When a service provider provides services to the user through platform-based sharing, it results in formation of two-sided or multi-sided markets where service provider and user interacts over the platform and the value of platform rises with the size of network (Rysman 2009). There are few studies which considered both user and provider sides in peer-to-peer sharing (Hawlitschek, Teubner et al. 2016, Sung, Kim et al. 2018, Gupta, Esmailzadeh et al. 2019). However, further empirical research is required to develop understanding regarding service user and service provider interaction and factors influencing this interaction in sharing economy. This study provides a unified model to study the provider's and user's intention to engage in sharing economy.

This research contributes to the province of sharing economy by examining those factors which leads to influence the mentalities of service providers and service consumers in peer-to peer sharing. To address the concerns related to the need of quantitative research in field of sharing economy and providing deep understanding to marketers, the study investigates the impact of influential factors on peoples' intention to provide service and to consume service using peer-to-

peer sharing. In addition, this research studies the role of Indulgence as a cultural value in forming the intention to use and provide services in peer-to-peer sharing.

LITERATURE REVIEW

Peer-to peer sharing

The concept of sharing is not entirely new. In the previous decades, the sharing economy has occurred as alternative to the capitalist economy by enhancing collaborative consumption. Today, the use of information technology, establishing formal platforms and networks has brought newness to the sharing concept. With the passage of time, the collaborative consumption is inevitably becoming a significantly growing sector of global economy. The present day sharing economy is defined as peer-to-peer sharing of goods and services through internet platforms (Albinsson and Yasanthi Perera 2012). Researchers have defined the sharing economy to many extents (Cheng 2016), and used alternative names for the sharing economy, such as collaborative consumption (Botsman and Rogers 2010), gig economy (Mulcahy 2016), mesh economy (Gansky 2010), platform economy (Parker, van Alstyne et al. 2016) and on-demand economy (Ganapati and Reddick 2018). There is considerable discrepancy in the way researchers have defined this phenomenon. The multiple definitions of sharing economy from literature are given in the Table 01.

Table 7 Definitions of the Sharing economy

Source	Definition
(Heinrichs 2013)	In sharing economy, people exchange, share, rent out and rent the products, services and expertise.
(Stephany 2015)	The sharing economy leads to minimize the ownership of assets by making them available online to a group.
(Cockayne 2016)	The on-demand economy refers to connecting consumers to services through on internet platforms through mobile application.
(Hamari, Sjöklint et al. 2016)	A peer-to-peer based sharing of goods and services by coordinating through the group-based internet channels.
(Aloni 2016)	A phenomenon in which the digital platforms play a role of facilitator for exchange of goods and services among peers.
(Frenken and Schor 2017)	An economic activity in which the consumers gives the rights of using their assets temporarily, for making money.
(Habibi, Davidson et al. 2017)	In sharing economy, the consumer has no right of possession over the shared goods.

As a result, the researchers describe the sharing economy or collaborative consumption as an umbrella construct, i.e. a comprehensive notion used to cover a wide-ranging phenomenon (Hirsch and Levin 1999). The concept of peer-to-peer sharing has captured the attention across diversified academic areas (Lamberton and Rose 2012, John 2013). Different studies have found out the factors which motivate the people to participate in sharing economy. These studies have shown several reasons, such as hedonic, social and economic benefits can motivate the consumer (Rogers and Botsman 2010, Möhlmann 2015), and the provider to participate in sharing economy (Bucher, Fieseler et al. 2016, Böcker and Meelen 2017). The factors which affect the intentions of consumer and provider to engage in collaborative consumption are summarized below in Table 02.

Table 8 Previous studies from provider and user perspective.

Constructs	Researcher
From User viewpoint	
Economic Benefit, Sustainability, Enjoyment, Social Relationship, Network Effect	(Sung, Kim et al. 2018)
Collectivism, Masculinism, Uncertainty Avoidance, Power Distance	(Gupta, Esmaeilzadeh et al. 2019)
Subjective norms, perceived value, perceived behavioral control, unique experience expectations, familiarity, eWOM	(Mao and Lyu 2017)
Enjoyment, Independence through ownership, Modern style and social experience,	(Hawlitschek, Teubner et al. 2016)
Trust and utility, Cost savings, Familiarity	(Möhlmann 2015)
Price sensitivity	(Liang, Choi et al. 2018)
From Provider viewpoint	
Collectivism, Masculinism, Uncertainty avoidance, Power Distance	(Gupta, Esmaeilzadeh et al. 2019)

Economic Benefit, Sustainability, Enjoyment, Social Relationship, Network effect	(Sung, Kim et al. 2018)
Income, Enjoyment, Product variety, Social experience, Social influence	(Hawlitschek, Teubner et al. 2016)
Social, Economic, Environmental Motivators	(Böcker and Meelen 2017)

There are only a few studies on providers' intention to engage in collaborative consumption. For instance, (Karlsson and Dolnicar 2016) found that social interaction, Income and Sharing experience are the main factors which motivate the provider to share accommodation. (Sung, Kim et al. 2018) found the economic incentive, social relation, enjoyment, sustainability and network effect as motives for participation in peer-to-peer sharing. In addition (Gupta, Esmaeilzadeh et al. 2019) studied the effect of cultural value on intention to engage in sharing economy. Still there is a need of studies examining and understanding the reason for participation in sharing economy from a provider's angle, Therefore this study provides a better understanding regarding these aspects.

Trust

In consumer's perspective trust is an instinctive feeling that the providing peer will fulfill the transactional responsibility (Kim, Ferrin et al. 2009) and provider is considered as the transaction ally of high morality and altruism (Pavlou and Fygenson 2006). Trust plays vital role in influencing the consumer's intention in uncertain situations (Kim, Ferrin et al. 2009). Based on "commitment-trust theory of relationship marketing" by Morgan and Hunt, trust is the prognosticator of any shared activity (Morgan and Hunt 1994) the consumer satisfaction and chance of choosing the sharing service again depends on the trustworthiness (Möhlmann 2015) in such context of cooperation, when user perceive the provider trustworthy, chances of user's engagement in sharing economy and completing a transaction will be high (Leonard 2012, Hawlitschek, Teubner et al. 2016). Thus, it is hypothesized that:

H1(a): Trust in provider will positively affect the user intention to engage in peer-to-peer sharing.

As peer-to-peer sharing is built on the interactive contract of completing a transaction, therefore the provider's trust in the user is also of great importance. In peer-to-peer sharing, when peer provider provides the services or share resources (car, bike, house or other resources) with the user, the provider has no control over resources for agreed time period. Therefore the main barrier in sharing from provider's perspective is getting worried about damage to shared resources due to some unseen actions by the user (Weber 2014). It means that the provider's trust in user peer is the principal reason of provider's participation in collaborative consumption (Teubner, Adam et al. 2014). Completion of rental transaction is hard to achieve without the provider's trust in user peer (Hawlitschek, Teubner et al. 2016). Therefore, it is hypothesized that:

H1(b): Trust in user will positively affect the provider intention to engage in peer-to-peer sharing.

Economic benefit

As a result of global financial crises 2008, the consumer's behavior has been changed. They are more concerned about spending their money and usage of available resources (Gansky 2010, Chudzian 2015, Tussyadiah 2015). More than 80 percent of the US consumers consider that shared products are less costly (PwC 2015), which indicates that cost benefit is an important driver of user participation in sharing economy. Consumers can save their time and money by acquiring goods and services from peer-to-peer sharing (Barbu, Florea et al. 2018). Mohlmann M. found in his study that savings increases the probability of satisfaction with the service provided (Möhlmann 2015). In peer-to-peer sharing lesser the expense, more the consumer will be motivated to engage in sharing (Bardhi and Eckhardt 2012). Most of the studies have found the positive impact of economic benefit on attitude and intention to participate (Hamari, Sjöklint et al. 2016, Sung, Kim et al. 2018). Based on findings of these studies we can formulate the hypothesis as:

H2(a): Economic benefit will positively affect the user intention to engage in peer-to-peer sharing.

Previous studies on sharing economy points to the fact that economic benefits is one of the major causes of provider's participation in sharing activity (Bardhi and Eckhardt 2012, Lamberton and Rose 2012). According to Chui, et al. the sharing economy increases the financial flexibility of owner to earn money and gain financial benefits by sharing idle resources (Chui, Manyika et al. 2012). Researchers found in their studies that economic benefits is the main reason of providing services in sharing economy (van de Glind 2013, Guttentag, Smith et al. 2018). Therefore it is suggested that providers who perceive that providing service or product will bring them economic advantages are more likely to engage in peer-to-peer sharing.

H2(b): Economic benefit will positively affect the provider intention to engage in peer-to-peer sharing.

Sustainability

Globally, with growing concern for environmental issues, sustainability implications of consumer and their consumption pattern have captured the attentiveness of researchers (Huang and Rust 2011, Prothero, Dobscha et al. 2011). Previous research indicate that how peer-to-peer sharing positively effects sustainability by sharing consumer resources instead of owned by individuals (Bartenberger and Leitner 2013). In North America, Average greenhouse gas emissions are reduced by sharing a car (Martin and Shaheen 2011). It is suggested that ridesharing allow the consumers to save resources and decreases the vehicle ownership (Efthymiou, Antoniou et al. 2013). In PwC's survey report, more than 76 percent of the respondents stated that peer-to-peer Sharing is beneficial for the nature (PwC 2015).

Sharing economy can be observed as indication of sustainable behavior with a desire to become environmentally responsible individual (Tussyadiah 2015). Sharing economy is appearing as a new phenomenon that can solve the environmental issues such as pollution and emission of harmful gases by minimizing the excessive consumerism (Prothero, Dobscha et al. 2011). Heinrichs also say that collaborative consumption can reduce the use of resources and improve the collective cohesiveness (Heinrichs 2013). Due to increasing awareness of negative environmental impact, people are likely to use products in order to have sustainable society (Gansky 2010). Sustainability also motivates the supplier to share services (Bellotti, Ambard et al. 2015). Thus, we can formulate the hypotheses as:

H3(a): Sustainability will positively affect the user intention to engage in peer-to-peer sharing.

H3(b): Sustainability will positively affect the provider intention to engage in peer-to-peer sharing.

Enjoyment

Enjoyment is as important as economic benefits for taking part in sharing economy. People are motivated to participate in collaborative consumption because of the enjoyment they seek from the activity (Hamari, Sjöklint et al. 2016). Enjoyment is the significant cause of user's participation in sharing economy by growing a positive attitude to use products or services (Hamari, Sjöklint et al. 2016). Enjoyment refers to degree to which in peer-to-peer sharing is perceived to be enjoyable excepting any predicted performance results (Davis, Bagozzi et al. 1992, Kim and Min 2015, Liu, Zhao et al. 2015).

In fact people share their resources to perceive enjoyment (Widlok 2004). Participation in sharing economy services provide the opportunity to interact with the members of society (Hwang and Griffiths 2017). Similarly enjoyment has a positive impact on consumer's intention to use peer-to-peer services (Tussyadiah 2016, Sung, Kim et al. 2018). According to PwC's survey, more than 63 percent people responded that enjoyment motivates them to participate in sharing economy (PwC 2015). Therefore, enjoyment is expected to play a key role in influencing the provider and user to participate in sharing economy.(Botsman and Rogers 2010)

H4(a): Enjoyment will positively affect the provider intention to engage in peer-to-peer sharing.

H4(b): Enjoyment will positively affect the user intention to participate in peer-to-peer sharing.

Social interaction

Sharing economy provides the opportunities for social interaction (Sung, Kim et al. 2018). Researchers argues that collaborative economy helps the participants to start and maintain social relationship and become an effective part of the society and they have suggested that social interaction positively effects the users to participate in peer-to-peer sharing (Barnes and Mattsson 2017).

Albinsson and Perera say that social interaction and seeking friendship are the main drivers of participation in peer-to-peer sharing (Albinsson and Yasanthi Perera 2012). Meeting new people, desire to connect with people, desire to become active part of the local society and helping others are some of the social motives for sharing resources (Botsman and Rogers 2010, Chudzian 2015, Tussyadiah 2015). The social relationship is the key factor that effects the user experience in sharing services (Priporas, Stylos et al. 2017). The people use peer-to-peer sharing to seek social interaction with local people and the service provider (Tussyadiah and Pesonen 2016). Social connections can promote the participation in sharing economy services (Bellotti, Ambard et al. 2015). According to Ikkala and Lampinen, social inclusion keeps the service provider involved in sharing economy (Ikkala and Lampinen 2015). Therefore, we hypothesized that:

H5(a): social interaction will positively affect the provider intention to engage in peer-to-peer sharing.

H5(b): social interaction will positively affect the user intention to engage in peer-to-peer sharing

Indulgence

Culture

Culture

Culture is the most influential factor which decides the way an individual behaves. The Hofstede cultural model has become a globally recognized model for studying and understanding the cultural differences. Due to its worldwide acceptance, this model has been applied in consumer research (Mazaheri, Richard et al. 2014, Tang 2017, Gupta, Esmaeilzadeh et al. 2019). In 2010, based on extensive work done by Hofstede and Michael Minkov, the 6th dimension of indulgence versus restraint was added to the original Hofstede's cultural model (Minkov and Hofstede 2012). Indulgence refers to the satisfaction of basic desires related to pleasure in life and entertainment (Hofstede 2011). In indulgent societies, individuals are likely to be happier and enjoy their liberty (Maleki and de Jong 2014). A study found that Happiness in indulgent societies is greater than in restraint societies due to less restriction on liberty and enjoyment of individuals in indulgent societies (Minkov 2009).

Recently one study has examined the effect of cultural dimensions on individual's intention to engage in peer-to-peer sharing (Gupta, Esmaeilzadeh et al. 2019). In which the researcher studied the effect of four cultural dimensions on provider's intention to provide and consumer's intention to rent but did not studied the indulgence value. Due to newness of this dimension, more studies are required for the applicability of this cultural dimension. In Indulgent society, individuals have freedom to express their positive emotions (Minkov 2009). From consumer perspective, consumers from this culture give importance to leisure and enjoyment during purchase and consumption activity. Therefore, The tendency to enjoy lives and freedom influence the consumer behavior (Koc, Ar et al. 2017). Individuals with higher indulgence rating are more likely to enjoy

and experience positive feelings to a greater extent. Thus, indulgence is expected to play a key role in influencing the provider and user to engage in peer-to-peer sharing.

H6(a): Indulgence cultural value will positively affect the provider intention to engage in peer-to-peer sharing.

H6(b): Indulgence cultural value will positively affect the user intention to engage in peer-to-peer sharing.

RESEARCH MODEL

Based on the hypotheses rationalized in literature, a research model has been developed as user and provider model to examine the impact of influencing factors.

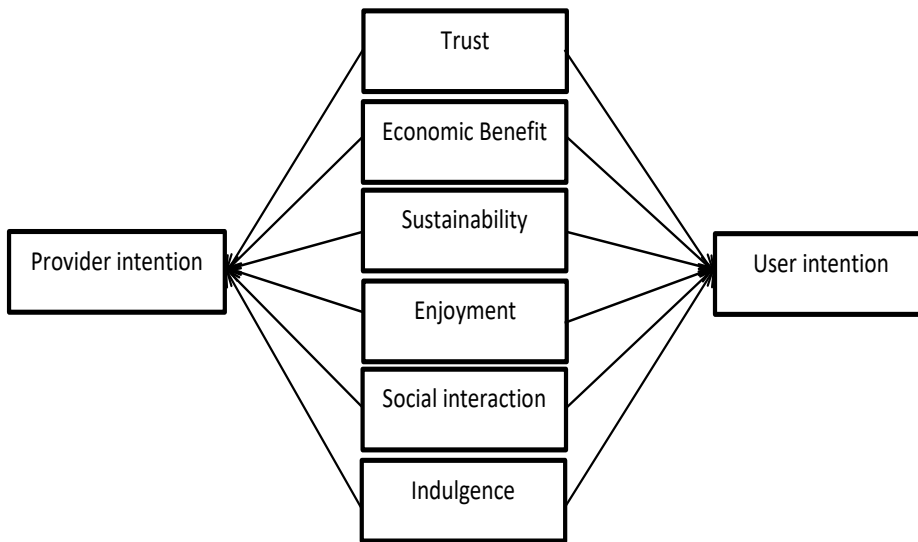


Figure 3 Research Framework

METHODOLOGY

The Survey method was chosen to collect the quantitative data from participants of sharing economy, in which the consumers and providers were included. This method was selected because it increases the generalizability of findings (Dooley 2001). The measurement items in survey were adopted from the already existing literature to secure the content validity. At the beginning of survey a definition of peer-to-peer sharing was provided, the questionnaire was split into two segments, the first segment was designed to get demographic information of user and provider, the second part was designed to measure the constructs by using valid items and the five-point Likert scale was used for the items ranging from 1 to 5. Table 3 describes all constructs and the valid items used for this study.

Table 9 Survey instruments

Constructs	Items	Description	Sources
Trust	Trust 1	In peer-to-peer sharing, the user/service provider is trustworthy.	(Cheung, Lee et al. 2015)
	Trust 2	In peer-to-peer sharing, the user/provider is honest in its dealings with the service provider/user.	
	Trust 3	In peer-to-peer sharing, the user/provider keeps its commitments to its service provider/user.	
Enjoyment	Enjoyment 1	I think peer-to-peer sharing is enjoyable.	(Van der Heijden 2004)
	Enjoyment 2	I think peer-to-peer sharing is exciting.	
	Enjoyment3	I think peer-to-peer sharing is fun	
	Enjoyment 4	I think peer-to-peer sharing is interesting.	
	Enjoyment 5	I think peer-to-peer sharing is pleasant.	
Social interaction	Social interaction 1	Peer-to-peer sharing helps build a mutual bond with others.	(Sung, Kim et al. 2018)
	Social interaction 2	Peer-to-peer sharing helps you maintain social relationship with others.	
	Social interaction 3	Peer-to-peer sharing will make you feel connected with people.	
	Social interaction 4	Peer-to-peer sharing helps strengthen social relations with others.	
Sustainability	Sustainability 1	Peer-to-peer sharing helps save natural resources.	(Hamari, Sjöklint et al. 2016)
	Sustainability 2	Peer-to-peer sharing is a sustainable mode of consumption.	
	Sustainability 3	Peer-to-peer sharing is ecological	
	Sustainability 4	Peer-to-peer sharing is environment-friendly.	
	Sustainability 5	Peer-to-peer sharing is efficient in terms of using energy.	

Economic Benefit	Economic 1	I can save money by participating in peer-to-peer sharing.	(Bock, Zmud et al. 2005)
	Economic 2	My participation in peer-to-peer sharing benefits me financially.	
	Economic 3	My participation in peer-to-peer sharing can improve my economic situation.	
	Economic 4	My participation in peer-to-peer sharing saves me time.	
Indulgence	Indulgence 1	People should be happy in everyday life.	(Wen, Hu et al. 2018)
	Indulgence 2	People should have fun.	
	Indulgence 3	People should have freedom of speech	
Intention	Intention1	In peer-to-peer economy, I have an intention to use/provide sharing services.	(Jang, Chung et al. 2015)
	Intention2	In peer-to-peer economy, I am willing to use/provide sharing services.	
	Intention3	In peer-to-peer economy, I am willing to spend time and money to use/provide sharing services.	

This study was conducted in Delhi and Kolkata , both metropolitan cities in India.. In line with the previous studies on Peer-to-Peer sharing, it has been deeply observed that the millennial and the young consumers particularly use the sharing services or products and they are considered the active participants of collaborative consumption(Maycotte 2015, Akbar, Mai et al. 2016, Godelnik 2017). Therefore the university students and young users of Uber and Ola (rideshare services) were recruited as participants. On the other side, to measure the peer providers' intention, the data was collected from the drivers of Uber and Ola. The convenience and simple random sampling technique were used in this study. The questionnaire was developed in English. The questionnaire was sent to the consumers through email and social media tools. The questionnaire was sent to almost 425 users and got 248 responses, out of which the incomplete responses were excluded and only 211 responses were used for statistical analysis. In addition, 206 questionnaires were disseminated among providers and got 160 responses. Most of the questionnaire were got filled by sharing a ride with providers, out of which only 147 used for statistical analysis. The demographic characteristics of provider and user are given below in Table 4.

Table 10 Socio demographic characteristics of Users and Providers

Variables	Consumer (User)		Provider	
	Frequency	%	Frequency	%
Gender				
Male	113	53.6	178	100
Female	98	46.4	00	00
Age (years)				
18-25	134	63.5	61	34.3
26-35	65	30.8	80	44.9
35-45	11	5.20	16	9.00
45-55	0	0.00	12	6.70
Above 55	1	0.50	9	5.10
Education				
Masters or above	98	46.4	35	19.7
Bachelor	90	42.7	64	36.0
Basic education	23	10.9	79	44.4
Household income per month (in PKR)				
Below 35000	82	38.9	56	31.5
Between 35000 to 50,000	58	27.5	47	26.4
Between 51,000 to 65,000	31	14.7	21	11.8
Above 65,000	40	19.0	54	30.3
Marital status				
Single	142	67.3	79	44.4
Married	69	32.7	99	55.6

The Statistical Package for Social Science (SPSS) and Analysis of a Moment Structure (AMOS) were used for data analysis. The reliability for each construct was calculated using SPSS statistics 25. In which the Cronbach’s alpha value of each construct was measured to check the internal consistency (Cronbach 1971), and all the values were over 0.7, which is the general acceptance standard according to Hair, Black (Hair, Black et al. 2006). The composite reliability was acceptable as it was over 0.7 in each case. Hence the overall reliability is achieved, as the values of composite reliability and Cronbach’s alpha were over 0.7 (Reuterberg and Gustafsson 1992). The factor loadings of the measures were in between 0.66 to 0.85 and the value of average variance extracted range from 0.53 to 0.63. The values are given in the Table 5 and Table 6.

Table 11 Reliability and Validity Measures (User)

Constructs	Items	Factor loading	Cronbach's α	CR	AVE
Trust	Trust 1	0.79	0.83	0.83	0.54
	Trust 2	0.82			
	Trust 3	0.76			
Enjoyment	Enjoyment 1	0.72	0.86	0.87	0.62
	Enjoyment 2	0.81			
	Enjoyment 3	0.85			
	Enjoyment 4	0.78			
Social interaction	Social interaction 1	0.71	0.85	0.86	0.60
	Social interaction 2	0.84			
	Social interaction 3	0.79			
	Social interaction 4	0.76			
Sustainability	Sustainability 1	0.82	0.87	0.87	0.63
	Sustainability 2	0.84			
	Sustainability 3	0.75			
	Sustainability 4	0.76			
Economic Benefit	Economic 1	0.79	0.81	0.82	0.53
	Economic 2	0.75			
	Economic 3	0.71			
	Economic 4	0.67			
Indulgence	Indulgence 1	0.75	0.79	0.80	0.62
	Indulgence 2	0.88			
	Indulgence 3	0.66			
Intention	Intention 1	0.71	0.77	0.78	0.58
	Intention 2	0.75			
	Intention 3	0.74			

Table 12 Reliability and Validity Measures (Provider)

Constructs	Items	Factor loading	Cronbach's α	CR	AVE
Trust	Trust 1	0.76	0.77	0.77	0.52
	Trust 2	0.81			
	Trust 3	0.63			
Enjoyment	Enjoyment 1	0.78	0.88	0.88	0.66
	Enjoyment 2	0.82			
	Enjoyment 3	0.87			
	Enjoyment 4	0.80			
	Social interaction 1	0.74			

Social interaction	Social interaction 2	0.87	0.86	0.87	0.63
	Social interaction 3	0.84			
	Social interaction 4	0.74			
Sustainability	Sustainability 1	0.80	0.86	0.86	0.61
	Sustainability 2	0.83			
	Sustainability 3	0.75			
	Sustainability 4	0.77			
Economic Benefit	Economic 1	0.80	0.82	0.82	0.54
	Economic 2	0.73			
	Economic 3	0.71			
	Economic 4	0.70			
Indulgence	Indulgence 1	0.76	0.82	0.83	0.62
	Indulgence 2	0.90			
	Indulgence 3	0.70			
Intention	Intention 1	0.71	0.76	0.77	0.52
	Intention 2	0.74			
	Intention 3	0.73			

The two-step analysis was performed as suggested by Hair, Black (Hair, Black et al. 2006). In the first part, the measurement model was examined by conducting confirmatory factor analysis to test the reliability, convergent and discriminant validity. In the second part, the structural model was built to test the interrelationship among the study variables. The model fit summary for the measurement model and the structural model is given in the Table 7, in which all values present an excellent fit for the models, as the values were over the general acceptance standard according to (Bagozzi and Yi 1988). A model is said to be good fit if the values of CFI is over 0.8; Tucker-Lewis coefficient is over 0.9 and RMSEA is up to 0.08 (Byrne 2010).

Table 13 User and provider research model fit

(Measurement Model)		
Index	Value (User)	Value (Provider)
GFI	0.81	0.81
AGFI	0.75	0.76
CFI	0.87	0.90
TLI	0.85	0.87
RMSEA	0.08	0.07
A		

RESULTS

The results, after testing the study hypotheses by using structure equation modeling (SEM) reveal that indulgence is the significant correspondent of user intention to participate in peer-to-peer sharing with an estimate value of 0.24. A strong relationship was also found in this study between economic benefits and user intention with an estimate value of 0.35. Enjoyment and user intention were positively associated with an estimate value of 0.10. Social interaction was also found to be a significant predictor of user intention to rent in peer-to-peer sharing with an estimate value of 0.26. However, the no significant relationship was found among trust, sustainability and user intention to participate in sharing economy. The estimate values and significance values can be found in Table 8.

Table 14 Hypotheses testing (User)

Hypothesis	Statement	Estimate	Significance	Results
H1a	Trust in provider will positively affect the user intention to engage in peer-to-peer sharing.	0.07	0.18	Not Supported
H2a	Economic benefit will positively affect the user intention to engage in peer-to-peer sharing.	0.35	0.001	Supported
H3a	Sustainability will positively affect the user intention to engage in peer-to-peer sharing.	0.06	0.12	Not supported
H4a	Enjoyment will positively affect the user intention to engage in peer-to-peer sharing.	0.10	0.03	Supported
H5a	Social interaction will positively affect the user intention to engage in peer-to-peer sharing.	0.26	0.001	Supported
H6a	Indulgence cultural value will positively affect the user intention to engage in peer-to-peer sharing.	0.24	0.001	Supported

All hypotheses except sustainability were supported in the case of provider. A strong association was found between economic benefits and provider intention to rent out with an estimate value of 0.32. Similarly the results show a strong relationship of social interaction, enjoyment and indulgence with the provider intention to rent out in peer-to-peer sharing with an estimate value of 0.30, 0.13, and 0.28 respectively. The estimate value and significance values are given in the Table 9.

Table 15 Hypothesis testing (Provider)

Hypothesis	Statement	Estimate	Significance	Results
H1b	Trust in user will positively affect the provider intention to engage in peer-to-peer sharing.	.038	0.04	Supported
H2b	Economic benefit will positively affect the provider intention to engage in peer-to-peer sharing.	0.32	0.001	Supported
H3b	Sustainability will positively affect the provider intention to engage in peer-to-peer sharing.	0.02	0.73	Not supported
H4b	Enjoyment will positively affect the provider intention to engage in peer-to-peer sharing.	0.13	0.03	Supported
H5b	Social interaction will positively affect the provider intention to engage in peer-to-peer sharing.	0.30	0.001	Supported
H6b	Indulgence cultural value will positively affect the provider intention to engage in peer-to-peer sharing.	0.28	0.001	Supported

CONCLUSIONS AND DISCUSSION

Sharing economy is a fascinating concept, offering a distinctive model where people can not only use the services but also provide the services to others (Gupta, Esmailzadeh et al. 2019). In the past, the researchers have conducted several studies and suggested the factors, such as hedonic, social and economic benefits can motivate the consumer to participate in peer-to-peer sharing (Rogers and Botsman 2010, Möhlmann 2015). However providers' intention to rent out in peer-to-peer economy has not been studied majority of the extent. A few studies have covered the provider's perspective, e.g. (Böcker and Meelen 2017). In order to have a deeper comprehension of peer-to-peer sharing, this paper studies the both, the provider and the user intention to participate in sharing economy. The findings of this study provide some potentially significant insights. The current study is the first to examine the Impact of indulgence cultural value on providers and consumers' intention to participate in sharing economy. As suggested by Hofstede (2011), the cultures based on restraint value are likely to control their desires and gratification needs. While in the indulgence based cultures, people do not control their impulses and they seek pleasure by having fun in life (Wen, Hu et al. 2018). According to Hofstede country comparison scale, India's culture is based on restraint value with a very low score on indulgence value. It depicts that the Indian society is restrained (Minkov and Hofstede 2012). The findings of this study reveal a significant impact of indulgence on user as well as providers' intention to participate in sharing economy. In addition we can say that the indulgence leads toward forming positive emotions in relation with happiness. This is a valuable contribution of this study into the existing literature by indicating that Indian society does not actually score low on indulgence. People in India, specially the youth do not control their impulses and desires, they are less restrained by the social norms, they like to enjoy their lives and seek pleasure in routine activities. It has also been observed in the study that the enjoyment is also a significant predictor of user and providers intention to participate in sharing economy. The result lends support from the previous research (Tussyadiah

2016, Hwang and Griffiths 2017). It means that the Indian society is not purely a restrained society. However, the same finding is contradictory to the results of previous study in case of provider's model (Sung, Kim et al. 2018). Further, the findings predicted a significant association among the economic benefit, user and providers' intention to participate in sharing economy. In case of user model, the result contradicts to the findings of previous study and lends support in case of provider's model (Sung, Kim et al. 2018).

Moreover, this study has found no significant relationship among sustainability, consumers' intention and providers' intention to participate in peer to peer economy. In case of providers' model, this finding is contradictory to the findings of previous studies (Böcker and Meelen 2017). In case of consumer model, the result are in contrast to previous research.(Guttentag 2015). As suggested by Eckhardt et al. (2010), there are three major reasons of non-sustainable behavior: economic reasons, institutional reasons and developmental reasons (Eckhardt, Belk et al. 2010). With regard to sustainability, may be the same reasons also apply in sharing economy. This study has found no significant association between the trust in provider and consumer intention to use services in sharing economy, this finding contradicts to the previous research findings (Hawlitshchek, Teubner et al. 2016). In case of provider's model, we found a strong association between provider's trust in consumer and provider intention to rent out services. Previous studies suggest that in peer to peer sharing the service provider may have concerns regarding the safety of shared resources. In sharing economy transaction is hard to achieve without the provider's trust in user peer. This finding lends support from the findings of previous research (Hawlitshchek, Teubner et al. 2016). Further the social interaction was found as a significant predictor of both, the providers' and the consumers' intention to participate in peer-to-peer sharing. The result is in line with the findings of previous research that studied social relationship (Karlsson and Dolnicar 2016, Böcker and Meelen 2017). This result makes sense because as suggested by (Hofstede 2011), Indian society is based on collectivism, where people socially interact with each other and strengthen the social bonding.

LIMITATIONS AND FUTURE RESEARCH

This study has certain considerations and the findings of the study should be presented with caution. First, the data for the research were collected in two cities in India. Therefore, it is possible that the findings may not be generalized for countries other than India. For further validation and generalizability, the model of this research should be studied in other countries. Future studies should conduct longitudinal studies and examine the impact of changes in the studied variables over time. Future studies should consider the indulgence-restraint cultural value to increase the applicability of this value across the different cultures. Further, the researchers should conduct more empirical research to examine the consumer-provider model to develop a deeper understanding. The future research can study consumer-provider model by linking the self-construal with collectivism vs. individualism cultural dimension, moreover the relation between collaborative consumption and subjective well-being can be studied in future.

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DXB270

Peer Pyramid: A Spectrum of Customer-Customer Interactions and Their Impacts on Customer Experience

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This paper builds a new conceptual model based on a comprehensive review of the literature to demonstrate various levels of customer-to-customer interactions during the shopping journey and the types of customer experiences they entail. It adopts a post-modern marketing perspective by analyzing different ways through which consumption could foster a sense of community (Huang and Hsu, 2010) and reflect customer citizenship behavior (e.g. Groth, 005; Zhu et al., 2016). A detailed review of past research on three fields including 1) social aspects of consumption, 2) communal/collective shopping, and 3) other-oriented customer experiences was performed and findings were combined. Results suggest there are five levels of customer-to-customer interactions corresponding to five distinct roles that customers may adopt towards their fellow customers. Those five levels are integrated in the study's proposed model named *Peer Pyramid*.

At the first level, a customer plays the mere role of *Accompanier* towards his/her peers. This level integrates random encounters of customers, such as in retail or service spaces with various levels of density (e.g. Lucia-Palacios et al., 2018). Such encounters could have positive or negative consequences, depending on particular ways through which other customers would act including being help-seekers, admirers, assistants, observers, competitors, or even friend/family like mentors (e.g. McGrath and Otnes, 1995; Rosenbaum and Massiah, 2007). In addition to these active types of companionship, peer customers may shape one's shopping experience indirectly through their appearances, attitudes, or manifested behaviors (e.g. Argo et al., 2005; Libai et al., 2010).

The second level of the proposed *Peer Pyramid* model points to other customers' active and planned contribution to shaping decisions of a focal customer, or the so-called *Shaper* role. At this level, customers deliberately expose themselves to organized inputs of *Shapers* mainly by consulting their contributions on social media. Such contributions normally have the format of creative user-generated content uploaded on forums, blogs, etc. (e.g. Poch and Martin, 2015; Malthouse et al., 2016). *Shapers* thus play the role of opinion leadership for their peers and informally influence peers' perceptions. Their acts of information distribution and choice influence would contribute to growth of social commerce (Song et al., 2017). Communication initiated by this group is usually followed by developing feedback from other customers, resulting in a voluntarily co-creation of value or co-production of shopping experiences.

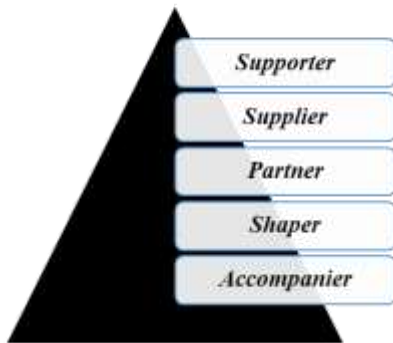
At the third level of the *Peer Pyramid* model, customers may choose to adopt similar purchase decisions. This is best reflected in online group buying (OBG) activities, in which vast numbers of strangers looking for the same product find each other through online platforms and engage in collective negotiation with the product's supplier in order to get a good deal for a relatively large purchase volume (e.g. Cheng and Huang, 2013). The transaction usually proceeds only when a required number of buyers is accumulated (Shiau and Luo, 2012). Peers thus here play the role of *Partners*, who need to coordinate and collaborate on a short-term basis until their collective shopping project terminates.

The fourth level of the *Peer Pyramid* model refers to customers' sharing of resources, as in the case of collaborative consumption (e.g. Botsman and Rogers, 2011). Customers' main motivation behind this type of consumption is to have temporarily access to their desired goods/services rather than to own them (Bardhi and Eckhardt, 2012). A collaborative consumption exchange involves either mutualization or redistribution of desired resources (Ertz et al., 2016). It includes acquiring resources from other customers and distributing those resources among them for some sort of compensation (Belk, 2014). Obtaining and sharing goods/services is coordinated in this process through collaborative online communities (Hamari et al., 2016). Each customer thus plays the role of a potential *Supplier* of goods/services for other customers in this level of the *Peer Pyramid*.

At the fifth and final level of the *Peer Pyramid* model, customers become even more united by forming groups of individuals with similar ideas and values. Such groups are formed around certain consumption activities or particular brands, and usually have clear hierarchies and established norms. Main categories of such groups include (virtual) consumption communities (e.g. McAlexander et al., 2002; Bagozzi and Dholakia, 2006; Chand and Li, 2010) and tribes (e.g. Canniford, 2011; Goulding et al., 2013). Communities could focus on promoting particular brands or certain general ideas such as social justice, sustainability, etc. An enhanced version of such communities would be a tribe, which refers to a social network of heterogeneous individuals linked by a shared passion or emotion (Taute and Sierra, 2014). Tribes usually involve members with a strong sense of community, a solid collective memory, and a high level of passion, engagement and identification (e.g. Veloutsou and Moutinbo, 2009; Tsiotsou, 2013). Accordingly, we suggest that each customer would play the role of a strong *Supporter* towards other customers at this level of our proposed model.

The following image depicts the full *Peer Pyramid* model. For each level, it shows how a positive (negative) customer experience could result depending on the favorable (unfavorable) role taken by customers towards their peers.

Peer Pyramid Model



Shared Element	Unfavorable Function	Favorable Function
Consumption Ideas/Values	Abandon	Promote
Consumption Resources	Retain	Allocate
Purchase Decisions	Refrain	Subscribe
Product-Related Inputs	Mislead	Inform
Shopping Occasions	Distract	Facilitate

This study contributes to both theory and practice on several dimensions. From a theoretical perspective, it links the two domains of customer-customer interactions and customer experience management. The proposed model explains how the nature of customer experience may vary as higher levels of interaction are activated. Our research provides managers with a framework to understand various possibilities of customer-customer interactions, and helps them adopt effective strategies to facilitate establishment and management of such connections.

Keywords: Customer-Customer Interaction, Customer Experience, Peer to Peer

References: *References are available from the authors upon request.*

DXB275

Recovery and reconstruction after a natural disaster, using a territorial marketing approach

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Abstract

The aim of the paper is to investigate the needs of territories hit by natural disasters, in which marketing approaches can represent ways of providing a valuable and effective response and recovery, in the tourism sector. A qualitative analysis was conducted to specify and better identify the state of the territories before, during and after the natural disaster from the point of view of tourism companies, experts and associations. These stakeholders of the territories hit by natural disasters had further specified the contents, role and skills of a key figure for the recovery and reconstruction activities in the tourism sector. The analysis revealed that the territorial marketing approach is a valid and appropriate model for a virtuous development of the territory in the post-disaster situations. The results of the focus groups set up in Italy and Slovenia have identified a ‘spontaneous’ call to territorial marketing as a set of tools to support and solve the situations and gaps that emerge in a post-disaster situation. Indeed, territorial marketing could be applied consistently because it is possible to detect all the theoretical dimensions recognized as indispensable for its useful application. Based on these results, implications are derived for tourism destinations to develop restoration and tourism recovery strategies in the territories affected by natural disasters, such as the training of reference figures like a Tourism Recovery Expert.

1. Introduction

Both ‘tourism’ and the ‘environment’ represent complex concepts, and both can be interpreted as intricate systems, where actions taken in one part of the system have consequences for its other component parts (Holden, 2016). Tourism is a cultural and intercultural phenomenon, and one of the most economically important sectors in the world (Duan, Xie and Morrison, 2022), as well as a factor for change, and it has a significant impact on the environment, economies and societies of the territories in which it operates.

In the event of natural disasters, tourism is a sector that is particularly affected in economic terms and impact on the image of an area. In fact, it is composed of, and involves a multitude of companies, associations, organisations and institutions present in the territories. Existing studies on the subject have focused over the years on image restoration strategies of destinations during and after a crisis (Beirman, 2018), as in the case of fires in Australia (Walters and Mair, 2012) and earthquakes in Japan (Wu and Shimizu, 2020). However, there are no works that take a broader

and all-encompassing perspective on the disaster-stricken territory, or address the problem in the short- and long-term.

Hence this work addresses the research gap on the management and recovery of territories affected by natural disasters using a qualitative research design. The premise of this work is based on understanding the impact of disasters on territories and on the tourism industry. In particular, in the selected indigenous contexts (i.e. Italy and Slovenia), the impact of natural disasters is highlighted through the perception of the key tourism sector stakeholders – experienced tourism professionals in the reference territories. In particular, this research investigates the contexts of the central Italian regions, after the 2016-2017 earthquakes, Slovenia, which experienced the 2014 icefall, as well as the recent floods (2022) in both contexts, and the ongoing pandemic that started in early 2020.

Taking its cue from the EU project RETOURN (REcovery TOURrism after Natural disaster), this research was conceived in response to the lack of preparation and adequate knowledge by the figures operating in the tourism sector on risk management and the recovery of damage resulting from natural disasters such as earthquakes, floods, hurricanes and pandemics such as the one caused by COVID-19.

The qualitative analysis, conducted adopting the focus group methodology (Lederman 1990; Miles and Huberman, 1994; Krueger and Casey, 2000; Patton, 2002; Wilkinson, 2011), was carried out to specify and better identify contents, role and skills regarding the problems and needs that emerged from stakeholders before the disaster, in the short run and in the long run after the disaster and to understand if and how a gatekeeper and expert figure can be of support for reconstruction and recovery. During the analysis, the findings revealed how the territorial marketing paradigm can be a theoretical and intervention framework, useful for disaster management, recovery and reconstruction.

The findings highlight how territorial marketing can be a useful approach to set up a virtuous activity of response and recovery within the territories affected by natural disasters. This work adopts territorial marketing as an approach to assess the competitiveness of the area

(Zbucea, 2014; Popović et al. 2018; Tovma et al. 2020) for recovery and reconstruction after a natural disaster (Laws et al., 2005; Wut, Xu and Wong, 2021).

The results give rise to the hypothesis of using and eventually adopting the territorial marketing approach as a model for a virtuous development of the territory in post-disaster situations.

The paper is structured as follows: first, an examination of the literature of territorial marketing and post-disaster tourism is presented. Then the empirical analysis is presented through methodology, results, advancement of the territorial marketing literature and implication for the stakeholders of the contexts analysed.

2. CONCEPTUAL BACKGROUND

2.1 Disaster tourism

Territory and tourism are mutually connected. This can also be seen in the case of crises and disasters since tourism is impacted by many external factors, including political instability, economic conditions, health issues, technological accidents, the environment and weather (Giraldi, Sestino, and Cedrola, 2022). A tourism crisis is an event or set of circumstances that seriously threatens the market appeal and reputation of a destination or tourism business (Beirman, 2018; Walters and Mair, 2012; Wu and Shimizu, 2020). It can significantly affect the long-term loss of trust in an organization or a destination, prevents the ordinary course of action, and requires a radical management response and an urgent adjustment of marketing and other operations in order to restore the confidence of employees, business partners and tourists in the destination's ability to survive (APEC International Centre for Sustainable Tourism, 2006; Klančnik, 2009; Bierman, 2003 in Tarlow, 2014). A crisis can affect an individual, a group, an organisation, a region, an entire country or even the world (Podbregar and Šprajc, 2022). A crisis is, therefore, any event that threatens the operation of tourism companies, damages the reputation of the destination, endangers the safety of the destination and tourists, triggers a negative perception of the destination on the market and interrupts tourist flows, or affects arrivals, overnight stays and income from tourism (Pavlakovič and Koren, 2022).

Since a crisis is perceived as undesirable, destinations and organisations must be able to deal with it and eliminate the consequences of a crisis or a disaster situation. This process is crisis management, a means by which an organisation or destination prepares, responds and recovers from a crisis (APEC International Centre for Sustainable Tourism, 2006; Urh and Jereb, 2022). Previous research has addressed the topic of crisis management and disruption and their impacts on destinations (Wut, Xu and Wong, 2021; Duan, Xie, and Morrison, 2022). Ritchie and Jiang (2019) present the literature on the subject and expose three features of crisis management: crisis and disaster preparedness and planning, response and recovery, resolution and reflection. It is essential that the crisis response, reconstruction and recovery are based on the nature and impact of the specific crisis or disaster, as other research has pointed out over the years (Ritchie and Jiang, 2019; Sano and Sano, 2019; Chan, Nozu and Cheung, 2020; Fountain and Craddock-Henry, 2020). Therefore, there are many handbooks and guidelines to support tourism companies in emerging from crises (e.g. Beirman, Ritchie and Campiranon, 2015; Huang et al., 2021) considering the cultural paradigms. The tourism industry can prepare and effectively respond to crises and disasters with the help of many reports, templates and toolkits. For example, the Pacific Asia Travel Association (PATA) guidebook and templates for industry professionals; the UNWTO crisis communication toolbox and templates for crisis communication and recovery marketing; and the hotel resilience strategies and guidelines (Ritchie and Jiang, 2019).

Handling crises and disasters and ensuring maximum security and safety levels can become a marketing tool for destinations or a destination's competitive advantage (European Forum for Urban Security, 2015). It can be used as a primary appeal of promotional messages, but it mainly affects people more susceptible to security issues (Wang and Lopez, 2020). Numerous indices consider safety, security and crisis management as their vital factor. One of them is the World Economic Forum (WEF, 2019), which publishes regular reports on the competitiveness of tourism countries. Part of the competitiveness index also includes safety as one of the critical factors when deciding on a trip to a destination. Territorial marketing could work on these implications and present a practical activity in response and recovery of the territories affected by natural disasters.

2.2 Territory and Territorial Marketing

The literature on territory management has established the definition of the concepts of territory and environment for decades (Rizzi, Ciciotti and Graziano, 2018). In particular, the territory can be defined as a set of tangible and intangible values – inhabitants, culture, historical heritage, artistic and urban heritage, infrastructure, location, and any other kind of situation – able to increase the overall value of the various elements (Kotler, Haider and Rein, 1993). Thus, the value of a territorial product (Ashworth and Voogd, 1998; Katemliadis, 2022) is the result of both the hard component and the construction that, in the hard dimension, it is possible to implement in terms of services, experiences, and relationships, i.e. the way in which the different constituent elements (hard and soft) harmonise with each other and the resulting combinations. Value and value creation, therefore, seem to depend, more than on tangible and structural resources (easily reproducible or replaceable, at least in some ways), on the way in which these resources are exploited and connected in the system, and on the way in which they are "reread", giving them new values and meanings from the various actors in the system. The power to create value mostly depends on the set of relationships interconnecting the various elements in the area. It is linked to the existing relationship and knowledge resources, trust and the meanings and symbols attributed by the stakeholders (Zbucea, 2014).

Moreover, competitive differentiation between territories originates from the regulatory and resource mobilisation capacity that institutions are able to have towards local and external productive forces. To these must be added the sense of identity, i.e. the ability of stakeholders to recognize themselves as a collective actor capable of proactively addressing the market. (Rullani and Romano, 1998). Territorial marketing is the analysis of the needs of stakeholders' and customers' markets aimed at building, maintaining and strengthening advantageous exchange relationships with stakeholders and external audiences, with the ultimate goal of increasing the value of the territory and businesses and their attractiveness, activating a virtuous circle of satisfaction-attractiveness-value (Valdani and Ancarani, 2000).

Finally, Sexto et al. (2009) identifies four pillars of territorial marketing that can be expressed as the reflection and planning of development activities by residents, tourists and

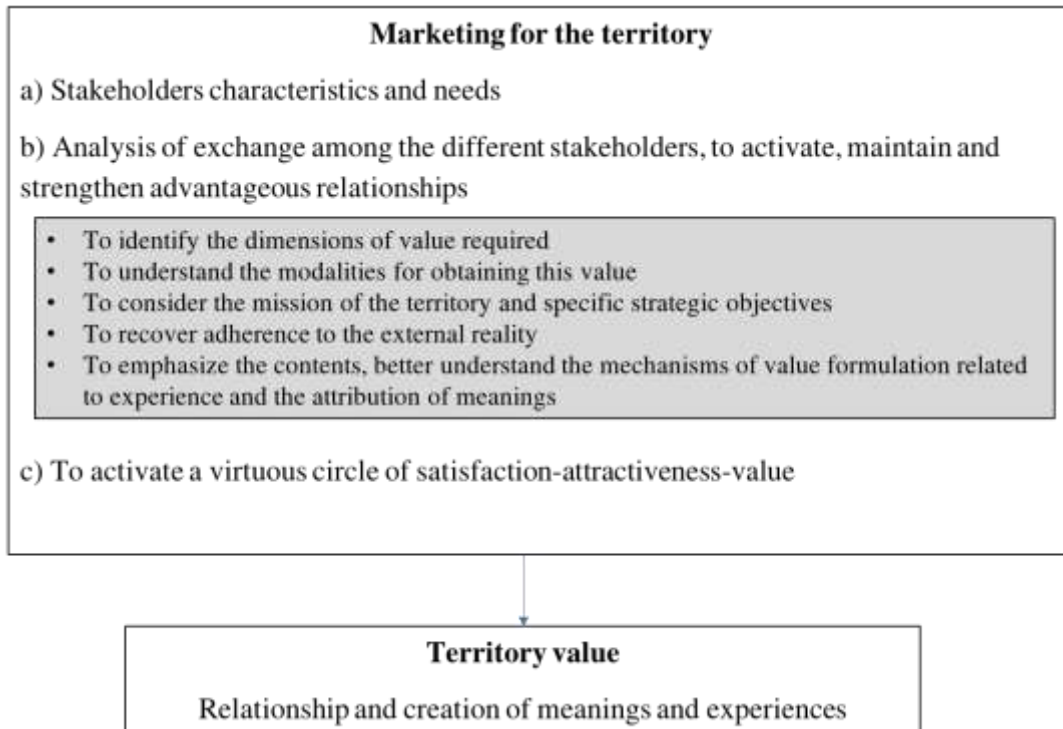
investors; promotion and analysis to enable actions in respect of to those audiences; creation of sustainable development policies promoting territorial identification; promotion of the places.

Hence, we propose a marketing activity for the territory (Valdani and Ancarani, 2000; Zbucea, 2014), as summarized in the proposed theoretical framework (Figure 1):

- a) Monitoring stakeholders in order to highlight their characteristics and needs
- b) Analysing and understanding the nature and content of the exchange that takes place among the different stakeholders, in order to activate, maintain and strengthen advantageous relationships. If the value of the territory depends mostly on the dimensions of relationship and creation of meanings and experience, the exchange becomes the main moment of value creation

Activating a virtuous circle of satisfaction-attractiveness-value in order to improve the value of the territory. The creation of synergies to build, develop and enhance the set of interactions and relationships that form the value of the territory passes through the action of monitoring and setting up specific plans for the objective public. It is therefore necessary to fully understand the nature of the value of the territory and the contents of its reference markets.

Figure 1. Theoretical framework



Source: elaborated by the authors

3. RESEARCH SETTING

Italian context

Natural disasters such as earthquakes, floods, hurricanes and pandemics such as the one caused by COVID-19 have a great impact on territories and tourism itself. Over the years, Italy has faced a wide range of natural disasters: earthquakes, floods, volcanic eruptions. This vulnerability, combined with the high density of the population and the presence of a vast historical and cultural interest real estate, make ‘Il Bel Paese’ clearly exposed to the risks and damage related to natural disasters. Italy has suffered losses of between 74 and 90 billion euros, due to 21,603 disasters over the last 40 years (Pugno, 2022).

According to the Sigma report "Natural catastrophes in 2021" from Swiss Re, it is estimated that 70% of Italian municipalities are exposed to seismic risk (Bevere and Remondi, 2022), and the European Severe Weather database (ESW, 2022) points out that in the last 10 years in Italy extreme weather events have quadrupled. Legambiente (2022) records that from January to September 2022 there were 62 floods in Italy, and from 2010 to September 2022 there were 510 floods and 1,318 extreme weather events (waterspouts, tornadoes, hailstorms).

In the last 50 years, Italy has been the country most affected by natural disasters; this has meant a huge negative balance in terms of damage and especially human lives. Since 1970, many seismic events have occurred: from Sicily (1968, Belice, Sicily, 231 victims) to Friuli (1976, 1,000 victims), Campania-Basilicata (1980, 2,914 victims) Abruzzo (2009, 309 victims) Lazio (2016, 299 victims) and Abruzzo again (2017, 29 victims), Italy has paid a huge price in terms of damage and human lives.

Unfortunately, the list of natural disasters does not end with earthquakes. Floods and landslides have also had a similar outcome. In this field, the major catastrophes were registered as follows: in 1985 in Trentino, a flood of mud caused the death of 268 people; in 1987 in Lombardia a storm, with floods, landslides and mudslides, caused 53 deaths; in 1998 in Campania, a landslide after a storm caused 161 deaths; and in September 2022 in Marche, there were 12 victims and 50 injured after a flood.

In particular, this study refers to the territory of the “Amatrice – Norcia – Visso Seismic Sequence”, so called by the National Institute of Geophysics and Volcanology and describing the series of four earthquakes localised in Central Italy between 24th August 2016 and 17th January 2017 with the strongest magnitude of 6.5. This set of shocks affected the Regions of Lazio, Marche

and Umbria, 299 victims remained under the rubble and following the dossier relating to the estimate of damages and costs which the Department of Civil Protection sent to Brussels, the impact attributable to residential buildings, public buildings, communication routes and cultural heritage of the area amounted to a total of 23.53 billion euros. Regarding the economic impact, a loss of 170 million was estimated, mostly attributable to the tourism industry. As a matter of fact, since the years 2009-2010 the affected areas had begun to perceive in a more conscious way the potential of their tourist vocation, recording a progressive increase in accommodation capacity until 2016, when the structures were destroyed or closed due to unavailability. Furthermore, a decrease in the tourist flow was shown in the following years (-29% compared to the average of the previous period of 2016). As an example, the municipality of Norcia counted 150,495 presences in 2015 and only 35,000 in 2017. After three years the regional data confirmed the negative trend; only one of the 17 closed hotels of the Marche region has reopened and there was an 11% drop in the turnover of companies in the tertiary sector (Dottori and Micucci, 2019); a similar situation was recorded in Umbria between 2015 and 2018 with a tourism reduction of 35% (Umbria Chamber of Commerce, 2017).

Slovenian context

Climate change effects have been present throughout the last decade (they could be categorised as natural catastrophes). Climate change is noticed as ever-warmer winters with little or no snow. Consequently, the hotels in the mountain ski resorts were not fully booked, and cable cars were not working or just in a limited quantity. At the same time, restaurants and other local providers were also under-booked. There are also higher costs to produce artificial snow, and many events have been cancelled because of the lack of snow. For example, the Golden Fox women's World Cup skiing race was initially based in Pohorje (NE Slovenia); however, it was cancelled in 2011 and partly cancelled in 2016, and transferred to the higher mountain ski resort Kranjska Gora (NW Slovenia) in 2012, 2014, 2018, 2020, 2021 and 2022 because of the lack of snow. The same is planned for next season, 2022/23.

Other natural catastrophes are also important factors in Slovenian tourism. In February 2014, a severe icefall paralyzed the entire country, especially the western part. Numerous hectares of forest were destroyed as well as fruit trees, the electricity network was severely damaged, and people were without electricity and heating for days. Tourism infrastructure was also destroyed,

such as camping sites, adventure parks and information boards. Strong icefall was also recorded in 1995, 1996, 1997, 2010 and previous years.

Slovenia is also facing serious floods. The most recent flood happened in September 2022, when many campsites along the Kolpa River (SE Slovenia) were flooded, and their infrastructure was destroyed. The flood in September 2007 ruined a historical site, "The Franja Partisan Hospital" (W Slovenia), and nearby museums where many items were destroyed or taken by the water. The restoration took almost three years. The capital Ljubljana also faced many floods, like those in October 2014 and September 2021, when various cultural institutions were flooded and ruined by the water. Floods also affected natural heritage sites such as caves, nature parks, and trails.

The Covid-19 pandemic began in March 2020 as an all-encompassing health crisis. Tourism providers had to close their businesses, and many tourism employees were made redundant or temporarily laid off. There was a steep decline in tourism arrivals, overnight stays, and income. After the first reopening, the tourism sector had to provide protective equipment, disinfectant, testing material and similar, which caused new high costs. However, the tourism sector got some help from the government with subsidies, grants and tourism vouchers. Vouchers were given to citizens and meant to be used for accommodation, sports facilities, restaurants, cultural events and organisations. The majority of tourism providers recovered in 2022.

4. METHODOLOGY

The data collection technique used in this research is the focus group, involving tourism and hospitality companies' representatives, who have had experience of natural disaster or disaster in general, to portray their experiences and reflections on the disruption.

For the Italian focus group, a total of 6 business owners and association representatives in central Italy were involved from the Umbria Region, thanks to the collaboration of the Umbria Chamber of Commerce as a gatekeeper and key informant. The actors involved in the research were mostly small businesses that had suffered damage following a natural disaster. There were also representatives of two associations, again made up of companies damaged by the disaster (2016-2017 earthquake).

For the Slovenian focus group, 5 representatives of the areas affected by the disasters were involved, including professionals from tourist hospitality companies, associations and attractions, through the scientific network of the University of Maribor.

The enterprises interviewed are characterised by:

- Family-run management, in some cases with a few outside employees
- Communication based on websites, direct contacts, presence on the main portals
- A customer base of national and foreign tourists
- Loyal customers (“friendship” relationships)
- Attention to customer needs and personalized services
- A strong network with the various operators of the territory (collaboration rather than competition)
- The idea that the supply provided is a dimension of a larger whole, based on the different aspects of value provided by the territory (strength but potential weakness).

Interviewees’ characteristics are summarized in Table 1.

Table 1. Interviewees’ characteristics

N.	Country	Role	Organization(s)
1	Italy	Entrepreneur	SME / B&B
2	Italy	Entrepreneur	SME / B&B
3	Italy	Entrepreneur	Organic Farm and B&B group
4	Italy	Tour Guide and Head	Association of enterprises that came into existence after the disaster (earthquake)
5	Italy	Entrepreneur, Member of the board of national union for hospitality for Umbria region, Member of the Umbria regional council	B&B, hotels and restaurants group
6	Italy	Entrepreneur	B&B, Camping area and organic educational farm
7	Slovenia	Founder / Entrepreneur	Camping site
8	Slovenia	Head	Tourist Association
9	Slovenia	Director	Camping site
10	Slovenia	Head	Tourist Association
11	Slovenia	Museum Director	Museum

Source: elaborated by the authors

The focus group technique was chosen as a data collection methodology (Lederman 1990; Miles and Huberman, 1994; Krueger and Casey, 2000; Patton, 2002; Wilkinson, 2003) to ask questions to participants while soliciting free discussion in an interactive setting, in order to encourage participants' sharing of their own views in the context of the views of the others (Patton, 2002). The guidance of the discussion around certain topics, in addition to the interaction, should represent a data quality enhancer, since it is thought to moderate extreme positions in the participants' discussion and provide good representations of perceptions and phenomena (Krueger and Casey, 2000). During the focus group sessions, data were collected through different means and techniques, primarily transcripts and researchers' annotations (Krueger and Casey, 2000).

The focus group interviews were conducted in July 2022 in Italy and Slovenia, in the interviewees' native language, and moderated by two scholars with 20 years' experience in the field of marketing research (three researchers were involved in each). The research teams provided for translation and linguistic adaptation (Harkness et al. 2004). The focus group was conducted to ensure the best comprehensibility of the topic and to foster the discussion among subjects with different levels of education and experience.

Data analysis was conducted according to established methodologies to ensure a progressive abstraction and thematisation of the results (Creswell 2007). Corroboration of evidence from different sources sheds light on the research topic and provides a robust interpretation of research findings (Denzin and Lincoln, 2011).

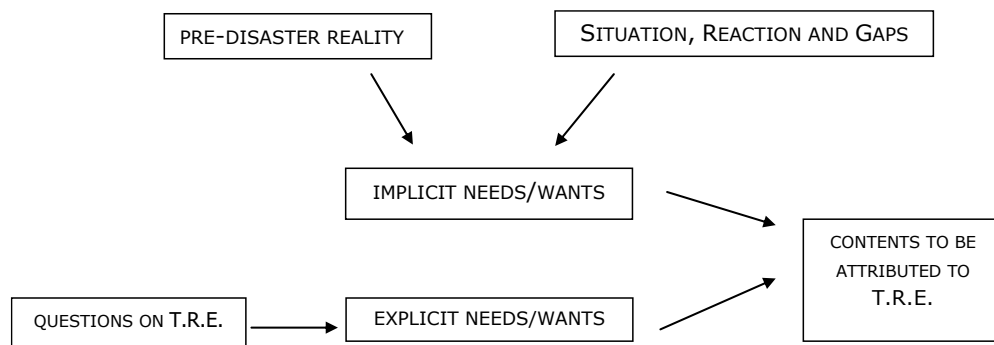
The focus groups' aim was to investigate:

1. *Pre-disaster reality*: enterprise management and daily experience
2. *Situation, Reaction and Gap* experienced during disaster: a) description of the period and conditions of life and suffering experienced; b) type of decisive support in terms of role, persons, workers, managers; c) type of gap – in terms of role, people, workers, managers – experienced in that period; d) type of support – in terms of role, persons, workers, managers – desired at that time and after the disaster

3. *Description of the figure* of the Tourism Recovery Expert in terms of role and position, in order to better specify knowledge, skills and tasks.

The underlying logic behind the choice of topics was as follows (Figure. 2).

Figure 2. The underlying logic behind the choice of arguments for the focus group



Source: elaborated by the authors

The pre-disaster reality, compared with the situation during and after the disaster, allowed the variation of the situation experienced during and after the disaster to be defined more clearly. This aspect, linked to Situation, Reaction and Gaps, enabled an identification of the implicit needs/wants. The questions on the figure made it possible to define explicit needs/wants. The comparison between implicit and explicit needs guaranteed the best specification of the contents to be attributed to the figure of the Tourism Recovery Expert, as well as the indirect verification of the explicit contents attributed to the figure in question.

5. RESULTS

The results of the focus groups are presented below to account for the results at the level of a single national focus group in the Within-level analysis. Subsequently, a further and comparative level of analysis was carried out, trying to synthesize the contributions and concentrating the analysis on the elements of reinforcement and analogy in the two contexts.

5.1. Within-level analysis

Italian Focus Group

In the very short term, the first visible damage is that of image. The general name of the territory is used as a reference to locate the disaster, without discriminating between zones, and this implies an oversizing of the effects even in areas that have not actually suffered damage. This leads to the immediate cancellation of bookings and, in general, to a significant reduction in companies' turnover. The consequence is the feeling of lack of support, loneliness in the catastrophe, coupled with the idea of having no one to guide, pull the strings, and provide direction. Everyone complained about the lack of a network in order to provide correct information and focus actions.

According to the interviewees, discouragement is often followed by hope, especially as a result of the solidarity that emerges in these situations. Solidarity has been expressed not only in the sending of aid, but also in the purchase of goods from the territories and a return of tourists when the situation was normalised, especially Italian tourists for short stays: *"there was a return of solidarity, I had many phone calls to buy our products; Everyone bought and ate Umbria"* (3); while another said *"the response of the Italians was moving and wonderful; even if we had slowed down, this push managed to fill problems. We were almost incredulous.... But it lasted a long time, so we were like: there's hope, so think about when we're going to rebuild what's going to be okay."* (5).

In the short and medium term, the lack of support concerns reconstruction aid: what emerges is the slowness of aid, and its inadequacy in relation to real needs. *"we worked alone because we need speed and for this reason it was not possible to use state aid"* (2).

The disaster led people and communities to do things that had never been done before. As one interviewee noted, *"You have done things never done before, unprecedented planning and looking at it made us happy and confident of a positive boost; after a couple of years, the positive push is over, companies that had new free time and that had poured into activities even outside business, in community projects etc., they left. Two years of hunger, family problems, earthquake practices, they then frayed everything, everyone went back to thinking in their own home, no longer having a vision of community, the propulsive drive within the community"* (5). But the desire to play on new and different schemes remained – *"the earthquake was almost pushed to do better"* (4).

What emerges is the lack of an institution or someone who could grasp the community thrust of the post-disaster situation and address it virtuously and in the long term, avoiding its dispersion after a physiological time -. “*If there had been an outsider who had grasped the stimulus and coordinated, it would have been ideal*” (1). The hypothesis is that a correct management of the activism experienced in the post-disaster by individuals and communities can lead to the creation of new models, new dynamics able to make a strong contribution to the growth and renewal of the territory.

Slovenian Focus Group

The Slovenian interlocutors did not focus much on the pre-disaster conditions. As they come from different tourism (or tourist-related) enterprises they encountered different challenges after the natural disaster (the type of which also varied). One interlocutor explicitly revealed that the after the disaster struck, the nature of the work changed radically (8). Another participant, however, stated that the nature of the work did not change as there are certain types of natural disasters that one cannot really prepare for (such as sleet damage), while other types can be a subject of prevention (for example, flooding) (9).

Generally, the time directly after the natural disaster was a time of confusion and discouragement and reacting quickly was crucial. Coordination was necessary between the various actors, institutions and services that were needed directly after the disaster occurred. The participants expressed the importance of cooperation between them.

The interlocutors emphasised the importance of public solidarity on the local and national level, as well as help from public services such as firefighters: “*When such a disaster occurs the solidarity of the locals, volunteers, and the participation of institutions is extremely important.*” [...] “*Also, institutions, local and national, have proven to be able to work together well.*” (9)

Solidarity not only helped in the practical sense, but also improved morality and gave hope. Government support after the disaster, however, could have been better as expressed by the participants of the focus group. They also stressed that systematic preventive measures on the national level would be important, as too often the authorities only deal with the consequences of the natural disaster and do not plan for what could happen in the future in that regard: “*The problem is prevention. In the case of curative measures post-disaster, we know we can work together. When it comes to preventative measures, however, not much happens.*” (9)

5.2. Between-level analysis

Earthquake/disaster effects can be traced back to various levels under a temporal progression, damage and recovery perspective.

The first level is the immediate damage on the economic return of the territory. The first visible damage is that of image linked to the communication of the disaster by the media in emphatic and inaccurate terms. The general name of the territory is used as a reference to locate the disaster, without discriminating between zones, and this implies an oversizing of the effects even in areas that have not actually suffered damage. This leads to the immediate cancellation of bookings and, in general, to a significant reduction in companies' turnover. The reaction from the local operators was to activate a direct communication with loyal customers in order to better explain the situation in the area and, in general, to reassure and convey serenity about what they were experiencing.

The second level is related to structural damage, mild or medium and not solvable within a few months. The most common response is to repair such damage directly, without counting or waiting for State aid, which is considered too slow and inadequate for the present situation.

The third level is related to the territorial devastation connected to the long-term hard and soft aspects. There are damages related not only to physical structures (roads, railways, public buildings, etc.), but also to key elements of attraction in the territory, such as museums, monuments, leisure services, or aspects related to the quality of life (lack of services, impoverishment of areas and relations, etc.) that lead citizens to leave the territory, causing a further impoverishment of the same.

These three levels of damage correspond to some psychological dimensions of reaction.

In the very short term, what prevails is the discouragement, the lack of confidence; discouragement is often followed by hope, especially as a result of the solidarity that emerges in these situations. Solidarity has been expressed not only in the sending of aid, but also in a purchase of goods from the territories and a return of tourists when the situation was normalised. Solidarity

linked to aid is seen not merely in a positive sense: the aid should be adapted to the needs of the territory and to the new idea of development, starting from the conditions of the post-disaster. On the contrary, the aid generally depends on who helps and is defined by the beneficiary, with the consequent compliance with the needs, priorities and characteristics of the territory.

In the short and medium term, the disaster leads people and communities to do things that have never been done before; since everything is destroyed and you have to start again, the spirit of the group, the positive reaction, the search for the new, for different dimensions never tried before, prevails. This aspect, too, helps to nourish hope, but this drive is destined to run out with time and with the re-emergence of the needs of everyday life. But the desire to play on new and different schemes remains.

In general, it is thought that reconstruction should follow a development plan that starts from the conditions of the post-disaster to imagine a new way of managing and giving value to the territory, for creating a system that acts as a multiplier of the value generated by the individual. It would be necessary to set the reconstruction starting from the situation of the post-disaster and in line with the potentialities of the territory, to build development and growth for the territory, which will lead to a better condition than the pre-disaster one.

Some key elements of the reconstruction and development process are identified as:

- the focal points for the reconstruction and development: loyal customers, community work, solidarity managed and organised, territory and strategy of the territory;
- the type of desired support: institutions that build a network, analyse the situation and define a development strategy on the basis of the existing conditions, but with a new way of doing things, to create new dynamics and potential, provide answers to the demand to address gaps and provide support.

One of the ways of helping tourism recover from a natural disaster is to create the profile of a Tourism Recovery Expert. The participants of the focus group had some common ideas regarding the characteristics of such an expert. They all said that in the case of a disaster this expert

should be on site, communicate with those affected by the disaster and listen to what they need. The top-down approach in such scenarios that was frequent in previous natural disasters experienced by the participants is not effective. As an Italian interviewee noted “*There is no collaboration, no building from the bottom up; it’s only from top down and mostly without collaboration with the locals. Such an expert should be in the field, working with people. We know what would be best for us and we want to participate in finding a solution. Such an expert could be someone who connects everyone involved.*” (1)

In particular, the expert should thus have the knowledge and abilities to bring together and establish collaboration between all the parties involved: from tourism enterprises affected by the disaster to organisations and services that need to be involved in this situation: “*They would need to understand the complexity of the situation and all the factors involved.*” (5). They would not need to have all the knowledge themselves, however, they would need to find the right people for the right job and also to navigate between official legislation and real-life needs of the tourism industry affected by the disaster.

Regarding the question of whether such an expert should be part of the organisation or an external expert the opinions were predominantly the latter. However one participant expressed the opinion that an expert from the local area would be better at understanding the needs of the people in tourism affected by a natural disaster.

6. DISCUSSION

This work aims to understand and study the phenomenon of natural disaster in the affected area, through the perceptions and needs of the key stakeholders in the tourism sector. The focus group research carried out highlighted territorial marketing as a set of tools to support and solve the situations and gaps that emerged in a post-disaster situation.

The literature on disaster tourism (Wut, Xu and Wong, 2021; Duan, Xie, and Morrison, 2022) has highlighted that the impact on destinations should be observed from the point of view of crisis and disaster preparedness and planning, response and recovery, resolution and reflection (Ritchie and Jiang, 2019).

The following findings emerge from the study:

- the idea of territory as set of hard and soft elements (Katemliadis, 2022), and set of relationships between stakeholders and territory that generate value and meanings (Ashworth and Voogd, 1998; Valdani and Ancarani, 2000; Katemliadis, 2022),
- the subjects identify themselves in an expression of the territory, in a collective subject (Rullani and Romano, 1998).

According to the territorial marketing framework (see Figure 1), the need for a strategy of reconstruction is linked to a strategy and planning that highlights, relaunches and enhances the unique and characteristic elements of the territory (Valdani and Ancarani, 2000; Zbucnea, 2014).

The territorial marketing framework therefore goes beyond the idea of recovery marketing and the reconstruction of an image of the territory (Walters and Mair, 2012; Wu and Shimizu, 2020), since it focuses on the management of the territory, its subjects and resources in a more comprehensive way. Indeed, according to this approach, each element of the territory (i.e. productive unit, association and institution), must develop and manage itself, starting from the territorial strategy and the concept of territory, in order to enhance and amplify its supporting elements. Consequently, the actions taken for the reconstruction, enhancement and development of the territory after the crisis (Duan, Xie, and Morrison, 2022) are developed on the basis of the existing conditions, but with a new way of doing things, in order to create new dynamics and potential (Valdani and Ancarani, 2000).

The dimensions identified in the literature as content of territory and territorial marketing and as modalities of application of territorial marketing emerge clearly in the focus as elements of description of the territory and identification of the solutions desired in the post disaster situation. Consequently, the hypothesis of application of territorial marketing for the recovery and development of a territory in the post-disaster is consistent both in terms of presence of the necessary doctrinal elements and in terms of requests emerging from the territory as well.

Indeed, territorial marketing could be applied by consistently building on relationships between stakeholders and territory that create values and meanings (Zbucnea, 2014), and sense of identity, which is also strengthened in the post-disaster situation (Wu and Shimizu, 2020).

7. IMPLICATIONS

We propose some practical implications that can be useful to the territories that have suffered natural disasters and to the tour operators who operate there. In particular, the analysis shows the need for a professional profile that acts as a key figure, a gatekeeper who can play a role of connecting between operators, institutions, associations and the various expressions of the tourism sector of the territory. With respect to the emerging needs and expectations, the interviewees would recommend a working group/a figure who deals with the following areas of expertise:

- defining the impact of the disaster not only from a physical and structural point of view but also in terms of social structure, of lost elements of value;
- understanding how to restart, considering the existing and questioning the old practices, in order to set new ways of doing and create new dynamics and potential that would allow not only a reconstruction but a true development;
- structuring a development plan that starts from the post-disaster conditions to imagine a new way of managing and giving value to the territory, for creating a system that acts as a multiplier of the value generated by the individual.

It would be necessary to set the reconstruction starting from the post disaster situation and in line with the potentialities of the territory, so as to build a real development, a growth trend of the territory higher than in the pre disaster.

8. CONCLUSIONS AND LIMITATIONS

As is clear from the literature and the empirical work, the analysis of the territory, with regard to disaster tourism and marketing approaches, tracks the followings points: a) the analysis of structural damage, b) the impact of the damage on the territory in hard and soft terms, c) the impact of the damage on the social structure, d) the analysis of strengths and weaknesses in the two physical/structural and social/lifestyle dimensions.

The purpose is to define strategies of restart and development based on the new situation and the new potential of the territory, which also implies the evaluation between returning to the old methods/models or defining new ones to seize new opportunities. The strategy must be set up

with the participation of the various stakeholders and shared with them, in order to have an involvement and participation in the subsequent implementation phase.

All this accomplishes a virtuous circle of satisfaction-attractiveness-value to improve the value of the territory.

Among the limitations of this study we recognize that the environmental and cultural variability was very marked (Huang et al., 2021), hence, despite the homogeneity of the focus group guide and of the research purposes, a very high complexity was encountered. We propose that subsequent studies should maintain greater uniformity at least for the moderation of the focus group or ideally to maintain consistent the data collection team, ideally bilingual, for greater consistency across the investigation contexts.

Moreover, we propose that this type of analysis be developed also in other territorial contexts and disasters, to observe the disaster phenomenon and the stakeholders' perceptions and reactions, evaluating how contextual elements, including cultural ones, may resemble or differ from this interpretation of the phenomenon and the subsequent needs of the territory and businesses.

Finally, we have observed the phenomenon in a perspective of territorial marketing framework and intervention system, but further multidisciplinary studies could find subsequent keys and fill other gaps in the literature in disaster tourism, tourism management and sustainable tourism.

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DXB279

**Examining Consumer Purchase Behavior During The COVID-19 Pandemic:
Determine Attitudes Towards Local Brands Reflecting the Differences
in Consumer Generations**

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ABSTRACT

Consumer purchase behavior is a dynamic process that is constantly changing. Every customer is unique and different, the purchase behavior of customers may be as well unpredictable as very similar. It depends on many factors, whether emotional, material, the environment, recent trends, also on individual generation. We can also talk about visible and invisible factors. Undoubtedly, knowing the customer shopping behavior is key for every business. Therefore we tried to examine the profiles of Slovaks consumers and the role of brands in their shopping behavior. The goal of this paper is to determine attitudes towards local brands reflecting the differences in consumer generations. Bases for this study was a representative research on 1200 Slovak consumers. The method used to obtain the data was survey. To determine relationships between variables T-tests were used. We can conclude consumers had to reconsider their spending during the pandemic, and as many as 43% of them switched from their favorite brands to private ones, mainly due to their financial situation. This is also the reason why some retail chains are trying to promote domestic and local products through their own brands. Also, young consumers are more interested in the information on the product packaging, mainly they search for the country of origin. They consciously search for shopping places that offer domestic and local products. The main reason for this behavior is to support Slovak products and local producers to support the economy.

Key words: consumer generations, buyer behavior, local brands, COVID-19 pandemic

JEL classification: M31

1 CONSUMER BEHAVIOR IN CONTEXT OF THE COVID-19 PANDEMIC

Understanding consumer shopping behavior in the context of this pandemic and beyond is vital for retailers and traders, as well as businesses and policy makers, to be able to implement strategies and tactics to retain existing consumers and attract new ones. In the consumer context, generational identity significantly influences shopping patterns and shopping behavior therefore there is need to examine if and how this behavior differs from generation to generations.

Consumer behavior is highly predictable and there are many predictive models that predict statistical probabilities of customer behavior based on past purchases (Guo et al., 2021). Consumers are predictable and have habits of what, when and where to shop (Sheth, 2020). Of course, this behavior is not just about consumption, but the whole purchasing decision from information retrieval to post-purchase behavior (Trihatmoko, 2020).

However, there are also unpredictable factors. These include, for example, natural disasters, regional conflicts and wars, recessions and economic crises, and global pandemics, including the Covid-19 pandemic we are experiencing today (Foster & Greene, 2021). These events can significantly disrupt consumption as well as the production and supply chain (Sheth, 2020). The global pandemic has caused consumers to order online and have products delivered home. Due to the avoidance of meeting people and social distancing, the choice of places to buy for consumers has been limited (Brandtner et al., 2021). Work, education, and shopping have moved to the home environment. At the same time, however, greater flexibility has increased as consumers do not have to adhere to schedules scheduled for travel to work or school, shopping, or consumption (Rai, 2021).

At the beginning of the pandemic, consumers' priorities focused on the most basic needs - food, hygiene and cleaning products. Consumers were headlessly stockpiling, focusing primarily on the purchase of basic goods, especially in relation to virus prevention, such as protective equipment and disinfectant gel (Loxton et al., 2020). The pandemic changed consumption patterns, for example by reducing sales of some product categories (travel, clothing) and improving sales of other categories (television entertainment, internet) (di Crosta et al., 2021).

In this context of economic, social and political instability, the consumer is exposed to stress, which necessitates the saving of money or, conversely, the impulsive purchase of products which he considers absolutely necessary in a situation of danger (Loxton et al., 2020; Wang & Hao, 2020).

Therefore, it is essential for companies to adapt to such unpredictable group behavior. It requires adapting business strategies and finding new ways to reach the customer (Hoekstra & Leeflang, 2020). One option is a strong focus on demographic indicators. In global marketing, it is common practice to group the consumer segment. One of the most commonly used is to group generation cohorts into a group and assign properties to that group (Bann et al, 2020).

Generation cohort theory says that individuals in the same age group share a defined history where personality, behavior, and consumption patterns are influenced by that history (Rajadurai, Bathmanathan, Azami, 2021). The external events that took place during their "adolescence" shape and shape them. There are different opinions on individual generations and their ages, we based

our research on the division of (Zwanka & Buff, 2021): Baby boomers (born 1943-1960), Generation X (born 1961-1981), Generation Y (born 1982-1991) and Generation Z (born after 1992) Other sources (e.g. (Aithal & Aithal, 2020) use different names and dates of births for the generations Baby Boomers (born 1944 - 1964), Generation X (born 1965 - 1979), Millennials (born 1980 - 1994) and Centennials (born 1995 - 2015).

In general, consumers within a cohort are similar, but at the same time each generation cohort differs in some way from the others (Bann et al., 2021). Generational differences are not determined by the age of the individual, but by external factors and experiences that shape an entire generation. Thus, groups of individuals born at the same time and growing up through the same experiences will share similar values, attitudes and beliefs and expectations that are constant throughout the life of the generation and form a generational identity (Eger et al., 2021).

In the current highly competitive period, at a time of global marketing and global purchasing, the country of origin of products is an important topic. It turns out that this factor can significantly affect consumer behavior and the purchase itself (Kashi, 2013). Consumers, for various reasons, care about the country or region in which the products come from and take these facts into account when making their purchasing decisions (Parkvithee & Miranda, 2012). The role of the country of origin in research into purchasing behavior is very important. The country of origin plays an important role in the perception of product quality and affects the overall perception of product quality (Rezvani et al, 2021). Highly ethnocentric consumers are not inclined to buy products from abroad and take the problem of domestic and local products as a moral responsibility (Siamagka & Balabanis, 2015). Research of reasons for buying local products and consumer behavior is an important source of information for companies in formulating strategies on how to compete successfully in the global market.

2 MATERIAL AND METHODS

The respondents to the questionnaire survey were adult consumers over the age of 18 living in Slovakia. The sample size was set at 1200 respondents, which is the usual size for representative surveys. To maintain the representativeness of the research, the sample was selected from a panel of respondents and data were collected by telephone for one month. Thanks to the collection via the telephone panel, it was possible to ensure the required distribution of respondents in the sample according to the required demographic characteristics of the population - according to the selected generations of consumers. The sample can therefore be considered representative of the Slovak population.

Table 1 number of respondents in each generation

<i>generation</i>	<i>born</i>	<i>Number of respondents</i>
baby boomers	born 1943 - 1960	267
generation X	1961-1981	342
generation Y	1982-1991	357
generation Z	born after 1992	234

Source: own research

As seen in table 1, the sample contains 267 participants from the baby boomers generation, 342 respondents from generation X, generation Y represents 357 respondents and generation Z 234 respondents. For the purposes of this article, we have examined attitudes towards local brands reflecting the differences in consumer generations.

The design of the questionnaire was created on the basis of literature and previous research at our workplace. The questionnaire contained three main parts. The first part dealt with general patterns of purchasing behavior, the second part focused on attitudes towards brands as such and the third part contained questions about the purchase of local and domestic products and the reasons for their purchase. This part of the questionnaire examines in depth the suggestions and recommendations when buying domestic products. The final part of the questionnaire contains demographic data, which are helpful in finding differences in the behavior of consumers of different generations and are also supporting information for further statistical analysis.

Basic data analysis descriptive statistics. To determine relationships between variables T-tests tests were used.

3 RESEARCH RESULTS

This survey has two basic objectives

- examine the impact of the COVID-19 pandemic on consumer behavior and changes in their shopping habits. This research is intended to contribute to the analysis of consumer behavior in a situation where the second wave of the COVID-19 pandemic has begun in the Czech Republic.
- find out if different generations of consumers have different attitudes towards domestic brands.

Figure 1 I had to reconsider my spendings during the pandemic (absolutely disagree---absolutely agree)



Source: own research

The statement in figure 1 was measured on a scale from absolutely disagree to absolutely agree and we can conclude consumers had to reconsider their spending during the pandemic. The generation that needs to save the most were the baby boomers, on the other side were the generation Z who felt almost neutral to their change in spendings during the pandemic.

We investigated further how their spending changed. The majority of all the respondents (63%) said they only buy the necessary things. The second most frequent answer was they do not go for vacations (54%) and they found new hobbies that do not require so much money (26%). While looking closely on the products and brands the respondents buy, we found out that as many as 43% of them switched from their favorite brands to private ones. Because of the pandemic they are more price sensitive and the main reason for changing brands is their financial situation. More than 60% of the respondents who changed brands say it was for a retail own brand. This is also the reason why some retail chains are trying to promote domestic and local products through their own brands.

To examine the differences in generations and their behavior we used a set of T-test. The most interesting results were shown by comparing the generation Z to all the other generations. The results have shown a statistical significance with all the compared groups. We provide a sample test for comparing generation Z and generation X, where the strongest proof for different behavior was found. The statement we compared across all the generations was “I am interested in the information on the product packaging and search mainly for the country of origin”, the scale was measured on a 5-point scale from strongly disagree to strongly agree.

P-value equals 0.00315294, ($p(x \leq T) = 0.00157647$). This means that the chance of type I error (rejecting a correct H_0) is small: 0.003153 (0.32%). The smaller the p-value the more it supports H_1 . Since $p\text{-value} < \alpha$, H_0 is rejected. The average of Gen Z population is considered to be not equal to the average of the Gen X population. In other words, the difference between the average of the Gen Z and Gen X populations is big enough to be statistically significant. The test statistic T equals -2.955710, is not in the 95% critical value accepted range: [-1.9611 : 1.9611]. $x_1 - x_2 = -0.19$, is not in the 95% accepted range: [-0.1300 : 0.0004404]. The statistic S' equals 0.0641. The observed standardized effect size is small (0.12). That indicates that the magnitude of the difference between the average and average is small.

Young consumers are more interested in the information on the product packaging, mainly they search for the country of origin. Looking further into the motives of the generation Z for shopping for domestic products we found that they consciously search for shopping places that offer domestic and local products (47% of generation Z). The main reason for this behavior is to support Slovak products and local producers to support the economy said 39 percent of those from generation Z who consciously buy Slovak products.

4 DISCUSSION

Consumer behavior is studied by individuals or groups who aim to meet their needs. Although consumer behavior is predictable, there are situations that change behavior. Such

changes may occur for a variety of reasons, including personal, economic, psychological, or external factors. When external factors are strong and potentially threaten consumers, such as a pandemic, they lead to significant behavioral changes. An example is panic shopping, where fear leads consumer to buy products they would not buy at all or buy in smaller quantities. As the age of the pandemic dwindled, shopping behavior changed again. Consumers in Slovakia have changed their buying patterns and started to focus on safe shopping and supporting the economy. Most consumers who have stated that they support local products do so consciously to support the Slovak economy in times of global economic crisis. Slovak retail chains also reacted flexibly to this trend by starting to offer more Slovak products.

It can be assumed that one of the consequences of the pandemic will be the return of consumers to the traditional market and the strengthening of local operations. "The traditional market will play a big role, people will no longer want or be able to afford to travel to more distant stores, so they will shop more locally and close to their homes.

We anticipate that because of the corona crisis, consumers will think more about shopping, reduce their spending on branded products, and focus more on buying private label products. According to our research, more than 40 percent of consumers have switched from their favorite brands to private labels. Due to their financial situation, customers will optimize their purchases more, so it is important that the chains support domestic producers through their own brand.

The pandemic in Slovakia strengthened ethnocentric tendencies. In addition, these findings suggest that domestic brand managers can effectively take advantage of customers' natural desire to buy Slovak products.

The limitations of this article are also suggestions for future research. First, this research and its focus should be replicated on brands in different product categories. Second, our research focused on examining brands rather than products, so it is possible to argue whether research focused on products and product groups would lead to the same results. Therefore, it is another proposal to conduct a study of the degree of ethnocentrism of Slovak consumers in the context of Slovak and foreign products. Another topic may be the perception of quality and its connection with ethnocentrism. Further research is needed, which assumes different perceptions of the quality of domestic and foreign brands.

It would be interesting to find out if, the attributes of products that consumers evaluate objectively - e.g. how they perceive quality or what their experience is, they are more susceptible to consumer ethnocentric tendencies.

The views of generations of consumers could also be examined and their unique behavior in the context of intra-group preference is related to the degree of identification with the group within the group. What effect does identification with a specific generation have on similar reasons for purchasing and how does the purchasing dynamics of such a group work?

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DXB281

THE IMPACT OF FAITH ON MUSLIM AND JEW CONSUMERS

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Objective: Faith and food consumption are strictly related, and this is relevant considering that 80% of the world's population is affiliated with a religious faith.

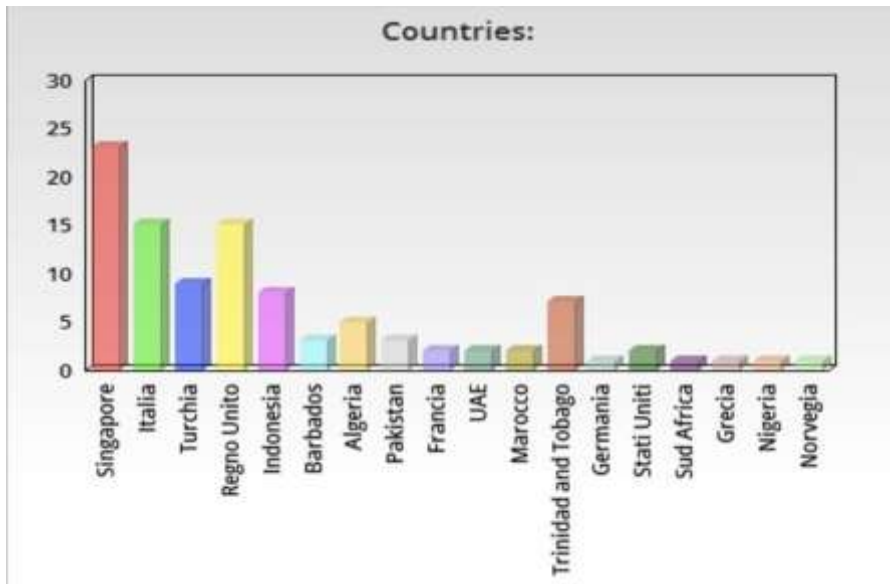
Religious beliefs and values influence consumer behavior differently, in particular: the brand relationships, the compensatory consumption and the product choices. Furthermore, some researchers in the past have tried to understand the differences in consumption between the believers of different religions (e.g. Protestants and Catholics) and with different levels of religiosity (Minkler & Cosgel, 2004). Specifically, in this study the focus is on two consumers: the Muslim and the Jew ones. Food consumption, for these religions, are driven by some precepts, indicated respectively by Halal and Kosher rules but, sometimes, also other kinds of consumers decide to purchase Halal or Kosher food for quality, safety and health. The objective, therefore, is to analyze the main characteristics of these consumers, highlighting similarities and differences.

Methodology: Two questionnaires were administered on Google Docs, in order to:

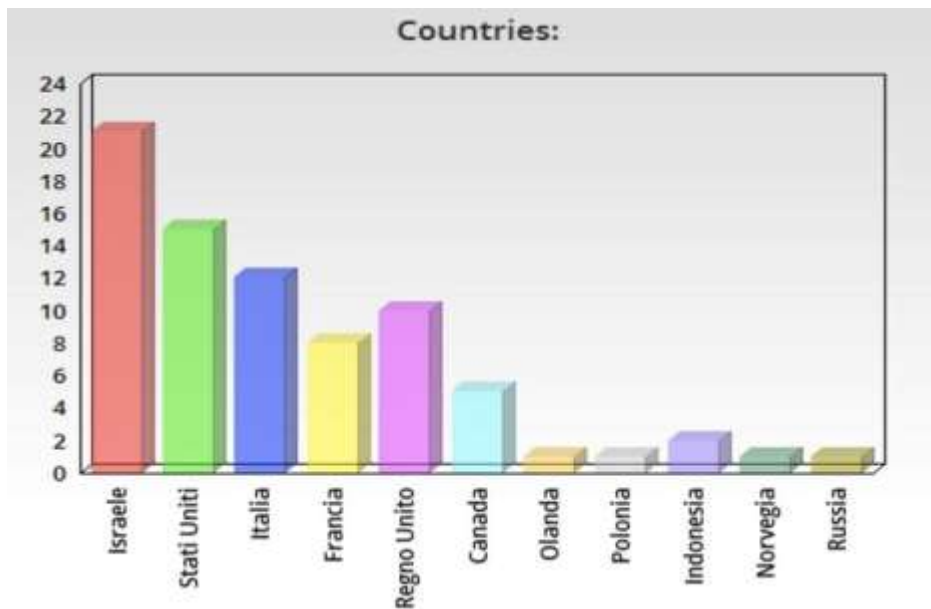
- understand the interdependence between religion and daily life/purchasing choices;
- understand the quality, wholesomeness, price and safety of products influence the decision-making process and whether they have, for consumers, the same or less importance with respect to halal/kosher certification;
- determine where shoppers go most to shop;
- how satisfied they are with the products they currently buy and whether they buy only and exclusively certified foods;
- understand what certified products consumers would like them to be most available on the market;
- establish whether you place the same trust in halal/kosher logos regardless by the certification body;
- understand whether consumers believe that the products sold in a store halal/kosher respect the dictates of this certification.

Respondents, from different countries, were 102 for the Halal questionnaire and 77 for the Kosher questionnaire. Countries participating in the Halal survey Countries participating in the survey.

For *Halal questionnaire*, participants were from:



For Kosher questionnaire:



Main findings and implications: For consumers of Halal products, religion has a strong influence both in daily behavior and in food choices. For Kosher consumers, religion has a preponderant influence on the latter aspect. Moreover, consumers of Halal foods are more price conscious in the purchasing process. Meat is the most requested product. Therefore, slaughterhouses and processing companies should take advantage from the opportunity to adopt the Halal/Kosher certification. Islamic consumers tend to accept any Halal logo and are more confident that a product is safe when sold in a store that treats certified products.

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CORPORATE SOCIAL RESPONSIBILITY & SUSTAINABLE DEVELOPMENT GOALS

DXB201

RECOGNIZING THE ESSENTIAL DYNAMICS OF FOOD WASTE BEHAVIOR

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EXTENDED ABSTRACT

Purpose:

A stable access to sufficient, safe and nutritious food, defined as food security is a government's responsibility. According to Food and Agriculture Organization estimates, globally about 7955 million people were chronically undernourished between 2012 and 2014. (FAO 2014) In 2018, 37.2 million Americans lived in food insecure households. (Coleman-Jensen 2019) 56% of food-insecure households participated in one or more of the Federal food and nutrition assistance programs. (Coleman-Jensen 2019) The presence of food waste is at odds with these efforts. Accordingly government and non-governmental organizations initiate campaigns to reduce food waste at the consumer level mainly because food waste is recorded to be higher at the consumption stage compared to production stages in the US (Chaudhury and Albinsson 2015). According to the United States Department of Agriculture, 31% of the food was lost at the retail and consumer level, which is 133 billion pounds, \$161 billion worth of food in 2010. (Buzby et al. 2014) Moreover, until the food reaches the fork, from production, to handling, to storage, to processing, to distribution it exploits the highest amount of resources of the supply chain. Therefore, when food is wasted at the last stage, it marks the highest economic, social and environmental loss.

In this study we tried to understand consumer's food wasting behavior using an extended version of the Theory of Planned Behavior (Ajzen 1991). It is a viable theoretical framework, well-documented with its capabilities and deficiencies in explaining behavior. Our focus in this study was consumer, his perceptions, attitudes, habits and behaviors. Multiple private and public stakeholders in food waste issue were incorporated into consumer's perception, and analyzed through consumer's lens. As an example, impulse buying strategies imposed by companies were incorporated in shopping habits of the consumer.

At the first stage of our model, "personal attitudes" towards food waste, a person's "perceived control" over food wasting behavior of his own and of his household, "subjective norms" imposed by society, and "moral norms" of a person were defined to shape the intentions not to waste food. After consumer's intentions were structured accordingly, alongside "intentions not to waste food", "habits" around planning, financing, shopping, and cooking emerged to be critical. As a third indicator, we have identified "holidays" such as Thanksgiving which bring families together around the dinner table, in contradiction with its innate spirit of generosity and sharing, elevate

food wasting behavior. (Aktas et al. 2018) Lastly, “practical benefits” of not trying to save food like freshness and aesthetic expectations, sparing the time that can be dedicated to saving food emerge as another food waste indicator. According to the literature, research on consumer’s food waste behavior conducted especially in the US needed a theoretical approach to construct a comprehensive understanding of the issue. Our research aims to fill this gap by developing a model serving local needs exploiting global knowledge.

Methods:

We conducted an online study with 322 participants. 298 respondents were left for analysis. Mean value for household size was 3.87, which made our sample much more extensive since food waste related questions were specified for the overall household. 67.1% of the participants were female. 75.2% of the respondents declared they do some sort of cooking at home and 80.5% stated they do some level of food shopping. One of the questions to measure food waste was to self-report the amount of weekly food waste in the house. 19.5% of the participants said there is hardly any food waste in the house; where hardly any was defined as a value less than 10% of overall food. The rest reported varying levels of food waste.

Discussion:

As a preliminary analysis we regressed background characteristics on the amount of wasted food. The amount of wasted food turned out to be negatively correlated with the level of education. As the respondent had higher level of education the amount of food wasted in the house was reduced. Similarly if the respondent had a higher responsibility at food shopping, the amount of food wasted was lower. These two results suit our expectations. Higher education can signal a higher awareness about the results of food waste and accordingly reduce the amount of wasted food. On the other hand, it is also expected that a person when responsible with food shopping can realize the cost of food waste and waste mindfully. However we could not find a significant relation of wasted food with age, gender, income or cooking responsibility variables.

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DXB204

Determinants of Green Purchase intention through attitude towards green products with moderating role of education

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The basic objective of this study is to identify the determinants of green purchase intention through attitude towards green products with moderating role of education. Primarily, the study is done by taking a well-known industry FMCG industry. Data was gathered from 250 customers of different brands. The findings reveal that there is a positive and significant relationship between green trust, green advertising skepticism, information utility, environmental involvement, and green purchase intention, Attitude mediates the relationship between green trust, green advertising skepticism, information utility, environmental involvement, and green purchase intention and education level doesn't moderate the relationship of attitude towards green products and green purchase intention. This study's findings will assist managers and marketers in developing strategies that will attract more customers and raise the value of green products among consumers.

Keywords:

Green purchase intention, information utility, green trust, environment involvement, green advertising

DXB216

Corporate social responsibility and its relationship with the organizational performance of manufacturing companies in Guadalajara, Mexico

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ABSTRACT

Over the years, the concept that companies commit to society has had to be perfected, focusing its idea on the protection and defense of society. Thus, nowadays, there are active and voluntary actions by companies for positive social, economic, and environmental development. Faced with this dynamism, where more and more people are interested in demanding transparency from companies in their accounts every day, it is no longer enough to respond only to their shareholders and the state in fiscal matters. Now it goes beyond that. Companies must aim to generate welfare for their stakeholders that naturally generate welfare for other groups such as society. This research explored the relationship between CSR and organizational performance (OD) in manufacturing SMEs in the Guadalajara Metropolitan, considering dimensions such as philanthropy, value creation, organizational identity, organizational image, product quality and image, market share, customer satisfaction, and personal satisfaction, as well as productivity, profitability, and efficiency. For this purpose, a sample of manufacturing SMEs in agribusiness, footwear, rubber, metal mechanics, and furniture was used, considering a fair and representative sample of each. In total, the variables with their respective dimensions are measured through 87 indicators. The methodology is applied through a structural equation model (SEM). In general terms, the result supports a positive and significant relationship between the implementation of CSR in the organizational performance of manufacturing SMEs; adopting these practices results in a positive way for the firm.

INTRODUCTION

For organizations, the reason for their existence has always been profit (always seeking a maximum in their earnings); however, it is also known that in the development and fulfillment of this it is also required the need to carry out actions for the common good (maximization of welfare); Therefore, the common good is related to a social and community dimension that derives from the moral good, the interest of all men and every man, thus developing a conception of corporate social responsibility focused on the common good and the modern criterion of stakeholders (Montuschi, 2022).

In the first contributions regarding the concept of corporate social responsibility (CSR), Carroll (1999) considered it as an obligation on the part of the company to design policies to achieve the objectives and values of society, while Davis (1960) defined it as the set of managerial decisions and actions that seek both economic and technical interests in an organization, while for Frederick (1960), it gives credit to managers for supervising that the expectations of their markets are met and thus improve the socioeconomic welfare, reaching the models that part of the orthodox paradigm and the model of integrated management of stakeholders (Quazi & O'Brien, 2000). Through time and the evolution of companies and society itself, corporate social responsibility has been gaining importance thanks to the implementation it has had from the organizations, not only as a tool for damage mitigation and the construction of ideas for the welfare of society but also as a strategy to convince the sense with which they were planned and can have an impact in the future.

If we consider each of the different areas, we could say that from the social sphere, we can observe a panorama where there is little access to education, and reduced investment in the health system, that as a result of the pandemic, this difference between countries could be noticed, and a lack of promotion of cultures and values. Regarding the economic field, the waste of resources and the failure to meet the basic needs of human beings, together with the neglect of their rights as persons, are increasingly worrying in this area. And finally, from the environmental point of view, the abandonment of the environment, pollution, deforestation, and excessive use of natural resources (Cormier & Magnan, 2003). Given the above, there is no doubt the role imposed on companies in today's world, a new challenge in their organizational evolution, to assume social responsibility no longer as philanthropy, nor as standards of advertising competition or to be placed in rankings, but

as a real commitment to carry out actions that lead companies to transparently seek that balance between economic, social and environmental benefits.

Therefore, CSR arises first as an ethical behavior that voluntarily leads to an obligation to society; that is, considering its understanding from the part of non-obligation, it will benefit both parties for the company of an economic nature that will be legally proven that such practice is an improvement and benefit to society. CSR is a strategy that is interesting to study, so the objective of this paper is to determine the impact of the relationship between Corporate Social Responsibility and organizational performance in manufacturing SMEs in the Guadalajara Metropolitan Area (GMA), which is made up of the municipalities of Guadalajara, Zapopan, Tlaquepaque, Tonalá, Ixtlahuacán de los Membrillos, Tlajomulco de Zúñiga, San Pedro Tlaquepaque and El Salto.

THEORETICAL FRAMEWORK

Organizational Performance

Organizational performance is linked to indispensable concepts for the company, such as efficiency, effectiveness, and financial performance; Therefore, the inflow and outflow of resources, business growth, assets, return on investment, and profit growth are elements to measure organizational performance, however, to this must be added the objectives that the organization has in terms of operating profit, that is, the profitability of the company, the strategy in terms of increasing sales, market expansion, and product innovation and finally the satisfaction of customers and employees (Lee and Miller 1996; Gopalakrishnan, 2000).

Companies relate organizational performance to the fulfillment of their mission, objectives, and goals, but it goes beyond that; it goes more toward the organization's overall growth through the achievement of positive financial results (Langerak et al, 2004). It is indicated that organizational performance is caused by a combination of effectiveness, efficiency, relevance, and economic and financial viability.

Different proposals from various authors have measured the organizational performance of a company; some of them take into financial account ratios, sales growth indicators, the size of the company, and its goals and objectives; However, it could be concluded then that it is linked to the way in which companies manage to perform their work, this is how several authors expose some

performance measures such as Tobin's q, return on assets, return on equity, family business participation, size, growth margins, product innovation, structure, among others (Daily and Dollinger 1992; Beehr et al, 1997; McConaughy et al, 2001; Gallo et al, 2000; Anderson & Reeb, 2003; Tanewski et al, 2003; Villalonga & Amit 2004; Gibb 2006).

Some existing theories regarding organizational performance include:

- a. **Systems theory:** in which the interdependence of the components in a system is specified; that is, the theory is based on the division of a system into subsystems, such as rules, changes, goals, and others, that are defined through a method (Whitchurch & Constantine, 2009; Kuntsevich et al, 2022).
- b. **The contingency theory:** where the company must try to reduce the uncertainty that may be had regarding the environment with the implementation of internal and external strategies that define processes and methods for a flexible structure that reduces fears of sudden changes in the environment (Fiedler, 2015; Starbuck, 2003; Thompson, 2001; Lawrence & Lorsch, 2015).
- c. **The theory of social networks:** this theory focuses on defining how the relationships between individuals in the company can positively or negatively affect organizational performance in it; therefore, the actors and their actions will be present in the organization in terms of the relationship between them (Redhead & Power, 2022; van Burg, Elfring & Cornelissen 2020; Jiang et al, 2022)
- d. **Resource-based theory:** which explains the optimal combination and allocation of resources (assets, skills, capabilities) to develop a good competitive advantage for the organization and thus better organizational performance (Penrose, 1959; Wernerfelt, 1984; Barney 1991 & Müller-Lietzkow, 1991).
- e. **Resources and capabilities theory:** which simply focuses on the function of wealth and other resources in the company, which, together with the resources and capabilities of individuals or the family, when focused on the same objective, achieve a more competitive organizational performance (Prosser et al, 2022; Kwiotkowska, 2022; Muneeb et al, 2022)

Therefore, the organizational performance of the company will always be observed through the fulfillment and growth of sales, profits, customers that in turn generate competitive advantages for the company, and thus summarizing the part of a system that although it may be interdependent, it

also achieves a relationship between its elements, so that if any of them changes in any way, another one in the same organization will do so (Daily & Dollinger, 1992) and (Astrachan & Shanker, 2003).

CSR, Organizational Performance and SMEs

Organizational performance is not only talking about economic profitability, productivity or market share, but it is a result of a strategic planning practice within organizations; several authors define performance as a multidimensional variable because it incorporates precisely this type of indicators (non-financial) and associates them with the objectives of the stakeholders; therefore, it is important not to leave aside these positions to measure organizational performance at any given time (Bhagwat & Sharma, 2007; Fowke, 2010; Avci et al, 2011; Williams & Naumann, 2011; Coram et al, 2011). The analyses and results that have been carried out regarding the relationship between CSR and organizational performance, as we have seen throughout the theoretical review, tend to be very diverse in terms of the dependence between the two concepts; it has already been mentioned above that there can be both positive and negative effects, negative when only the company seeks to maximize its profits, positive when there is interdependence between stakeholders Friedman (1970); Freeman (1984); Margolis and Walsh (2003); Orlitzky et al. (2003); Allouche and Larouche (2005) and Wu (2006).

The link between CSR and organizational performance in SMEs, in practice there are two aspects: the productive part that makes compliance mandatory, making it possible to formulate competitive strategies that integrate stakeholders (Tilley, 2004; Jenkins, 2005; Porter and Kramer, 2006; Spence, 2007), and differentiation with large companies, since they have few financial resources, do not have technology, do not develop extensively in terms of hiring personnel and do not define appropriate profiles in their managers; Spence, 2007), and the differentiation with large companies, since they have few financial resources, do not have technology, do not develop extensively in terms of hiring personnel and do not define adequate profiles in their managers, therefore decision making is centralized; however, not everything is limitations, they also develop a series of advantages such as the approach with their customers, there is not so much labor conflict and there is greater flexibility (Herrera et al, 2016), although most of the time such approach or closeness with their customers, suppliers and workers lack planning, and usually occur in a more natural or

informal way (Nielsen and Thomsen, 2009), Jenkins (2004) and Cegarra (2006) mention that despite these differences in thinking about the development of SMEs, they claim that they perform CSR in a better way, that is, their activities are usually more linked to social issues, they identify and recognize these aspects more easily generating an impact on their competitiveness.

Some studies have shown the importance of addressing the study of CSR and organizational performance and have established the following relationship: Villalonga (2004) mentions that the family business has competitive advantages, for Gibb (2006) the type of family business is related to the level of organizational performance it can achieve; while for Hedberg and Yu (2009), there is a positive relationship between social capital and firm performance. Family-controlled firms develop low levels of organizational performance (Westhead & Howort, 2006). Family-owned firms perform better due to lower agency costs (Miller & Le Breton-Miller, 2006); finally, Kowalewski, Talavera & Stetsyuk (2010) consider family ownership and management to be positively related to firm financial performance.

Therefore, it can be seen that the relationship between CSR and organizational performance in companies tends to be an essential resource that, in the medium and long term, generates a positive impact on the company, although, from my point of view, there is still a lack of empirical evidence; however, it should be made clear that from what has been analyzed by the authors, it is possible to rescue the link between the two concepts.

Dimensions of Organizational Performance

Initially, Friedman (1962) suggested that social responsibility activities should be consistent with their economic objectives, so managers should make decisions that maximize the firm's utility (Jensen & Meckling, 1976); that is, make decisions that allow them to maximize the value of the firm as well as its future cash flows (Copeland, Murrin & Koller, 1994). However, Swanson (1999) and Whetten, Rands & Godfrey (2001) argue that firms have a duty of care to society beyond profit maximization since failure to do so reduces the value of the firm (Paine, 2002; Mitchell, Agle, and Wood, 1997; Donaldson & Preston, 1995; Wood & Jones, 1995). From this arises the position that it is possible to balance organizations' economic interests and promote socially responsible actions (McWilliams & Siegel, 2001; Waddock & Graves, 1997; Freedman & Stagliano, 1991; Martin, 1972). Such is the case of Godfrey (2004); he assures that corporate social responsibility actions contribute to shareholder wealth because of the social capital (trust) generated in the community and the shareholders (Ojeda et al, 2019).

These different positions have generated a discussion on the possibility of reconciling the achievement of better performance based on socially responsible actions (Paine, 2002; Windsor, 2001; Mitchell et al, 1997; Wood & Jones, 1995; Carroll, 1999). Therefore, in order to gain a better understanding of these discussions by different authors, Mackey, Mackey and Barney (2005) conceptualize the term socially responsible behavior (Waddock, 2004; Aguilera, Rupp, Williams & Ganapathi, 2007; Wood & Jones, 1995), and then establish what is meant by performance in organizations (Orlitzky et al, 2003). Moskowitz (1972) was the first to state that business strategies with a social responsibility approach can generate better financial results compared to the application of traditional strategies. Likewise, Fitch (1976) concludes that it would be possible for some organizations to achieve better performance if they could identify and solve closely related social problems by involving their workers and generating profits in the process.

Therefore, analyzing the different contributions of the authors regarding the relationship between Corporate Social Responsibility and Organizational Performance, the following dimensions are defined for this research to measure organizational performance in SMEs:

- **Quality and image of products and services:** In such a competitive environment, it is valuable for businesses to be concerned about the perception that customers have about them; having a commercial image is fundamental within a business because it allows it to stand out from others, it is the personality that a company has and ensures that the business is recognized and remembered Carbache et al, (2020); Fischer and Espejo, (2011) mention that the marketing strategy includes the selection and analysis of the market, the choice and study of the group of people to be reached, as well as the creation and permanence of the marketing mix that satisfies them.
- **Market share:** According to the various literature, contributions refer to market concentration in different manufacturing sectors; some examples of these studies are in food and beverage, cement, and even oil sectors (Diaz et al, 2007; Gonzalez & Gomez, 2007; Gonzalez & Rosero, 2011; Moreno, 2012; Navarro et al, 2013; Obara et al, 2010; Schnettler et al, 2008); therefore, according to these contributions it is important always to consider the structure and market power of the industry, imperfect competition, taking care of the growth of manufacturing and the number of establishments that at any given time may affect the profit margin Chakraborty & Barua (2012).
- **Customer satisfaction and personal satisfaction:** Obtaining customer satisfaction is the key to retention for the company, Ferrel and Hartline (2012), "to maintain and manage customer satisfaction from a strategic viewpoint, managers must understand their expectations and the difference between satisfaction, Quality, and value. They must also establish indicators to measure this satisfaction as a continuous and long-term commitment of the entire organization" (p.371).
- **Productivity, profitability and efficiency:** Productivity indicators at work can be boosted by defining goals, with clear communication, acting with transparency, increasing autonomy, and correctly using the tools; having this data reduces uncertainty, identifies strengths and also weaknesses that may be affecting the achievement of objectives (Chiavenato, 2010). Productivity, profitability, and efficiency are the performance objectives that companies must achieve to obtain profitability superior to the industry; as mentioned by expert authors, having good profitability, given good productivity, will positively affect the efficiency of the company's organizational performance.

CSR dimensions

It is necessary to implement strategies to strengthen citizen participation by developing social empowerment that will trigger a successful integral development of the community. These strategies are found in the integral community development plan, defined by law and is the technical document that identifies the potentialities and limitations, priorities, and community projects that will guide the achievement of the integral development of the community; This law is centered on the definition that a community will always be the basic and indivisible spatial nucleus linked to common characteristics and interests where a history, needs and cultural, economic, territorial and other potentialities are combined and shared; therefore, each of the dimensions of CSR was measured through the following:

- **Philanthropy in CSR:** Philanthropy, in turn, was measured by the integral development of the community, the benefit and development of society, integration of business and society; where each of them explains how to understand the value chain of the company and the activities that the company performs while doing business; and helps to identify the positive and negative social impact related to such activities (Porter & Kramer, 2006; Porter, 1990).
- **Value creation in CSR:** Responsibility with the creation of economic value where the current environment forces companies to be socially responsible, therefore stakeholders always end up influencing the strategies that have to do with decision-making, that is, to ensure that the company responsibly meets the needs and thus be profitable (Dess et al, 2011). In addition, of course, creating shared value implies compliance with laws and ethical standards, as well as the mitigation of any harm caused by the company, but it is much more than that (Damanpour, 1991).
- **Organizational Identity in CSR:** Organizational identity is defined as the unconscious basis of organizational culture. Specifically, it is the totality of repetitive patterns of individual behavior and interpersonal relationships, reflecting the unacknowledged meaning of organizational life. While organizational identity is influenced by conscious thought: that is, the perception of how those involved relate to each other, and thus the transfer of their emotions under the organizational structure (Erickson, 2008). It should consider that human resources, production, motivation, labor relations, incentives, job

satisfaction, and staff turnover are part of it (Chiavenato, 2004; Spitzeck, 2011; Grau, 2012; Letailleur, 2012).

- **Organizational Image:** The image of a corporation is not only created by the company, but it is related to the signals that a company transmits to its stakeholders, which in turn, through this, obtains a positioning in the market; when stakeholders are mentioned, reference is made even to the employees themselves, since, from the moment they decide to work in the company until they are already part of it, the image that the employee has of the company influences their attitudes in the development of their functions in the workplace (Aaker, 1997; Dutton & Dukerich, 1991; Riordan et al, 1997; Gatewood et al, 1993). The image or reputation of an organization is considered an essential part of the relationship with organizational performance and therefore implies a responsibility to the environment, responsibility to society, and responsibility to shareholders.

To summarize, as a synthesis of the theoretical framework, implementing Corporate Social Responsibility strategies impacts the company's organizational performance. Adding that there are many links between CSR, considering as part of this measurement philanthropy, value creation, organizational identity, organizational image with organizational performance creating competitiveness through the Quality and image of products and services, market share, customer satisfaction and personal satisfaction and productivity, profitability and efficiency, noting a favorable empirical relationship between the two concepts; this is the existing relationship and the opportunity that is sought in the research, therefore, the fact that SMEs are unaware of this type of strategies and the absence of being seen as a company with all the formal processes in the implementation of CSR programs, fall on the need to measure both financial and non-financial performance in order to promote the benefits and competitive advantages of its application.

METHODOLOGY

In order to carry out this research, various methodological techniques were used to design the necessary tools to obtain primary and secondary information, as well as to process it; Figure 1 shows the base model that was contrasted in this work; it is a second order construct; the research design focused on an instrument applied to manufacturing SMEs in the agro-industry, footwear, rubber, metal-mechanics and furniture industries that comprise the AMG of the municipalities of Guadalajara, Zapopan, Tlaquepaque, Tonalá, Ixtlahuacán de los Membrillos, Tlajomulco de Zúñiga, San Pedro Tlaquepaque and El Salto; this questionnaire is based on the Likert scale all items were measured with a 5 position, 1= strongly disagree, 2= partially disagree, 3= neither agree nor disagree, 4= partially agree, and 5= strongly agree as limits.

Therefore, we have a reflective model; that is, first and second-order constructs are usually reflective since the indicators are obtained from the latent variable; the construct causes the indicators. Chin (1998) establishes that for a construct to be reflective, given that all its indicators act in the same direction, the increase of one in one direction implies that the others will change similarly; this is why we are dealing with a construct of a reflective nature. Therefore, the measures of the construct must be perfectly correlated since they all measure the same thing. From here, we start to review a series of requirements to be fulfilled to advance our model, to mention we have convergent and discriminant validity as well as reliability or internal consistency, which are shown below.

Tabla 1.
Technical data sheet of the research sample

Characteristics	Description
Universe	3, 133 SMEs in the manufacturing industry.
Field of study	National
Sampling	Manufacturing SMEs with 11 to 250 workers
Data collection method	Personal survey
Type of sampling	Simple random sampling
Sample Size	672 pymes
Margin of sampling error	± ± 4% at an aggregate level, for a confidence level of 97% (p=q= 0.5)
Period of fieldwork	S September 2018 to February 2019

Source: Prepared by the authors based on data from DENU, (2020).

The hypotheses that have been tested in the research process are described below:

H1: Philanthropy has a positive and significant effect on the CSR of manufacturing SMEs.

H2: Value creation has a positive and significant effect on the CSR of manufacturing SMEs.

H3: Organizational identity has a positive and significant effect on the CSR of manufacturing SMEs.

H4: Organizational image has a positive and significant effect on the CSR of manufacturing SMEs.

H5: Quality and image of products and services have a positive and significant effect on the organizational performance of manufacturing SMEs.

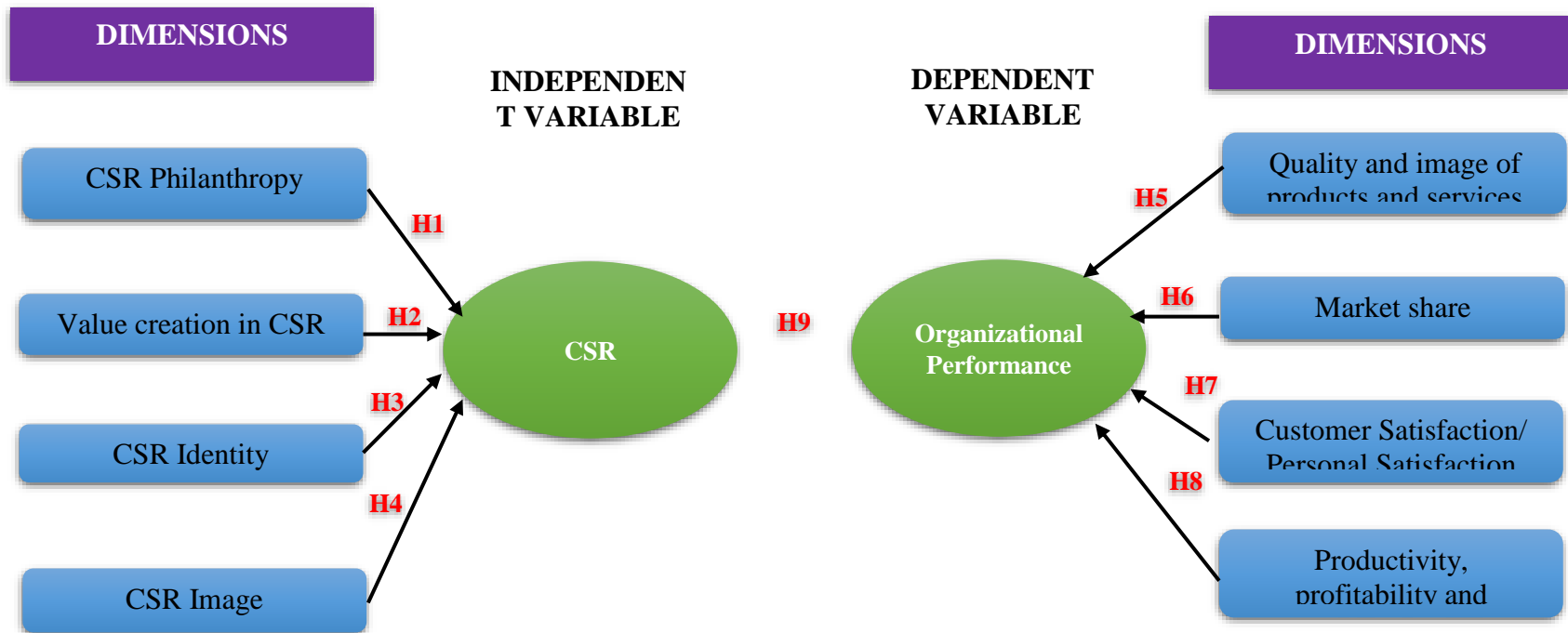
H6: Market share has a positive and significant effect on the organizational performance of manufacturing SMEs.

H7: Customer satisfaction and personal satisfaction have a positive and significant effect on the organizational performance of manufacturing SMEs.

H8: Productivity, profitability, and efficiency have a positive and significant effect on the organizational performance of manufacturing SMEs.

H9: Corporate social responsibility has a positive and significant effect on the organizational performance of manufacturing SMEs.

Figure 1. Research Construct



Source: Own elaboration.

Discussion and Analysis

The results of the Confirmatory Factorial Analysis (CFA) are presented in table 2 and shown that the el modelo proporciona un buen ajuste de los datos ($S-BX^2 = 1910.9022$; $df = 1422$; ($p < 0.0000$); $NFI = .905$; $NNFI = .912$; $CFI = .917$; $RMSEA = .073$). Likewise, Cronbach's alpha and CFI exceed the value of 0.70 recommended by Nunally and Bersntein (1994).

Table 1. Internal consistency and convergent validity of the theoretical model

Variable	Indicator	Factor Loading	Robust T- Value	Cronbach's Alpha	CRI	VEI
Philanthropy in CSR	FDL1	0.636	1.000*	0.806	0.801	0.516
	FDL2	0.688	15.114			
	FDL3	0.692	14.994			
	FDL4	0.643	11.374			
	FDL5	0.655	14.571			
	FDL6	0.671	12.958			
	FDL7	0.639	11.804			
CSR value creation	CVC2	0.733	1.000*	0.735	0.701	0.540
	CVC3	0.737	19.198			
CSR organizational identity	IOH1	0.665	1.000*	0.892	0.872	0.525
	IOH2	0.615	18.084			
	IOH3	0.610	16.247			
	IOH4	0.615	17.515			
	IOH5	0.620	17.713			
	IOH6	0.622	13.321			
	IOH7	0.639	13.649			
	IOH8	0.619	15.560			
	IOH9	0.613	15.637			
	IOH10	0.635	16.578			
	IOH11	0.621	13.409			
	IOH12	0.625	15.358			
	IOH13	0.626	13.223			
	IOH14	0.621	14.867			
	IOH15	0.601	14.805			
CSR organizational image	MRA4	0.600	1.000*	0.845	0.847	0.546
	MRA5	0.673	22.710			
	MRA6	0.647	19.941			
	MRA7	0.606	16.994			
	MRA14	0.684	17.955			
	MRA15	0.656	18.437			
	MRA16	0.643	18.009			

	MRA17	0.613	16.559			
Quality and image of products and services	CPS1	0.741	1.000*	0.879	0.880	0.638
	CPS2	0.693	28.888			
	CPS3	0.710	25.196			
	CPS4	0.654	21.020			
	CPS5	0.641	18.753			
	CPS6	0.630	19.748			
	CPS7	0.732	26.098			
	CPS8	0.722	26.583			
Market share	CDM1	0.734	1.000*	0.833	0.835	0.551
	CDM2	0.612	23.231			
	CDM3	0.701	27.221			
	CDM4	0.705	24.523			
	CDM5	0.710	26.309			
	CDM6	0.599	19.192			
Customer satisfaction / Personal satisfaction	SCP1	0.658	1.000*	0.887	0.887	0.552
	SCP2	0.619	19.203			
	SCP3	0.727	20.082			
	SCP4	0.726	18.741			
	SCP5	0.683	16.182			
	SCP6	0.660	16.182			
	SCP7	0.638	22.219			
	SCP8	0.699	17.314			
	SCP9	0.621	19.927			
	SCP10	0.666	13.303			
Productivity, profitability and efficiency	PRE1	0.651	1.000*	0.797	0.800	0.601
	PRE2	0.630	26.799			
	PRE6	0.627	15.602			
	PRE7	0.639	19.611			
	PRE8	0.657	20.621			
	PRE9	0.655	20.704			
S-BX ² (df = 1422) = 1910.9022 (p < 0.0000); NFI = .905 ; NNFI = .912 CFI = .917 ; RMSEA = .073						

* = Parameters set to this value in the identification process

*** = p < 0.001

Source: Own elaboration.

With respect to the evidence of the discriminant validity, measurement of the scale of the business social responsibility level was through two ways which you can see in more detail in table 3. First, the range of 90% of confidentiality, none of the individual elements of the correlation factors matrix contains the value 1.0 (Anderson & Gerbing, 1988). Second, the variance extracted between each pair of factors is higher than its corresponding VEI (Fornell & Larcker, 1981). Therefore, based on these criteria one can conclude that the different

measurements made on the scale show enough evidence of reliability and convergent and discriminant validity.

Table 3. Discriminant Validity of the theoretical model measurement

Variables	Corporate social responsibility	Organizational performance
Corporate social responsibility	0.532*	0.270
Organizational performance	0.226 - 0.311	0.600*

*These values presented the estimation of the correlation factors with a confidence interval of 90%.

The hypotheses were tested in the theoretical model of competitiveness and business social responsibility, using the Structural Equations Model (SEM) software EQS 6.1 (Bentler, 2005;) Byrne, 2006; Brown, 2006). The nomological validity of the theoretical model was analyzed through the performance of the chi-square test, in which the theoretical model was compared with the measurement model, not finding significant differences (Anderson & Gerbing, 1988;) (Hatcher, 1994). The results of this analysis are presented in table 4.

Table 4. Results of the Theoretical model

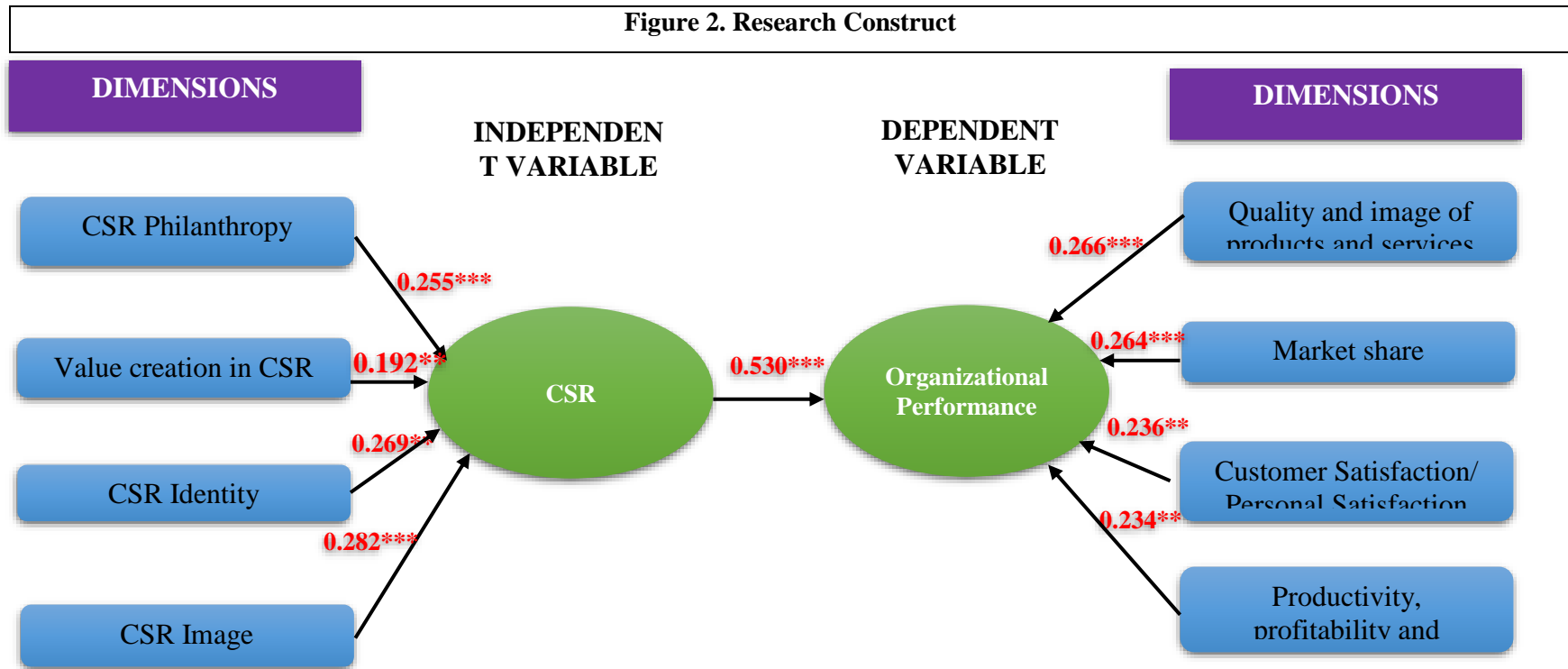
Hypothesis	Structural Relationship	Standardized Coefficient	Robust T- Value
H1: Philanthropy has a positive and significant effect on the CSR of manufacturing SMEs.	Philanthropy → CSR	0.255***	11.046
H2: Value creation has a positive and significant effect on the CSR of manufacturing SMEs.	Value creation → CSR	0.192***	9.198
H3: Organizational identity has a positive and significant effect on the CSR of manufacturing SMEs.	Organizational identity → CSR	0.269***	15.426
H4: Organizational image has a positive and significant effect on the CSR of manufacturing SMEs.	Organizational image → CSR	0.282***	18.659
H5: Quality and image of products and services have a positive and significant effect on the organizational performance of manufacturing SMEs.	Quality and image → Organizational Performance	0.266***	23.755
H6: Market share has a positive and significant effect on the organizational performance of manufacturing SMEs.	Market share → Organizational Performance	0.264***	24.095
H7: Customer satisfaction and personal satisfaction have a positive and significant effect on the organizational performance of manufacturing SMEs.	Customer satisfaction and personal satisfaction → Organizational Performance	0.236***	19.630
H8: Productivity, profitability, and efficiency have a positive and significant effect on the organizational performance of manufacturing SMEs.	Productivity, profitability, and efficiency → Organizational Performance	0.234***	20.667
H9: Corporate social responsibility has a positive and significant effect on the organizational performance of manufacturing SMEs.	CSR → Organizational Performance	0.530***	35.619
$SBX^2_{(1320)}=1808.8920$ (p = 0.000) NFI = 0.906 NNFI= 0.912 CFI = 0.917 RMSEA = 0.074		*** = p < 0.001	

Table 4 shows the results obtained from the structural equation model (SEM), where the Root mean square error of approximation (RMSA) index is .074, indicating the degree of fit of the model to the covariance matrix of the sample. There is no agreement as to the threshold to consider the acceptable fit, however it is considered that it should be below 0.08 (McDonald and Ho, 2006), for this case it is within the acceptable range. Regarding the Normed fit index (NFI), an index proposed by Bentler and Bonett (1980), which analyzes and improves the fit obtained by comparing two different models, i.e. the model studied vs. the null model (Hooper et al., 2008); it is important to note that the NFI index tends to lose precision with small samples (Byrne, 2006). It takes values between 0 and 1, with 0.9 being considered the threshold for a good fit indicator. In the model the NFI value was initially 0.905, close to the minimum threshold but not reaching it. Another index is the Non-Normed fit index (NNFI), which is better known as the Tucker-Lewis index (TLI). It is also based on comparing the study model with the null model, but unlike NFI it performs better with small models and samples (Byrne, 2013), as with the rest of the incremental indexes, 0.9 is usually considered as an acceptable threshold for the measure (McDonald and Ho, 2002). In the model the NNFI value was 0.912, acceptable. Finally, the Comparative fit index (CFI), to solve the dependence of NFI on sample size, was revised by Bentler himself and published the CFI, which compares the χ^2 of the study model with the χ^2 of the null model. Like the previous one, it takes values between 0 and 1, with a value that a value above 0.9 indicates a good model fit (Gefen et al., 2011). In the model, the initial CFI value was 0.919, meeting the minimum value recommended. Regarding the hypotheses, we have H1 with respect to the results obtained ($\beta = 0.255$, $p < 0.001$) indicating that philanthropy has a significant positive effect on CSR. In hypothesis H2 the results obtained ($\beta = 0.192$, $p < 0.001$) indicate that value creation has a significant positive effect on CSR. Referring to H3 the results indicate ($\beta = 0.269$, $p < 0.001$) organizational identity has a positive and significant effect on CSR. In H4 ($\beta = 0.282$, $p < 0.001$) indicating that organizational image has a positive and significant effect on CSR. As for H5 ($\beta = 0.266$, $p < 0.001$), the quality and image of products and services do have a positive and significant effect on organizational performance. H6 ($\beta = 0.264$, $p < 0.001$) indicating that market share has a positive and significant effect on organizational performance. As for H7 ($\beta = 0.236$, $p < 0.001$) where customer satisfaction and personal satisfaction have a positive and significant effect on organizational

performance. H8 has ($\beta = 0.234$, $p < 0.001$) productivity, profitability and efficiency have a positive and significant effect on organizational performance. And finally with the last hypothesis H9 the results indicate ($\beta = 0.530$, $p < 0.001$) resulting that CSR has positive and significant effects on organizational performance.

Therefore, it is verified and concluded that the independent variable CSR with its dimensions of philanthropy, value creation, organizational identity, and corporate image, with indicators which stand out the incorporation of community interests in business decisions, assessing the situation for the competition in the level of motivation of its employees, helping the pension plan of employees, trying to maximize profits, being competitive with quality products, gaining strategic benefits that allow them to compete more effectively in the market, being honest with customers and reasonable costs to serve customers according to what is generated, among others, are indicators that benefit the organizational performance of manufacturing SMEs in the Guadalajara Metropolitan Area. Figure 2 below shows the model and its relationship:

Figure 2. Research Construct



Source: Own elaboration.

DISCUSSION

This research explored the relationship between CSR and organizational performance in SMEs, considering dimensions such as philanthropy, value creation, organizational identity, corporate image, product quality and image, market share, customer satisfaction, and personal satisfaction, as well as productivity, profitability, and efficiency. For this purpose, a sample of manufacturing SMEs in the agro-industry, footwear, rubber, metal-mechanics, and furniture sectors was used, considering an equitable and representative sample of each. In total, the variables with their respective dimensions were measured through 87 indicators.

Overall, the result supports a positive and significant relationship between the implementation of CSR in the organizational performance of SMEs; adopting these practices result in a positive way for the company.

The results obtained for each of the hypotheses reinforce previous empirical results in which philanthropy, value creation, organizational identity, organizational image, Quality and image of products and services, market share, customer satisfaction, and personal satisfaction, and productivity, profitability and efficiency are important for successful organizational performance (Bowen (1953); Davis (1960); Frederick (1960); Friedman (1962); Carroll (1979); Gary Becker (1964); Ferrel and Hartline (2012); Kotler and Keller (2012)). Therefore, through the application of the SEM technique (structural equations), the direct and positive effect of CSR on organizational performance was found in this analysis, considering that this relationship is between the different industries that were analyzed (agribusiness, footwear, rubber, metal, and furniture), so the consistency of the relationship between the variables is positive. In turn, a positive and significant relationship was obtained between CSR and organizational identity and image, considered by part of the literature. Finally, the positive effect of CSR on organizational performance was obtained through the measurement of the different dimensions of CSR. It is concluded that the proposed model is good since its predictive capacity, as well as the goodness of fit of the model, is satisfactory. Therefore, it is affirmed that CSR positively affects the organizational performance of manufacturing SMEs in the Guadalajara Metropolitan Area.

CONCLUSIONS

Over the years, the concept that companies commit to society has had to be perfected, focusing its idea on the protection and defense of society. This is how, nowadays, there are active and voluntary actions on the part of companies for positive social, economic, and environmental development. Faced with this dynamism where every day there are more and more people interested in demanding transparency from companies in their accounts, it is no longer enough to respond only to their shareholders and the state in terms of tax matters, now goes beyond that, companies must aim to generate welfare to their stakeholders that these in turn naturally generate welfare to other groups such as society. Therefore, this struggle between achieving social welfare among all the actors involved in the company is that CSR provides a positive relationship in terms of business results and social, environmental, or ethical practices, each company according to their values and social commitment to understanding their industry which should define their actions in terms of social responsibility.

The results obtained in the research demonstrate the link between the two latent variables (CSR and organizational performance), corroborating the findings in the literature and expressed by the different authors who are experts in the theory; The general research question of what is the impact of corporate social responsibility on the organizational performance of manufacturing SMEs in the metropolitan area of Guadalajara is positive and significant, CSR has a positive and significant impact on organizational performance through elements such as philanthropy, value creation, organizational identity and organizational image, organizational identity and organizational image, applying or developing strategies for the integral development of the community, benefiting and developing society and integrating the idea of business and society, so that in turn, there is the creation of economic value, shared value through innovation, with an integration of the analysis from the outside in and from the inside out proposed by Porter and Kramer (2006); considering human resources, labor relations, production, motivation, incentives, staff satisfaction, customer satisfaction and responsibility to the environment, society and shareholders, so that these in turn achieve that positive relationship in the organizational performance of manufacturing SMEs.

For the dependent variable that was measured with four dimensions such as Quality and image of products and services, market share, customer satisfaction, personal satisfaction, and productivity, profitability, and efficiency, there was a positive and significant effect on the development of

elements such as new product development, product specialization, considering the competition in all aspects, competing with quality products, always considering niche markets, focus on maximizing customer needs in terms of product requirements, communicate decisions and everything related to the company to employees, be competitive in terms of production costs, have an essential response capacity in manufacturing and distribution, and always consider revenues about profitability and benefits that should always be high, are some of the elements that are manufacturing SMEs consider in the practice of good organizational performance.

It should be noted that there are a number of recommendations that arise from the results obtained in this research for future research, where the following is suggested: 1. It would be important that the study can be applied to different types of SMEs in different sectors, i.e., consider the branches of each sector, to be more specific among them, mainly because the results show the importance of the same for good organizational performance, 2. Consider applying the study to the employees of these SMEs to assess their opinion and thus make a comparison in terms of responses with management levels, 3. Extend the study to micro and large companies to allow an analysis of each of these extremes, i.e., the micro companies that are starting out, what perception they have of this type of strategies and how to consider growing with them, and in the large companies to know how they carry out these strategies and the benefits within the organization, 4. With the results obtained, to propose a model for manufacturing SMEs that allows the applicability of CSR in the improvement of organizational performance so that it can be perfected more and more in accordance with their own advances in CSR.

Therefore, it is concluded that the hypotheses expressed in this research are fulfilled since the development, generation, and implementation of adequate corporate social responsibility positively impacts the organizational performance of manufacturing SMEs in the Guadalajara Metropolitan Area, generating a competitive positioning in the market.

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DXB218**The bibliometric analysis of Cultural and Creative industries (CCIs) and COVID-19.**

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Abstract

The objective of this article is to compare research trends in the cultural and creative industries (CCI) about COVID-19 to show how research variables have changed since COVID-19. This was realized through a bibliometric analysis with articles from the Scopus database and the keywords related to the cultural and creative industries and COVID-19, where a comparison was made through a co-occurrence analysis by the VOSviewer software where the keywords were grouped by clusters. The results obtained are that some of the keywords that began to be studied after COVID-19 in this sector were digitalization, resilience, and mental health, while other keywords that were studied before the pandemic maintained the interest of analysis during the contingency, which was labor precariousness and public policies focused on the pandemic.

Keywords: cultural and creative industries, creative industries, cultural industries, cultural industries, COVID-19, bibliometric analysis

Introduction

In December 2019 a virus named coronavirus began to spread affecting the whole world, this virus was dangerous, and the governments of different countries took a decision a lockdown by recommendations of the World Health Organization (WHO). This led to the fact that people in the countries could not leave their homes, only the necessary, and that most industries had to stop working, among these were the cultural and creative industries (CCI), (Henderson & Musgrave, 2014).

All economic industries were affected by the social distancing caused by COVID-19, but the cultural and creative industries were among the most affected since due to their characteristics, the activities that are part of this industry are generally carried out in indoor locations, with a high concentration of people in the same place, so they couldn't remain open. These industries found one of the opportunities to remain active and reduce losses by entering digitalization, which was one of the most important points during this pandemic (Flew and Kirkwood, 2021).

The importance of this industry resides in the growth it was having before the health crisis, it had been developing an important value for several countries that are part of the OECD and the European Union, and even though governments do not support this industry in the same way as other economies, the CCIs showed to be gaining ground in the economic ones. Since the CCIs were surpassing the business economy with a growth of 18% while the average of the OECD countries showed 12%, about the generation of jobs it surpassed the OECD countries with 13.4% compared to 9.1%, as well as has been shown that consumption has been increasing since households are spending more on the consumption of culture, (OECD, 2022).

The impulse that the CCIs had been taking. It was slowed down by the pandemic since one of the industries most affected by COVID-19 was the CCIs. The following are some of the data that show the effects that COVID-19 had on the CCIs related to economic and employment aspects, (UNESCO, 2021):

-It is estimated that by 2020 CCIs will have a contraction of \$750 billion generated by this industry compared to the year before the pandemic (2019).

-Regarding the human factor in the CCIs, jobs in this industry had a fairly rapid decline, with an estimated loss of 10 million jobs losses in 2020 alone.

According to UNESCO, within the cultural and creative industries, some were more affected than others during the lockdown caused by the pandemic, since there are different key characteristics for these industries to continue functioning during the pandemic, such as the importance of activities with a public presence, the ability to adapt to physical distance and the viability of these industries to work from home. Thus, the industries that had the greatest difficulty in adapting to these

characteristics were the performing arts and festivities and cultural and natural heritage, as well as the most affected were cinemas and libraries, and bookstores, (UNESCO, 2021).

A bibliometric analysis of the cultural and creative industries before and after COVID-19 will help to identify the changes that occurred in the lines of research worldwide about this type of industry of growing interest in recent years and thus show whether some of the topics that were already being developed before the pandemic became more relevant during this phenomenon, disappeared or remained, as well as the highlights of what paths should be taken to continue helping to understand and develop the CCIs so that they can be strengthened.

Cultural and Creative Industries (CCI)

The concept of cultural and creative industries began to be popularized with T. Adorno, who makes a reference to the massification of culture by its forms of reproduction. Later in the 1990s, a new concept related to these industries emerged, the creative economy, where it was pointed out that the input of these industries was creativity and that this could encourage innovation, and technological changes and make business development more competitive (UNESCO, 2010).

In the same decade of the 90's the British government defined cultural and creative industries as those about design, architecture, music, and film, among others. At that time the government was paying attention to the professional policies of the CCIs since, given globalization, they were gaining more attention, (Yen et al., 2022).

Therefore, the cultural and creative industries can be defined as the ability of humanity to give economic value to intrinsic expressions of human beings such as thinking, creating, and innovating (Peris-Ortiz et al., 2019).

In the same direction, it is indicated that the cultural and creative industries generate wealth and jobs through the exploitation of intellectual property based on the creativity, skill, and talent of people (DCMS, 2021).

On the other hand, UNESCO (2010) points out that the CCIs should not be observed from a solely industrial perspective, where the focus is only on the manufacture and development of products and services, but also on those other industries that make these products and services reach the consumer market, such as promotion, dissemination, reproduction, among others.

UNESCO (2021), divides cultural and creative industries into six different areas which are shown below:

- 1.- Cultural and natural heritage (museums, historical sites, archaeological sites, cultural landscapes, natural heritage).

- 2.- Performing arts and festivities (performing arts, live music, dance, festivals, parties, and fairs).
- 3.- Visual arts and crafts (fine arts, photography, crafts).
- 4.- Books and press (books, newspapers, magazines, libraries, book fairs).
- 5.- Audiovisual and interactive media (cinema, television and radio, streaming, podcasts, video games).
- 6.- Design and creative services (architecture, fashion design, graphic design, interior design, advertising).

The cultural and creative industries are conformed by many sub-sectors whose main input is creativity for the creation of products and services and that with the globalization and internationalization of the CCI have taken an economic relevance in the countries so that governments have paid more attention to their development as they are generating wealth and employment.

COVID-19 and the Cultural and Creative Industries

The pandemic caused major global impacts on all commercial sectors, including the cultural sector and its sub-sectors such as theaters, galleries, heritage sites, and operas, among others (Ost & Saleh, 2021). Faced with the negative economic effects that COVID-19 would have on cultural enterprises and that most of them would be extremely affected, governments and private and semi-public foundations saw the need to support companies by developing measures so that they could cushion the harsh effects of the pandemic, (Betzler et al., 2020).

One of the effects of the pandemic on the cultural and creative industries is their limited ability to survive, since most of their activities are carried out in physical spaces and given the confinement, these were mostly affected. The effects of this pandemic promoted new ways of adapting so that businesses in this sector continue to operate even though the spaces were forced to close, which is necessary to encourage the entrepreneurial spirit, (Popa et al., 2021).

One of the socio-economic effects of COVID-19 was unemployment and financial insecurity, which in turn has generated another problem: the mental health of the population. These effects have a greater impact on workers in the cultural sector since most of them work independently and they have always had problems with the instability of their income. The pandemic has deepened the precariousness of labor in this sector (May et al., 2022).

In addition to the negative effects of the pandemic, MSMEs in the creative and cultural sectors face even more challenges. The surprising thing is that these companies have been able to survive by reinventing their business models in the turbulent environment brought on by the pandemic, some of the strategies used varied from making radical adaptations, moderate or not adapting, technology played a very important role for companies to implement their strategies, (Peñarroya-Farell & Miralles, 2022).

In general, COVID-19 forced the confinement of people, so the cultural and creative industries were most affected because it is not a sector of primary need and most of the activities that make it up are mainly of a face-to-face nature. But their best ally to face the pandemic was the digital platforms that allowed the consumers of this industry to obtain entertainment through a different channel than the physical one and in this way, the CCIs could continue generating income and lessening the economic impact of the health crisis, (García & Sánchez-Bayón, 2021).

Methodology

The methodology used for this article was based on bibliometric analysis since this type of tool helps to visualize the scientific behavior of an area of study and the objective of this work is to analyze documents in scientific databases related to the cultural and creative industries and COVID-19 and thus be able to analyze the trends in research on this topic and the changes generated in the lines of research because of this.

The Scopus database was used where two different search combinations were searched, the first search was to find articles that investigated the cultural and creative industries with COVID-19, for this we used the search query string (TITLE-ABS-KEY ("COVID-19") AND TITLE-ABS-KEY ("Cultural and creative industries") OR TITLE-ABS-KEY ("Creative industries") OR TITLE-ABS-KEY ("Cultural industries")) resulting in 94 documents for the years 2020, 2021 and 2022. No limitation was set because doing so would further restrict the result of the documents found and would give a very limited view of the phenomenon.

Subsequently, a search was performed in Scopus where the purpose was to find which lines of research were taking force before the pandemic, so a search query string was used (TITLE-ABS-KEY ("cultural and creative industries") OR TITLE-ABS-KEY ("cultural industries") OR TITLE-ABS-KEY ("creative industries") OR TITLE-ABS-KEY ("cultural industry") OR TITLE-ABS-KEY ("creative industry")) AND (LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)) where 1,615 documents were obtained as a result, in this search the years before the pandemic 2017, 2018 and 2019 were used as a filter to have a visualization about the trends that had been emerging before COVID-19.

The software used for the analysis of the data obtained from the Scopus database about the cultural industries and COVID-19 was VOSviewer which was developed in the Netherlands. This software

helps to analyze the documents downloaded from the database and to analyze them through maps of the most studied in the field of study in which the information is being sought, as well as to generate networks of different types, according to the needs of the research such as citation, co-citation, co-occurrence of words, among others, (Van Eck and Waltman, 2010, 2014).

In this research, we worked with the creation of networks through co-occurrences which shows the frequency in which the keywords appear in the documents used for the creation of the bibliometric maps and is the most appropriate for the research since it shows the lines of research that are developed in the selected field of study, (Ozturk, 2020).

In this research two different criteria were taken for the creation of the networks, the first one was the search of cultural and creative industries related to COVID-19 based on the keywords used in the selected documents, taking as the unit of analysis all the keywords with a minimum of 3 co-occurrences with a result of 462 keywords and 23 coincidences of more than 3 co-occurrences. On the other hand, the second search of only the cultural and creative industries used as criteria for the creation of the networks the author's keywords with a minimum of 10 co-occurrences resulting in 4107 keywords and 51 coincidences with more than 10 co-occurrences.

Results

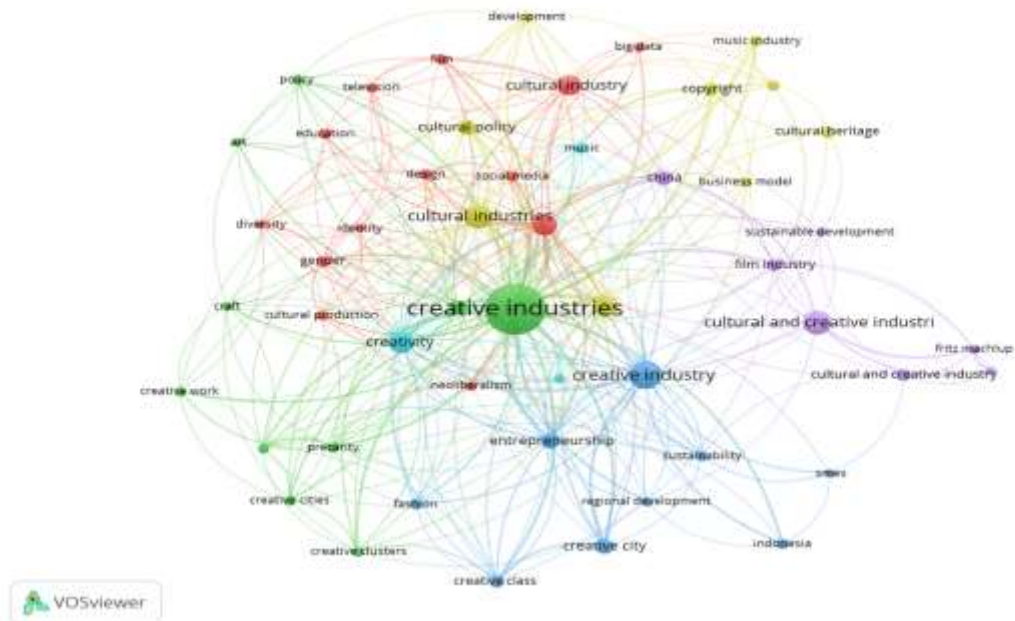
The results of the VOSviewer software are shown below to determine the lines of research that were being worked on before COVID-19 in 2017, 2018, and 2019, as well as at the beginning and during COVID-19 about the cultural and creative industries.

The first figures presented are the visualization of keyword networks and the formation of clusters, to later show how these lines of research were developed over the years.

Some tables will also be shown the strength of the linkage of the keywords selected by the software as the most repeated and will end with tables showing the 10 most cited articles on COVID-19 and the CCIs.

The Cultural and Creative Industries

Figure 1. Author keywords network visualization was based on the occurrences about cultural and creative industries.



Source: software VOSviewer 2022.

Figure 1 shows the author's keywords with the highest number of repetitions in the analyzed documents, which were grouped into 6 clusters as explained below:

Cluster 1. The red cluster is composed of 13 items where the keywords used by the author with the highest linking strength were: Innovation, Film, Cultural industry, Gender, Cultural production, Design, Diversity, Neoliberalism, Social Media, Education, Identity, Television, and Big data.

Cluster 2. In the green cluster, 10 items were grouped with the keywords most used by the authors when researching CCIs, from which the following was derived: Creative industries, Culture, Precarity, Creative labor, Creative clusters, Creative cities, Policy, Craft, Creative work, Art.

Cluster 3. The blue cluster has 9 items of the keywords used by the authors in the research such as: Creativity industry, Entrepreneurship, Creative city, Creative class, Sustainability, Fashion, Regional development, Indonesia, and SMEs.

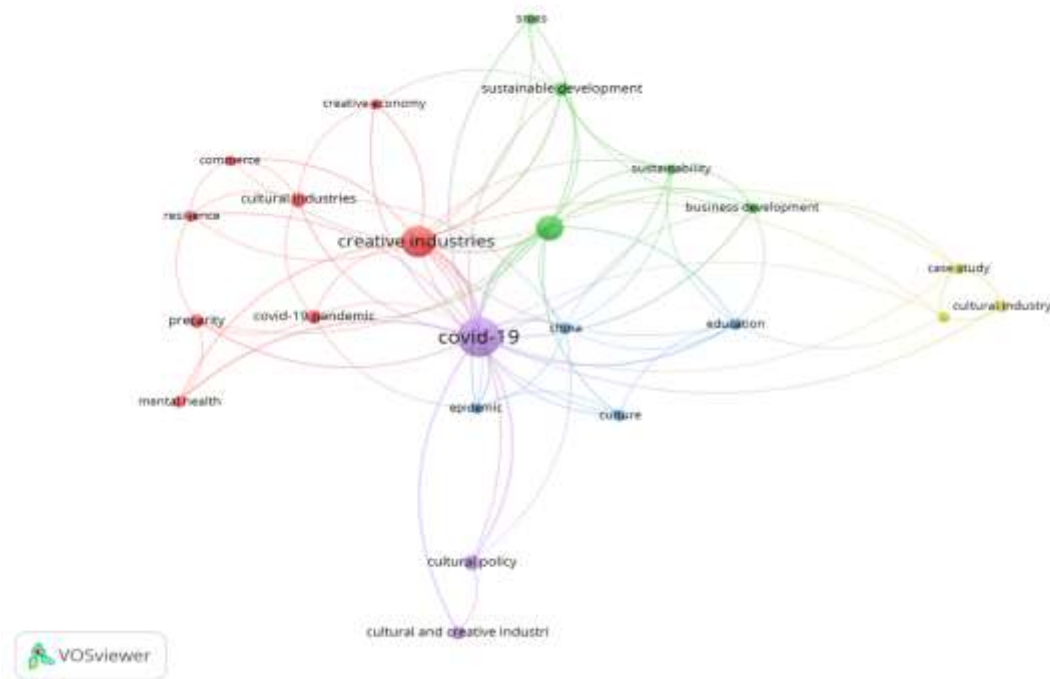
Cluster 4. Cluster 4 in yellow is made up of 9 items of keywords used by the author about cultural and creative industries: Cultural industries, Creative Economy, Cultural policy, Copyright, Development, Music industry, Globalization, Business model, and Cultural heritage.

Cluster 5. In cluster 5 turquoise color 7 items were grouped with the keywords most used by the authors, and they are Cultural and creative industries, China, Film industry, Fritz machlup, Input-output table, Sustainable development, Cultural and creative industry.

Cluster 6. In the last purple cluster, made up of 3 items of the keywords used by the authors in the articles, we find the following: Creativity, Music, and Artists.

Cultural and Creative Industries and COVID-19

Figure 2. All keywords network visualization was based on the occurrences about cultural and creative industries and COVID-19.



Source:

software VOSviewer 2022.

Figure 2 shows all the keywords with the highest number of repetitions in the analyzed documents, which were grouped into 5 clusters as explained below:

Cluster 1. Cluster 1 in red color is formed by 8 items with the keywords most used by the authors in the ICC research are the following: Creative industries, the Covid-19 pandemic, Cultural industries, Mental health, Precarious, Creative Economy, Resilience, and Commerce.

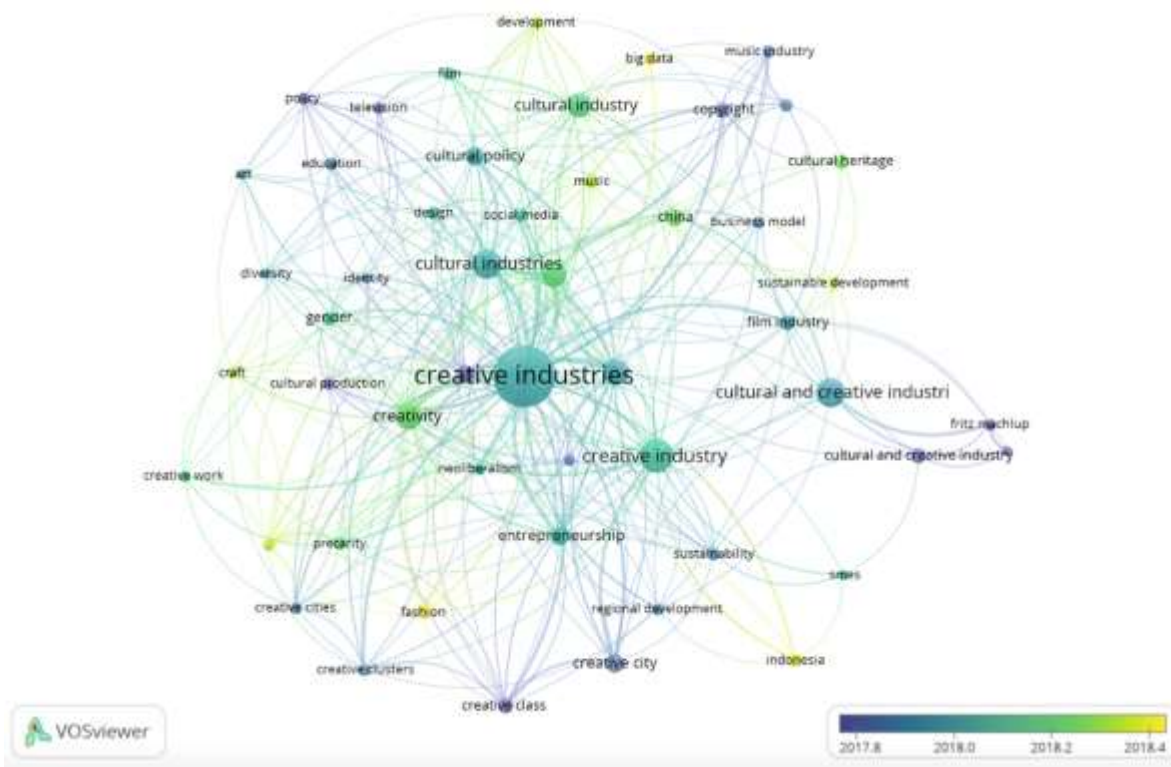
Cluster 2. In cluster 2, green color, 4 items were grouped with the following keywords used by the authors: Creative industry, Business development, Sustainable development, sustainability, and SMEs.

Cluster 3. Cluster 3 in blue color integrates 4 items of keywords used by the author concerning the cultural and creative industries: Education, China, Epidemic, and Culture.

Cluster 4. In cluster 4 in yellow color 3 items were grouped with the keywords most used by the authors, and they are Case study, Digitalization, and Cultural industry.

Cluster 5. In the last cluster in purple color, 3 items were grouped with the keywords used by the authors in the articles, and they are Covid-19, Cultural policy, and Cultural industry: Covid-19, Cultural policy, and Cultural and creative industries.

Figure 3. Author keywords overlay visualization was based on the occurrences and average publication per year about CCI.

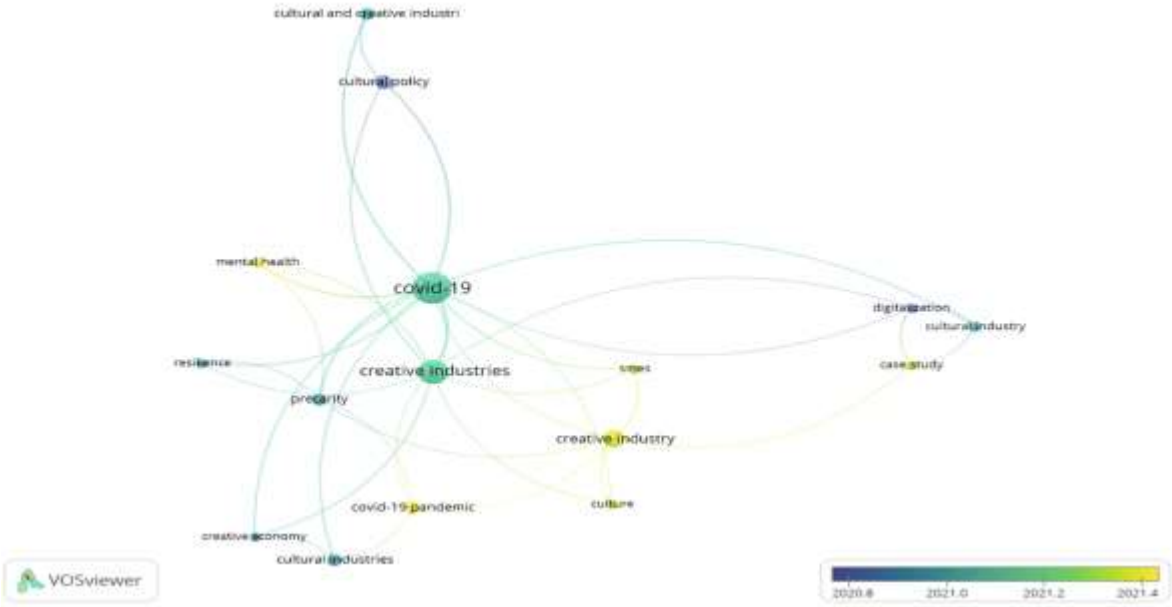


Source:

software VOSviewer 2022.

The study of the CCIs has focused more on the creative industry than on the cultural industry, in the years 2017 to 2019 the research related to this industry had a focus on entrepreneurship and innovation, on trying to understand how this creativity occurs and the work it has in the industry, but at the same time it also pointed out the precariousness. On the other hand, a topic that has always been relevant for these industries has been the cultural policies that are developed to support them.

Figure 4. Author keywords overlay visualization was based on the occurrences and average publication per year about CCI and COVID-19



Source:

software VOSviewer 2022.

Since the pandemic, research on cultural policies intensified, mainly at the beginning of the pandemic, and digitalization began to be studied about CCIs. Subsequently, studies focused on precariousness and resilience in this industry as a consequence of COVID-19 and by the end of 2021, mental health and SMEs became relevant, as shown in Figure 4.

Table 1. List of keywords from the CCI search by the importance of occurrence and link strength.

Keywords	Ocurrences	Total link strength	Number of cluster	Links
Creative industries	297	248	2	44
Cultural industries	69	82	4	30
Creative economy	52	78	4	29
Creativity	58	72	6	27
Innovation	55	66	1	26
Creativity industry	92	56	3	27
Culture	24	42	2	26
Entrepreneurship	30	41	3	18
Cultural policy	30	40	4	16
Creative city	29	36	3	11
Precarity	15	32	2	16
Creative class	18	31	3	14
Cultural and creative industries	68	31	5	15
China	26	28	5	17
Creative labour	12	28	2	15

Source: own elaboration based on VOSviewer.

Table 1 shows the 15 keywords with more co-occurrences within the analysis where the criteria used for the selection of the keywords used by the author with more relevance within the field of research were that the software selected those with a minimum of ≥ 10 keyword repetitions where out of 4,107 keywords 51 were found to coincide more than three times. Where the keywords with more co-occurrences and link strength were those related to cultural and creative industries, followed by creativity, innovation, culture, entrepreneurship, and cultural policies.

From the above, it can be inferred that what is most studied in the cultural and creative industries are issues related to creativity as the main input of these industries and how they are constantly innovating; as well as that in these industries entrepreneurship is the way they have to conform, motivations, context, the behavior of the entrepreneurs of the CCI and the importance of policies about these so that they develop in the best conditions.

Table 2. List of keywords from the CCI and COVID-19 search by the importance of occurrence and link strength.

Keywords	Ocurrences	Total link strength	Number of cluster	Links
Covid-19	42	67	5	21
Creative industries	26	34	1	15
Creative industry	17	32	2	14
Business development	3	12	2	7
Education	4	12	3	8
Sustainable development	5	12	2	7
sustainability	3	11	2	7
China	4	10	3	8
Cultural policy	7	9	5	4
Epidemic	3	9	3	6
Case study	3	7	4	5
Covid-19 pandemic	5	7	1	6
Cultural industries	6	7	1	6
Culture	4	7	3	5
Digitalization	3	7	4	5

Source: own elaboration based on VOSviewer.

Table 2 shows which were the words with more co-occurrences about the search criteria in the Scopus database for how the cultural and creative industries have been studied with the keyword COVID-19, where the 15 most relevant keywords for the study of this phenomenon are shown. To obtain these results we used the criterion of a minimum of ≥ 3 keyword repetition where out of 462 keywords 23 were found to coincide more than three times, with this criterion the result obtained from the keywords were mainly COVID-19, creative and cultural industries, business development, education, sustainable development, sustainability, China, cultural policy and epidemic.

From the above, it can be inferred that in the study of the cultural and creative industries during COVID-19 the authors focused on studying this sector from an approach based on business development and the changes that SMEs in the creative and cultural sector had to face to survive, as well as the development of government policies focused on sustainable development and sustainability and the role played by entrepreneurs in the application of these policies.

In addition, concerning education issues, the studies focus on entrepreneurs and the strengthening of education for entrepreneurial creativity and how parents during the pandemic, besides education, were looking for cultural and creative enrichment for their children, and finally, cultural policies during the pandemic focused on studying the policies applied by governments to lessen the negative impact of the pandemic on the cultural and creative industries.

Table 3. Ten most cited studies about cultural and creative industries (CCI)

Rank	Authors	Título del artículo	Year	Journal	Total citations
1	Del Giudice, M., Khan, Z., De Silva, M., (...), Caputo, F., Carayannis, E.	The microlevel actions undertaken by owner-managers in improving the sustainability practices of cultural and creative small and medium enterprises: A United Kingdom–Italy comparison	2017	Journal of Organizational Behavior	107
2	Liu, C.-H.S.	Examining social capital, organizational learning and knowledge transfer in cultural and creative industries of practice	2018	Tourism Management	85
3	Friedman, S., O'Brien, D., Laurison, D.	'Like Skydiving without a Parachute': How Class Origin Shapes Occupational Trajectories in British Acting	2017	Sociology	65
4	Werthes, D., Mauer, R., Brettel, M.	Cultural and creative entrepreneurs: understanding the role of entrepreneurial identity	2018	International Journal of Entrepreneurial Behaviour and Research	51
5	Pret, T., Cogan, A.	Artisan entrepreneurship: a systematic literature review and research agenda	2019	International Journal of Entrepreneurial Behaviour and Research	45
6	Tao, J., Ho, C.-Y., Luo, S., Sheng, Y.	Agglomeration economies in creative industries	2019	Regional Science and Urban Economics	36
7	Psomadaki, O.I., Dimoulas, C.A., Kalliris, G.M., Paschalidis, G.	Digital storytelling and audience engagement in cultural heritage management: A collaborative model based on the Digital City of Thessaloniki	2019	Journal of Cultural Heritage	36
8	Yang, J., Černevičiūtė, J.	Cultural and creative industries (CCI) and sustainable development: China's cultural industries clusters	2017	Entrepreneurship and Sustainability Issues	33
9	Sacco, P.L., Ferilli, G., Blessi, G.T.	From Culture 1.0 to Culture 3.0: Three socio-technical regimes of social and economic value creation through culture, and their impact on European cohesion policies	2018	Sustainability (Switzerland)	31
10	industriesGundolf, K., Jaouen, A., Gast, J.	Motives for strategic alliances in cultural and creative industries	2018	Creativity and Innovation Management	28

Source: own elaboration based on Scopus

Table 3 shows the 10 most cited articles in the Scopus database regarding cultural and creative industries in the years 2017 to 2019 which were the years before COVID-19. The content of the first three most cited articles about this topic will be briefly explained below:

The most cited article with 107 citations and published in 2017 addresses the practices promoted by the owners of cultural and creative SMEs about actions that promote sustainability, where it was found that the owners have a fundamental role in undertaking this type of practice, (Del Giudice et al., 2017).

On the other hand, the second most cited article with 85 citations published in 2018 seeks to investigate the relationships between social capital, organizational learning, and knowledge transfer given that the growth of cultural and creative industries about tourism has generated a path toward the social and economic development of their contexts, (Liu, 2018).

Finally, the third most cited article with 65 citations published in 2017 explains how the acting profession in the UK is more successful for those actors who come from privileged social classes, while actors from working-class backgrounds are underrepresented and who do not have the same

access to economic, cultural, and social capital and how access to these capitals help actors face challenges specific to their profession, (Friedman et al., 2017).

Table 4. Ten most cited studies of cultural and creative industries and COVID-19.

Rank	Authors	Titulo del articulo	Year	Journal	Total citations
1	Comunian, R., England, L.	Creative and cultural work without filters: Covid-19 and exposed precarity in the creative economy	2020	Cultural Trends	71
2	Banks, M.	The work of culture and C-19	2020	European Journal of Cultural Studies	37
3	Khlystova, O., Kalyuzhnova, Y., Belitski, M.	The impact of the COVID-19 pandemic on the creative industries: A literature review and future research agenda	2022	Journal of Business Research	28
4	Betzler, D., Loots, E., Prokúpek, M., Marques, L., Grafenauer, P.	COVID-19 and the arts and cultural sectors: investigating countries contextual factors and early policy measures	2021	International Journal of Cultural Policy	28
5	Mak, H.W., Fluharty, M., Fancourt, D.	Predictors and Impact of Arts Engagement During the COVID-19 Pandemic: Analyses of Data From 19,384 Adults in the COVID-19 Social Study	2021	Frontiers in Psychology	24
6	Mariotti, I., Akhavan, M., Rossi, F.	The preferred location of coworking spaces in Italy: an empirical investigation in urban and peripheral areas	2021	European Planning Studies	20
7	Flew, T., Kirkwood, K.	The impact of COVID-19 on cultural tourism: art, culture and communication in four regional sites of Queensland, Australia	2021	Media International Australia	18
8	Raimo, N., De Turi, I., Ricciaridelli, A., Vitolla, F.	Digitalization in the cultural industry: evidence from Italian museums	2021	International Journal of Entrepreneurial Behaviour and Research	16
9	Choi, M., Tessler, H., Kao, G.	Arts and crafts as an educational strategy and coping mechanism for Republic of Korea and United States parents during the COVID-19 pandemic	2020	International Review of Education	15
10	Vlassis, A.	Global online platforms, COVID-19, and culture: The global pandemic, an accelerator towards which direction?	2021	Media, Culture and Society	10

Source: own elaboration based on Scopus.

Table 4 shows the 10 most cited articles in the Scopus database about the cultural and creative industries, where shows the most cited article addresses the issue of the precariousness of creative and cultural work, indicating that although much is known about this issue, governments still have not created policies to improve the working conditions of this sector. Since COVID-19, industrial and political organizations have been concerned about the repercussions that it could have on this industry and its workers, where the conclusion was reached as to whether COVID-19 had a major impact on the cultural and creative sector or whether it only came to discover what was already known, that the price of CCI work is unsustainable (Comunian and England, 2020).

The second most cited article also addresses issues related to workers in the cultural and creative industries within another crisis in this case that of COVID-19, as well as changes in consumption, production, and cultural work caused by the pandemic, focusing more generally on the repercussions in the cultural field from COVID-19, (Banks, 2020).

And finally, the third most cited article refers to an analysis of CCIs and COVID-19 from a resilience study approach, a literature review was conducted on the challenges that this brought and its positive effects (in IT and software) and negative (music industry, festivals and cultural events), where the

authors wanted to answer whether the CCIs had digital capabilities and how was their ability to adapt to the effects of the pandemic (Khlystova et al., 2022).

Conclusions

The conclusions reached in this research about the changes in trends that occurred after COVID-19 in the cultural and creative industries were that before the pandemic, the topics that were gaining relevance addressed issues such as creativity, innovation, entrepreneurship, cultural policy, precariousness, and China. From 2020, when the pandemic occurred worldwide, research changed and focused on cultural policy, but in a more intensive way than in previous years; precariousness was another variable that increased the interest in the study, as well as the study of SMEs. On the other hand, new variables such as mental health, digitalization, and resilience that had not been considered in studies before the pandemic began to gain relevance about CCIs.

The limitation of this research is that the industry chosen for analysis is relatively new in the field of study and was related to a variable that began to be studied recently, as well as the use of a single scientific database.

This analysis may help future research on CCIs that wish to delve deeper into some of the trends that emerged from this study since new variables were discovered and should be considered to better understand their behavior as they relate to this industry.

Although bibliometric analyses help to identify trends in scientific research, this study compares trends that were being developed before COVID-19 and how, because of this event, new study variables that were not previously considered within this industry became relevant.

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DXB219**Economic freedom as a trigger for sustainable human development**

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ABSTRACT

The purpose of this paper is to analyze how the decisions made by governments when applying a trade policy based on economic freedom in emerging countries affect the economy and human development, based on the fact that there is still no consensus on what the most appropriate trade policy is to achieve the welfare of citizens, explained through institutional and agency theory. The method is exploratory, using the technique of creating a theory based on previous empirical research, based on a systematic qualitative procedure to generate a model that explains at a conceptual level the interaction between variables. First, a codification of the empirical data is done to identify how the variables are codified, select the most representative ones and end up presenting a theoretical model. The method is exploratory, using the technique of creating a theory based on previous empirical research, based on a systematic qualitative procedure to generate a model that explains at a conceptual level the interaction between variables. First the empirical data is coded to identify how the variables are coded, then the most representative variables are selected, and a theoretical model is presented. This study provides information to better explain the political models focused on market freedom and thus improve decision making for governments and thus improve the quality of life and standard of living of the population of emerging countries.

Keywords: Economic freedom, economic development and sustainable human development.

INTRODUCTION

In emerging markets, much has been said about what is the best policy to have for the best economic and human development. Today, there seems to be a close relationship between trade openness and the development of countries, but not always. This has been the case, there are researchers who criticize commercial opening in a discriminatory way, such as Stiglitz (2017), who mentions that when there is imperfect competition, economic benefits cannot be maintained, since large corporations concentrate great power in the market, causing them to small producers disappear, which also has effects in the weakening of the bargaining power of workers, since multinational companies can relocate if employees do not accept lower wages or worse conditions and this can increase unemployment. Likewise, there is what is known as the inverted Kuznets curve, which consists in the fact that poor countries initially have equal income, but as the economic ones develop, they are concentrated in few individuals and therefore, the distribution of income worsens, but in the medium and long term this inequality is significantly reduced (Huynh, 2022).

Likewise, it has been identified that an appropriate institutional framework is necessary to take advantage of the opportunities offered by the economic system. Therefore, the need arises to identify the best trade policy that supports sustainable development, there are studies that have shown that a national policy focused on economic freedom, which is seen as the incentives generated by having property rights, the increase of government spending, development of strategies for opening and investing in new businesses, having labor, monetary, commercial and investment freedom have benefited employment (Jacimovic et al., 2013) and therefore generates sustained growth Haller 2016 ; Egu & Aregbeshola, 2017), in addition to generating the conditions for attracting foreign direct investment (FDI), which will initially be attracted by cost advantages and in the medium term by internal market conditions, labor qualified, the infrastructure (Abbes et al. 2015).

Therefore, this is focused on identifying a model where it is shown that a trade policy focused on the free market positively affects economic development and therefore sustainable human development, for this, in this document, a debate is first presented. on economic growth and sustainable human development, to later present the empirical findings that support the premises proposed in this research.

Economic growth and sustainable human development

The wealth of nations has been seen as the consequence of generating open and free business environments where foreign direct investment, free flow of capital, exports and imports prevail, however, the economic and health crisis generated since 2020 by the COVID-19 pandemic has created a considerable global tension by questioning whether the free market really benefits economic development (Aïssaoui & Fabian, 2021) and, at the same time, it has generated a significant concern about the real benefits it creates, as it is the employment (Jacimovic et al., 2013) and sustainable human development (Haller 2016; Egu & Aregbeshola, 2017), the previous has generated a significant increase in political forces that mobilize economic opportunities towards populism, especially in low-income countries such as in Latin America where it has been accentuated today by having most of the countries in the region under this economic system, but which unfortunately, this has brought greater corruption that could jeopardize the benefits expected by the population (Aïssaoui & Fabian, 2021).

Likewise, it is found that institutions could generate obstacles to human and economic development (Butzbach, 2021), under this feature Dzionek-Kozłowska & Matera (2021) mention that the role of national culture is crucial in the economic development, since human interactions are necessary for industrialization process, plus the fact that certain rigid economic systems negatively affect economic freedom, which identifies commercial openings, possibility of investing and doing business, financial freedom, and monetary freedom and in different studies it is perceived that it is important to develop these variables since they encourage the economic development of less developed countries (Arel-Bundock, 2016), however, economic freedom has also given results in the inequality of income in short term, but in the long term it has been seen that it begins to be a reduction, consequently, economic growth begins, as explained by the inverted Kuznets curve applied in Asia (Huynh, 2022); This has generated an increase in countries with populist policies, but even so, it has been found that in some countries with this political aspect they apply certain institutional changes focused on economic freedom, such as the development of labor policies and tax incentives that encourage the creation of local businesses and in succession are activators for economic development (Larnell, 2018), also it has been found that during different economic crises, a regulation of the capitalist system is required to achieve its own stability and, therefore, it is understood why changes are occasioned in different democratic governments in terms of changing to a model of greater control over capitalism (Ormaechea et al., 2021).

The previous economic trend could be explained by relying on new institutional economics to understand social changes, interdependencies, and structural tensions, as well as the balances in the economic system of countries in develop affect the growth of developing countries, where there is little adoption of formal institutional structures, but these will be systematically adopted by the interrelation of domestic politics and transnational mechanisms and international competition (Perry, 2020). Therefore, the facility of doing business is something that institutional economics could explain and at the same time identify the potential in economic development, which are affected by environmental factors such as the climate for doing business, the dynamism of the ecosystem; while psychological factors include risk aversion, the desire for autonomy and self-satisfaction (Porfirio et al. 2018); in addition to this, it has been investigated that entrepreneurship has an important relationship in economic growth since the speed of said growth depends on the initiatives of doing business, so it is necessary to adopt policies that stimulate the creation of a higher business performance that promote the entry of new entrepreneurship into the national market (Rusu et al., 2022) and at the time develop financial inclusion strategies, such as banking digitization (Yu, 2022), so that new entrepreneurs can obtain capital in a more efficient, cheaper way and turn them into true agents of change to detonate the development of a country. Therefore, in the following model (Figure 1) it can be seen that the development of an open trade policy, focused on globalization and economic freedom, a better human development supported by greater economic growth can be achieved.

Figure 1. Conceptual model



Trade policy and human development

When the issue of unemployment is analyzed, it has been found that both developed and in process of developing countries apply different trade policies to attract FDI, since it has been seen that employment rate improves in countries that have made important structural reforms by making an

open market for foreign investment flows (Grahovac & Softić, 2017), but that is not only creating reforms but also having financial and economic stability, a good level of security and social equity. In addition to the above and as previously mentioned, formal and informal institutions can generate difficulties for human and economic development (Butzbach, 2021), however there are studies that show that an adequate institutional framework such as a trade policy focused on openness stimulates economic development, especially in less developed countries (Arel-Bundock, 2016), but in turn, this can be explained with the inverted Kuznets curve, where it has been seen that Asian countries initially had inequality but today it has been substantially reduced (Huynh, 2022). Therefore, the increase in labor policies and tax incentives help to set up new businesses, both new and foreign direct investment (FDI), which is when multinational companies invest abroad in activities that create value, this activity has been proved to generate positive impacts on productivity, human capital and physical capital, generating capital flows in countries that lack of it, which generates positive effects on payments (Amir & Mehmood, 2012; Nikolov, 2016).) and therefore sustained economic growth. In order for developing countries to take advantage of the positive effects of free trade and benefit from FDI flows, they must have a specialized and qualified labor force to make them attractive to multinational companies (Barzotto, et al. 2016), therefore, if countries invest in human capital, they will be interesting to attract FDI and, in turn, may stimulate economic growth (Hamoudi & Aimer, 2017) that benefits society. That being the case, the following premise is proposed:

PI A trade policy generates better human development and therefore greater economic growth.

Trade policy and economic growth development

The trade policy applied by the countries on the 1990s was characterized by a process of a democratic system that was taking place aligned by the economic transition, at that moment clusters were created and several cities underwent industrial restructuring (Yang et al., 2020) and this was supposed to encourage not only the establishment of relevant institutions, but also be a sort of reward for citizens for accepting certain initial losses that inevitably occurred with the introduction of a new economic system (the initial drop down income, the increase in the unemployment rate, the growth of inequality and the phenomenon of obvious poverty). The development of institutions in countries with little tradition in their development was negatively affected by the strengthening of individuals and interest groups that made up the political and economic powers, abusing the mechanisms of the democratic system to appropriate economic power and political even more. In such circumstances, the elements

of acceptance of an authoritarian system, with clear preferences in terms of economic development, improvement of living standards, reduction of poverty and inequality, were produced as socially acceptable and preferred by the population (Prašćević, 2013).

On the other hand, the globalization process is an intrinsic process to the result of the activities of multinational companies given by means of foreign investment, exports and imports and all commercial relations with the exterior, and with this the market takes advantage of the opportunities and obtains goods of acceptable quality and with very cheap prices (Haller, 2016), in this way it is possible to understand the role that international companies have had in the growth of domestic consumption, as well as their ability to stimulate competitiveness of the export processes for all the countries that participate in this environment, in such way that the emerging markets and mainly those of manufacture, are the ones that obtain the most benefit from this context (Jacimovic et al., 2013). Due to the above, the globalization process is inevitable, so companies must create specialized skills for participation in specific sectors, as well as the use of technologies and management skills, in such a way that competitive advantages can be obtained that cause sustained growth of whoever starts it up (Egu & Aregbeshola, 2017).

In this context, governments have been concerned with regulating the disproportion caused by these production models through macroeconomic policies where the tax burden favors the recovery of part of the produced capital and avoids a significant reduction in productive resources, thereby will strengthen the national economy by contributing to the improvement of inflationary processes, the growth of aggregate demand and the risk to decline (Grubišić, & Marčetić, 2013), in such a way that even when it seems that taxes would have a negative impact in the development of companies, the truth is that their condition is minimal compared to their benefits, in such a way that the Net Present Value generates a direct compensation rate that produces a change that could be positive in the long terms, however, investors have the last word to make their investment based on this understanding (Hove & Chidoko, 2012).

Therefore, the most or less beneficial contribution of these policies in emerging and weakly developed markets has been growth, neither of the two possible points of view, the pros and cons, are denied. When argued correctly, they can find adherents. This is why it is accepted that the processes imposed by globalization in emerging markets improve their competitiveness and therefore an improvement in their economies (Haller, 2016). It has been seen how developing countries expand beyond their traditional participation in international production as recipients of FDI and with an

impact of their FDI abroad in the countries of origin, with which capital, technology, and other resources of the multinational company, but also emerging countries are large suppliers of inputs and finished products, which generates foreign exchange and triggers economic growth, for which the following premise is proposed:

P2: A trade policy focused on globalization generates greater economic growth.

Therefore, by developing a policy based on economic freedom, foreign direct investment (FDI) can be attractive, where at first sight it would seem to be entirely beneficial for the macroeconomic development of the country; however, there are studies where it has been seen that said investments have been mostly in manufacturing and service sector activities; this for having cheap labor and raw materials (Bose, 2012), but not so much in research and development where it has been proved that sustainable development is generated and therefore there is not enough sophistication (Forte, 2013); for that reason, it is important to develop adequate conditions in developing countries such as environmental factors like the climate for doing business, the dynamism of the ecosystem, psychological factors such as risk aversion, the desire for autonomy and self-satisfaction and flexibility to do business (Porfirio et al. 2018); not to only be attractive in costs. Therefore, it has been found that entrepreneurship has an important relationship in economic growth since the speed of said growth depends on the initiatives of doing business, so it is necessary to adopt policies that stimulate the creation of greater performance that promote the entry of new ventures into the national market (Rusu et al., 2022).

Developing countries have greater possibilities of absorbing FDI in short term if they generate an adequate condition of economic development and with an increase in long-term values (Grubišić, Z and Marčetić, 2013), there is evidence of when developing countries apply a policy to receive FDI triggers economic development, in fact, it is an engine for growth (Abbes et al. 2015), so countries must develop strategies to reduce political risk and improve institutions (Arel-Bundock, 2016), as well as building on infrastructure, economic stability, less corruption and the development of the internal market (Bose, 2012; Assunção et al. 2013).

Although, it has been verified that emerging countries have achieved great benefits as recipients of FDI, it is also found that it is perceived that for the investor (generally multinational companies from developed countries) where they obtain great economic benefits (Budiarta, 2018), which has caused research on how foreign direct investment abroad (OFDI), where they help to increase the competitiveness of local companies and at the same time generates unions to transfer resources and

technologies from the international markets to the national economy; In addition, it generates a transformation of the productive structure by acquiring large-scale resources, assets and technologies to develop technology-intensive industries, which has helped to increase the competitiveness of local companies and at the same time establishes new links to transmit resources and technologies of the global market to the domestic one, besides the developing distribution and value channels abroad (Caseiro and Masiero, 2014; Maciągowska and Kołtuniak, 2016; Knoerich, 2017; Egu and Aregbeshola, 2017; Noor, et al. 2016; Nwaolisa and Francis, 2018); Therefore, the following premise is proposed:

P3 Economic freedom generates incentives to attract FDI and with this trigger greater economic growth

CONCLUSIONS AND IMPLICATIONS

In this document we have focused on analyzing economic freedom as one of the variables that is made up of open trade, the facility of investing and doing business, financial freedom, and monetary freedom (Arel-Bundock, 2016), could explain the sustainable human development through economic growth in developing countries (Arel-Bundock, 2016; Huynh, 2022; Amir and Mehmood, 2012; Nikolov, 2016). Thus, it was also studied that in the 1990s there was a process of economic transition, based on a democratic and globalized political system where it was thought that it was pertinent that the citizens of poor countries had losses in their well-being to prop up medium and medium growth and long-term (Prašćević, 2013) hoping that as it happened in Asia, where the inverted Kuznets curve applied in Asia was presented (Huynh, 2022), despite the fact that it is not something generalized in emerging countries, it can be accepted that the processes of globalization can improve the competitiveness of countries and therefore improve their economic development; additionally, there is a need to create the necessary conditions to attract FDI, which is an indicator of a thriving and growing productive structure (Caseiro & Masiero, 2014; Maciągowska & Kołtuniak, 2016; Knoerich, 2017; Egu & Aregbeshola, 2017; Noor, et al. 2016; Nwaolisa & Francis, 2018).

This research has several limitations, first it only considers the institutional framework to explain a phenomenon that is very complicated to investigate, so it is necessary to seek considerable theoretical support. Another element that is rarely mentioned in this document is the cultural environment, which would be important to study in order to know the impacts that national culture can cause in the economic sphere.

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DXB230

AN UNDERSTANDING OF NAPKIN RECYCLING BEHAVIOR: THE ROLE OF CONSUMER SELF-IDENTITY, GENERATION, AND ATTITUDE

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Abstract

Purpose

This study aims to investigate the role played by social norms and generational differences in recycling behavior. In particular, the study demonstrates how social norms and generational differences moderate the mediation of attitude between self-identity and recycling intention.

Design/methodology/approach

Using data collected from 1,113 Italian customers, this study evaluates a proposed theoretical framework. The effects of moderated mediation were tested using the statistical product and service solutions (SPSS) program with the PROCESS Macro.

Findings

The research findings suggest that recycling attitude mediates the relationship between green self-identity and recycling intentions. Moreover, social norms moderate the mediating effects of recycling attitudes on the relationship between green self-identity and recycling intention. In addition, generation also plays an important role and there is a significant three-way interaction effect (green self-identity \times social norms \times generation) on recycling intention.

Discussion:

The key findings of this research are:

- attitude mediates the relationship between green self-identity and recycling intention;
- social norms moderate the mediation effect of attitude on the relationship between green self-identity and recycling intention;
- generational differences moderate the moderated (social norms) mediation effect of attitude between green self-identity and recycling intention.

Limitations:

A cross-sectional study using convenience sample and self-reported variables has been done. The research findings should therefore be generalized with caution.

Research limitations/implications

Building on the extant literature which focuses on the psychological process between self-identity and consumption, this research advocates the mediating role of recycling attitude, in explaining the effect of green self-identity on consumers' recycling intention. Besides the research unveils the role of social norms and generational differences.

Originality/value

To authors' best knowledge this study is among the few which reveal the moderated mediation of recycling attitude between green self-identity and recycling intention. Taking social norms and generation into consideration, the findings of this research provide new insights into the sustainability literature.

DXB232**Sustainability in Higher Education: Evidence from India**

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ABSTRACT

Sustainable Development (SD) initiatives have been taken up by organisations such as the United Nations to support corporates and Higher Educational Institutes (HEIs) in adopting SD practices. However, SD initiatives have failed to spread far and wide. To understand this context better, this paper quantitatively determines the growth and outreach of a few SD initiatives across the world, with focus on India. Using content analysis of public documents of top-tier HEIs in India, this paper finds out the focus of the top-tier HEIs in the engineering and management streams in the context of SD and how this affects the outreach efforts of SD initiatives and contributes to its growth. We study five top Indian Institutes of Technology (IIT) and four Indian Institutes of Management (IIM) as case studies. Our paper attempts to understand in the context of SD, the dynamics between top-tier HEIs and other HEIs which are their mentees or follow top-tier HEIs as role models. We also develop a conceptual framework of such dynamics regarding SD. The findings of this study are startling. Not only the growth of SD initiatives has stifled, but most regions of the world are still uncharted territory for them. Our research reveals that though top-tier HEIs are involved in SD activities substantially, they do not publicise their SD activities nor are members of any SD initiative. Perhaps this low focus and non-publicity of SD activities acts as a barrier for other HEIs which, following top HEIs, do not give importance to SD initiatives. This paper contributes to the understanding of growth of SD initiatives and puts forth a model regarding the barriers to the adoption of SD in higher education. Since only few top-tier HEIs have been studied in this research, generalisations cannot be made with such limited data. This study may be complemented with more research on other IITs, IIMs and other well-known educational institutes in India.

Keywords: Sustainable development, sustainability, higher education, UN PRME, Sustainable Development Goals

DXB238**Family Business Groups & CSR – Corporate Governance in India**

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EXTENDED ABSTRACT**Keywords**

Family Business Group, CSR, Corporate Governance, Corporate Behaviour.

INTRODUCTION

Corporate businesses in the private sector are in the forefront in driving economic growth (McLennan & Banks, 2019). This is witnessed with their presence in Banking, Insurance, Telecom, Aviation, Steel sectors, etc. Prior studies show that private sector business enterprises, which are creating huge value for their shareholders in terms of wealth maximization did not reciprocate equally in contributing to Indian society; whereas Government business enterprises were unable to contribute to society due to lack of financial resources (Chakraborty et al., 2004). Business and industry are meant to serve larger societal objectives in their pursuit of economic goals. Therefore, this study is significant in understanding the interrelation and interaction between government, business and society (Walsh et al., 2003).

Prior studies show that the economic models and corporate governance models of developed countries cannot be exactly replicated in the Indian context since Indian social landscape and culture as well as the political environment significantly varies from that of the developed countries (Deshmukh, 2022). Therefore, this study is an attempt to bridge the gap between the interests of corporate finance and that of the interests and requirements of the Indian society. Corporates across

the world are in a state of turbulence because of Covid pandemic and geopolitical crises (Herédia-Colaço & Rodrigues, 2021). Therefore, the traditional corporate governance system needs to be redefined and realign keeping the societal needs and requirement of the specific country as the backdrop in corporate decision making.

The Covid-19 Pandemic has signalled the vulnerability of the societies and communities. It has also made corporate to rethink and realign their business strategies while serving the community needs (Swaminathan et al., 2020). This study is an attempt to promote a culture of stakeholder-centric organisation as compared to shareholder-centric organisations. Indian Companies Act 2013 has legislated a mandatory contribution of 2% of the profit towards various corporate social responsibility activities for listed companies (Manchiraju & Rajgopal, 2017). Good corporate governance practice comes with the adoption of legally mandated code on governance and voluntary adoption of best practices (CSR activities, ESG compliance, sustainability activities and other community prerogative) (Aguilera & Cuervo-Cazurra, 2009). Corporates around the world are viewed as business institutions meant to serve public policy, public purpose, and public interest even when the ownership control is in the private hands (Windsor, 2006).

OBJECTIVE

Indian corporate landscape is dotted with family business enterprises at one end of the spectrum and govt. business enterprises at the other. Majority of the top companies in India are family-owned business. These enterprises have taken leadership position after the globalisation of the Indian economy. Indian Corporate Business Houses have made huge progress in institutionalising corporate governance reforms that are put in place through various regulatory requirements. This study focuses on the role of CSR contributions by family business groups in the upliftment of the society.

REVIEW OF LITERATURE

Globalisation of world economies after the advent of WTO has accelerated the pace of economic activities (Manzi, 2019). At one end of the spectrum developed countries benefited immensely both on economic front and also on various social indicators (Gatto, n.d.). But on the flipside the gap between the rich and poor nations has increased manifold. This indicates that the benefits of economic reforms have not yet reached to poor and vulnerable sections of the society.

Reforms in Corporate governance was first started in United Kingdom at behest of London stock exchange initiative which has brought in place Cadbury committee recommendations (The first code of corporate governance) (Price et al., 2018). Subsequently extensive reforms were undertaken both in U.K and U.S and in other European countries to help strengthen corporate governance frameworks (Gualmini, 2008). SOX Act 2002 is one such instance of the evolution of corporate governance code. India of course has its own contribution towards corporate governance reforms (Afsharipour, 2009). SEBI (Securities Exchange Board of India) constituted a committee under the chairmanship of K.M Birla with the task for drafting code on corporate governance (Bijalwan, 2012). But before the code was implemented it was revised by the SEBI committee under the leadership of Mr. N.R Narayanamurty. Therefore, in India corporate governance code compliance has come into effect starting from 1st January 2006 in the form of Clause-49 of the listing agreement. The Indian Companies Act 2013 for the first time has brought a legislative framework for establishing corporate governance standards and norms in order to meet the aspirations of 21st century stakeholders (Reavis et al., 2017). The corporate governance code can only provide the minimum legislative framework. The substance and the spirit of governance has to be implemented by the corporate leadership at the board and also at the top management levels.

RESEARCH GAPS IN THE LITERATURE

India is one of the few countries in the world which has legislated a mandatory CSR Compliance requirement under the companies Act 2013. The law requires the listed companies having a net worth 500 crore or more, or a turnover of 1000 crore or a net profit of 5 crore or more during the last three financial years should contribute 2% of the net profit towards various CSR activities. Prior research shows that new age entrepreneurs during the last two decades are in the fore front in their contribution towards corporate philanthropic and CSR contributions (Idowu & Schmidpeter, 2015). Therefore, this study is to show case CSR contribution by family businesses and thus meeting CSR compliance requirements.

METHODOLOGY

This study shows the corporate response to Covid pandemic in terms of CSR contribution by leading family business groups. The family groups that are considered for the study are Aditya Birla Group, Mahindra & Mahindra Group and TATA Group companies. The data for the study is collected from annual reports for the year 2021-22 from the respective companies' statutory filings. The data has been analysed qualitatively.

EMPIRICAL RESULTS

The corporate social responsibility contribution made by family group companies for the financial year 2021-22 provide below.

Aditya Birla group CSR Contribution for the year 2021-22

Companies Name	CSR required Amount as per company law	CSR -actual amount spent
Ultra tech	103. Crore	103. Crore
Gram shim	48.85 Crore	84.66 Crore
Hindalco	40.05 Crore	53.99 Crore

Mahindra group CSR contribution for the year 2021-22

Companies Name	CSR required amount as per company law	CSR -actual amount spent
Mahindra & Mahindra	110 Crore	125 Crore
Tech Mahindra	108.6 Crore	108.6 Crore

TATA group CSR contribution for the year 2021-22

Companies Name	CSR required amount as per company law	CSR -actual amount spent
TCS	716.Crore	727. Crore
Titan	35.01 Crore	35.42 Crore
Tata Motors	23.70 Crore	23.70 Crore
Tata Steel	189.85 Crore	221.98 Crore
Tata Consumer	13.32 Crore	13.54 Crore

FINDINGS OF THE STUDY

The study observes that the contributions made by the group companies towards CSR is far in excess of the legal requirements. This shows that the family businesses in India are sensitive to the social development needs of the country and thus are contributing liberally. The study also observed that during the Covid pandemic years between 2021 and 2022 even when businesses were affected due to the lockdown, these family group companies have contributed to the CSR requirements. This trend definitely acts like precedents for other business counter parts to emulate the culture of towards society contributions. Corporate social responsibility is one of the important non-financial parameters where domestic and foreign investors use these criteria for their investment decisions. In this way CSR contribution indirectly helps companies to achieve good corporate governance practices. The study observed that Indian Companies Act 2013 has legislated a mandatory contribution towards CSR based on a set criterion, it therefore becomes a legal requirement towards society rather than being labelled as a social responsibility. The study notes that the total contribution made by these 11 family groups companies towards CSR is approximately 1600 Crore during the year 2021-22. More than the quantity of contribution, what attracts the attention is the areas where these three family groups have taken interests in undertaking their CSR activities. The non-conventional areas such as women's health, sanitation, provision of basic requirements to fight covid19, etc. which may not necessarily be outlined by the government of India in their CSR guidelines. Spending more than the mandated by law and focusing on solving the practical problems, these business groups went beyond compliance and proved their accountability in contributing for the sustainable development of the society. The study observes that in the said business groups, the social responsibility is transformed into business responsibility & has become a select criteria in measuring corporate governance practices. An implication of this study signals corporate behaviour in addressing sustainability issues in businesses.

CONCLUSION

This study suggests a novel approach in dealing with corporate social responsibility. Based on Prior literature review on CSR contributions we have identified the prominent areas of social problems which are (i) Education and skill development, (ii) Healthcare, (iii) Village and cottage industries, (iv) Clean drinking water and sanitation, (v) road infrastructure. We suggest that a focused approach needs to be given to each of the identified social and economic problems and the entire CSR contribution to be made by all these companies for a span of two years in order achieve visible sign of growth and development. Subsequently each other socio-economic development agenda can be taken of sequentially. In this regard the corporate need has a consensus and identify Central and State govt. flagships scheme if it is existing or design a new pilot scheme in achieving those development targets.

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DXB241 Triple Net Reporting

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Purpose:

Growing global awareness about climate change, environmental degradation and social disparity has led to significant changes in both voluntary and mandatory reporting standards for listed companies. Disclosures assist capital markets in better allocations, increasing efficiency in greenhouse gas (GHG) mitigation. Investors use disclosures to write contracts and make choices about inclusion into a portfolio with mitigation or Environment-Social-Governance (ESG) objectives. Sharing information in a reliable, formal disclosure improves the learning-processes of participants – either in business or policymaking.

Findings:

Regulatory pressures have been building in recent years for mandatory GHG mitigation disclosure formats and reporting with growing recognition of a climate crisis. Several Standards Boards have promoted taxonomies of climate related risks for reporting by companies listed on exchanges. Examples of disclosure taxonomy and reporting are those of international regulators such as the *Climate Related Financial Risks Taxonomy* of the European Union, and of national regulators such as *LODR (Listing Obligations and Disclosure Regulations)* of the Securities and Exchange Board (SEBI) of India.

Fundamental gaps arise between voluntary ESG reporting and what should be mandatory GHG mitigation reporting. Law researchers Armour, Enriques and Wetzler (2021) make a forceful argument for mandatory disclosures by businesses on mitigation related actions. They point to the positive externalities of symmetric disclosures by companies. A broader financial agenda is possible when disclosures are mandated, with the ensuing relationships between investors, regulators and third-party assessors. They can then collaborate better on the price discovery function for the GHG emission externality.

Research Methodology

This article undertook an in-depth review of the taxonomies developed earlier in order to increase their capability to disclose key information for climate change mitigation strategies. One well-known taxonomy is Triple Bottom Line, a term coined by John Elkington (1997). The approach was developed and popularized by Elkington and his collaborators, and by the mid-1990s was widely used and acknowledged in business management. It was inspired by corporate social responsibility, and was prescient (but not explicitly so) of today's Sustainable Development Goals (SDGs), as it is a framework that evolved for ESG prior to the climate crisis.

Originality:

This paper proposes a new framework, the Triple Net Reporting framework, for metrics on business-level GHG mitigation policy and climate action. The value of such a framework is that it bridges key gaps in the earlier disclosures for ESG programs and the current information needs for

GHG mitigation. The additional information disclosed is of great value to multiple business stakeholders – policymakers, investors, other companies in the sector, and supply chain partners.

Discussion:

Triple Net Reporting framework has three main categories: Net Worth, Network, Net Zero. These TNR categories expand the TBL notions of Profits, People, Planet. In TNR vis-à-vis TBL reporting, roughly speaking, Net Worth expands to all Transition Financial Statements the notion of Profits; Network contextualizes to organizations, agencies, and enterprises the notion of People; and Net Zero contextualizes to mitigation pathways the notion of Planet. Net Worth ‘bridges’ transition financial statements; Network ‘bridges’ stakeholders in externality transitions; and Net Zero ‘bridges’ transition trajectories of GHG emissions. TNR is based on recent academic research into GHG disclosure imperatives. A few of the specific bridges are mentioned next.

Applications to practice:

The rest of the paper describes six additional disclosures of key importance to bridge the gap and which are readily incorporated into Triple Net Reporting.

Pathways: In a path breaking paper that links investment professionals making portfolio choices to net zero, Bolton et al (2022) argue that this carbon guidance is similar to earnings guidance, and will enhance the understanding of investors, and aligns stakeholders with specific mitigation pathways.

Risks: The concept of “materiality” is aimed at screening climate risks that must be reported to investors. It is worth noting, however, that climate risks mitigation based on materiality is not the same as emission mitigation. The former is relevant to incentives to the investor as a change agent for mitigating material financial risks; the latter is wider and affects most other stakeholders.

Performance: Policies for sustainable growth need performance measures that provide the guiderails for incentives. Tanzil and Beloff (2006) provide examples of such metrics from the chemical industry. Azapagic and Perdan (xxxx) provide a framework for all three aspects (environmental, economic, social) of sustainable growth from emission rights management that can be used across industries but emphasize that significant customization is needed for different types of businesses.

Co-benefits: Disclosures on co-benefits of these carbon credits, and projects potentials are used for MAC curves. The bottom-up disclosure approach helps identify mitigation options that provide co-benefits in terms of development, economic growth, job creation, local environmental quality, or poverty alleviation (Deng et al 2018).

Life-Cycle: Life Cycle Management (LCM) was developed to complement the existing evolution of the *Life-Cycle Assessment (LCA)* of the Society of Environmental Toxicology and Chemistry (SETAC, 2004). The LCA standards (a series starting from ISO, 1997, and from SETAC, 1993) provide quantitative methods to compare the environmental impact of different products while LCM includes qualitative variables. Amelse (2022) argues that “sequestration requires understanding where energy is produced and consumed, the magnitude of CO₂ generation, and the Carbon Cycle.” Clearly, buyer-supplier perceptual measures will evolve as objective data becomes more abundant. A “channel leader” can have a significant impact in driving such change (Hall 2000).

Marginal Abatement Cost Curve: MACC is invaluable information for setting GHG emissions regulatory scheme parameters, whether the parameter is a tax rate or a quantity cap. It provides information on costs and potential of GHG mitigation at various levels – the firm, sector, or economy. MACC is used to compare multiple strategies for mitigation (Vogt-Schilb et al, The World Bank, 2014). It is derived from firm level disclosures on its clean-up cost function – the costs of abating its emission. It graphs the additional price-per-additional-ton of CO₂ mitigation versus the quantity of the additional mitigation in cumulative thousands of tons.

Impact on policy:

The paper indicates a comprehensive list of specific metrics for Triple Net Reporting. AR6 of the IPCC- a summary report for policymakers - in its introduction and framing section, recognizes the need to integrate frameworks for aligning co-benefits of specific mitigation projects. “[There is]... *increasing diversity of analytic frameworks from multiple disciplines including social sciences. This report identifies multiple analytic frameworks to assess the drivers of, barriers to and options for, mitigation action.*” (AR6, Section A). TNR, described above, furthers the integration of frameworks such as GHG mitigation and TBL to empower SDGs, and particularly SDG 13 on climate action.

Research limitations:

Comparative case studies and controlled experimental designs can establish the true value of integrative frameworks. However, such systematic research methodology was not possible due to a paucity of data on disclosures and mitigation. The selected references list is appended. A larger, systematic review is being developed.

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DXB255**Understanding the influence of CSR on Employees – a sensemaking perspective**

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INTRODUCTION

The literature on corporate social responsibility (CSR) focus on many types of stakeholders outside of the organizations and outcomes relating to the customer-based and financial results. A new distinct approach in this research is considered to extend beyond this idea. Thus, this research focuses on sensemaking approach to explore the impact of internal CSR on employees. This research furthers understanding on how individual employees make sense of their internal organizational CSR activities. Four mainstream areas are outlined to explain the overview of the topic based on the key issues that drive this research to be studies: why this research is interesting and how this research problem is addressed. The four key areas in this research are: Sensemaking, Internal CSR, Meaningfulness at Work, Employee Outcomes.

RESEARCH BACKGROUND AND KNOWLEDGE GAPS

The first stream of this research is concerned with sensemaking theoretical perspective. According to the works of Carroll (1999); Lee (2008), CSR has been studied in academic areas based on the different theories over several decades. The common and core theories are institutional theory (Jonsson, 1997), stakeholder theory (Freeman, 2010), social exchange theory (Thomas & Iding, 2012), social identity theory (Onkila & Sarna, 2021). Although studying CSR is gradually increasing in numbers, much of articles have been carrying out replication of formal CSR theories. It is time to move beyond these traditional theories and let an evolutionary theory emerge. Hence, this research employs sensemaking. Weick (1995) defined sensemaking as a process in which individuals give meaning to their ongoing experiences. Individual employees search meaningfulness at work through their organizational CSR (Anguinis & Galavas, 2019). This research proposes a conceptual framework based on the work of Anguinis and Galavas to understand the impact of internal CSR on employees though experiencing meaningfulness at work.

The second stream of this research is viewing CSR from the internal dimension. According to the stewardship theory, multiple stakeholders are divided into external and internal stakeholders who are managed under the external and internal CSR activities (Werther & Chandler, 2010). External CSR refers to practices focused on the consumers, local society, and environment (El Akremi, Gond, Swaen, De Roeck & Igalens, 2018). On the other hand, internal CSR refers to practices toward the internal workforce (i.e., employees). Reviewing the previous CSR papers, most studies focus CSR from the external dimension such as CSR activities to customers, shareholders, society, and environment, etc. Considering internal CSR in the forthcoming studies is an opportunity to fill the knowledge gap in the literature (Kim, Nurunnabi, Kim & Jung, 2018; Nazir & Islam, 2020). As employees are one of the key stakeholders, firms should take the responsibility of employee well-

beings at work (Peloza & Shang, 2011; Onkila & Sarna, 2021). Therefore, this research contributes internal CSR for the purpose of employee wellbeing at work.

The third stream of this research considers employee outcomes as a result of the impact of internal CSR activities. Employee outcomes are significant to study and there are three reasons why considers employees outcomes in this research. First, the attention of CSR has received either been on customer-based outcomes (Ahn, 2019; Jeon, Lee & Jeong, 2020; Martinez, Perez & Rodriguez del Bosque, 2014), or firms' financial performance (Franco, Caroli, Cappa & Del Chiappa, 2020). Second, some papers are calling to examine the interfaces of CSR and of their implications for internal employee which could be more systematically explored in future CSR research (Chiu & Hackett, 2017). Third, employees are the main workforce of the organizations' long-term sustainability. According to Turker's (2009), internal CSR initiatives will affect the behavioural and job-related outcomes of employees (Farooq, Payaud, Merunka & Valette-Florence, 2014; Hofman & Newman, 2014; Kim, Song & Lee, 2016). Because of three reasons above, employee outcomes are becoming the main consideration for this research as a result of the impact of internal CSR activities.

The final stream of this research is integrating individual level sensemaking with the organizational level CSR activities. The study of CSR is generally fragmented from the view of different levels such as the macro level (institutional and organizational level) compared to the micro level (individual level) (Aguinis & Glavas, 2012). Throughout the diverse CSR literature, it is uncovered that scholars generally consider particular elements at a single level analysis at a time. For example, scholars who prefer studying institutional and organizational levels focus more on institutional factors such as normative elements (stakeholders), cultural-cognitive elements (society), and regulative elements (laws and standards) (Scott, 1995) to engage CSR activities. On the other hand, researchers who are interested in studying at the individual level analysis generally draw upon individuals' psychological factors to be awareness of CSR. As a result, a single level analysis of CSR studies is rich and saturated in the literature and accordingly, there is a need for multilevel analysis in which the diverse extant literature can be integrated and synthesized in a coherent and comprehensive manner (Aguinis & Glavas, 2012). Therefore, it is time to build a bridge between macro and micro level analysis in order to contribute multilevel model in the CSR literature. Therefore, this research shows an integration between macro and micro level with the help of mediator; individual employees make sense of their internal organizational CSR activities and resulting outcomes for themselves.

CONCLUSION

Thus, this research approaching to CSR offers a new insight into the literature by offering a conceptual framework that explain to understand how employees make sense of their internal organizational CSR activities, which lead to outcomes for themselves. Moreover, this research also contributes an integration between macro level and micro level CSR analysis; how individual employees makes sense of their internal organizational CSR activities. In addition, this research model serves as a guide for future research to explain how employees experience CSR and meaningfulness at work and resulting in more or less positive outcomes for themselves.

DXB264**PRODUCER ORGANISATIONS: THE FUTURE OF SHGs****Aparna Saraf**

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Abstract

Microfinance through Self Help Groups has emerged as one of the key tools in poverty alleviation in India. The SHG Bank Linkage programme of NABARD is three decades old and has grown in leaps and bounds. The journey that began just to meet the typical credit needs of the poverty struck population facilitated success stories of economic and social empowerment. SHGs are being used as a technique for overall development of Indian population largely living in rural areas; may it be for watershed programmes, agricultural growth, development in sectors of health, hygiene, sanitation, education etc.

There has been a lot done by the Government, policy makers and authorities in provisioning welfare of the population. These efforts have surely brought in a commendable change. According to the Global Multidimensional Poverty Index (2022) 415 million people in India came out of the shackles of poverty in 15 years, Multidimensional Poverty Index value and incidence of poverty has more than halved. Despite these efforts a substantial part of India even today faces issues and challenges of poverty, unemployment, illiteracy, economic inequality and gender disparity. As per the MDP Index it is found that of the total poor population of 229 million a huge chunk of 90 percent (205 million) live in rural areas. This points out the stark reality and a tough challenge which calls for urgent attention.

According to various research studies the spread of entrepreneurial acumen within the populace especially rural can help mitigate the severity of the rural problems. Efforts have also been directed towards promoting entrepreneurship within the rural belts of India. However, the gap still persists. Here, the SHG-movement can be a handy solution. In India an impressive number of Self-Help groups (SHGs) are working at the grass root level majorly in rural India on the principles of cooperation, solidarity and joint responsibility.

This paper is an attempt to understand the working of Self-Help Groups, their development and their future.

I. Introduction

Modern India is today talking of becoming a Trillion-dollar economy. The dream undoubtedly can be achieved only with inclusive development. Inequalities, gaps and differences in social, economic and political diasporas is surely not going to facilitate achieve the set goals. As per the early figures of Census 2021 a whopping 90 crores of Indians reside in rural areas. As per the Multidimensional Poverty Index published by UNDP in 2022 incidence of poverty in India fell from 55.1 percent in 2005-06 to 27.7 percent in 2015-16 and further to 16.4 percent in 2019-20. Although these declining figures are a relief the report further states that the percentage of people who are poor is 21.2 percent in rural areas compared with 5.5 percent in urban areas. Rural areas account for nearly 90 percent of poor people, 205 million of the nearly 229 million poor people live in rural areas —making them a clear priority. Consequently, it is mandatory that concrete steps need be taken towards upliftment of the poverty struck population based in rural areas. Providing such populace with subsidies, concessions or monetary aid under certain schemes can only be a temporary solution. Its time to design and implement a permanent remedy.

A famous proverb goes as '*Give a man a fish, and you feed him for a day. Teach a man to fish, and you feed him for a lifetime.*' This is exactly what the present India in rural areas needs. It is time these 229 million people are upskilled and equipped to be self-sufficient. To reach out to these poor people Self Help Groups can be one of the key strategies.

II. Objectives

The objectives of the present study are:

- a. To understand the working of SHGs
- b. To analyse the growth and spread of SHGs in India
- c. To understand the potential of SHGs in inclusive development
- d. To identify the future of SHGs.

III. Self Help Group Movement in India

With an objective of extending the banking services to the unbanked population of India, the microfinance philosophy was implemented in India through NABARD's flagship programme of SHG-Bank Linkage in 1992. Self Help Groups (SHGs) are devised as the important vehicles of microfinance.

According to NABARD:

“Self Help Group (SHG) is a small voluntary association of poor people, preferably from the same economic background. They come together for the purpose of solving their common problems through self-help and mutual help. The SHG promotes small savings among its members. The savings are kept with a bank. This common fund is in the name of the Self Help Group. Usually, the number of members in one SHG does not exceed twenty”.

The SHG philosophy propagates the principle of self-help first and then mutual help as well. When working in group it also provides for help to others. It is commonly observed that the SHGs are formed initially on areas of common interest that enable the group members to unidirect their efforts for their development. They function on the principle of co-operation and provide for a forum for members to extend support to each other. It enables the members to co- operate and work in a group environment.

IV. Features of Self Help Groups

Generally, Self Help Groups encompass several activities of men and women but the Indian focus is on financial aspects of SHGs. Ideally SHGs are expected to develop a discipline in the lives of the members of the group. This discipline is mainly the financial discipline which brings along social and economic discipline as well. The salient features of Self Help Groups are as enlisted below:

Homogeniety

It is sharing similarities, like similarity of gender, caste etc. In most cases it is gender similarity that is dominant in the formation of Self Help Groups. Homogeneity is also observed in terms of economic status and interest.

Regular Thrift

This is an important feature of Self Help Groups. Small saving on a regular basis is the key to success of any Self Help Group. This develops the habit of saving on a regular basis among the members.

Regular Meetings

Self Help Groups are also characterized with regular meetings of the members of the groups. These meetings held normally once in a fortnight or month provide a common place for the members to discuss over their common concerns so as to ventilate their narrow feelings.

These meetings add to the better understanding and cohesiveness among the group members. Meeting, being held in the non-working hours, can be conveniently attended by all. These regular

meetings act as an important pillar for social empowerment of the group members.

Internal Lending

The Self Help Groups once get habituated to savings; they begin with the internal lending. This is lending within the group from the amount collected by the group. This is done as per the norms laid down at the time of establishment of the group.

Linkage

Self Help Groups are further linked with banks – the lending institutions. The formation of Self Help Groups is many times the deciding factor regarding linkages. The Self Help Groups may be directly linked with the banks or may be through the NGOs or the Micro Financing Institutions. These forward linkages provide for credit to the group, which in turn distributes the loan among the members of the Self Help Group.

V. Growth of Self Help Groups in India

As per the report on status of Microfinance published by NABARD, the SHG-Bank Linkage programme is the world's largest microfinance programme. The programme today covers 14 crore families, 119 lakh SHG groups having cumulative savings of INR 47240.48 crore as on 31 March 2022. The credit linkage is also impressive with almost 34 lakh SHGs being credit linked during FY 2021–22 (as against 29 lakh groups in 2020-21) and loans worth INR 99,729.23 crore disbursed. The credit outstanding as on 31 March 2022 is INR 1,51,051.30 crore for 67.40 lakh SHGs (an average of INR 2.24 lakh per SHG).

The table 1 given below summarises the growth of SHGs over last three years. It can be clearly understood from the figures that the SHG movement has brought more than 14 crore families in the mainstream which otherwise were deprived of formal financial and credit system. It also indicates that almost 119 Lakhs of SHGs that are operating in India are providing a platform to it's members to come together and discuss financial as well as social issues confronting them. These figures clearly indicate the panoramic spread of SHG-movement.

Table 1: Progress under SHG-Bank Linkage Programme: 2019-20 to 2021-22

(in lakhs/ amt. in crores)

	Particulars	2019-20		2020-21		2021-22	
		No. of SHGs	Amt.	No. of SHGs	Amt.	No. of SHGs	Amt.
SHG savings with Bank as on 31st March	Total SHG Nos.	102.43	26152.05	112.23	37477.61	118.93	47240.48
	All Women SHGs	88.32	23320.55	97.25	32686.08	104.05	42104.77
	% of WSHGs	86.22%	89.17%	86.65%	87.21%	87.45%	89.13%
Loans disbursed to SHGs during the year	Total No. of SHGs extended loans	31.46	77659.35	28.87	58070.68	33.98	99729.22
	All women SHGs	28.84	73297.56	25.9	54423.13	31.50	93817.21
	% of WSHGs	91.67%	94.38%	89.71%	93.72%	92.70%	94.07%

Source: Report on Status of Microfinance (2021-22), NABARD

Although the growth of SHGs has witnessed phenomenal rise in three decades it is still observed to be skewed with Southern India taking a major stake in it (table 2). The eastern region with predominant state of West Bengal is also contributing to the skewed growth. The southern & Eastern regions account for more than sixty percent of the total SHGs in India. This disparity needs to be duly addressed.

Table 2: Region-wise progress of Saving Linked SHGs with Banks (2019-2020 to 2021-22)

(Amt.in lakh)

Regions	2019-20		2020-21		2021-22	
	No. of SHGs	Savings Amt.	No. of SHGs	Savings Amt.	No. of SHGs	Savings Amt.
Northern	577122	59550	609808	174345	680143	199582
North Eastern	556899	48141	633714	83126	680845	106441
Eastern	2811130	664333	3122424	774912	3243980	1358595
Central	1135083	171217	1345575	211870	1355564	325696
Western	1473853	201880	1550176	374023	1688451	327691
Southern	3689236	1470085	3961703	2129485	4244070	2406043

Source: Report on Status of Microfinance (2021-22), NABARD

VI. Review of Literature

There are various studies in the field of microfinance and SHGs that have time and again highlighted their significance and scope in inclusive development. Some significant studies referred for the research are:

In 1998 Naila Kabeer observed the effectiveness of credit in addressing the needs and priorities of the poor as well as in empowering women. The study reveals the impact of participation in micro enterprise services of the SEWA bank in Ahmedabad. The study also provides preliminary indications of the nature and magnitude of benefits resulting from participation.

Manimekalai and Rajeshwari (2002) in their study of SHGs in Tamilnadu found that the women members of SHGs who started their own small businesses like tailoring, animal husbandry, petty shop etc. were contributing more than fifty percent of their earnings to their households. They further observed that though women were supporting the families financially, their voices were not heard in core familial decisions like education and weddings of their children, purchasing assets etc.

Lalitha and Nagarajan (2002) observed in 2002 that in India, microcredit studies done on self- help groups dealing with income generating activities have noted positive profit levels and short payback periods for loans. Earnings generated from such undertakings have been instrumental in increasing the physical wellbeing of the household.

Ferdousi, (2015) assessed the role of microfinance institutions in facilitating the growth of micro-entrepreneurs by assisting them with the necessary support and sufficient guidance in relation to innovative methods, market trends and latest technologies to be implemented for business growth and development. The study highlighted on the need for the microfinance segments to support the small level entrepreneurs by educating them with some effective business knowledge. It has further emphasized on the necessity to upgrade skills of the small business owners along with the financial support in order to develop a sustainable business setup for them.

Saraf A (2015) in her study assessed the expanding role of microfinance and SHGs in rural development. She pointed out in her study that SHGs are not only vehicles of economic

empowerment but are also emerging as a solution for mitigating various rural challenges. In her paper she has discussed a case of SHG that formed a SEG and how the income generated was used for water conservation and Ali & Mughal, (2019) made an analysis that monetary assistance offered by microfinance units can deliver fruitful results only when it is complemented with a sense of knowledge to run a business in an effective manner. This study has specifically identified the importance of developing managerial as well as non-managerial skills in a small level entrepreneur in order to make him/her good enough for completely utilising the growth opportunities availed from the financial benefits of a micro-banking system.

It can be clearly understood from these research studies that the dream for inclusive development can be achieved through promotion of entrepreneurship among the rural and poverty ridden segments of society. The studies have also observed the need for financial support as well as appropriate training for skill upgradation.

VII. Self Help Groups to Self Enterprising Groups

The SHG-Bank Linkage programme (SBLP) of NABARD has successfully completed three decades. These thirty years have witnessed a phenomenal growth in the SHG-Bank linkages. The program was initially started with an objective of banking the unbanked. Consequently the SBLP focused on meeting the credit needs of the poor. Many studies have pointed out that the existing banking structure did not permit to reach the poor and fulfill their credit requirements. Here the Microfinance intervention worked wonder. Microfinancing helped provide the micro credit needs of the unbanked people. It gradually brought them under the formal banking structure though not individually but through SHGs. This helped better the lifestyle of the members of SHG. Microfinance thus emerged as an effective tool for socio-economic empowerment. Since 80% of the SHGs were women SHGs this initiative also provided for overcoming the gender disparities. Entrepreneurial talents and capabilities are latent in all communities, their translation to innovative action depends on appropriate stimuli and environment and these stimuli can be generated through training (Rajani 2008). Almost after fifteen years of inception of SBLP, NABARD directed its efforts partially towards enterprise development within the SHGs. The MEDP and LEDP schemes of NABARD are trying to develop entrepreneurial skills within the mature SHGs.

A. Joint Liability Groups

In 2005-06 NABARD introduced Joint Liability Groups (JLGs). These are informal groups of 4-10 members engaged in similar economic activities and willing to jointly undertake to repay the loans taken by the groups. Basically, JLGs are credit groups where savings by the group is voluntary and their credit needs are met through loans from the financial institutions and the loans are extended to both individual members of JLGs as also to the group. In 2005-06 NABARD undertook a pilot project of financing of JLGs. The success of the project led to JLG promotion. A total of 54.09 lakhs of JLGs were promoted during the year 2021-22. Cumulatively, JLGs promoted stand at 187.92 lakh as on 31 March 2022, with a net growth of 40% over 2020-21. In terms of cumulative JLGs promoted as on 31 March 2022, Southern states recorded the highest growth at 49% followed by Western states at 48% (Report on Status of Microfinance, 2021-22, NABARD)

B. Micro Enterprise Development Programme (MEDPs)

NABARD sensed the need for capacity building of SHGs. Hence from 2006 it started supporting need-based skill development programmes (MEDPs) for matured SHGs which already have access to finance from Banks. MEDPs are skill development training programmes mainly directed to bridge the skill deficits or strengthen the production activities already pursued by the SHG members. Here NABARD extends grant to eligible training institutions and SHPIs to provide skill development training either in agriculture or farming as also in non- farm and service sectors. This ultimately leads to establishment of micro enterprises either on individual basis or on group basis. Over the years around 3.47 Lakh SHG members have been covered through 12,531 MEDPs. Given the overall expanse of SHGs in India this figure needs to be upscaled by increasing the number of MEDPs.

C. Livelihood and Enterprise Development Programmes (LEDPs)

Various studies conducted by NABARD as well as other researchers have pointed out that skill upgradation trainings alone have limited impact on livelihood creation among the SHG members. Hence NABARD undertook measures to create sustainable livelihoods among SHG members and to attain optimum benefit out of skill upgradation. For this a new scheme Livelihood and Enterprise Development Programme (LEDP) was designed and launched in December 2015. LEDP aims to conduct livelihood promotion programmes in clusters. It provides intensive training for skill

building, refresher training, backward-forward linkages and handholding & escort supports. It caters to the complete value chain and offers end-to-end solution to the SHG members.

The skill upgradation training is provided in batches of 25-30 members and covers agricultural & allied activities as well as rural off-farm sector activities. Cumulatively, LEDP programmes have covered 1.06 lakh SHG members (under FIF) till 31 March 2022.

VIII. Producer Organisations

Rondot (2001) defined “The producer organizations (POs) are formal rural organizations whose members are smallholder farmers who organize themselves with the objective of improving farm income through improved production, marketing, and local processing activities. In India, the Companies Act, 1956 was amended in 2002 to allow for incorporation of producer organisations on the basis of the recommendations of a high-powered committee chaired by Y K Alagh (Government of India, 1999).

The Government has identified farmer producer organization as the most appropriate institutional form around which to mobilize farmers and build their capacity to collectively leverage their production and marketing strength (GoI, 2013). According to the Ministry of Agriculture and Farmers welfare around 5000 Producer Companies were established in India till 2020. Of these 5000 POs a major 42% are promoted by NABARD.

Studies have indicated that farmers of India are good producers but they face difficulties in proper marketing of their farm produce. This is mainly because of unavailability of markets in rural areas and poor marketing skills of farmers. One of the potential alternatives for efficient marketing is mobilizing farmers for group action, for arranging inputs and collective marketing so as to benefit from economies of scale (Sahu,2014). Producer organisations (POs) are widely heralded as leading contributors to poverty reduction and achievement of food security (FAO, 2010).

Ground level Studies have pointed out some significant challenges faced by POs. One of the major challenge being the difficulty in convincing farmers to become members of POs. Since the POs have less number of members this in turn affects the capital mobilization and consequently restricts the spread of activities that can be undertaken by the PO. Also lack of management skills and limited exposure to entrepreneurship and business development have affected the survival of POs.

(Rajesh Kumar Bishnoi et al, 2020). These challenges need to be duly addressed through the existing structures and mechanisms.

IX. Weaving the Ecosystem

The abovegiven discussion clearly indicates that over a period of time NABARD has undertaken variety of measures for inclusive development mainly through Self Help Group movement. SHGs have witnessed an exponential growth within last three decades. From a meagre 300 SHGs in 1992 the movement has shaped to 119 lakh SHGs all over India. More than 80% of these SHGs are women SHGs. MEDPs, LEDPs are commendable interventions by NABARD for skill development and micro-enterprise promotion. According to Ankur Baruah, Director INSPRA, Ahmedabad, ‘Micro finance has immense potential to alleviate poverty and provide sustainable livelihood to millions of people. However, the sector is underperforming in terms of livelihood creation than addressing the consumption needs. There is a need for integrating opportunities, skill and financial needs of the poor with micro finance services.’ Hence the micro-enterprise development objective now needs to be revised and the SHG tool duly fuelled with microfinance should be upgraded.

In the recent years NABARD has contributed extensively in formation of the Farmer Producer Organisations. All these efforts, though undertaken separately, are ultimately leading towards achievement of common goals of poverty alleviation, rural development & inclusive growth. The following model Self Help Producer Organisations (SHPOs) is suggested for developing an ecosystem wherein the strengths of microfinance, SHGs and POs can be linked for an exponential impact.

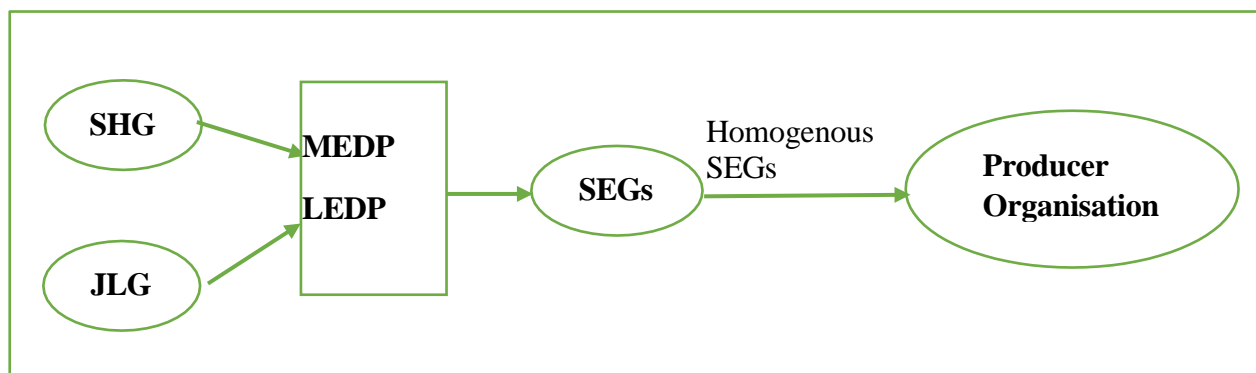


Figure 1.1: Model suggested by author

The model proposed above is an attempt to provide with a future linkage for SHGs and a backward linkage for Producer Organisations. Mature and active Self Help Groups or Joint Liability Groups can be provided with entrepreneurship training through the NABARD promoted MEDPs and LEDPs and transformed into Self Enterprising Groups. The SEGs manufacturing similar products within nearby areas then can be made to join hands for formation of Producer Organisations. This will help the SHGs avail the benefits of united efforts, economies of scale, larger markets and consequently higher profitability and longer survival rate. Simultaneously the major challenge faced by POs i.e of difficulty in getting membership can be overcome. Initially when 10-15 SHGs join hands the PO can be established with a membership of minimum 150-200 members. This can later be increased by adding more SHGs and JLGs. And if these are SEGs it will be of larger ease and benefit. Mainly because

the members of SEGs are already equipped with necessary business skills. Hence the POs so formed can run their activities smoothly.

NABARD is already doing a commendable job in promotion of SHGs, JLGs as well as Producer Organisations. It is only required to synchronise its efforts being made distinctively within each of these areas. This ecosystem can generate following benefits:

- e. Cumulative development
- f. Strength of united efforts
- g. Benefits of Economies of scale
- h. Benefits of expertise
- i. Ease of Marketing
- j. Better financials
- k. Higher rate of survival

X. Conclusion

The SHG-Bank Linkage program is the largest microfinance intervention of the world. SHGs have led to cohesive development of a huge part of the population. Microfinance has brought the unbanked poor within the mainstream of formal banking structure. SBLP did not stay restricted to formation of SHGs and financial inclusion but gradually through programmes like Micro Enterprise

Development and Livelihood & Enterprise Development it provided for income generation for the SHG members; thus, providing for inclusive development. In furtherance of efforts for achieving the SDGs the SBLP can be linked with the Producer Organisation initiative of NABARD. The challenges faced in establishing POs can be substantially mitigated by way of the strengths of homogeneity, solidarity and regularity of SHGs.

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EMPOWERING OF FARMERS THROUGH AGRICULTURAL CROP INSURANCE SCHEMES IN INDIA**Prof. Farah Naaz Gauri**

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ABSTRACT:

Crop insurance is necessary for the farmers to protect them against financial issues. Crop insurance is indispensable for the prosperity of farmers and policy instruments to deal with the perils present in agriculture. But the implementation of Crop insurance largely depends on the farmer's attitude. The present study discusses the outcomes of the study in the area of crop insurance. It measures the present situation of crop insurance schemes and Problems of crop insurance, examines the Attitudes of farmers towards crop insurance

Key Words: *Crop insurance, Farmers awareness, Attitude, Problems and policy.*

INTRODUCTION:

Agriculture plays a vital role in India's economy. Over fifty eight per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product. Agriculture being the function of physical, socio-institutional, techno-economic factors, which are dynamic in nature, keeps on changing with the basis objective of increasing production and generation of food grain surplus. Agriculture in India is highly susceptible to risks like droughts and floods. Farmers have developed risk management strategies to cope with these adverse events, sometimes with the assistance of the governments. It is necessary to protect the farmers from natural calamities and ensure their credit eligibility for the next season. For this purpose, the Government of India introduced many agricultural schemes throughout the country. Pooling in the important learning from all the earlier schemes and taking into consideration of access to technology in the recent days, Pradhan Mantri Fasal Bima Yojana promises to take care of the loopholes of earlier schemes.

SIGNIFICANCE OF THE STUDY:

The present study is significant for potential beneficiaries from those villages which have not much awareness of crop insurance scheme. It will also helpful to small and marginal farmers to protect their interest in crop against natural calamities and getting benefits under this scheme. It will also assist the insurers, bankers & policy makers for policy prescription & policy intervention.

REVIEW OF LITERATURE:

Duhan (2017) studied farmers perception towards crop insurance schemes and found out that lack of awareness should be removed and knowledge is essential for better implementation of these schemes, farmers perceive premium to be high and claims to be low. Farmers also want that all crops should be covered not a few selective ones. They don't like time and amount of claim.

Karthik (2013) in his research titled "A study on crop insurance in Madurai district" that in spite of the schemes introduced periodically in India for agriculture insurance has not ensured the purpose. Crop insurance coverage in terms of area, database of farmers and agricultural output is not sufficient enough; payment of indemnity based on area approach has settled the claim for unaffected farmers. Government should take initiatives to redesign by providing appropriate mechanisms and providing financial support for agricultural insurance. Providing similar help to private sector insurers would also provide a provision to increase insurance coverage and viability of the insurance schemes over time.

Studies have revealed that farmers expressed negative perception and attitude towards agricultural insurance. However, evidence from literatures also shows that, some insurance programmes are perceived positively by farmers. Mojarradi, Zamani, and Zarafshan, (2008) used path analysis to test for exogenous variables, perception towards agricultural insurance as an intervening variable and attitude towards agricultural insurance as the dependent variable. They reported that farmers had positive attitude towards private crop insurance agents also.

Garforth (2005) used stated attitude to measure how good or bad the respondent felt it would be to take out insurance for their farm to cover against consequential losses. The findings indicated that the stated attitude of the whole sample was neutral to slightly positive.

Yazdanpanah, et al. (2009) attributed farmers' satisfaction with crop insurance to several factors; commitment to bank and quality of services for farmers insured previously, and bank image, quality of service for currently insured farmers, quality of service, and indemnity for all farmers.

Rostami, et al. (2007) showed that several individuals, economic, and social factors influence farmers' attitude toward agricultural insurance. The most important factors in this area are education, area of lands used and diversity in production, risk aversion, and type of ownership.

OBJECTIVES OF THE STUDY:

1. To study the crop insurance schemes in India.
2. To study the farmers Attitude towards crop insurance schemes in India
3. To study the problems faced by farmers in crop insurance in India

RESEARCH METHODOLOGY:

Area of the study: The research study was done in India.

Nature and source of data: The present study is exploratory in nature, the study is based on questionnaire method; primary data has been collected from various farmers in India and the secondary data have been collected from related journals, magazines and textbooks.

Statistical tools used for the study: Simple percentage analysis and likert scale.

Sampling used: 800 farmers were selected by convenience sampling method.

CROP INSURANCE SCHEMES IN INDIA:

Pilot Crop Insurance Scheme: (PCIS) (1979-1980) General Insurance Corporation in collaboration with the state government introduced this scheme in 26 areas of Gujarat, 23 areas in West Bengal and 17 areas in Tamil Nadu. Subsequently it was extended to other states. The scheme covered Cereals, Millets, Oilseeds, Cotton, Potato, Gram and Barley. The scheme covered 6.27 lakh farmers who paid premium worth Rs. 195.01 lakhs. The claims paid Amounted to Rs. 155.68 lakhs with claim premium ratio of 0.80.

Comprehensive Crop Insurance Scheme: (CCIS) (1985-1999) Comprehensive crop insurance scheme was an extension of PCIS. It was made compulsory for loanee farmers and was implemented by GIC. The premium rates were 2 percent of the sum insured for cereals and millets, and 1 percent for pulses and oilseeds. The union government and the state government shared premium and claims in the ratio of 2:1. Small and marginal farmers received 50% premium subsidy. The limit of sum insured was pegged at Rs. 10,000/- per farmer per hectare. The participation by states was on voluntary basis. The Government of India under the scheme was reimbursing 50 percent of administrative expenses to GIC.

Experimental Crop Insurance Scheme: (ECIS) (RABI 1997-1998) This scheme was introduced on an experimental basis to additionally cover non-loanee small / marginal farmers in 14 districts of five States. It entailed 100 percent premium subsidy for small / marginal farmers. The scheme covered 4.55 lakh farmers who paid Rs. 2.84 crore as premium and collected claims worth Rs. 37.80crore. This resulted in a fairly high claim premium ratio of 13.31.

Farm Income Insurance Scheme: (FIIS) (2003-2004) to take care of variability in income arising out of fluctuations in the yield and market price, the government introduced a pilot project, viz. Farm Income Insurance Scheme (FIIS) during Rabi 2003-04 seasons. The objective of the scheme was not only to protect the income of the farmer, but also to reduce the government expenditure on procurement at Minimum Support Price (MSP). The other main objectives were to encourage crop diversification and also to give fillip to private trade, etc.

National Agricultural Insurance Scheme (NAIS): The National Agricultural Insurance Scheme (NAIS) was initiated in the year 1999-00 by redesigning an existing insurance scheme called the Comprehensive Crop Insurance Scheme of India (CCIS), which operated in the country since 1985. The NAIS provides insurance cover for yield losses of food crops, oilseeds and annual commercial/horticultural crops due to natural calamities, pests and diseases. For Food crops and oilseeds: ranges from 1.5 to 3.5 per cent of SI or actuarial rates, whichever is less Annual Commercial and horticultural crops: actuarial rates Varies depending on the shortfall of actual yield from the threshold yield in the unit area of insurance and the sum insured by the farmers.

Weather Based Crop Insurance Scheme (WBCIS): The Weather Based Crop Insurance Scheme (WBCIS) was introduced by the Government of India in 2007-08 on a pilot basis in selected areas of a few States. The introduction of WBCIS was based on the fact that a similar scheme piloted by the Agriculture Insurance Company of India (AIC) since 2004 was argued to have distinct advantages over NAIS. WBCIS is based on deviation of weather parameters (such as rainfall, humidity, frost and temperature) from the desired value in a period in the insurance unit. In 2009-10, the scheme covered about 30 crops in 13 States during Kharif and 11 States during the Rabi season. In areas and crops where WBCIS is being implemented, NAIS is not available to farmers. Also, as in NAIS, for areas and crops for which the scheme is implemented, participation is compulsory for loanee farmers and is optional for others. For Food crops and oilseeds: ranges from 1.5 to 3.5 per cent of SI or actuarial rates (capped at 10 per cent for kharifand 8 per cent for Rabi), whichever is less Annual Commercial and horticultural crops: ranges from 2 to 6 per cent of SI (actuarial rates capped at 12

per cent) Varies depending on the difference between the actual value and the trigger value of the weather parameter and the cost of inputs per unit area declared by AIC

Pradhan Mantra Fasal Bima Yojana (PMFBY): launched on 13 January, 2016 is a branch new insurance scheme of the central government. The scheme which is administered by the ministry of Agriculture and farmers' welfare will be implemented in all the states with the cooperation of the respective state governments. The scheme targets at providing a better insurance support to the farmers by low premium insurance cover. The new crop insurance scheme removes the capping on premium subsidies when compared to earlier schemes. It also covers risks like post-harvest losses, preventive sowings and many localized calamities like cyclones, which were excluded in most of the earlier schemes. Giving high priority to awareness creation is also a welcome step in this scheme.

ANALYSIS AND INTERPRETATION:

Table No. 1
Awareness of farmers about crop insurance

Sr. No	Awareness	No. of Respondents		Percentage	
		Yes	No	Yes	No
1.	Do you know the information about crop insurance?	572	228	71.5	28.5
2.	Do you know the procedure of taking crop insurance?	516	284	64.5	35.5
3.	Need for arrangement of workshop/orientation program?	596	204	74.5	25.5

Source: Field Survey

Out of total respondents 71.5% know what is crop insurance? But only 64.5% farmers know the procedure of insuring crop. It is indicate that farmers are aware about crop insurance. 74.5% respondents are said that there is a need of arranging such type of program.

Table No. 2
Source of information

Sr. No.	Source	No. of Respondents	Percentage
1.	Bank/Financial Institution	296	37
2.	Newspaper/TV./Radio	224	28
3.	Agri. Department	72	9
4.	NGOs or any other agency	18	2.25
5.	Fallow Farmers	190	23.75
	Total	800	100

Source: Field Survey

The above table shows that, out of 100 numbers of respondents 37% farmers came to know about this crop insurance through bank and financial institution, 28% through Newspaper/TV/Radio, 9% through Agri. Department, 23.75% through fallow farmers.

Table No. 3
Reasons for availed Crop Insurance

Sr. No	Reason	No. of Farmers	Percentage (%)
1	Protect against losses	263	32.87
2	Compulsory by bank	197	24.63
3	Financial security	227	28.37
4	Low premium	113	14.13
	Total	800	100

Source: Field Survey

The Table 3 reflects that protection against losses is foremost reason for availed crop insurance among most (32.87 %) of the farmers. 28.37 % of the farmers availed crop insurance with the intend to get financial security and 14.13 % of the farmers' purchased because of low premium and 24.63 % of them avail crop insurance schemes due to compulsion from the bank.

ATTITUDE OF FARMERS TOWARDS CROP INSURANCE SCHEME:

In the Likert scale, the farmers were asked to respond to each of the statements in terms of five degrees usually as – a) Strongly Agree b) Agree c) No Opinion or Undecided d) Disagree and e) Strongly Disagree. These five points constitute the scale. Each point on the scale carries a score. The answers supporting the statement 'fully' are given the maximum score of five, while the answers on the other end receive a score of one. At one extreme of the scale there is strong agreement with the

given statement and at the other, strong disagreement, and between them lie intermediate points. Then all the score values are totaled for each question and the total score for each question is divided by the maximum possible score and multiplied into one hundred (in terms of percentage). Thus, the final score represents the extent of the support to the statement mentioned in the question. If the final score is more than 75 per cent, then it is said to be that there is strong agreement to the given statement. If it is 50 to 75, there is agreement and if it is less than 50 it shows disagreement to the given statement. In the above said ways, the attitudes of farmers are analyzed by the researcher for the purpose of this study.

In this study, for analyzing the attitude of farmers towards crop insurance scheme, 8 statements are placed before the respondents. The sample respondents of India are asked to state their opinion towards these 8 statements. With a view to finding out the opinion, the respondents are asked to indicate whether they strongly agreed or agreed or no opinion or disagreed or strongly disagreed about the given statements. For eliciting the responses the following statements are given to them in the sample study: Protects against loss or damage of crops, Gives financial security, It helps in reducing the risks, Provides guarantee for the banker, Premium rate is reasonable, Quick settlement of claims, Easily accessible through bank and Structured compensation pay-outs.

Table No.4.1
Assessment of Farmers' Attitude towards the Statement
“Protects against Loss or Damage of Crops”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	231	1155
Agree	4	359	1436
No. Opinion	3	103	309
Disagree	2	87	174
Strongly Disagree	1	20	20
Total		800	3094
Final Score %		77.35	
Mean Score		9.67	

Source: Field Survey

From the Table 4.1 it is clear that farmers have a favorable opinion towards the crop insurance schemes statement, viz. “protects against loss or damage of crops”. The final score in respect of the farmers is 77.35 per cent and mean score is 9.67. It is inferred that as the farmers' agreement is more

than 75 per cent in all the cases, the statement ‘crop insurance protects against loss’ is strongly agreed by majority of respondents.

Table No. 4.2
Assessment of Farmers’ Attitude towards the statement
“Gives Financial Security”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	223	1115
Agree	4	336	1344
No. Opinion	3	181	543
Disagree	2	46	92
Strongly Disagree	1	14	14
Total		800	3108
Final Score %		77.7	
Mean Score		9.71	

Source: Field Survey

It is discernible from the Table 4.2 that a majority of respondents have a favorable attitude towards the statement. The score given by the sample farmers for the statement is around 77.7 per cent of farmers and thus it is strongly agreed. The computed mean score works out to 9.71 for farmers.

Table No. 4.3
Assessment of Farmers’ Attitude towards the Statement
“It Helps in Reducing the Risks”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	146	730
Agree	4	349	1396
No. Opinion	3	172	516
Disagree	2	133	266
Strongly Disagree	1	-	-
Total		800	2908
Final Score %		72.7	
Mean Score		9.08	

Source: Field Survey

It is understood from the Table 4.3 that the statement “it helps in reducing the risks” has been agreed by the farmers. The calculated final score comes to 72.7 per cent farmers.

Table No. 4.4
Assessment of Farmers' Attitude towards the Statement
“Provides Guarantee for the Banker”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	196	980
Agree	4	287	1148
No. Opinion	3	169	507
Disagree	2	129	258
Strongly Disagree	1	19	19
Total		800	2912
Final Score %		72.8	
Mean Score		9.1	

Source: Field Survey

Table 4.4 highlights the opinion of samples farmers towards provision of guarantee for the banker in case of default in payment. It can be inferred that 72.8 per cent of farmers have accepted the statement, i.e. “provides guarantee for the banker”. The mean score worked out to 9.1 scores respectively. It is concluded that agreement is seen from of farmers for the given statement by assigning less than 75 per cent total score.

Table No. 4.5
Assessment of Farmers' Attitude towards the Statement
“Premium Rate is Reasonable”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	132	660
Agree	4	273	1092
No. Opinion	3	114	342
Disagree	2	194	388
Strongly Disagree	1	57	57
Total		800	2539
Final Score %		63.48	
Mean Score		7.94	

Source: Field Survey

Table 4.5 reveals the opinion of respondents regarding the reasonability of crop insurance premium. It clearly shows that the majority of respondents have a favorable attitude towards the statement "premium rate is reasonable". The score obtained by this statement is 63.48 per cent of

farmers. The mean score in respect of this statement is 7.94 per cent respectively. It is observed from the above analysis that the premium rates are reasonable for the sample farmers.

Table No. 4.6
Assessment of Farmers' Attitude towards the Statement
“Quick Settlement of Claims”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	22	110
Agree	4	162	648
No. Opinion	3	146	438
Disagree	2	247	494
Strongly Disagree	1	223	223
Total		800	1913
Final Score %		47.83	
Mean Score		5.98	

Source: Field Survey

It is understood from the Table 4.6 that the sample farmers have disagreed with the statement “quick settlement of claims” which is evident from the above table by giving a final score of 47.83 per cent. The mean score in respect of this statement is 5.98 respectively.

Table No. 4.7
Assessment of Farmers' Attitude towards the Statement
“Easily Accessible Through bank”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	139	695
Agree	4	369	1476
No. Opinion	3	144	432
Disagree	2	137	274
Strongly Disagree	1	11	11
Total		800	2888
Final Score %		72.2	
Mean Score		9.02	

Source: Field Survey

The accessibility position of crop insurance through bank has been opined by the respondents and it is shown in the Table 4.7. It is observed from the above table that the majority of respondents have given a positive opinion towards the statement "easily accessible through bank" by awarding 72.2 per cent score by farmers. Positive Agreement is seen from the table by obtaining 72 per cent score for this statement from of farmers.

Table No. 4.8
Assessment of Farmers' Attitude towards the Statement
“Structured Compensation Payouts”

Attitude	Score Given	No. of Farmers	Total Score
Strongly Agree	5	72	360
Agree	4	186	744
No. Opinion	3	207	621
Disagree	2	329	658
Strongly Disagree	1	6	6
Total		800	2389
Final Score %		59.73	
Mean Score		7.46	

Source: Field Survey

The above Table 4.8 indicates that majority of the farmers have a favorable opinion towards the statement “structured compensation payouts” by giving a score of 59.73 per cent by farmers. Since the final score is more than 50 per cent, it is understood that there is an agreement among the sample farmers to the given statement.

PROBLEMS FACED BY FARMERS IN CROP INSURANCE IN INDIA:

Table No. 5
Problems faced by farmers in crop insurance

Sr. No	Problems faced by farmers	No. of Respondents	Percentage
1	The premium rate of crop was higher	258	32.25
2	Delay in settlement of claims	194	24.25
3	Lack of awareness	166	20.75
4	Premium is additional burden to the farmer therefore willingly they do not want to avail this facility	70	8.75
5	Time consuming procedures	112	14
	Total	800	100

Source: Field Survey

The higher rate of premium for crop was the major problem of the farmers. Another big problem of farmers is delay in settlements. The next problem reported by farmers is Lack of

awareness. Lastly near about 8.75 percent farmers say that it is an additional burden to them therefore willingly they do not want to avail this facility.

Table No. 6

Suggestions for Improvement in Crop Insurance Schemes of the Farmers

Sr. No	Suggestions for Improving Administration of Crop Insurance Scheme	No. of Farmers	Percentage (%)
1	Cover more crops	107	13.38
2	Individual Assessment	48	6.00
3	Reduce Premium	122	15.25
4	Quick settlement of claims	239	29.87
5	Gram Panchayat as a unit of loss assessment	115	14.37
6	Insurance service at doorstep / at village	112	14.00
7	CCE's in presence of villagers	57	7.13
Total		800	100.00

Source: Field Survey

The table 6 shows that the respondents made several suggestions for improving the existing scheme for crop insurance schemes. A majority of the farmers want quick settlement of claims. Above 13.38 per cent of the beneficiaries favoured that the crop insurance will extend to residual crops to improve the scheme. Some respondents also propose nearly 14.37 per cent the unit of loss assessment as a gram panchayat. Some 7.13 per cent of the farmers' opinion the farmers want Crop Cutting Experiments in their presence. 14.00 per cent farmers want insurance service at door step. 15.25 per cent respondents also proposed reduction in premium rate and 6.00 per cent farmers want Individual Assessment to make the scheme more farmers - friendly.

CONCLUSION:

Agriculture in India is highly susceptible to risks like droughts and floods. It is necessary to protect farmers from natural calamities and ensure their credit eligibility for the next season. For this purpose, the government of India introduced many agriculture crop insurance schemes throughout India. In this context, insurance companies are playing a major role to help the farmers. To encourage the farmers the insurance company should understand the needs of the farmers, but understanding farmers is complex, as it is related to psychology of farmers and also depends on various factors, which have a direct bearing on climatic changes.

In the research study it is observed that farmers have problems to claim the crop insurance, which was destroyed by natural calamity i.e. due to heavy rain or drought, it has shown below 50%.

It shows that government had crop insurance schemes but at the time of claim farmers are not satisfied with the schemes, also the study has observed that few compensations pay out on total crop destroyed by natural calamity. So the government should be very sensitive towards the farmers to get more than 75% claim on total insurance.

The study concludes that farmers play an important role in agricultural growth and the farmers should be made more satisfied.

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DXB289**Estimating Residential Water Demand in Lesotho and Policy Implications**

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ABSTRACT**Purpose**

In Lesotho, water has become a debatable subject, especially in the last few decades because there has been a gross mismatch between supply and demand, primarily in rural areas. Thus, it is necessary to carefully analyse decisions regarding the allocation of water resources. In this paper, an attempt was made to estimate the elasticities of residential water demand in both the short-and long-run in Lesotho by employing the ARDL approach through cointegration and error correction methods. It proposes a demand model for residential water by applying the Stone-Geary functional utility form, which views water consumption as either fixed or residual.

Research methodology

Residential water consumers in Lesotho are subjected to nonlinear pricing, with the same pricing schedule applied throughout all districts. In this pricing scheme, there are two types of charges: fixed and volumetric charges. The volumetric price is changeable and subject to four blocks of rising block pricing. In Lesotho, the Water and Sewage Company (WASCO) was the primary authority responsible for supplying clean drinking water and sanitation. WASCO splits Lesotho into 15 districts for administrative purposes, with decentralised billing and metering in these district offices. Therefore, this study used monthly time-series data from January 2015 to March 2018, whereby data from all WASCO districts were aggregated. Annual data on GDP per capita were sourced from the International Monetary Fund's (IMF) world economic outlook and disaggregated into a monthly series using the linear interpolation method (Maddala, 1977).

Findings

The results shows that price elasticity was found to be -0.16 in the short run and -0.22 in the long run, using monthly time-series data from January 2015 to March 2018. The income elasticity of water demand is 0.16 in the short run, and 0.22, in the long run. Additionally, based on the findings, it was observed that the share of water consumption insensitive to price changes in Lesotho was 113 Lpcd. Moreover, the elasticity of residential water prices was low.

Practical implications

Water demand forecasting and cost-benefit analysis of future water supply projects can benefit from elasticity estimates. The long-run effects of water pricing on water use should be studied in the future using different datasets

Originality

This study suggests that changing supplier revenue by changing prices may be more successful in Lesotho, and hence, in other developing countries.

Keywords: Residential water demand, Stone Geary, Elasticity, ARDL bounds test, Lesotho

DXB236

HOW DO SUSTAINABLE DEVELOPMENT GOALS IMPACT ON INTERNATIONAL BUSINESS? CASE OF RAÍZEN**Renata L C Rossoni**

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ABSTRACT

The teaching case features the company Raízen, a Brazilian multinational based on sugar-energy production, with businesses related to biofuels and sugar production, marketing, services, and outreach markets. In 2020, the company joined the United Nations Sustainable Development Goals. Raízen has committed to ten goals linked to the seventeen Sustainable Development Goals of Agenda 2030. The dilemma of the case is: how can Raízen reconcile the SDGs envisaged in Agenda 2030 with increasingly international and diversified performance? The teaching case aims to foster discussion and reflection on how a multinational sugar-energy sector company can align its market expansion with the Sustainable Development Goals of the 2030 Agenda. To motivate the case discussion, students are invited to: (i) Categorize Raízen's practices based on the SDGs; (ii) Evaluate how the attribution of certain practices in the host country can support the achievement of the SDGs in the host countries; (iii) Propose scenarios for the company's international performance, considering the SDGs and Raízen's diversified business portfolio. The case can be used in undergraduate and graduate courses, specifically in disciplines related to International Business, Sustainability, Corporate Social Responsibility, and Strategy, or any others that develop relationships between international business and sustainability.

INTRODUCTION

R&D Consulting is a Brazilian company based in São Paulo and operates with international business advisory and consulting. In 2022, it celebrates 20 years in business, accumulating more than 100 national and international customers. In 2021, the CEO, Ana Silva, informed her team that the proposal for services offered to Raízen Company had been approved. Raízen is a Brazilian multinational in the sugar-energy sector. The proposal was associated with providing qualified consulting to assist the company's management in collecting data and information related to expanding its business on the international market. The project would require the opportunities indicated in the consultancy to consider sustainable values. This requirement justifies the fact that Raízen is a company that associates its business with the United Nations Sustainable Development Goals. More precisely, the consultancy should help the contractor respond to how to align the SDGs provided for in the 2030 Agenda with increasingly international and diversified performance. Would it be possible to expand without losing sight of its public commitments to the 2030 Agenda? Would international action bring more opportunities or threats to this engagement?

THE COMPANY

Raízen is a multinational company with sugar and ethanol production, fuel distribution, and bioenergy generation businesses. It emerged in 2011 from a *joint venture* between Brazilian Cosan S.A. (50%) and the Brazilian subsidiary of Royal Dutch Shell plc (50%), which focused on biofuels and renewable energies. Cosan is a Brazilian company operating in several sectors, such as agribusiness, fuel and natural gas distribution, lubricants, and logistics. Shell is a British oil company with a strong international presence in oil and natural gas exploration, production, refining, and marketing, with operations in more than 70 countries. Cosan and Shell's experiences provided Raízen's *training from accumulated know-how* in skills, innovation, and internationalization, adding a profile committed to sustainability.

Raízen Brasil operates 35 factories, sugar, ethanol, and bioenergy production units; 2-second generation ethanol production units (E2G); a biogas production unit (from vinasse, filter cake, and by-products); 16 bioenergy generating plants; 67 airport filling bases; 67 fuel distribution bases; and holds more than 860,000 hectares of agricultural land for sugarcane cultivation.

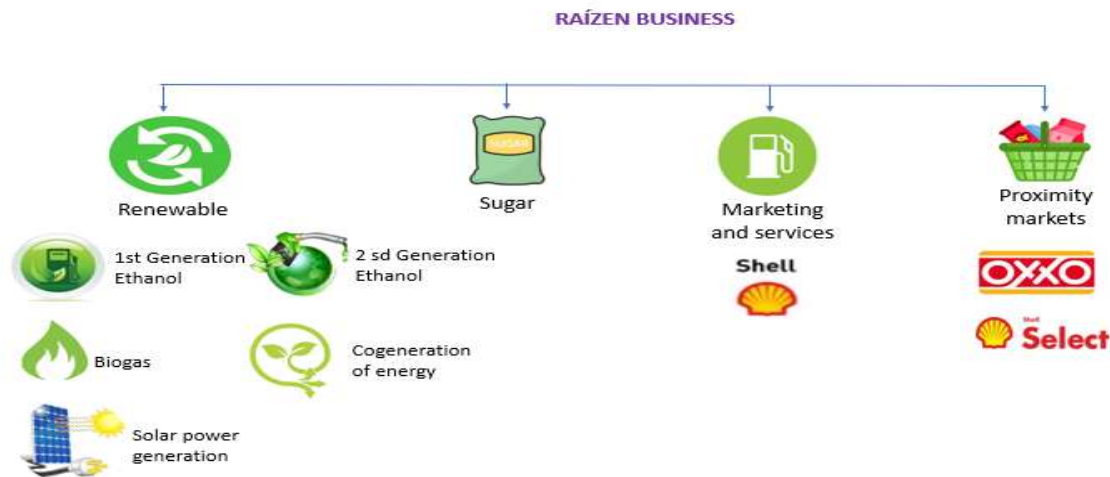
In 2018, it acquired Shell's assets in Argentina for an additional \$950 million²⁶. In the Argentine subsidiary, Raízen operates an oil refinery, a lubricant production plant, four land terminals, two airport refueling bases, and 730 Shell stationsⁱⁱ. Since then, it has had a 20% *market share* in the country, which gives it the second position in the Argentine fuel distribution market, the second largest fuel market in South America, behind only Brazil.

²⁶ Estadão. 2018 Raízen buys Shell's 'downstream' business in Argentina for \$950 million. <https://economia.estadao.com.br/noticias/negocios,raizen-compra-ativos-de-refino-e-distribuicao-da-shell-na-argentina-por-us-950-mi,70002281568>. Accessed December 2, 2021

In addition to oil refining and fuel distribution, ethanol production, sugar, and energy cogeneration activities, the portfolio is combined with marketing, services, and proximity businesses. In the export sector, Raízen operates in the commercialization of sugar and ethanol *through trading* in the United States, Colombia, Singapore, the Philippines, and Switzerland.

The company's significant figures are exemplified in its more than 30,000 employees in Brazil and Argentina, in addition to US\$ 20 billion in net operating revenue in 2020/2021²⁷. To strengthen the synergy between its different businesses, the company adopted a model based on three pillars, (1) integrated ecosystems capable of optimizing operations and the supply of solutions accessible to clients and supported by a robust trading platform; (2) a solid culture capable of promoting a diverse environment that allows the sharing of values with all those involved in the value chain; (3) Advanced technologies capable of driving innovation and supporting more efficient business management, enhancing new growth opportunities (3)²⁸. Figure 1 summarizes the company's business.

Figure 1 – Raízen Business



Source: Elaborated by the authors from Raízen (2021a).

In 2019, Raízen joined Mexican Femsá Comércio, known for owning the Coca-Cola franchise in several Latin American countries, to form the joint venture NÓS Group. With the group's formation, Raízen incorporated the OXXO network into its portfolio. The OXXO brand is the largest network of proximity stores in Latin America, with more than 18,000 stores distributed in Mexico, Colombia, Chile, Peru, and Brazil²⁹. With a diversified portfolio and an innovative business model, Raízen seeks to combine innovation and sustainability to generate returns in its business.

²⁷ Raízen. 2021a. *Annual Report 2020 2021*. <https://www.raizen.com.br/relatorioanual/2021/pdf/raizen-rs2021-pt.pdf>. Accessed January 3, 2022

²⁸ Raízen. 2021b *Our business*. <https://www.raizen.com.br/nossos-negocios>. Accessed December 2, 2021.

²⁹ Raízen. 2022 *Grupo Nós*. <https://www.raizen.com.br/nossos-negocios/proximidade#grupo-nos>. Accessed December 2, 2021.

RAÍZEN BUSINESS

Renewable

In the renewable line, Raízen operates in the market of production and sale of sugarcane ethanol, second-generation ethanol, hereinafter (E2G), biogas, cogeneration, and energy marketing. Through investments in advanced technologies, it is the only company in the world to produce E2G on a commercial scale from the reuse of by-products of the production process.

- a) *Second-generation ethanol*, also called 2G ethanol or cellulosic, is a biofuel produced from waste discarded from first-generation ethanol's production process. The main ones are straw and sugarcane bagasse. However, beet, wheat, or corn residues can also be used. This type of fuel favors an increase in the production cycles of agricultural crops such as sugarcane by using it as raw material residues from planting and other production processes. Thus, E2G production increases production capacity per hectare by up to 250% compared to first-generation ethanol production. This technology allows an 80% reduction in carbon dioxide emissions and can reach a rate of 90% by 2025³⁰. Compared to ordinary gasoline, 2G ethanol can emit up to 15 times less carbon into the atmosphere.
- b) *Biogas*: the product is the result of a complex production process in which biodigesters convert the organic matter of the pie (remaining residues of the purification of sugarcane broth composed of 70% water, 18% organic matter, and 12% of other solids) and vinasse (remaining water of the distillation process consisting of 95% water, 3% of salts and 2% of organic load) in methane and carbon dioxide, resulting in the so-called biogas. This mixture undergoes a desulfurization process to purify the gas so it can be used in motor generators for electricity generation. Once purified, biogas has the same characteristics as natural gas (96.5% methane), thus possibly being used, in the form of biomethane, as a substitute for diesel as fuel for automobiles, tractors, and trucks³¹.
- c) *Cogeneration of energy*: cogeneration represents high energy efficiency, as it avoids thermal energy waste (as occurs in pure thermal power plants). In sugarcane processing, there is a high demand for thermal, mechanical, and electrical energy. After the extraction of the broth, it is possible to burn the bagasse obtained in boilers, producing steam that is used to get the three energy sources. It is worth mentioning that alcohol accounts for about one-third of the sugarcane plant's total energy, with the remainder distributed between the bagasse, the hands, and the straw. Cogeneration moves an energy chain with the potential to double the energy obtained by alcohol production. In the cycle, a boiler is used, in which an energy source (bagasse or sugarcane straw) generates steam at high pressure, with a temperature higher than the boiling point of water. The release of steam occurs through mechanical systems, moving machines, transferring heat to

³⁰ Milanez, A. Y., Nyko, D., Valente, M. S., Sousa, L. D., Bonomi, A. M. F. L. J., Jesus, C. D., . . . & Gouveia, V. D. (2015). From promise to reality: how cellulosic ethanol can revolutionize the sugarcane industry: an assessment of competitive potential and suggestions for public policy. BNDES sector, 41, 237–294.

³¹ Raízen. 2021a. *Annual Report 2020 2021*. <https://www.raizen.com.br/relatorioanual/2021/pdf/raizen-rs2021-pt.pdf>. Accessed 3 January 2022

industrial processes, or moving turbines for electricity generation. The cycle is completed with the return of the condensed steam to the boiler, to be heated again. In the combined cycle, a gas turbine at high temperature moves a generator, which transfers the heat from the gas to water, which is vaporized and drives a second generator, in which both produce electricity³².

Sugar

The sugar produced by the company originates mainly from sugarcane. Before the product reaches the consumer, the plant goes through several processes. First, it is ground and heated to extract the sweet broth. Next, this broth is filtered, concentrated, and centrifuged (when it is separated from water). Thus, sucrose crystals are obtained. Finally, the whiter sugars go through clarification and refinement to improve their flavor, texture, and appearance. Raízen operates with raw sugar exports, which can be transformed into several products³³.

Services, marketing, and proximity

In the service sector, Raízen sells fuels for motor vehicles and aviation through the Shell network in Brazil and Argentina. It also offers engine oils of Shell Evolux and Shell V-power brands, developed with technologies aimed at increasing engine performance and reducing the emissions of pollutants. In addition, the marketing industry prioritizes customer experience through applications such as Shell Box and a platform that offers integrated solutions to B2B customers. In the proximity sector, Raízen has been licensed to the OXXO brand and the Shell Select brand to Raízen in Brazil. The OXXO convenience store chain has 18,000 stores in Mexico, Brazil, Colombia, Chile, and Peru, while Shell Select's store chain has more than 1,300 franchisees in Brazil and Argentina.

AGENDA 2030 IN THE BUSINESS OF RAÍZEN

Raízen has made many efforts to support the 2030 Agenda for Sustainable Development - UN. In the year of the company's foundation, 2011, the Raízen Maracá factory was the first in the world to receive the international accreditation BonSucro³⁴. This certification is the leading global standard of sustainability of sugarcane. It assures producers, buyers, and distributors that certified products comply with a list of high-standard requirements in terms of legislation, biodiversity and ecosystem impact, human rights, production, and continuous improvement. In addition, standards and indicators of water use, environmental impact, use of agrochemicals, contracts and salaries, land and labor

³² Empresa Brasileira de Pesquisa Agropecuária. 2022 https://www.agencia.cnptia.embrapa.br/gestor/cana-de-acucar/arvore/CONTAG01_107_22122006154841.html. Accessed 23 September 2021

³³ Raízen. 2021a. *Annual Report 2020 2021*.

<https://www.raizen.com.br/relatorioanual/2021/pdf/raizen-rs2021-pt.pdf>. Accessed January 3, 2022

³⁴ Raízen. 2022b Circular Economy. <https://www.raizen.com.br/agenda-esg/economia-circular>. Accessed January 3, 2022.

rights, industrial efficiency, etc., are considered for certification³⁵.

In line with these actions, the company intends to be a protagonist in the global energy transition through biofuels such as E2G, bioelectricity, biogas, biomass, and solar energy generation associated with disseminating clean and affordable energy. Among the various initiatives related to production, an investment line was directed to the "Reduce Program." This program established a set of goals for water management in the company's production chain to reduce water collection and effluent generation. More than 27 billion liters of water have ceased to be collected since then³⁶. Additionally, the company's production chain adopts circular economy practices. From the various bio-products of sugarcane and ethanol, the production units became self-sufficient and generated revenue from the commercialization of surplus energy. Biogas, E2G, and sugarcane bagasse pellets are marketed and exported to coal-based thermal power plants, which means other countries' efforts to reduce dependence on fossil fuels.

The "ELO Program," founded in 2011, strengthens the sugarcane production chain by promoting the continuous improvement of its participants in business, environment, cultivation, and people³⁷. As the company's sugarcane process comes from many suppliers, Raízen identified the need to expand quality standards upstream, mainly by improving economic, environmental, and social management techniques. As a result, more than 2,000 suppliers were supported, and the company invested R\$ 21 million in the initiatives. In 2020, ELO was acknowledged by the United Nations Economic Commission for Latin America and the Caribbean as an important sustainability initiative for Brazil³⁸.

In 2021, Raízen received the "Woman on Board" label, an independent initiative launched in partnership with UN Women, which acknowledged corporate environments with the presence of women on advisory or management boards³⁹. Since 2019, a diversity and inclusion committee has promoted actions such as education on concepts, behavior, and responsibilities to respect diversity in all business areas. In 2021, the "Respect at the Root of Everything" campaign encouraged employees to share best practices to create a better work environment. Another major program encourages volunteering among employees, transforming them into agents of positive social impact around the company's operations. About 400 employees were trained to volunteer as mentors of young people assisted by the Raízen Foundation.

The Raízen Foundation, founded in 2012, operates in 7 centers through 2 programs for children and

³⁵ Bonsucro.2022 About Bonsucro. <https://bonsucro.com/what-is-bonsucro/>. Accessed 3 January 2022.

³⁶ Raízen.2022b Circular Economy. <https://www.raizen.com.br/agenda-esg/economia-circular>. Accessed January 3, 2022.

³⁷ CEPAL.2020 Repository of cases on the Big Push for Sustainability in Brazil. <https://biblioguias.cepal.org/c.php?g=981128&p=7143453>. Accessed 3 January 2022

³⁸ Raízen.2020 *Annual Report 2019 2020 ELO Program*. <https://raizen-prod.s3.sa-east-1.amazonaws.com/raizem-elo-relatorioanual.pdf>. Accessed 3 January 2022

³⁹ Forbes.2021 With 2 women on the board Raízen receives the Women on Board seal. <https://forbes.com.br/forbesesg/2021/08/com-duas-mulheres-no-conselho-raizen-recebe-o-selo-women-on-board/>. Accessed January 3, 2022

young people⁴⁰. When the program "Active Childhood," based on Reggio Emilia's pedagogy, stimulates the recognition of multiple potentials among the children served. The program "Active Youth" provides young people with awareness of their role in the world, dreams, and ways to reach them. By 2024, the foundation will have served 10,000 young people and reached 100% of the operations established. During the COVID-19 pandemic, the pedagogical care of the children was not interrupted, and about 23 tons of school meals were converted into basic food baskets and donated to the families⁴¹.

Since 2020, the company has been conducting socioeconomic assessments of its production units' communities. The "Neighborhood Relationship Plan" will be implemented by 2025. In 2022, 2.2 million people have benefited from Raízen projects. The pandemic has increased exponentially due to the company's community action. A total of 1.5 million liters of alcohol were provided to hospitals and cities in Brazil. About 250,000 liters of the product were given to logistics and transportation workers, and approximately three million bottles were given for use in electoral areas during the 2020 Brazilian municipal elections. Resources were allocated to constructing and maintaining field hospitals in Rio de Janeiro and São Paulo. The initiative was combined with the donation of virus and drug detection tests to patients in intensive care units across the country. Doctors and nurses could receive free fuel credits at network stations, amounting to more than \$350,000 in distributed credits.

Raízen's international actions for the 2030 Agenda are concentrated in Argentina, where it maintains its operations. The program "*Creando Vínculos*" supports projects in surrounding communities. More than 100,000 people have been served, and more than 300 organizations have had projects supported throughout their history. In 2020 and 2021, a campaign in the company's network of service stations in the country raised funds to provide more than one million meals in community kitchens aimed at low-income and at-risk people. During the pandemic, several surrounding communities received food and hygiene products. Two Argentine hospitals received funds for infrastructure improvement, equipment acquisition, and financial support from the Argentine Red Cross. Ambulances serving hospitals in the province of Buenos Aires had their fuel supply guaranteed free of charge.

Raízen has continuously shown results associated with the 2030 Agenda. The proof of this is the establishment of 10 public commitments aligned with the SDG⁴², identified in Table 1.

Table 1 – Raízen commitments related to the SDGs































⁴⁰ Raízen.2020b *Activity Report 2020 Raízen Foundation*.

<https://www.raizen.com.br/relatorioanual/fundacaoraizen/2021/pdf/fundacaoraizen-ra2020-pt.pdf>. Accessed December 2, 2021

⁴¹ Raízen.2020b *Activity Report 2020 Raízen Foundation*.

<https://www.raizen.com.br/relatorioanual/fundacaoraizen/2021/pdf/fundacaoraizen-ra2020-pt.pdf>. Accessed December 2, 2021

⁴² Raízen.2021c Our commitments. <https://www.raizen.com.br/agenda-esg/compromissos-publicos/nossos-compromissos>. Accessed December 2, 2021

1	Reduce the carbon footprint of ethanol and sugar in 10%	  
2	Reduce water catchment from external sources in 10%	  
3	Increase the GJ/ha indicator by 15% (higher efficiency and more energy with the same area)	  
4	Ensure a robust system for 100% traceability of ground sugarcane volume	  
5	Ensuring internationally recognized sustainability programs for sugarcane sources	  
6	Keep all units in operation certified to an internationally recognized standard	  
7	Promote human rights advances in our operations and supply chain	  
8	Actively influence our strategic partners to eliminate the risks of violation of our ethical values and <i>compliance</i>	  
9	100% of the surroundings contemplated by the Raízen Foundation	  
10	Reach 30% of women in leadership positions from management by 2025	  

Source: Raízen (2021c).

The company maintains a *public dashboard*⁴³ in which it discloses the performance management of the ten commitments made, the results of the historical series, and the highlights of the practices obtained so far. For example, the total amount of greenhouse gases from its operations is quantified and audited by independent companies. In addition, other commitments were made, such as protecting young people, children's rights, and sustainable production. Raízen refuses, for example, to buy sugarcane produced in protected or declared indigenous areas.

⁴³ Raízen.2021c Our commitments. <https://www.raizen.com.br/agenda-esg/compromissos-publicos/nossos-compromissos>. . Accessed December 2, 202

NEXT STEPS: INTERNATIONAL PERFORMANCE AND ENGAGEMENT WITH SDGs

In the first meeting with the R&D senior consultant, Ana noticed that the company had made significant efforts on some sustainability indicators. The company's social performance results and the various practices aligned with the 2030 Agenda are detailed in its social and environmental performance reports. The consultant, João Santos, observed

- The company's sustainable alignment in the renewable sector may not be replicable to the other businesses operated by Raízen in the short term. Transitioning from an economic model to a sustainable one requires investment and training. Furthermore, we must consider that even operating in the Latin American context, many cultural, economic, and environmental differences must be analyzed for each type of business, not to mention the legislation of each country and operation, which must be observed in any suggestions about the international expansion of the company.

Despite agreeing with Santos, Ana Silva considered that the priority of the consultancy would be to contribute to a survey of data and information capable of stating Raízen international performance based on standards and certifications that allow it to operate as a reference at the global level. In answering it, Santos conjectured that the company's international expansion could occur by licensing fuel production technology or installing an E2G production unit in a host country. However, the consultant pointed out that, given its efficiency, the company could serve several global markets, incorporating the sustainable differential in the energy market. Moreover, Raízen dominates an innovative technology for E2G production, besides being the only commercial-scale producer of the product in the world⁴⁴.

Silva recognizes that the expansion by exploiting E2G technology is an opportunity for Raízen. Several countries are still reluctant to replace gasoline with ethanol because they understand that this product can make them dependent on producing countries like Brazil. She pointed out that the company has recently signed a Memorandum of Understanding with *Volkswagen do Brasil* to develop potential new ethanol formulas. This collaboration includes the expansion of ethanol use in international markets⁴⁵.

Santos considered partnerships with other companies and institutions could be analyzed as an opportunity for operational transition to Raízen other companies. However, the SDGs could strongly imply these decisions, as some may conflict with the sustainable values of the 2030 Agenda.

Before closing the initial meeting with his colleague, the director stressed that the challenge of the consultancy would be to offer options without losing sight of Raízen's goals, practices, and public engagement symbolized in its ten commitments to the 2030 Agenda. The proof of the issue's

⁴⁴ Valor.2021 Raízen makes the world's first E2G IPO and raises R\$6.9 billion.

<https://pipelinevalor.globo.com/negocios/noticia/raizen-faz-primeiro-ipo-de-e2g-do-mundo-e-levanta-r-69-bilhoes.ghtml>. Accessed 2 December 2021.

⁴⁵ Raízen.2021d Volkswagen, Raízen, and Shell announce a partnership to accelerate decarbonization.

<https://www.raizen.com.br/sala-de-imprensa/volkswagen-raizen-e-shell-anunciam-parceria-para-acelerar-descarbonizacao>. Accessed 2 December 2021. _____

relevance, as made clear, was that the company operated the largest initial public offering of B3 shares in 2021, the official stock exchange in Brazil. It exemplifies how much value investors place on the socio-environmental performance of multinational companies. Furthermore, the company's reputation could be reflected by the decisions.

At the end of the meeting, both went to their teams to share the project's challenges, reflected in some key questions: how to align the SDGs in the 2030 Agenda with an increasingly international and diversified performance? Would it be possible to expand without losing sight of your public commitments to the 2030 Agenda? Would international action bring more opportunities or threats to this engagement? Is the company's diversified business portfolio an opportunity or a threat to achieving the SDGs?

ADDITIONAL INFORMATION 1
DATA ON THE SUGAR AND ETHANOL MARKET

*Table 2 - Volume of sugar and ethanol exported between 2015 and 2022**

Sugar	Sugar (volume in tons)	Ethanol (volume in cubic meters)
2015	11,331,037.34	1,109,017.42
2016	28,930,384.09	1,793,490.77
2017	28,693,623.89	1,418,927.20
2018	21,259,203.51	1,674,348.08
2019	17,876,491.24	1,930,160.60
2020	30,634,228.29	2,673,862.53
2021	27,253,842.36	1.952.826.58
2022	9,722,744.94	764,167.27

*Consolidated data through June

Source: Cane Observatory (2022, p. 1).

Table 3 - Ten largest importers of Brazilian sugar between 2015 and 2022 (in tons)*

Country	Volume	% total exports
China	16,345,425.56	9.3
Algeria	15,214,014.58	8.66
Bangladesh	13,811,787.56	7.86
Nigeria	10,804,444.01	6.15
India	10,644,306.25	6.06
United Arab Emirates	9,263,419.98	5.27
Saudi Arabia	8,873,487.49	5.05
Malaysia	7,952,972.92	4.53
Morocco	7,685.140.61	4.37
Iraq	6,938,371.78	3.95

Source: Cane Observatory (2022, p. 1).

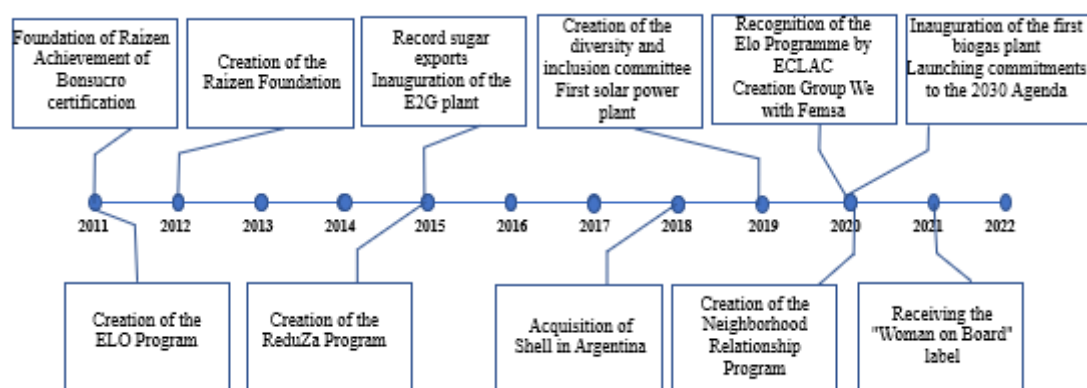
Table 4 - Ten largest importers of Brazilian ethanol between 2015 and 2022 (in cubic meters)*

Countries	Volume	% total exported
United States	6.002.139,29	45.07
South Korea	4.223.497,60	31.72
Netherlands	869.881,92	6.53
Japan	480.637,98	3.61
China	233.883,28	1.76
India	203.525,01	1.53
Nigeria	179.877,86	1.35
Turkey	142.341,81	1.07
United Kingdom	136.387,68	1.02
Colombia	125.940,17	0.95

Source: Cane Observatory (2022, p. 1).

ADDITIONAL INFORMATION 2 RAÍZEN FIGURES AND TIMELINE

Figure 2 - Raízen Timeline



Source: prepared by the authors from Raízen (2021a).

Table 5 - Raízen in figures 2020

Item	Data
Revenue	BRL 114,6 Billion
EBITDA	BRL 6,6 Billion
Sugar and ethanol production units	35
Production unit of E2G	01
Refinery	01
Cultivated agricultural area	1.3 million hectares
Distribution terminals	70
Airport supply bases	69
Shell-branded gas stations	7,300
Shell Select Stores	1,300
B2B Clients	4.000
Fuel marketing	29 billion liters
Ethanol production	2.5 billion liters
Sugar production	4.4 million tons
Commercialization of electricity	48.6 TW/h
Collaborators	40 thousand

Source: Prepared by the authors from Raízen (2021a).

TEACHING NOTES

EDUCATIONAL OBJECTIVES

This teaching case aims primarily to foster reflection and how the international performance of sugar and alcohol companies can be influenced by the Sustainable Development Goals (SDGs) of the United Nations. Raízen's international expansion brings *valuable insights* to International Business despite its engagement with the SDGs. Additionally, the integration between the SDGs and *International Business* (IB) is still in the early stages. Thus, the case not only reveals how the SDGs can be more actionable for multinationals but also shows the role of multinational companies in a more inclusive society and a more sustainable environment. The secondary objectives of the teaching case were listed based on the Bloom Taxonomy reviewed by Anderson et al. (2001):

1. Categorize Raízen's practices based on the SDGs.
2. Assess how the allocation of certain practices in the host country can support the achievement of the SDGs in the host countries.
3. Propose scenarios for the company's international performance considering the SDGs and Raízen's diversified business portfolio.

SOURCES AND METHODS OF DATA

Data and information about the company were obtained from publicly available sources, e.g., websites, national and international news portals, market reports, institutional documents, videos, etc. The characters, speeches, and consulting firms are fictitious and were used as a didactic resource of the educational tool. Preliminary authorization for the publication of the work was formally obtained from the company.

RECOMMENDED USE AND DIFFICULTY LEVEL OF THE CASE

The case can be used in undergraduate and graduate courses, specifically in disciplines related to International Business, Sustainability, Social Responsibility Color, and Strategy, or any others that develop relationships between international business and sustainability. To provide a clear application to academics, the dimensions of Leenders & Erskine (1989) were adopted for evaluating teaching cases. In the analytical, conceptual, and presentation dimensions, the case presents difficulty levels 3, 2, and 1, respectively, difficult, regular and easy, indicated in Table 6.

Table 6 - Case dimensions

Dimension	Level	Information presented in the case	Explanation of difficulty level	Purpose
Analytic	3	This case presents the situation and context in which the events originate	The student is invited to categorize, judge, and propose analyses on the case	Fertilization of IB and SDS is receivable. IB students should develop the skills to identify, explain and develop alternatives for the company's international performance, considering the SDGs
Conceptual	2	Provides a limited amount of elements conceptualized, although it is sufficient to achieve the desired objective	Mandatory literature should be presented before the application of the case. In graduate school, complementary bibliographies are recommended	Provide students with concepts relevant to professional practice in IB-aligned SDGs
Presentation	1	The case narrates, from the accounts of the characters, practices, and milestones of the company's trajectory analyzed	The teacher should apply the case synchronously. This case can be applied to more than one level of training	The information required for the examination of the students is sufficient and clear

Source: Adapted from Leenders and Erskine (1989, p. 120).

SUGGESTED THEORETICAL FRAMEWORK

The suggested theoretical framework synthesizes concepts relevant to the conduction of the case in the classroom and directs how it can be interpreted, considering the eclectic paradigm. The teaching notes and the suggested theoretical discussion assume that the students had contact with the previously indicated texts.

Raízen, a Brazilian company founded in 2011, exemplifies a case aligned with the growing socio-environmental appeal of the 21st century. The *company's core business* is manufacturing products with less social and environmental impact, mainly renewable fuels, such as sugarcane ethanol. In this approach, people, businesses, communities, and states are called to reverse climate change, social misery, environmental degradation, etc., and interact more proactively and rationally. Thus, the proposal of this teaching case offers a two-way discussion on how multinational companies can

engage in the realization of the SDGs while discussing the influence of the SDGs on international behavior.

The 2030 Agenda for SDGs is a common plan established in 2015 by the Member States of the United Nations. In all, 17 goals were signed by developed and developing countries to reduce social and environmental inequalities, such as poverty and hunger, and ensure benefits from collaborative actions such as responsible consumption, healthy living, and peace among people (United Nations, 2021). Companies, especially multinational companies, achieve these goals, assuming responsibilities, given their global position, economic dominance, and resonance capacity (Celone, Cammarano, Caputo, & Michelino, 2021).

However, because they are country-level and non-manageable targets at the company level, it is still unclear how IB research can contribute to the SDGs (Montiel, Cuervo-Cazurra, Park, Antolín-López, & Husted, 2021). Nevertheless, it is a recent discussion according to Montiel, Cuervo-Cazurra, Park, Antolín-López, and Husted (2021). The proof of this is the publication of articles (Celone et al., 2021; Montiel et al., 2021; van Zanten & van Tulder, 2018), whose contents shed light on how multinational companies can engage in the SDGs, and even more, how goals can change the behavior of multinationals.

Montiel et al. (2021) used an externality-based approach to provide a prescriptive framework that establishes how multinational companies, henceforth MNEs, can engage in the SDGs, making them manageable at the enterprise level. In summary, the authors offered propositions that reinforce how MNEs benefit from the implementation of the SDGs in host countries by making investments in their subsidiaries while indirectly benefiting from actions in the communities of those countries. As far as we know, this is one of the first models to provide IB academics and professionals clear guidance on how multinationals can proactively engage with SDGs.

The authors translated the objectives into three dimensions: the type of impact on the externalities created by the MNEs (1), the configuration of the SDGs in the value chain (2), and the organization of MNEs' investments in internal and external (3). In the first dimension, the goals were categorized according to the type of externality, whether positive or negative, forming six sets. In the second dimension, the SDGs were positioned along the value chain (supply, production, distribution, use, and disposal). It allowed them to be understood in concrete actions at the company level, making managing the SDGs more feasible for multinationals. Finally, they categorize the investments of the MNEs into internal parties as the parties that have a contractual relationship with the company, and external, ones without a contractual relationship.

Celone et al. (2021) developed a literature review whose results confirmed the relevance of MNEs in achieving the SDGs. In this sense, they suggested that the engagement of MNEs in the SDGs should be guided by a clear, proactive understanding, as opposed to a reactive and utilitarian view driven by external pressures and having profit as the main objective. Along the same lines, van Zanten & van Tulder (2018) employed an institutional approach to propose how MNEs can engage in the SDGs. The authors' findings revealed that MNEs engage more with actionable targets internally and avoid negative impacts on the environment. Furthermore, it showed a passive stance in contributing

to the SDGs, as efforts to "do good" are smaller than those that avoid negative impacts.

Incorporating the SDGs into the IB research agenda offers a rich opportunity for IB theories to be updated. Among its various economic and behavioral theories, it is suggested preliminary that the Eclectic Paradigm can be expanded with an orientation to the SDGs in IB.

The Eclectic Paradigm, developed in the 1970s as a theory, establishes that advantages of ownership (O), location (L), and internalization (I) drive the international behavior of companies beyond their country of origin. (see Cantwell, 2015; Ferreira, Pinto, Serra e Santos, 2013). According to the authors, the model OLI is a useful meta-structure to integrate other theoretical approaches in the area of IB. Therefore, it seems relevant to propose a reflection on how the SDGs provide a bidirectional flow for MNEs because, at the same time as their actions are beneficial to the achievement of goals in the country of origin and host, they are also affected by these repercussions (Montiel et al., 2021).

Dunning & Lundan (2008) looked at how institutions transform the OLI Model benefits package, guiding the behavior of multinational companies in decisions about why, where, and how they internationalize. In summary, the OLI model can be interpreted from an institutional perspective, which is not something new. However, incorporating the SDGs as drivers of these advantages is an innovative approach, including teaching programs. An approach to positive and negative externalities can renew how companies take on property and location advantages (Montiel et al., 2021). The authors argue that considering the SDGs can change the internationalization decision since decisions can be changed when considering the liabilities generated in host countries. Notably, the Eclectic Paradigm is one of the potential theoretical approaches relevant to the case.

SUGGESTED LESSON PLAN

The suggested teaching and learning plan include different perspectives on applying the case in undergraduate and graduate courses. The application assumes that students have contact with the recommended literature, which can be reinforced in theoretical classes and seminars. The case application should be made in a synchronous class, which does not prevent students from reading the texts in advance. Table 7 identifies four steps of the application of the case.

Table 7 – Recommendation of application steps

Stage	Description
1	<ul style="list-style-type: none"> • The professor should resume the case, making a general summary of the development of the narrative. • The impasses that underpin the teaching case must be read in such a way that the second part of the application is initiated. If students have not previously read the text and there is time to do so, this can be done in the first part of the class. • In graduate studies or concentrated disciplines, the case can be applied in a meeting of closing the discipline or related to the suggested theoretical approach.

2	<ul style="list-style-type: none"> • Students can be divided into groups of 3 to 5 members. • In a period of not less than 90 min, each group will place itself in the position of the consultants of the fictitious company and, based on the information offered throughout the case, will contemplate the questions suggested for discussion from the case and theory. • The teacher will be able to establish the best way to return the teams.
3	<ul style="list-style-type: none"> • The students’ presentation concerning the results of the analysis (questions). • A general discussion at the end of the group closes the activity.

Source: prepared by the authors.


Students are expected to be able to develop conceptual skills that reveal how companies can engage before, during, and after their internationalization, in practices that contribute to the SDGs. Additionally, the case helps develop the analytical capacity to examine how the SDGs can impact international business performance, a crucial skill for 21st century IB academics and professionals.

QUESTIONS FOR CASE DISCUSSION

1. *How does Raízen contribute to the 2030 Agenda?*

The examination of this question supposes that the students are familiar with SDGs. In this sense, Montiel et al. (2021) and the United Nations (2021) are mandatory readings. Students should use the information collected in the development of the case to identify Raízen's practices that contribute to the SDGs. Once identified and categorized, Montiel et al. (2021) provides a guideline on how goals can be used by companies, not just multinational companies. Students should build a scheme based on Chart 8. This schematization allows us to create an understanding of how the company engaged in the SDGs, as well as to examine how practices are distributed in the creation of positive externalities or the reduction of negative externalities.

Table 8-Indication of the application of the SDGs in the case

Practice/ SDGs	SDGs principal	SDGs Set	Type of impact	SDGs position in the value chain	Investment
Practice n		<ol style="list-style-type: none"> Increasing knowledge (SDGs 4 and 9) Increasing wealth (SDGs 1, 5, and 8) Increasing health (SDGs 2 and 3) Reducing the excessive use of natural resources (SDGs 6, 7, 13, and 15) Reducing damage to social cohesion (SDGs 10, 11, 16, and 17) Reducing excessive consumption (SDGs 12 and 14) 	<ol style="list-style-type: none"> Positive (Group 1, 2, and 3) Negative (Group 4, 5, and 6) 	<ol style="list-style-type: none"> Provide Produce Distribute Use Discard 	<ol style="list-style-type: none"> Internal External

Fonte: Prepared from Montiel et al. (2021).

How can Raízen's international performance be influenced by the SDGs?

This issue aims to encourage students to build scenarios for Raízen's international performance, considering the influence of the SDGs. Therefore, the Eclectic Paradigm is suggested as a central reference in the research of IB (Ferreira et al., 2013). Dunning & Lundan's (2008) work is important reading for the case application. Cantwell (2015) and Ferreira et al. (2013) suggested supportive studies that can be used according to the degree of familiarity of students with the approach. The OLI model allows some implications to be conjectured about how engagement with the 2030 Agenda SDGs can influence the three major internationalization decisions (why, where, and how).

Advantages of ownership (O) and SDGs

- By engaging in a series of practices offering positive externalities and negative restrictions, the company has developed the resources and capabilities to sustain ten commitments to support the 2030 Agenda.
- By enduring Resources and Capabilities oriented to the SDGs, Raízen has established prerogatives for these properties to become advantages of ownership in the context of internationalization. To do so, the company must develop capabilities that allow them to be transferred between countries as it performs its international expansion.
- More efficient production methods and techniques, economies of scale and scope, international certifications, active relational development from knowledge networks and intensive collaboration throughout the production chain, and recognition of new opportunities for international action are some advantages of ownership identified in the development of the case.
- In Argentina, several actions to combat COVID-19 have been replicated, which reveals that the experience in supporting the host country may have engaged in actions in the neighboring subsidiary.
- Creating a *joint venture* with the Mexican Femsa can be beneficial for promoting reverse engagement, that is, the overflow of practices employed in Mexico by the partner company. Femsa has invested heavily in reducing damage to social cohesion in several countries (Montiel et al., 2021).
- Tangible and intangible capabilities and resources, such as knowledge and relational assets, developed in the host country, host, or imported from international partners contribute to the company's engagement and can act as isolation mechanisms (Dunning & Lundan, 2008), offering reasons for international expansion.
- van Zanten & van Tulder (2018) assume SDGs as an objective-based institution, which is relevant for IB. By guiding its activities to high-level standards and directing the focus of its operations to Agenda 2030, the company opened markets due to the possession of institutional advantages (Dunning & Lundan, 2008).

Advantages of location (L) e SDGs

- Location advantages are related to the decision on where internationalization should be oriented. It is an issue that should be addressed in an externality approach (Montiel et al., 2021). The authors point out that considering the cost of negative externalities may outlast location benefits in certain countries, a company engaged with the SDGs may not add location advantages. In other words, embedding SDGs in location advantages means to examination where and who captures such advantages.

- Investing in the production or processing of sugarcane in a country with looser rules and without an efficient system of protection of workers' rights may, at first sight, seem like a choice to earn extraordinary profits. However, incorporating the examination of such negative externalities could change the decision on where to internationalize.
- The company can, for example, avoid expanding into this location or seeking to engage in the local transformation by transferring ownership advantages.
- Values and practices that underpin the SDGs can "raise the rules" and lead the transformation of the production chain in these locations by establishing more efficient methods in the use of natural resources and production, as well as by offering decent working conditions.
- The advantages of ownership of the company can direct international performance to the extent that the assets meet the rules of the game of other countries, providing traceable products produced according to international sustainability standards.
- Ownership advantages open markets and encourage global action targeted at regions with stricter rules on producing biofuels and sugar, such as Europe.

Advantages of internalization (I) and SDGs

- These advantages relate to "how" internationalization happens. Raízen's direct investment has so far been concentrated in Argentina. Additionally, it operates internationally via the export of several *commodities*.
- Embedding the 2030 Agenda into "how" internationalization can be carried out is relevant to understanding how marketing, licensing, and investment can contribute to the SDGs.
- As to Zanten & van Tulder (2018), the degree of internationalization of the company can drive its engagement with the SDGs. Thus, marketing seems a limited mode of engagement since its benefits may be restricted to the host country.
- Raízen has developed an innovative technology for producing 2G ethanol. The licensing of this technology can allow rapid dissemination of the product worldwide. However, this mode seems more associated with engagement to reduce negative externalities than "do good," which corroborates previous findings that MNEs have engaged in more actionable SDGs and mitigated their actions (van Zanten & van Tulder, 2018).
- The internalization of operations through investment is the modality that can offer the most excellent repertoire of possibilities for engagement with SDGs. However, Montiel et al. (2021) observed that the entry by acquisitions could be devastating for communities, given the reorganization of operations, layoffs, closure of units, etc.

Given that the possible circumstances on this issue are comprehensive, students are not expected to offer right or wrong answers, but they consider the literature indicated. There is still a long way to go regarding the connection between IB and SDGs, especially in empirical research. The teaching case seeks to offer a small part of these contributions, supported by theoretical studies, to invite students to put themselves in the role of consultants and reflect on how international action can be renewed to respond to the challenges of the 21st century.

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