

Handbook of Research on

Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era



Cristina Raluca Gh. Popescu



Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post–COVID–19 Era

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The editor would like to dedicate this book entitled “Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era”, published by IGI Global – International Academic Publisher, to all the brilliant and distinguished academics and specialists that decided to participate in the creation of this daring and marvelous project targeting building knowledge and promoting intellectual capital and activities in the new knowledge-based society and the new economy. The editor remarks with great joy and great pride the fact that this book brings together highly relevant studies which are able to successfully display today’s unsettling situation at an international level – mentioning the case of countries, group of countries and regions such as Brazil, the Czech Republic, Ecuador, the European Union (EU), Germany, Ghana, India, Malaysia, Mexico, Nigeria, Romania, Turkey, United Arab Emirates (UAE), United Kingdom (UK), thus requiring an in-depth analysis and wide-spectrum research on changing dynamics in responsible and sustainable business in the Post-COVID-19 Era. The topics chosen for debate fall into different and diverse fields, such as the following ones: economics; business and management; computer science and information technology; education; environmental, agricultural, and physical sciences; library and information science; medical, healthcare, and life sciences; media and communications; security and forensics; government and law; social sciences and humanities; and science and engineering.

In like manner, the editor would like to dedicate this book to all the specialists that will choose to read the chapters of “Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era”, thus becoming part of this great project. In this manner, the aim of disseminating and promoting precious knowledge will have been reached by the authors of these book chapters.

The editor would like to dedicate this book to the Editorial Advisory Board members as well as the Editorial Review Board members, thus thanking all these important specialists for their inestimable effort and work in bringing to life this precious project.

The editor would like to dedicate this book to distinguished Professor PhD. Rafael Ravina-Ripoll, Department of Business Organization and the International University Network of Happiness and the Research Institute for Sustainable Social Development of the University of Cadiz (INDESS), University of Cádiz, 11405 Jerez de la Frontera, Spain, who was so kind to write the “Forward” section of this book and bring a vital contribution with the analysis, comments and suggestions for the success of the entire project. The editor would like to emphasize the fact that Professor PhD. holds a Ph.D. in History since 2015. He has been a Professor of Business Organization at the University of Cadiz (Spain) since 2008 – 1996. His priority lines of research are happiness, happiness management, wellbeing, and business. He is the author of more than 100 research papers published in several indexed academic journals (Corporate Governance, Quality & Quantity, Entrepreneurship and Sustainability Issues, Polish Journal of Management Studies, International Journal of Entrepreneurship, International Journal. Environmental Research Public Health, Journal of Risk and Financial Management, Energies, International Journal of Business Environment, Academy of Entrepreneurship Journal, Journal of Legal, Ethical and Regulatory Issues, Frontiers in Psychology, Sustainability, Retos, etc.) and in numerous chapters published in the most relevant international publishing houses in economics (Springer, Peter Lang, Tirant lo Blanch, Aranzadi, Akal, Narcea, Comares, Dickinson, etc.). According to the Google Scholar database, his research has more than 300 citations, and his h-index is equal to 11. He is a founding member of the International University Network of Happiness and the Research Institute for Sustainable Social Development of the University of Cadiz (INDESS), guest editor of Energies and Journal Corporate Governance. He is on the editorial board of Decision Analytics Journal and Healthcare Analytics, Retos, Cuadernos de Administración and Revista Jurídicas CUC. He is also the Director of the University Research Group Happiness Management, Creativity and Well-being in Industry 4.0 from social sciences and humanities.

It should be emphasized, in this context, that all the findings and results belonging to the great studies that are part of this “Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era” solidified my belief that there are numerous yet unaccomplished targets concerning the world’s prominent Sustainable Development Goals (SDGs). Also, the conclusions belonging to the great studies that are part of this “Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era” contributed to my belief that once the world’s prominent Sustainable Development Goals (SDGs) are reached (even in part), there will be a constant struggle to maintain the balance between the good that has been accomplished and the challenges that naturally occur in the evolution of mankind. Thus, the editor would like to dedicate this “Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era” to all the individuals that are concerned with finding viable solutions capable to ensure that the world’s prominent Sustainable Development Goals (SDGs) are reached, by being creative, innovative, carrying, and helpful, and, in essence, by willing to support changing the dynamics in responsible and sustainable business in the Post-COVID-19 Era.

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*Cristina Raluca Gh. Popescu, University of Bucharest, Bucharest, Romania & The Bucharest
University of Economic Studies, Bucharest, Romania*

The COVID-19 pandemic and the COVID-19 crisis have brought tremendous pressure on human beings and have raised deep concerns regarding the future of people's activities all over the world. The post-COVID-19 era presents a highly challenging perspective due to the uncertainties raised by the new environment, already weakened by the lack of cooperation among individuals, the ruthless competition between entities, and the fierce and aggressive decisions taken in haste, which affected the balance of our planet, the future of the next generations, and the well-being and mental health of people. Mindfulness represents a major solution to today's problems, offering individuals the possibility to become more focused, more connected with present situations, and more willing to understand not only their needs, but also the requirements of their colleagues, communities, and all that surrounds them. Mindfulness, as an investment in our lives, comes to support creativity, development, innovation, responsibility, sustainability, well-being, and a healthy and well-balanced business environment.

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Organizational Greening Strategy in Times of Pandemic COVID-19	35

*José G. Vargas-Hernández, Instituto Tecnológico Mario Molina, Unidad Académica
Zapopan, Mexico*

This study analyzes the various features and elements related to strategic organizational sustainability. The analysis departs from the assumption that traditional organizations have to face a lot of challenges posed by the new global economy context confronting contradictory patterns of globalization and de-globalization processes. In order to create the new conditions for the organizations not only to survive but to succeed, it proposes a new model based on designing and implementing strategic organizational sustainability, abandoning the narrow focus on economic growth and profits to embrace the social inclusion and equity as well as the environmental sustainability issues.

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Nima Norouzi, Bournemouth University, UK

The sustainable revolution constitutes a multiscalar process characterized by gradual interconnection and digitization in economic globalization. This work confronts the discourses derived from this socioeconomic process with the biophysical limits of the planet through the analysis of the material requirements of the basic infrastructure necessary for the technologies of the Fourth Industrial Revolution. Through the study of the discourses and the current situation of natural resources, 13 metals have been identified whose availability in the next 30 years constitutes the limiting factors for the effective deployment of the technologies of this process. In this situation, the theoretical foundations of future potential are established where techno-optimistic and degrowth discourses coexist through uneven development, making sustainability a characteristic based on exclusivity.

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Arturo Luque González, Universidad Técnica de Manabí, Ecuador & Universidad del Rosario, Colombia

The concept of consumerism brings together many of the social transformations that serve as predictors of present and future behaviors and act as vehicles for today's society. Its evolution is diffuse and corresponds to different periods of history that have incorporated the characteristics of desire, superficiality, and exclusivity that drive new needs and potentialities. Its importance underlies the need to analyze 46 theoretical approaches through their categorization in six dimensions and frequency count in Google Scholar. The methodology used a higher-order association, establishing the most significant combinations and weightings. From these results, the concept of consumerism is defined by the economic-social-cultural-ethical categories according to its frequency of use in Google. This shows economic influences as a determining factor, over and above processes that are far from the common good or the general interest.

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José G. Vargas-Hernández, Instituto Tecnológico Mario Molina, Unidad Académica Zapopan, Mexico

This chapter analyzes the adaptive resilience capacity as an organizational strategy. It is assumed that the development of organizational resilience capabilities can support the transformation and adaptation strategies aimed to enhance the socio ecosystem services. One of the organizational capabilities is organizational resilience assuming that adverse conditions have an impact on the organization which may remain vulnerable unless it learns new capabilities and actions, adapts to access changing resources, and creates iteratively new forms and opportunities with the available resources. It is concluded that a strategic adaptive capacity approach to organizational resilience supports the design and implementation of more flexible and progressive strategies to face any kind of environmental disturbances, crises, and shocks to become more competitive in the global marketplace environment.

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Nima Norouzi, Bournemouth University, UK

This chapter investigates the effects of COVID-19 on electricity consumption in some countries, especially in Iran. The effect of COVID-19 in the electricity industry and the amount of electricity consumption in Iran and in the countries that have been most affected have been studied. A study of COVID-19's impact on the world shows a reduction of about 15% in electricity demand during the short term of the COVID-19 outbreak. This amount varies from country to country. Studies show that the countries under study have experienced a relative decline in electricity demand in the short term, but with the continued prevalence of COVID-19 and the removal of some restrictions, the state of electricity consumption has more or less returned to pre-COVID-19 levels. It is worth noting that at the time of writing this chapter, the COVID-19 pandemic continues.

Chapter 7

Corporate Social Responsibility (CSR): Effects on Organizational Identification and Employee Creativity..... 145

Okechukwu Ethelbert Amah, Lagos Business School, Pan Atlantic University, Nigeria

Corporate social responsibility (CSR) is no longer a legal obligation but discretionary aimed at fulfilling the needs of stakeholders. The failed leadership in Africa has made discretionary CSR initiatives very important in the life of employees and local community. The chapter reports a micro-level study that considered the effect of CSR initiatives directed to employees and local communities on employee organizational identification (OID) and employee creativity (ECR). The results obtained show that CSR directed to employees has both direct and indirect relationships with ECR through OID, while CSR directed at local community has only indirect relationship with ECR through OID. The results position CSR initiatives as strategic to the performance of business instead of just being philanthropic. This means that managers must take special interest in developing and implementing CSR initiatives since their outcome has an effect on employee behavior. The study also demonstrates the need to factor the importance of each CSR initiatives directed at various stakeholders in future study.

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Fiscally Responsible Businesses as a Result of COVID-19 Pandemic Shock: Taking Control of Countries' Tax Systems by Putting an End to Corporate Tax Evasion and Tax Havens 161

Cristina Raluca Gh. Popescu, University of Bucharest, Romania & The Bucharest University of Economic Studies, Bucharest, Romania

Jarmila Duháček Šebestová, Silesian University in Opava, Czech Republic & SBA in Karviná, Czech Republic & Moravian Business College Olomouc, Czech Republic

The COVID-19 pandemic and COVID-19 crisis represent impressive motivating forces for advancement, change, evolution, and improvement at a global level. The study focuses on the OECD latest developments in international tax reform work on base erosion and profit shifting (BEPS) in the courageous attempt to promote novel global initiatives for responsible tax and to support ambitious global actions for responsible tax principles. The results show the need to establish fiscally responsible businesses as a result of COVID-19 pandemic shock, thus taking back control of countries' tax systems by putting an end to corporate tax evasion and tax havens. The findings address the importance of being in line with tax principles, encouraging responsible financial transactions and behaviors.

Chapter 9

Legal Review of the Government's Responsibility in Compensating for the Damage Caused by the COVID-19 Crisis 193

Mohammad Sheikhi, Islamic Azad University, Dubai, UAE

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The onset and spread of COVID-19-related disease and the measures taken by the government to combat it have given rise to several legal issues. The most important of these issues can be considered the government's legal framework in the fight against this disease and the responsibility for compensation. Examining the first issue through Iran's current laws and regulations, it became clear that choosing the appropriate legal framework in the fight against this disease could be more than the basic and ordinary regulations. Instead of creating a national headquarters to fight COVID-19 under council approvals, the Supreme National Security Service shall use the capacities of the crisis management organization and the relevant law and the provisions of Article 79 of the Iranian constitution.

Chapter 10

The Impact of Corporate Social Responsibility on Firm Value During the COVID-19 Pandemic: From the Perspective of the Malaysian Tourism Industry 206

Lin Woon Leong, Taylor's University, Malaysia

Song Bee Lian, Taylor's University, Malaysia

In this chapter, the authors have investigated the effect of CSR on firm value during the pandemic. They used the event study technique and noted that an engagement in the CSR activities increases the stock returns to the hospitality firms during a pandemic crisis. The results showed that the hospitality firms that showed a better stock market performance during the pandemic invested in CSR activities. This would indicate a theoretical application and practical implication on their business duties towards the society, and any future research in CSR would allow them to successfully handle a critical disaster like this pandemic in the future.

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Strategic Analysis of the Organizational Learning Approach to Dynamic Resilient Capability 223

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Zapopan, Mexico

The purpose of this study is to analyze the strategic organizational learning approach to dynamic resilient capabilities. A scoping review of the theoretical and empirical literature on organizational dynamic resilience capability reveals gaps to be addressed to improve the conceptualization. Under the assumption of some attributes and properties, it is viable to study the organizational resilience learning process leading to the analysis of the organizational resilience strategies.

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*Pinosh Kumar Hajoary, Institute of Entrepreneurship and Innovation Science, University of
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Jose Arturo Garza-Reyes, University of Derby, UK

Business organisations are attempting to transform themselves according to the paradigms of Industry 4.0. This chapter presents the case of Tapfrsh kiosk, an internet of things (IoT)-based beverage service platform for urban communities. It discusses the business ecosystem, system design, technology usage, machine design, aesthetics, and operational aspects of the Tapfrsh kiosk. The authors include a critical commentary on the kiosk using a multidimensional lens. Entrepreneurial insights are discussed.

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Nima Norouzi, Bournemouth University, UK

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Julijana Nicha Andrade, Federal University of Minas Gerais, Brazil

The main argument elaborated in this chapter is that companies, particularly start-ups, need to continuously work on their business leadership, human capital, and organizational change and persistence in order to survive and keep thriving even in uncertain times, such as the post-COVID-19 period. Additionally, the chapter argues that Pfeffer's seven principles for organizational success are still very relevant today and recommends to start-ups to use this framework. The chapter draws from the literature on human capital and management, organizational structure and perseverance, and responsible business leadership. The drawings from the literature are then applied to a single case study, the recruitment consultancy The Big Search. The findings confirm that Pfeffer's seven principles for organizational success are highly relevant today to companies that do want to invest in their performance and success. Moreover, the findings show the challenges and opportunities that start-ups, such as The Big Search, have gone through.

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Raising Awareness of Responsible Consumption Through Fashion Rentals and Frugal intentions..... 303

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Sustainable consumption practices help to reduce environmental impacts and fosters responsible consumers. Researchers have explored the positive drivers and negative barriers of fashion-conscious consumer (FCC) purchasing intention on fashion clothing. The study also examined the motives and outcomes of the phenomenon, such as rental landscape and frugality. Using the qualitative phenomenological method, researchers conducted 21 in-depth semi-structured interviews in India to tap into FCC's buying intention and experience. From the results of qualitative analysis, researchers identified "emotion" as a new parameter reflecting consumer passion and interpersonal relationships. Different themes emerged, such as selection of the style, attention-seeking, status value, cost factor (uncontrollable), and psychological value, which are the commonly identified motivators. Conceptual framework is developed to understand the perception towards green environment and sustainability. The implications are to improve the sustainable practices in the fashion sector through rental options and frugality.

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José G. Vargas-Hernández, Instituto Tecnológico Mario Molina, Unidad Académica

Zapopan, Mexico

The purpose of this study is to analyze the strategic organizational learning approach to dynamic resilient capabilities. A scoping review of the theoretical and empirical literature on organizational dynamic resilience capability reveals gaps to be addressed to improve the conceptualization. Under the assumption of some attributes and properties, it is viable to study the organizational resilience learning process leading to the analysis of the organizational resilience strategies. Resilience is addressed through turnaround and dynamic capabilities. Organizational resilience is critical to possessing dynamic capabilities attracting new resources, design strategies, and learning to overcome rigidity and regain stability.

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of Economic Studies, Bucharest, Romania

Changing dynamics in responsible and sustainable business comes as a must in the post-COVID-19 era, while energetic, influential, and powerful transformational leaders represent the vital solution to ensuring creativity in business and a luminous future for organizations worldwide. On the one hand, the newest challenges faced by companies due to the COVID-19 pandemic are analyzed, while, on the other hand, the dominant traits of leaders are displayed in an attempt to determine the successful mix between creative actions, human resources, innovation, intangible assets, intellectual capital, research, technological advancement, and visionary managerial business processes. The study shows that transformational leaders' general focus should be on the amazing benefits derived from addressing fundamental issues, such as the well-being of individuals, the health of the planet, reaching the Sustainable Development Goals (SDGs), bringing circular economy (CE), artificial intelligence (AI), and smart cities (SC) closer to human beings' vital needs.

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Nesrin Ozcan Akdag, Department of Business Administration, Suleyman Demirel University, Isparta, Turkey

Mustafa Zihni Tunca, Faculty of Economics and Administrative Sciences, Department of Business Administration, Suleyman Demirel University, Isparta, Turkey

The fragility of the global economy during the COVID-19 outbreak has shown the importance of supply chain sustainability. Although academic interest in the concept of sustainable supply chain management has risen significantly in the last decades, this concept has lately attracted the attention of policymakers as one of the dynamics of the “new normal” in the post-COVID-19 era. This study was carried out to highlight the dynamics of SSCM in the post-COVID-19 era, based on the recent developments in sustainable supply chain literature. Hence, the bibliometric analysis method was utilized by using various software packages. The data collected for this research consists of the finding of the search results of the “Sustainable Supply Chain Management” phrase from the Web of Science database for the period of 1975 – 2021. In total, 326 articles have been included in the analyses.

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Tourism has been recognized as a delight for attraction, accommodation, culture, recreation, and more. The tourism industry has become a major source of revenue for many businesses and for nations as a whole as part of the service sector. The unusual outbreak of the COVID-19 pandemic is the sole disruptive circumstance for the last several months. Due to the unprecedented situation, there is a chance for new travel trends to emerge in the nation. This chapter describes the emerging new normal tourism and travel trends like a staycation, wellness and spa tourism, virtual tourism, sustainable travel, eco-tourism, vaccine tourism, and also aims at finding tourist preferences of destinations from the new travel trends post pandemic. Travellers today would like to visit destinations consisting of nature protected regions, which are termed sustainable travel, to satisfy their ecotravel, money value, private space, social distance, security, accessibility, and cleanliness needs.

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Dominic Owusu, University of Cape Coast, Ghana

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Benedict Ofori Antwi, University of Cape Coast, Ghana

Isaac Kwadwo Anim, University of Cape Coast, Ghana

Unprecedented outbreaks of disease have challenged the contemporary world with substantial adverse consequences on the effectiveness of business models in operations and supply chain management (OSCM). The advent of COVID-19 put a lot of pressure on staff and resources. However, the focus of contributors has been on the pressure on staff managing the various hospital facilities and ignoring

inventory, which is one of the key areas where resources required to take care of patients are managed. Using the resource dependency theory, this chapter analyses how COVID-19 affected the inventory practices of hospitals operating in the Western Region of Ghana. It further makes suggestions on how the inventory of hospitals should be managed in order to avert possible shortages and interruptions in healthcare delivery and further relieve hospital staff of the pressure they have to sustain when there is a shortage. The chapter offers suggestions on areas of inventory management practices that management of hospital facilities should pay attention to.

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Foreword

These days, humanity faces unprecedented provocations as well as incredibly demanding threats derived from the novelty and the particularity of the situations that the COVID-19 pandemic and the COVID-19 crisis have managed to generate all around the globe, in record time. It seems that today, more than ever before in history, sustainable development and sustainable development goals are heavily challenged by the current demographic, economic, financial, political, and social context, and the need to support both present and future generations without compromising individuals' chances for healthy and prosperous lives becomes a valuable aim for the leaders and specialists all over the world. In continuation, sustainability assessment instruments, tools and methods call for urgent measures capable to ensure and promote the world's top environmental standards and the world's visionary climate policies that will make possible the governing of a sustainable world for all. These are times in which the quest for ensuring well-being, mental health, mindfulness, resilience, robustness, self-control, and self-mastery are pivotal to the existence of humanity and the preservation of planet Earth. Also, moderation and temperance in terms of human behavior might be the key for success in the times of the COVID-19 pandemic and the COVID-19 crisis, while mildness in economic, financial, political, and social activities and decisions might represent the beginning of a new chapter in all our lives.

In this particular context, the book suggestively entitled *Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era*, published by IGI Global, proves to be ideal for academics, leaders, scientists, researchers, students, Ph.D. scholars, and postdoctoral students, since it brings to light a plethora of subjects that demand immediate interest and that require great attention, as follows:

- Chapter 1 is profoundly concentrated of the topic of mindfulness at work, regarded as a sound business investment, in the attempt to discover the benefits of focusing on the employees' well-being, while increasing, in the same time, creativity and innovation.
- Chapter 2 targets the implications of the organizational greening strategy in times of pandemic COVID-19, highlighting the advantages of using such a strategy in today's context.
- Chapter 3 emphasizes the challenges of the sustainable Fourth Industrial Revolution, which in the words of the author represent a multi-scalar process characterized by gradual interconnection and digitization in economic globalization.
- Chapter 4 gives all the attention to the valuable and intriguing subject of the fallacies of consumerism, in the attempt to present an analysis of its impact and depth in today's society.
- Chapter 5 directs the readers' attention to the strategic adaptive resilience capacity, which is a very important topic of analysis these days.

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- Chapter 6 emphasizes the changes and challenges derived from the COVID-19 pandemic for the electricity market, in the attempt to create a strategic planning for the electricity market and propose a framework for sustainable management in the time of crisis.
- Chapter 7 draws toward the importance of corporate social responsibility (CSR) and centers its attention of the effects on organizational identification, and employee creativity.
- Chapter 8 addresses the challenging and valuable aspects that characterize fiscally responsible businesses as a result of COVID-19 pandemic shock, with particular reference to a highly novel topic these days, which is represented by taking control of countries' tax systems by putting an end to corporate tax evasion and tax havens.
- Chapter 9 directs the readers' attention to the legal review of the government's responsibility in compensating for the damage caused by the COVID-19 crisis.
- Chapter 10 closely considers the impact of corporate social responsibility (CSR) on firm value during the COVID-19 pandemic from the perspective of Malaysian tourism industry. In this book chapter, the authors have investigated the effect of CSR on the firm value during the pandemic.
- Chapter 11 brings to light a strategic analysis of organizational learning approach to the dynamic resilient capability, in today's context.
- Chapter 12 closely examines the topic of reshaping the beverage retail in urban communities through connected platform.
- Chapter 13 tackles the subject of regulating sustainable economics, by providing a legal and policy analysis in the light of the United Nations Sustainable Development Goals.
- Chapter 14 centers on the vital advantages and the pivotal importance of reinventing operating models for sustainable organizational performance, focusing on the case of The Big Search.
- Chapter 15 centers on the matters that surround the subject of raising awareness of responsible consumption through fashion rentals and frugal intentions.
- Chapter 16 centers its attention on the organizational learning capability to dynamic resilient, in order to highlight a strategic analysis.
- Chapter 17 addresses the crucial need of fostering creativity in business, in the attempt to empower strong transformational leaders in today's highly challenging and extremely dynamic context.
- Chapter 18 embraces the topic of the dynamics of sustainable supply chain management in the Post-COVID-19 Era, focusing on a bibliometric literature review.
- Chapter 19 aims at presenting the paradigm change in tourists' preferences towards evolving new normal tourism and travel trends.
- Chapter 20 brings to the attention the topic of the COVID-19 pandemic and its implications on store keeping practices, and the perspectives of health workers.

It is both my great pleasure and my great honor to invite academics, leaders, scientists, researchers, students, Ph.D. scholars, and postdoctoral students to seriously consider this book entitled *Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era* for reading, due to its power to disseminate knowledge and to display solutions capable to accompany the activities and actions that are due to take place in the Post-COVID-19 Era.

I would like to take this opportunity to deeply congratulate the authors, the Editorial Advisory Board members, and the Editorial Review Board members for the valuable work done as well as the important results gained throughout the entire process.

Also, I would like to take this chance to heartily and to warmly congratulate the editor of the book *Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era*, Professor Dr. Cristina Raluca Gh. Popescu, from the University of Bucharest, Bucharest, Romania, The Bucharest University of Economic Studies, Bucharest, Romania, The National Institute for Research and Development in Environmental Protection, (I.N.C.D.P.M.), Bucharest, Romania, and the National Research and Development Institute for Gas Turbines COMOTI, Bucharest, Romania, for initiating this valuable project together with the IGI Global publication team members and for having the power to finalize successfully the work that usually accompanies such lengthy, comprehensive, and time consuming projects.

Since I have also collaborated in the past with the editor, Professor Dr. Cristina Raluca Gh. Popescu, it is my great pleasure to communicate in these lines my immeasurable happiness to have seen a new project and a new contribution belonging to Professor Dr. Cristina Raluca Gh. Popescu that was able to come to life, thus wishing that the chapters will bring consistent knowledge and vital information to all interested scholars and specialists.

In the end, I would like to express my deepest appreciation and my warmest consideration to the publisher IGI Global for offering me this immense opportunity to make an in-depth analysis of this book and to be able to put in writing, in brief, my beliefs, my comments, my suggestions, and my thoughts concerning this book, as a whole, all the book chapters and, also, the priceless collaboration with the editor.

All in all, I wish you balance in all your daily activities and tasks, happiness and joy in all successful targets that you are able to reach, power to make all your projects flourish, and good thoughts and positive thinking in order to attract good fortune and to act creatively, innovatively and thoughtfully!

May you all have a pleasant reading!

Rafael Ravina-Ripoll
University of Cádiz, Spain

Rafael Ravina-Ripoll holds a Ph.D. in History since 2015. He has been a Professor of Business Organisation at the University of Cadiz (Spain) since 2008-1996. His priority lines of research are happiness, happiness management, wellbeing, and business. He is the author of more than 100 research papers published in several indexed academic journals (*Corporate Governance, Quality & Quantity, Entrepreneurship and Sustainability Issues, Polish Journal of Management Studies, International Journal of Entrepreneurship, International Journal. Environmental Research Public Health, Journal of Risk and Financial Management, Energies, International Journal of Business Environment, Academy of Entrepreneurship Journal, Journal of Legal, Ethical and Regulatory Issues, Frontiers in Psychology, Sustainability, Retos, etc.*) and in numerous chapters published in the most relevant international publishing houses in economics (*Springer, Peter Lang, Tirant lo Blanch, Aranzadi, Akal, Narcea, Comares, Dickinson, etc.*). According to the Google Scholar database, his research has more than 300 citations, and his h-index is equal to 11. He is a founding member of the International University Network of Happiness and the Research Institute for Sustainable Social Development of the University of Cadiz (INDESS), guest editor of *Energies* and *Journal Corporate Governance*. He is on the editorial board of *Decision Analytics Journal* and *Healthcare Analytics, Retos, Cuadernos de Administración* and *Revista Jurídicas CUC*. He is also the Director of the University Research Group Happiness Management, Creativity and Well-being in Industry 4.0 from social sciences and humanities.

Preface

The main objective of this reference book is to provide valuable insight of today's important changes caused by the COVID-19 pandemic shock in terms of defining, characterizing, presenting and understanding the meaning, challenges and implications of responsible and sustainable business. Important questions tend to appear once focusing on the broad topic represented by the idea of responsible and sustainable business, while addressing the important changes caused by the COVID-19 pandemic shock. Among these key questions, could be mentioned the following ones: (1) What is sustainable business? (2) What does responsible business mean? (3) What do responsible and sustainable business practices implicate? (4) Which are the specificities of corporate social responsibility and enterprise development? and (5) How is the classic entrepreneurial paradigm by contemporary world businesses affected? In like manner, this scientific book is keen on providing valuable insight towards today's important changes caused by the COVID-19 pandemic shock, while presenting reliable and successful sustainable business models which have become, in time, increasingly appealing for all entities' leaders worldwide.

This book aims at providing an updated view of the newest trends, novel practices and latest tendencies concerning the manner of addressing and creating responsible and sustainable business, while striving to understand those important changes caused by the COVID-19 pandemic shock.

The target audience is represented by academics, scientists, researchers, students, PhD scholars and post-doctoral students. Also, this reference book will present important features concerning sustainable development goals, challenges, and practices, while emphasizing the key determinants in achieving performance and excellence, which will prove to be extremely valuable for specialists, practitioners, governmental institutions, and policy makers' worldwide. Nevertheless, this scientific book will represent a well - documented and well - developed work for (potential) business leaders, entrepreneurs, and managers, as well as highly prominent individuals involved in decision making processes.

The main objective of this reference book is to provide a platform for sharing researchers' and professionals' most recent ideas, findings and works concerning the dominating subject represented by responsible and sustainable business, while addressing the most important changes caused by the COVID-19 pandemic shock. In this context, researchers and professionals are kindly invited to submit their contributions in form of original research papers, case studies or essays, in particular on the following topics (but not limited to the following topics) highlighted below. It should also be stated that interdisciplinary and cross section contributions are welcomed as long as they fall in the area specific to shaping the responsible and sustainable business, with reference to important changes caused by the COVID-19 pandemic shock.

- Business Transparency
- Responsible and Sustainable Business
- Corporate Social Responsibility (CSR)
- Adoption of Corporate Social Responsibility (CSR) Tools
- Corporate Social Responsibility (CSR)
- Taxation
- Aggressive Tax
- Sustainable and Responsible Business Leadership
- Corporate Sustainability Management
- Innovation
- Artificial Intelligence and the power to influence the future
- Business Excellence and Innovation
- Business Environment
- Business Ethics
- Climate change
- Circular economies
- Competency-based education
- Constructing modern knowledge
- Corporate Tax Avoidance
- Effective Tax Rate
- Economic Performance
- Environmental Performance
- Energy transitioning to sustainability
- Entrepreneurship and Greening Economy
- Entrepreneurship measuring indicators
- Entrepreneurial finance
- Environmental sustainability and justice
- Future energy scenarios, with focus on smart energy markets
- Intellectual capital, sustainability and resilience
- International entrepreneurship
- New and sustainable agribusiness management models
- Smart cities
- Sustainable agriculture and organic farming
- Sustainable Conservation Management
- Sustainable Development in Business Reporting
- Sustainable Entrepreneurship
- Sustainable Entrepreneurship skills and competences
- Sustainable Human Resource Development
- Sustainable Rural Community Development
- Global Entrepreneurship
- Social Entrepreneurship
- Women Entrepreneurship
- Corporate social responsibility
- Creativity

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- Creating an inclusive and competitive entrepreneurship
- Information technology
- Innovation
- Innovative Business Models
- Innovation for sustainable agriculture and food chains
- Intellectual capital
- Leadership
- Knowledge management
- Organizational performance
- Public policies and influences on entrepreneurship
- Responsible Innovation, Performance and Excellence for a sustainable future
- Responsible consumption and production
- Social responsibility
- Sustainable entrepreneurial ecosystems
- Sustainable energy, with responsible consumption and production
- Sustainability (business) practices
- Sustainable Solutions
- Sustainable Business Models
- Sustainable society, with responsible consumption and production
- Tax heavens
- Tax transparency
- Technologies and policies for a sustainable society
- Technological and social innovation for sustainable business
- Travel resilience and sustainability challenges
- Tourism resilience and sustainability challenges

ORGANIZATION OF THE BOOK

The book is organized into 20 chapters. A brief description of each of the chapters may be found below, as it results based on the authors' own statements:

Chapter 1 is profoundly concentrated of the topic of mindfulness at work, regarded as a sound business investment, in the attempt to discover the benefits of focusing on the employees' well-being, while increasing, in the same time, creativity and innovation. The author of this chapter starts with the idea that the COVID-19 pandemic and the COVID-19 crisis have brought a tremendous pressure on human beings and have raised deep concerns regarding the future of people's activities all over the world. In continuation, the author emphasizes the fact that the Post-COVID-19 Era presents a highly challenging perspective due to the uncertainties raised by the new environment, already weakened by the lack of cooperation among individuals, the ruthless competition between entities, and the fierce and aggressive decisions taken in haste, which affected the balance of our planet, the future of the next generations, and the well-being and mental health of people. In this matter, the author of this chapter addresses mindfulness as a major solution to today's problems, offering individuals the possibility to become more focused, more connected with present situations, and more willing to understand not only their needs, but also the requirements of their colleagues, communities, and all that surrounds them, and also concentrates

on highlighting the power of mindfulness – as an investment in our lives, comes to support creativity, development, innovation, responsibility, sustainability, well-being, and a healthy and well-balanced business environment. The study revolves around several key concepts, among which the following ones could be mentioned: business, management, economics, accounting, COVID-19 Era, competitiveness, creativity, innovation, human resources, investment, responsibility, sustainability, work, mindfulness, well-being, and changes.

Chapter 2 targets the implications of the organizational greening strategy in times of pandemic COVID-19, highlighting the advantages of using such a strategy in today's context. It should be added that this study is aimed to analyze the various features and elements related to strategic organizational sustainability, with the specific mention that the analysis starts from the assumption that traditional organizations have to face a lot of challenges posed by the new global economy context confronting contradictory patterns of globalization and des-globalization processes. In order to create the new conditions for the organizations not only to survive but to succeed, it is proposed a new model based on designing and implementing strategic organizational sustainability, abandoning the narrow focus on economic growth and profits to embrace the social inclusion and equity as well as the environmental sustainability issues. In terms of the keywords which are pivotal to this study, the following ones could be mentioned: economic growth, organizational sustainability, organizations, social inclusion, strategy, and sustainability.

Chapter 3 emphasizes the challenges of the sustainable Fourth Industrial Revolution, which in the words of the author represent a multi-scalar process characterized by gradual interconnection and digitization in economic globalization. The author of this book chapter analysis the discourses derived from this socioeconomic process in parallel with the biophysical limits of the planet through the analysis of the material requirements of the basic infrastructure necessary for the technologies of the Fourth Industrial Revolution. What is more, through the study of the discourses and the analysis of the current situation of natural resources, the author managed to identify 13 (thirteen) metals whose availability in the next 30 years constitutes the limiting factors for the effective deployment of the technologies of this process. In this situation, the author stated the fact that the theoretical foundations of future potential was established where techno-optimistic and the decrease in the growth discourses coexist through uneven development, making sustainability a characteristic based on exclusivity. In terms of vital concepts specific to this particular chapter under analysis, the following elements were brought to the attention of the readers: sustainable revolution, infrastructure, raw materials, shortage, sustainability, sustainable economics, green economics, and ecological economics.

Chapter 4 gives all the attention to the valuable and intriguing subject of the fallacies of consumerism, in the attempt to present an analysis of its impact and depth in today's society. According to the author, the concept of consumerism brings together many of the social transformations that serve as a predictor of present and future behaviors and act as vehicles for today's society. What is more, the author highlights the fact that the evolution of this concept, "consumerism", is diffuse and corresponds to different periods of history that have incorporated the characteristics of desire, superficiality and exclusivity that drive new needs and potentialities. Furthermore, the author states the belief that the importance of this notion underlies the need to analyze 46 theoretical approaches through their categorization in six dimensions and frequency count in Google Scholar. In this matter, the methodology used by the author is represented by a higher-order association, in the attempt to establishing the most significant combinations and weightings. From these results, the concept of consumerism is defined by the economic-social-cultural-ethical categories according to its frequency of use in Google, which is

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meant to show the economic influences as a determining factor, over and above those processes that are far from the common good or the general interest. The author identified several representative keywords for the book chapter, as follows: consumerism, consumer society, market economy, free trade, corruption, and supranational organizations.

Chapter 5 directs the readers' attention to the strategic adaptive resilience capacity, which is a very important topic of analysis these days. The author mentions in this book chapter the intended purpose of this scientific work, namely the will to analyze the adaptive resilience capacity as an organizational strategy, starting from the assumption that the development of organizational resilience capabilities can support the transformation and adaptation strategies aimed to enhance the socio ecosystem services. What is more, the author mentions that one of the organizational capabilities is organizational resilience based on the fact that adverse conditions have an impact on the organization which may remain vulnerable unless it learns new capabilities and actions, adapts to access changing resources, and create iteratively new forms and opportunities with the available resources. The conclusions of this book chapter rely on the following aspects, as the author mentions: a strategic adaptive capacity approach to organizational resilience supports the design and implementation of more flexible and progressive strategies to face any kind of environmental disturbances, crises, and shocks to become more competitive in the global marketplace environment. The pivotal concepts for this book chapter are the following ones: adaptive resilience capacity, adaptive capacity strategy, and organizational resilience strategies.

Chapter 6 emphasizes the changes and challenges derived from the COVID-19 pandemic for the electricity market, in the attempt to create a strategic planning for the electricity market and propose a framework for sustainable management in the time of crisis. In this book chapter, the author investigates the effects of COVID-19 on the electricity consumption in some countries, especially in Iran. What is more, the author has studied in this book chapter the effect of COVID-19 in the electricity industry and the amount of electricity consumption in Iran and in the countries that have been most affected. Also, the author makes reference to a study of the COVID-19's impact on the world, which shows a reduction of about 15% in electricity demand during the short term of the COVID-19 outbreak. In continuation, the author brings to the attention the fact that this amount varies from country to country. Studies show that the countries under study have experienced a relative decline in electricity demand in the short term, but with the continued prevalence of the COVID-19 and the removal of some restrictions, the state of electricity consumption has more or less returned to pre-COVID-19. Also, according to the author, it is worth noting that at the time of writing this article, the COVID-19 pandemic continues. The keywords specific to this book chapter are the following ones: COVID-19, SARS-COV-2, electricity demand, energy market, renewable energy, energy economics, green economics, sustainable economics, and electricity market.

Chapter 7 draws toward the importance of corporate social responsibility (CSR) and centers its attention of the effects on organizational identification, and employee creativity. According to the author, CSR is no longer a legal obligation but discretionary aimed at fulfilling the needs of stakeholders. In continuation, the book chapter studies the case of the leadership in Africa, and the implications of the CSR initiatives in the lives of employees and local community. In addition, the book chapter reports a micro-level study that considered the effect of CSR initiatives directed to employees and local communities on employee organizational identification (OID) and employee creativity (ECR). According to the author, the results obtained show that CSR directed to employees has both direct and indirect relationship with ECR through OID, while CSR directed at local community has only indirect relationship with ECR through OID and, also, the results position CSR initiatives as strategic to the performance of business

instead of just being philanthropic. The authors believe that this means that managers must take special interest in developing and implementing CSR initiatives since their outcome has effect on employee behavior. The main keywords specific to this book chapter are the following ones: triple bottom line, employee behavior, micro-level, and Africa.

Chapter 8 addresses the challenging and valuable aspects that characterize fiscally responsible businesses as a result of COVID-19 pandemic shock, with particular reference to a highly novel topic these days, which is represented by taking control of countries' tax systems by putting an end to corporate tax evasion and tax havens. According to the authors of this study, it has been brought to the attention of the readers that the COVID-19 pandemic and the COVID-19 crisis represent impressive motivating forces for advancement, change, evolution and improvement at a global level. What is more, the authors focused in their study on the OECD latest developments in international tax reform work on Base Erosion and Profit Shifting (BEPS), in the courageous attempt to promote novel global initiatives for responsible tax and to support ambitious global actions for responsible tax principles. Furthermore, the scientific work places in the center of attention the G7 nations "historic" decision on applying a minimum global corporate tax rate of 15%, as well as the G20 finance ministers commitment on backing-up this initiative by creating a framework for international tax reform due to include a minimum corporate rate of 15%. It should be emphasized that the results presented in this book chapter show the need to establish fiscally responsible businesses as a result of COVID-19 pandemic shock, thus taking back control of countries' tax systems by putting an end to corporate tax evasion and tax havens. In like manner, it should be mentioned that the findings noted in this book chapter carefully and thoroughly address the importance of being in line with tax principles, encouraging responsible financial transactions and behaviors. In terms of key concepts, the following notions have proven to be of utmost importance in the analysis of book chapter: business, base erosion and profit shifting, minimum corporate rate, tax evasion, tax haven, international tax reform, intangible asset, intellectual capital, multinationals, and responsible taxpayer.

Chapter 9 directs the readers' attention to the legal review of the government's responsibility in compensating for the damage caused by the COVID-19 crisis. The authors of this book chapter noted that the government's onset and spread of COVID-19-related disease and the measures taken by the government to combat it have given rise to several legal issues. In continuation, the authors highlighted their belief that the most important of these issues can be considered the government's legal framework in the fight against this disease and the responsibility for compensation. What is more, the authors stressed the fact that while examining the first issue through Iran's current laws and regulations, it became clear to the authors that choosing the appropriate legal framework in the fight against this disease could be more than the basic and ordinary regulations, thus the author having the opportunity to provide several important and vital solutions in this matter. In terms of keywords, the following concepts are vital for this book chapter: law enforcement, COVID-19, civil liability, public law, disease control, government obligations, and private law.

Chapter 10 closely considers the impact of corporate social responsibility (CSR) on firm value during the COVID-19 pandemic from the perspective of Malaysian tourism industry. In this book chapter, the authors have investigated the effect of CSR on the firm value during the pandemic. The authors have used the event study technique and noted that an engagement in the CSR activities increases the stock returns to the hospitality firms during a pandemic crisis. What is more, according to the authors, the results that they were able to obtain showed that the hospitality firms that showed a better stock market performance during the pandemic should invest in CSR activities. Furthermore, according to the authors, this would indicate a theoretical application and practical implication on their business duties towards

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the society and any future research in CSR would allow them to successfully handle a critical disaster like this pandemic in the future. The important keywords that are characteristic to this book chapter are as follows: COVID-19 pandemic, stakeholder theory, corporate social responsibility, firm value, and tourism industry.

Chapter 11 brings to light a strategic analysis of organizational learning approach to the dynamic resilient capability, in today's context. The author mentions in terms of the purpose of this study the desire to analyze the strategic organizational learning approach to dynamic resilient capabilities, thus closely examining the theoretical and empirical literature on organizational dynamic resilience capability, in order to reveal gaps to be addressed to improve the conceptualization. What is more, the author mentions that under the assumption of some attributes and properties, it is vital to study the organizational resilience learning process leading to the analysis of the organizational resilience strategies. The key notions for this book chapter are the following ones: dynamic resilient capability, organizational learning, and strategic analysis.

Chapter 12 closely examines the topic of reshaping the beverage retail in urban communities through connected platform. The authors noted, in this context, that all over the world business organizations are attempting to transform themselves according to the paradigms of Industry 4.0. What is more, the authors chose to present in their book chapter the case of Tapfrsh kiosk – an Internet of Things (IoT) based beverage service platform for urban communities. According to the authors, the chapter discusses the business ecosystem, system design, technology usage, machine design, aesthetics and operational aspects of the Tapfrsh kiosk and, also, the chapter includes a critical commentary on the kiosk using a multidimensional lens in order to highlight the entrepreneurial insights specific to this domain. The keywords which are of great value for this book chapter are the following ones: Industry 4.0, F&B Retail, connected retail, Internet of Things (IoT), community retail, and entrepreneurship.

Chapter 13 tackles the subject of regulating sustainable economics, by providing a legal and policy analysis in the light of the United Nations Sustainable Development Goals. The author mentions the fact that the chapter fills in the gaps encountered while analyzing the matters that surround regulating sustainable economics, by presenting an analysis of renewable energy policies while making reference to different countries. Also, the author assesses in the book chapter how renewable energy may assist in efforts towards reducing poverty and promoting human well-being, by focusing on a comparative analysis of the emphasis given to renewable energy through policies in various countries is presented. What is more, the author mentions that, based on the findings from the study, some recommendations to address the differences seen in pursuing renewable energy technologies are made. Furthermore, the author states the intention of illustrating in the book chapter the fact that the sample countries have been tackling renewable energy with different depths of policies and with varying levels of success, and the different nature of these policies suggests that future developments much depend on a change in the current emphasis and level of priority afforded to renewable energy. The representative keywords for this book chapter are the following one: renewable energy, sustainable development, energy policy, energy sources, green economic, sustainable economics, ecological economics, and climate change economics.

Chapter 14 centers on the vital advantages and the pivotal importance of reinventing operating models for sustainable organizational performance, focusing on the case of The Big Search. According to the author of this book chapter, the main argument elaborated in this chapter is that companies, particularly start-ups, need to continuously work on their business leadership, human capital and organizational change and persistence in order to survive and keep thriving even in uncertain times, as the post-COVID-19 period. Additionally, the author mentions that the book chapter argues that Pfeffer's seven principles for

organizational success are still very relevant today and recommends to start-ups to use this framework. What is more, the chapter draws from the literature on human capital and management, organizational structure and perseverance and responsible business leadership and, thus, according to the author the drawings from the literature are then applied to a single case study, the recruitment consultancy The Big Search. The findings of this book chapter confirm, according to the author, that Pfeffer's seven principles for organizational success are highly relevant today to companies that do want to invest in their performance and success and, also, the results show the challenges and opportunities that start-ups, as The Big Search, have went through and are lying forward. The key notions specific to this book chapter are as follows: human capital, organizational success, business leadership, and post-COVID-19.

Chapter 15 centers on the matters that surround the subject of raising awareness of responsible consumption through fashion rentals and frugal intentions. The authors start their research by mentioning that the sustainable consumption practices help to reduce environmental impacts and fosters responsible consumers, and emphasize the fact that researchers have explored the positive drivers and negative barriers of fashion-conscious consumer's (FCC) purchasing intention on fashion clothing. The authors examined in their book chapter the motives and outcomes of this complex phenomenon, such as rental landscape and frugality. In continuation, the author stated that, by using the qualitative phenomenological method, they have conducted 21 in-depth semi-structured interviews in India to tap into FCC's buying intention and experience. What is more, from the results of qualitative analysis, researchers identified "emotion" as a new parameter reflecting consumer's passion and interpersonal relationships. Furthermore, the authors mentioned that different themes emerged, which are the commonly identified motivators, such as: the selection of the style, the attention-seeking, the status value, the cost factor (uncontrollable) and the psychological value. The authors noted that a conceptual framework was developed in the book chapter in order to facilitate the understanding of the perception towards green environment and sustainability, having in mind the implications of such an in-depth analysis, which is to improve the sustainable practices in fashion sector through rental options and frugality. The keywords specific to this book chapter are as follows: fast fashion, fashion-conscious consumer (FCC), frugality, post-consumer textile disposal, rental clothing, second-hand clothing (SHC), and sustainability.

Chapter 16 centers its attention on the organizational learning capability to dynamic resilient, in order to highlight a strategic analysis. Based on the author's stated purpose, the book chapter intends to analyze the strategic organizational learning approach to dynamic resilient capabilities. The author focused in the book chapter on reviewing the theoretical and empirical literature on organizational dynamic resilience capability in order to reveal the gaps to be addressed in order to improve the conceptualization. Also, it should be emphasized that the author believes that the organizational resilience learning process is leading to the analysis of the organizational resilience strategies, thus the resilience is addressed through turnaround and dynamic capabilities. In continuation, the author mentions that organizational resilience is critical to possessing the dynamic capabilities that implicate attracting new resources, which involve the designing of strategies, in order to facilitate to learn to overcome rigidity and regain stability. The keywords important to this book chapter are the following ones: dynamic resilient capability, organizational learning, and strategic analysis.

Chapter 17 addresses the crucial need of fostering creativity in business, in the attempt to empower strong transformational leaders in today's highly challenging and extremely dynamic context. The author of this book chapter starts by arguing that changing dynamics in responsible and sustainable business comes as a must in the Post-COVID-19 Era, while energetic, influential and powerful transformational leaders represent the vital solution to ensuring creativity in business and a luminous future for orga-

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nizations worldwide. Thus, the author mentions that, on the one hand, the newest challenges faced by companies due to COVID-19 pandemic are analyzed in this book chapter, while, on the other hand, the dominant traits of leaders are displayed in this book chapter, in the attempt to determine the successful mix between creative actions, human resources, innovation, intangible assets, intellectual capital, research, technological advancement, and visionary managerial business processes. The book chapter shows that transformational leaders' general focus should be on the amazing benefits derived from addressing fundamental issues, such as: the well-being of individuals, the health of the Planet, reaching the Sustainable Development Goals (SDGs), bringing Circular Economy (CE), Artificial Intelligence (AI) and Smart Cities (SC) closer to human beings vital needs. In terms of keywords, these are the pivotal concepts for this scientific book chapter: business, creativity, human resource, innovation, intangible asset, intellectual capital, leadership, sustainable development goals, circular economy, artificial intelligence, smart cities, and well-being.

Chapter 18 embraces the topic of the dynamics of sustainable supply chain management in the Post-COVID-19 Era, focusing on a bibliometric literature review. The authors have expressed their great concern towards the fragility of the global economy during the COVID-19 outbreak, which according to them has shown the importance of supply chain sustainability. What is more, the authors of this chapter believe that although academic interest in the concept of Sustainable Supply Chain Management (SSCM) has risen significantly in the last decades, this concept has lately attracted the attention of policymakers as one of the dynamics of the “new normal” in the Post-COVID-19 Era. The authors have carried out their current study in order to highlight the dynamics of SSCM in the Post-COVID-19 Era, based on the recent developments in sustainable supply chain literature. Hence, the authors have noted the fact that the bibliometric analysis method was utilized by using various software packages. Furthermore, the data collected by the authors for this research consists of the finding of the search results of the “Sustainable Supply Chain Management” phrase from the Web of Science database for the time period of 1975 – 2021, which led to the inclusion of 326 articles, in total, in the analyses. The main keywords of this book chapter are as follows: supply chain management, Sustainable Supply Chain Management (SSCM), and bibliometric analysis.

Chapter 19 aims at presenting the paradigm change in tourists' preferences towards evolving new normal tourism and travel trends. The authors of this book chapter noted the fact that tourism has been recognized as a delight for attraction, accommodation, culture, recreation and many more, which also implicated that the tourism industry has become a major source of revenue for many businesses and for nation as a whole as part of the service sector. What is more, the authors have stressed the fact that the unusual outbreak of COVID-19 pandemic is the sole disruptive circumstance for the last several months, which is unpredictable and inevitable. Furthermore, the authors have highlighted in their work the fact that due to the unprecedented situation, there is a chance for new travel trends to emerge in the nation. This chapter describes, on the one hand, the emerging new normal tourism and travel trends like a staycation, wellness and spa tourism, virtual tourism, sustainable travel, eco-tourism, vaccine tourism and, also, on the other hand, aims at finding tourist preferences of destinations from the new travel trends post-pandemic. Based on the authors' remarks, travellers today would like to visit destinations consisting of nature protected regions which are termed sustainable travel to satisfy their eco-travel, money value, private space, social distance, security, accessibility, and cleanliness needs. The main concepts which offer a specific pattern to this current chapter are as follows: tourism and travel trends, staycation, eco-travel, wellness and spa, vaccine tourism, virtual tourism, and sustainable travel.

Chapter 20 brings to the attention the topic of the COVID-19 pandemic and its implications on store keeping practices, and the perspectives of health workers. The authors of this book chapter have noted the fact that the unprecedented outbreaks of disease have challenged the contemporary world with substantial adverse consequences on the effectiveness of business models in operations and supply chain management (SC) (OSCM). In continuation, the authors have prompted the fact that the advent of COVID-19 put a lot of pressure on staff and resources. Also, the authors have emphasized in their work that the focus of contributors has been on the pressure on staff managing the various hospital facilities ignoring inventory which is one of the key areas where resources required to take care of patients are kept. The authors of this book chapter that concentrates on the COVID-19 pandemic and its implications on store keeping practices, and the perspectives of health workers have been using the resource dependency theory in order to analyze the manner in which the COVID-19 has affected the inventory practices of hospitals operating in the Western Region of Ghana. In addition, the authors have made several valuable suggestions in their book chapter on how the inventory of hospitals should be managed in order to avert possible shortages and interruptions in health care delivery and further relieve hospital staff the pressure they have to sustain when there is a shortage. Also, the chapter offers suggestions on areas of inventory management practices that management of hospital facilities should pay attention to. The keywords that prompted the attention of the reader are as follows: inventory, inventory shrinkage, inventory records, inventory investment, inventory turnover, COVID-19, pandemic, resource dependency theory, and store keeping.

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is also the Director of the University Research Group Happiness Management, Creativity and Well-being in Industry 4.0 from social sciences and humanities.

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Chapter 1

Mindfulness at Work, a Sound Business Investment: Focusing on the Employee Well-Being While Increasing Creativity and Innovation

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ABSTRACT

The COVID-19 pandemic and the COVID-19 crisis have brought tremendous pressure on human beings and have raised deep concerns regarding the future of people's activities all over the world. The post-COVID-19 era presents a highly challenging perspective due to the uncertainties raised by the new environment, already weakened by the lack of cooperation among individuals, the ruthless competition between entities, and the fierce and aggressive decisions taken in haste, which affected the balance of our planet, the future of the next generations, and the well-being and mental health of people. Mindfulness represents a major solution to today's problems, offering individuals the possibility to become more focused, more connected with present situations, and more willing to understand not only their needs, but also the requirements of their colleagues, communities, and all that surrounds them. Mindfulness, as an investment in our lives, comes to support creativity, development, innovation, responsibility, sustainability, well-being, and a healthy and well-balanced business environment.

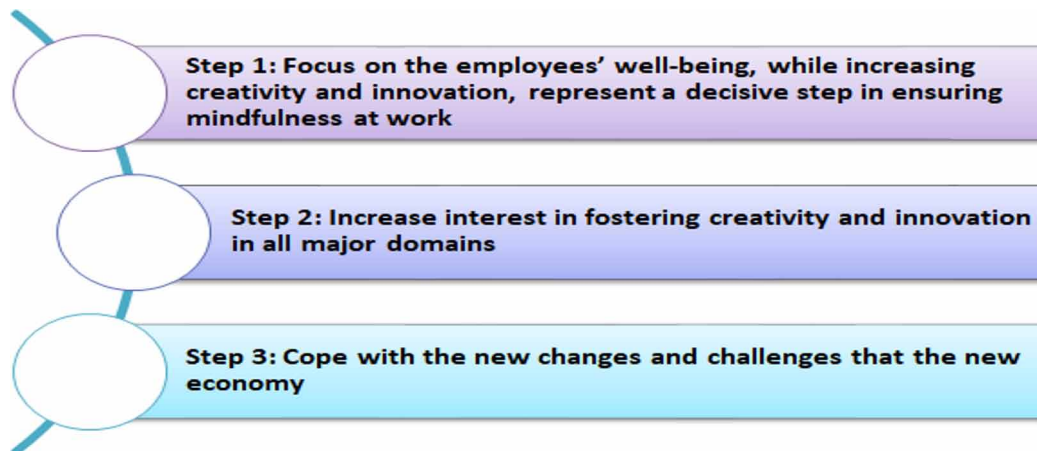
INTRODUCTION

Nowadays, there is an increasing interest in fostering creativity and innovation in all major domains –in particular, due to the COVID-19 pandemic and the COVID-19 crisis, in the attempt to cope with the new changes and challenges that the new economy, the new digitalized economy and the knowledge-based economy brought to our society. In continuation, based on the specialists' careful documentation, it

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was discovered that focusing on the employees' well-being, while increasing creativity and innovation, represent a decisive step in ensuring mindfulness at work – regarded as a sound business investment. In this matter, the European Parliament (EP) published in June 2021 a document entitled “Creative Europe programme 2021-2027”, in which it was mentioned that “the European Commission has decided to continue the Creative Europe programme as a stand-alone programme, increasing its budget by 17%”, showing in this way the crucial importance of creativity and innovation in a highly competitive business environment (European Parliament (EP), 2021, p. 1). Based on recent statistics, the EP highlights the following pivotal facts: “It is estimated that the creative and cultural sectors account for 7.5% of the EU workforce (over 12 million full-time jobs), making them the third employer after the construction, and food and beverages sectors, generating value added of approximately €509 billion. Yet cultural and audiovisual activities and operators face many challenges and barriers, including the digital shift, language barriers, market fragmentation, difficulties in accessing funding in a sector dominated by micro enterprises and small and medium-sized enterprises (SMEs), a low level of mobility and global competition” (European Parliament (EP), 2021, p. 2) (see Figure 1. COVID-19 Era and the importance of fostering creativity and innovation in all major domains).

Figure 1. COVID-19 Era and the importance of fostering creativity and innovation in all major domains
Source: the author



These days, specialists have pointed out that there are numerous challenges specific to the new economy, the new digitalized economy and the knowledge-based economy, especially when centering on finding solution capable to enhance creativity and innovation, as displayed in the lines below (European Parliament (EP), 2021, p. 2) (see Figure 2. Challenges specific to the new economy):

- One key challenge specific to the new economy, the new digitalized economy and the knowledge-based economy is represented by “the economic dimension of the cultural sector and its contribution to job creation and economic growth” (European Parliament (EP), 2021, p. 1). As it can be noticed, although there are numerous specialists who displayed a great concern towards the European Union’s (EU) “strongly economic approach to culture”, recent figures have illustrated

that “the economic dimension is one axis alongside the social dimension”, thus positioning culture, creativity and innovation as top priorities in today’s society, especially in the context in which “culture’s contribution to international relations” has managed to become crucial in these days business environment (European Parliament (EP), 2021, p. 1).

- Additionally, in the document on “Creative Europe programme 2021-2027”, the EP prompts that “cultural policy is a Member State competence”, thus pointing out that there is a clear need “to preserve the EU’s cultural diversity and its cultural heritage”, based on the fact that: “Cultural policy covers the economic aspects of cultural and creative organizations’ and enterprises’ activities as well as aspects linked to culture as a factor in identity and social cohesion. Both are interlinked and contribute to the well-being of EU citizens, the EU’s economy and social cohesion. They result from and reflect common values tied to democracy and freedom of expression and creation” (European Parliament (EP), 2021, p. 2).
- In continuation, another challenge addressed by the EP is represented by the need to find measures capable “to strengthen the competitiveness of the cultural and creative sectors (CCS) – the audiovisual branch in particular – and create jobs”, which prompted to encourage creativity and innovation in the EU Member States and, also, at an international level, focusing on business development, “while striving for balanced geographical coverage and sector representation” (European Parliament (EP), 2021, p. 2).
- Moreover, promoting creativity and innovation implies, in like manner, an increased focus on policy development, “new business and management models”, as well as “policy cooperation across the EU” and at an international level (European Parliament (EP), 2021, p. 2).
- Furthermore, the EP document on “Creative Europe programme 2021-2027” centers on finding funding solutions capable to support and foster creativity and innovation at all levels, in all major domains, thus acknowledging the need to: (a) adapt “to digital technologies and innovative strategies”; and (b) take “a cross-sectoral strand”, in order to increase competitiveness, strengthen the new skills and new competences that a highly innovative, and a predominantly creative business environment require in the COVID-19 Era (European Parliament (EP), 2021, pp. 2-3).

Figure 2. Challenges specific to the new economy

Source: the author based on the European Parliament (EP). (2021). Creative Europe programme 2021-2027. Briefing. EU Legislation in Progress 2021-2027 MFF. European Parliamentary Research Service (EPRS). PE 628.229 – June 2021



Policy development, “new business and management models”, as well as “policy cooperation across the EU” and at an international level

In the “Creative and Cultural Workforce in Europe Statistics Report”, Dent et al. (2020) argue that “(...) there is a dualistic celebration and criticism of CCI labor markets from both top-down and bottom-up perspectives that presents a crucial tension for DISCE – there is a general lack of understanding of both the stability and the sustainability of creative work within the creative economy” (Dent et al., 2020, p. 8). In the same report, the authors noted that: “Understanding creative labor markets as precarious and also as representative of the wider economy illuminates a problematic instability which sits at the heart of our modern economic model” (Dent et al., 2020, p. 8). It should be noted that, in the lines above, the acronym for creative and cultural industries is represented by CCIs, while the acronym for Developing Inclusive and Sustainable Creative Economies is represented by DISCE (the name of the project prepared by Dent et al., 2020).

Taking into consideration recent studies that promote creativity and innovation as major factors capable to enhance the influence of the new economy on our society, there are several aspects that require immediate attention, as follows:

Step 1: The first aspect that needs immediate attention is represented by “demonstrating the hidden and invisibilized resources that sustain the creative economy (for example caregiving responsibilities, private/independent wealth, ready access to housing, access to education)”, since specialists have displayed a great concern towards the fact that “their absence from official data monitoring exercises allows for a clearer understanding of how the creative economy operates through and based on exclusion” (Dent et al., 2020, p. 16). Also, this first step implicates, based on specialists researches, finding answers to the key question: “What are inclusive and sustainable creative economies, and how can they be developed?” (Dent et al., 2020, p. 16).

Step 2: The second aspect that requires urgent consideration is represented by acknowledging and understanding the “link between the precarity and diversity agendas” (Dent et al., 2020, p. 18). In this matter, there are several vital issues noted in the “Creative and Cultural Workforce in Europe Statistics Report”, among which could be mentioned: (a) “precarious work is only accessible to those who can fulfill the entrepreneurial and insecure demands of creative work and those who are the most vulnerable within the precarity agenda are then targeted via a performative diversity agenda” (Dent et al., 2020, p. 19); (b) “the growth of self-employed or individualised models of work and the absence of a robust legal framework to support creative workers have led to systems of injustice” (Dent et al., 2020, p. 19); and (c) “the ability of citizens to participate in that which they value, applying learnings from the capability approach together with an ethics of care framework to make visible that which is required for equal participation” (Dent et al., 2020, p. 19). What is more, both the COVID-19 pandemic and the COVID-19 crisis has created a great opportunity for the economy to encompass its limitations in terms of the “creative and cultural labor markets”, shedding a new light on the potential opportunities brought by the aforementioned relationship that exists “between the precarity and diversity agendas” (Dent et al., 2020, pp. 18-19).

Step 3: The third aspect that implicates immediate focus is represented by promoting “the diversity of cultural expressions” and ensuring “it remains valued, economically and intrinsically – including in light of migration and security concerns” (European Union (EU), 2017a). Also, the European Union 2017 report brings to the attention the importance of fostering cultural expressions diversity in order “to combat prejudices, cross language barriers and bring communities together”, since strong “international cultural relations” are a vital point on the EU agenda these days (European Union (EU), 2017a).

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The table below presents several challenges, measures, and results that should be taken into consideration in order to help promote creativity and innovation (see Table 1. Challenges, measures, and results to help promote creativity and innovation in today's business environment: the impact of COVID-19 pandemic and COVID-19 crisis on sustainability and new economy development).

Table 1. Challenges, measures, and results to help promote creativity and innovation in today's business environment: the impact of COVID-19 pandemic and COVID-19 crisis on sustainability and new economy development

Challenges in promoting creativity and innovation	Measures in promoting creativity and innovation	Results in promoting creativity and innovation
• Creativity represents, according to specialists, both "a strategic" and "still underexploited resource for Europe", which implicates that the new economy will face the imminent challenges of finding solutions capable to support creativity and innovation at all levels (European Union (EU), 2017b).	• In order to promote creativity and innovation at all levels, specialists encourage constructive "EU action (...) to support cultural and creative sectors", with a particular accent on the "knowledge and labor intensive" sectors, thus managing at a higher rate innovation (European Union (EU), 2017b).	• In this matter, the results due to be expected refer to: promoting the benefits of a knowledge-based economy, a digitalized economy in all industries – with the main accent on the ones which are "knowledge and labor intensive"; creating new, better jobs and high quality jobs – including new jobs for young people; achieving economic growth based on sustainable measures and sustainable development policies (European Union (EU), 2017b).
• The new economy, the knowledge-based economy, and the digitalized economy represent highly competitive forms of economy, which are confronted by serious challenges at the EU level, as follows: "the lack of skills, finance, innovation and coordination" (European Union (EU), 2017b).	• In order to be able to respond better to all these current challenges – which have accentuated, in particular, due to the impact of COVID-19 pandemic and COVID-19 crisis, the EU policies need to offer support to all cultural and creative sectors, since according to EU specialists culture represents "a catalyst for innovation", a major force capable to strengthen entrepreneurship and enable local, regional and country development (European Union (EU), 2017b).	• In terms of results, the major accomplishments due to be expected by specialists in the field are the following ones: "strengthening cultural diversity, social links and active citizenship" (European Union (EU), 2017b).
• A major challenge for the EU these days is represented by creating "the framework for a strategic approach towards the cultural and creative sectors (CCS)", in order to find viable solutions to offer institutional and financial support to all creative industries (European Commission (EC), 2012; European Union (EU), 2017b).	• In order to find both institutional and financial support to all creative industries, several measures were taken, as follows: (a) creating and implementing "a multi-layered strategy", based on "a holistic approach for integrated strategies", capable to provide "new growth and jobs opportunities in the EU" (European Commission (EC), 2012, p. 4); and (b) a "stronger partnerships between the cultural and creative sectors, social partners and education and training providers, both through initial training and continuing professional development" (European Commission (EC), 2012, p. 5).	• The results expected make reference to the following issues: (a) creating general policies and instruments capable to support all creative industries and, also, if the situations require, preparing tailored policies and instruments capable to support those creative industries that particularly need more attention and more support (European Commission (EC), 2012, p. 4); and (b) "promote socio-economic development" by providing "sectors with the mix of skills needed for creative entrepreneurship in a rapidly changing environment", especially in those cases in which "some sectors are confronted with a shortage of employees with technical and traditional skills and crafts, because young people in particular are less attracted to take up such skills" (European Commission (EC), 2012, p. 5).

Source: the author, based on the sources cited above

The book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” also brings to light the main research question (MRQ), the main research objective (MRO), the secondary research questions (SRQ), and the secondary research objectives (SRO), as seen in the lines below (see Table 2. Main research question (MRQ), main research objective (MRO), secondary research questions (SRQ), and the secondary research objectives (SRO) for the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”):

Table 2. Main research question (MRQ), main research objective (MRO), secondary research questions (SRQ), and the secondary research objectives (SRO) for the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”

Main Research Question (MRQ)	Main Research Objective (MRO)
• (MRQ) Does mindfulness at work represent a sound business investment and which are the benefits of focusing on the employees’ well-being, while increasing creativity and innovation?	• (MRO) The MRO centers on the importance of presenting mindfulness at work as a sound business investment, while focusing on the employees’ well-being, in order to determine and increase creativity and innovation in a highly challenging and extremely competitive business environment.
Secondary Research Questions (SRQ)	Secondary Research Objectives (SRO)
• (SRQ1) Which are the main solutions capable to capitalize on business growth opportunities and harnessing a sound business investment, in order to ensure mindfulness at work and a healthy business environment?	• (SRO1) This secondary research objective concentrates its attention on mindfulness at work in the attempt to determine solutions capable to capitalize on business growth opportunities and harnessing a sound business investment.
• The answers to SRQ1 and SRO1 may be encountered in the first subsection tackles the subject of “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment”, which is part of the section entitled “Main focus of the chapter”.	
• (SRQ2) Which are the main solutions capable to determine today’s business environment to center on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation, in order to ensure mindfulness at work and a healthy business environment?	• (SRO2) This secondary research objective concentrates its attention on mindfulness at work, by centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation.
• The answers to SRQ2 and SRO2 may be encountered in the second subsection presents the subject of “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation”, which is part of the section entitled “Main focus of the chapter”.	
• (SRQ3) Which are the main solutions capable to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships, in order to ensure mindfulness at work and a healthy business environment?	• (SRO3) This secondary research objective concentrates its attention on mindfulness at work, in the attempt to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships.
• The answers to SRQ3 and SRO3 may be encountered in the second subsection presents the subject of the third subsection brings to the attention the subject of “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships”, which is part of the section entitled “Main focus of the chapter”.	

Source: the author

This book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” has a complex structure, as reflected in the lines below:

1. First of all, the introduction tackles the general framework specific to the topic chosen to be presented. In this matter, in the first part of the introduction, there are several key aspects that were closely analyzed and which were published by the European Parliament (EP) in June 2021 in a document entitled “Creative Europe programme 2021-2027”, that refer to the importance of being part of and working in a creative and innovative environment (European Parliament (EP), 2021, p. 1). Also, the next part of the introduction brings numerous arguments in favor of immediately addressing the challenges of the new economy, in order to provide a creative and innovative environment, emphasizing the immense benefits of the digitalized economy and of the knowledge-based economy. In the introduction the main research question (MRQ) is presented as well as the main research objective (MRO), accompanied by the secondary research questions (SRQ) and the secondary research objectives (SRO).
2. Second of all, the background deals with the literature review on mindfulness in business and mindfulness at work, while accentuating the importance of the discoveries presented in major studies on business investments, with direct reference to the role of mindfulness for employees and leaders. In continuation, the background is focusing on addressing the solutions proposed by specialists in order to address and foster the employees’ well-being, while increasing creativity and innovation at the places of work.
3. Third of all, the main focus of the chapter centers on three vital subsections, namely: the first subsection tackles the subject of “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment”; the second subsection presents the subject of “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation”; and the third subsection brings to the attention the subject of “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships”.
4. Fourth of all, the next sections of this book chapter are represented by the “Discussion and synthesis of results”, the “Solutions and recommendations”, the “Future research directions”, the “Conclusion” and the “References”, which come to complete the analysis and offer a broader perspective on the up-to-date subject on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”.
5. Fifth of all, it should be mentioned that the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” has several important keywords that are carefully taken into consideration, as follows: business, management, economics, accounting, COVID-19 Era, competitiveness, creativity, innovation, human resources, investment, responsibility, sustainability, work, mindfulness, well-being, and changes (see Figure 3. Key concepts for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part I; and Figure 4. Key concepts for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part II).

Figure 3. Key concepts for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part I
Source: the author

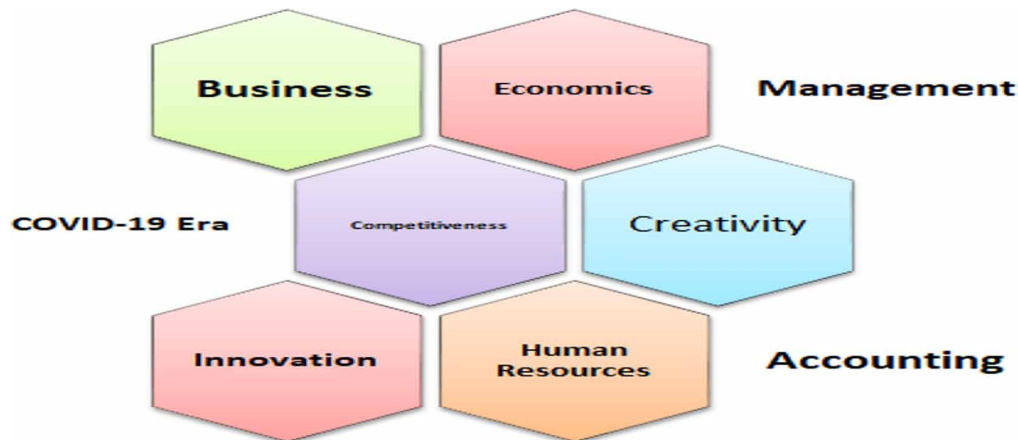


Figure 4. Key concepts for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part II
Source: the author



Background

The “Background” section of the book chapter “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” tackles the following key aspects, as follows:

- First of all, the background section concentrates on presenting the literature review on the most recent challenges that our planet faces, in the context of the COVID-19 Era. In this matter, several references were made to recent results and findings presented in vital studies belonging to prominent specialists such as A. Luque González and F. Casado Gutiérrez (2020), J. E. García Guerrero,

R. Rueda López, A. Luque González and N. Ceular-Villamandos (2021), P. Guerrero-Miranda and A. Luque González (2021), and A. Luque González, J. Á. Coronado Martín, A. C. Vaca-Tapia, and F. Rivas (2021). Also, the articles belonging to the authors A. Luque González and F. Casado Gutiérrez (2020), J. E. García Guerrero, R. Rueda López, A. Luque González and N. Ceular-Villamandos (2021), P. Guerrero-Miranda and A. Luque González (2021), and A. Luque González, J. Á. Coronado Martín, A. C. Vaca-Tapia, and F. Rivas (2021) made several dominant references to the people's need of becoming more and more mindful of their surroundings, of the resources possessed, of the vitality of the changes that arise in the digitalized economy and of the advantages and the importance of being part of a social economy – focused on human beings, on ecosystems, on balanced relationships between life-work-community, and sustainability, sustainable development, and social responsibility.

- Second of all, the background section centers on addressing the literature review discoveries on mindfulness, in general, and mindfulness at work, in particular, in the attempt to promote the role and the importance of mindfulness in day-to-day lives. In this matter, studies belonging to specialists such as, Kabat-Zinn (2003), Walsh and Shapiro (2006), Lomas et al. (2015), Neff (2003), Popescu and Dumitrescu (2016ab), Popescu (2017), Popescu (2018), Popescu (2019abcdefg), Popescu (2020abcd), Popescu (2021abc), Popescu (2022abc), Popescu and Duháček-Šebestová (2022), Popescu and Kyriakopoulos (2022), Popescu and Popescu (2018ab), Verdes-Montenegro-Atalaya et al. (2021), and Wongpakaran et al. (2021), are brought to the attention.

In this particular context presented in this section, several major questions arise, as follows (see Figure 5. Major questions for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”; and see Figure 6. Major questions for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part II):

- What is mindfulness?
- Why mindfulness at work should be regarded as a business investment: what advantages and benefits does it bring to employers, managers, leaders, and employees?
- Why should the business environment focus these days should be on the employees’ well-being, in order to increase creativity and innovation?
- How can mindfulness at work raise the level of creativity and innovation among key work figures, such as: employers, managers, leaders, and employees?
- Why and in what way should people become more and more mindful of their surroundings, of the resources possessed, of the vitality of the changes that arise in the digitalized economy and of the advantages and the importance of being part of a social economy?
- What are the reasons that determine individuals to be more focused on themselves, on their mental health and well-being, on biodiversity and ecosystems, on balanced relationships between life-work-community, on resources, poverty alleviation and sustainability, sustainable development, and social responsibility?
- Are mindfulness business principles and mindfulness business practices a result of a more balanced way of life, of a stronger relationship between life-work-community, and of a more centered society on the need to ensure resilience, robustness, sustainability, sustainable development, and social responsibility?

Figure 5. Major questions for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part I
 Source: the author

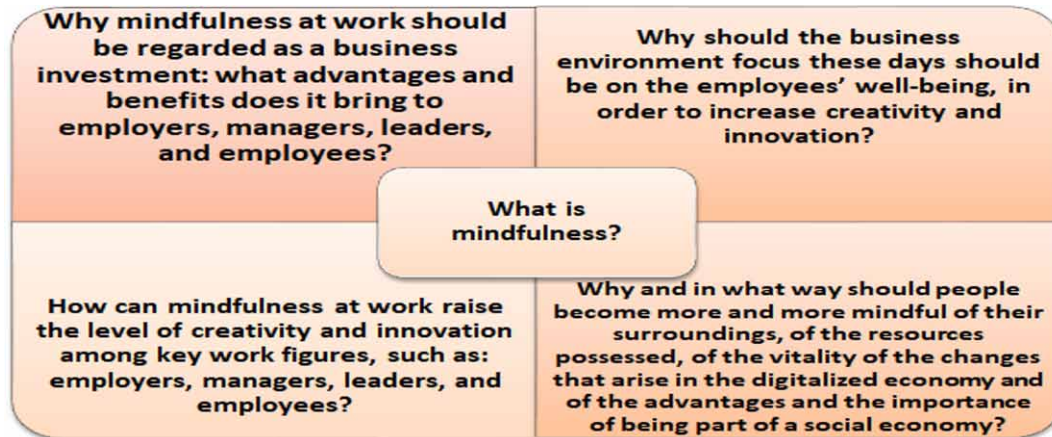
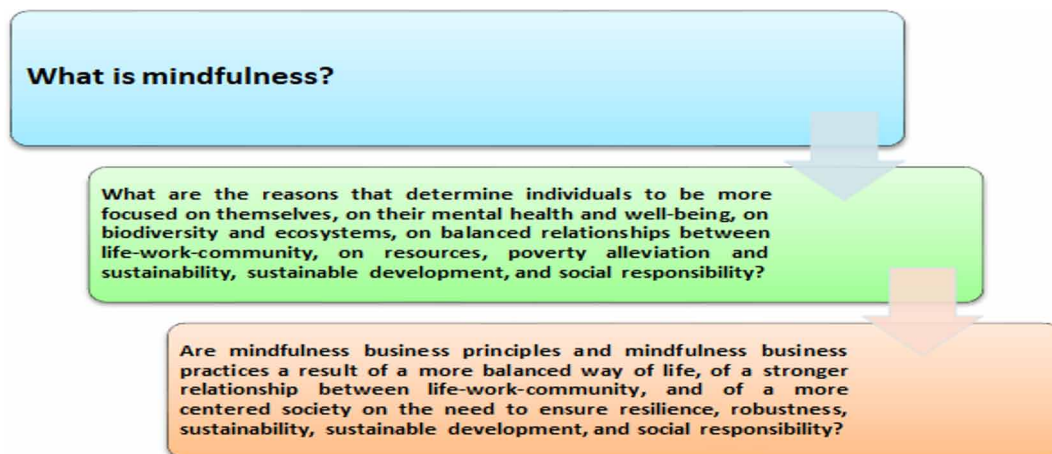


Figure 6. Major questions for the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” – part II
 Source: the author



The reputed specialists A. Luque González and F. Casado Gutiérrez (2020) emphasize in their recent study on “Public strategy and eco-social engagement in Latin American States: an analysis of complex networks arising from their constitutions” the following vital aspects: “The processes of social responsibility are understood to be voluntary improvements either to the law—by public bodies such as local authorities, governments, etc.—or else by companies in their corporate social responsibility (CSR) policies. However, they are also processes of sustainability: those that meet current needs without compromising the ability of future generations to meet their own, thereby ensuring the balance between economic growth, environmental care, and social welfare. These processes have increased in number and complexity while, in parallel, the world moves toward a state of permanent interconnectivity that

constantly impacts on its environment. The public and private sectors are no exception to this premise. Businesses and governments, driven by a society that is increasingly self-aware, are at pains to incorporate social and environmental standards into the production of their goods and services.” (Luque González & Casado Gutiérrez, 2020, p. 1). In continuation, the authors J. E. García Guerrero, R. Rueda López, A. Luque González and N. Ceular-Villamandos (2021) pointed out in their research on “Indigenous peoples, exclusion and precarious work: design of strategies to address poverty in indigenous and peasant populations in Ecuador through the SWOT-AHP methodology” the following pivotal issues, as follows: (a) nowadays, poverty is regarded by specialists as a multi-faceted phenomenon, which may be encountered worldwide and which possesses “multiple dimensions”, thus the states should recognize “the need to implement policies with a rights approach and dimensions such as economic standards, living conditions, education, training and health care”, since currently “the public authorities, by distinguishing the poor from purchasing capacity or consumption, promote assistant programs in which the populations concerned do not participate” (García Guerrero et al., 2021, p.15-16); (b) based on recent statistics, the “new forms of work, with the highest technology, relocated and automated, will lead to poverty eradication” by respecting all individuals’ rights and by allowing “them to equally participate in the construction of the information society from their general conceptions to their implementation, by forming a knowledge system in which people participate in decision-making processes and, in exchange, practices both products and knowledge” (García Guerrero et al., 2021, p. 16); (c) what is more, “the social economy is provided as an alternative to achieving the well-being of vulnerable or excluded groups and the general population”, especially when thought of and understood “as a source of opportunities”, in a constructive manner (García Guerrero et al., 2021, p. 16); and (d) “the social economy (...) requires better distribution of public resources, market development and opportunities to expand the number of buyers and bring farmers closer to consumers in the field and the city”, under the circumstances in which “(...) peoples place their social structures in confidence, reciprocity and cooperation, where harmonious coexistence is promoted between peoples and nature, (...) which are based on community practices that question economic accumulation (...)” (García Guerrero et al., 2021, p. 16).

These days, numerous specialists have shown in their recent studies the importance of mindfulness, in general, and of mindfulness at work, in particular. In this matter, Wongpakaran et al. (2021) in the study entitled “Role of equanimity on the mediation model of neuroticism, perceived stress and depressive symptoms”, points out the following pivotal ideas: “As equanimity is found to be integrated in mindfulness meditation method, it should hypothetically help control disruptive emotions among people with psychiatric problems. (...) equanimity results in fewer difficulties with emotional regulation, and this may explain the positive effect of mindfulness-based meditation on the emotional regulatory effect of mindfulness, as well as on neuroticism and alexithymia” (Wongpakaran et al., 2021, p. 2). In continuation, Wongpakaran et al. (2021) noted that “(...) the practice of mindfulness and breathing meditation was negatively related to neuroticism. (...) mindfulness meditation was directly related to equanimity, in line with the related investigation that the patients with personality problems who engaged in mindfulness practice may have cultivated a greater acceptance toward adversity and perceived less adversity and more equanimity in situations in which they felt vulnerable” (Wongpakaran et al., 2021, p. 9). What is more, Serrat et al. (2021) stressed in the article on “Efficacy of the FIBROWALK multicomponent program moved to a virtual setting for patients with fibromyalgia during the COVID-19 pandemic: a proof-of-concept RCT performed alongside the state of alarm in Spain” the fact that: “(...) mindfulness training was introduced in the late 1970s in hospitals as a program (i.e., Mindfulness-Based Stress Reduction) for helping people with problems in stress management and chronic health conditions (including chronic

pain) to find alternative and more healthy ways of relating with personal life challenges” (Serrat et al., 2021, pp. 10-11). Also, as emphasized by Serrat et al. (2021), “(...) several studies have reported that mindfulness may be an effective approach for promoting better mental health and fostering wellbeing in heterogeneous clinical and non-clinical populations” (Serrat et al., 2021, pp. 10-11). Furthermore, Serrat et al. (2021) study mentioned that “(...) mindfulness training is aimed at modifying the relationship with one’s thoughts—to be more nonjudgmentally open to them, with acceptance—rather than at changing their content. (...) The role of mindfulness on wellbeing and mental health has also been studied during the COVID-19 pandemic. In this regard, some studies pointed out that mindfulness, as a trait, would be related with more effective coping during lockdown, and, as online intervention, it would be associated with improved wellbeing, stress and anxiety in various samples” (Serrat et al., 2021, pp. 10-11).

In the lines below there are several aspects highlighted which represent the main ideas presented in different studies on mindfulness at work and dominant relationships specific to mindfulness at work for the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” (see Table 3. Main ideas presented in the studies and dominant relationships specific to mindfulness at work for the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”).

Table 3. Main ideas presented in the studies and dominant relationships specific to mindfulness at work for the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”

Authors:	Main ideas presented in the studies and dominant relationships specific to mindfulness at work:
• Dharmawardene et al. (2016) • Kriakous et al. (2020)	• Key focus on: the advantages and the benefits of mindfulness-based interventions, in the attempt to discover successful solutions to improve individuals’ quality of life, on the whole. • Specialists have pointed out in their studies the fact that mindfulness-based interventions represent a successful solution to improve people’s mental health and physical health, being responsible for improving individuals’ well-being and quality of life (Dharmawardene et al., 2016; Kriakous et al., 2020).
• Kabat-Zinn (2003) • Walsh & Shapiro (2006) • Lomas et al. (2015)	• Key focus on: the advantages and the benefits of mindfulness training programs, which are believed to be responsible for enriching people’s lives and ensuring their well-being. • In the article entitled “Mindfulness-based interventions in context: Past, present, and future”, Kabat-Zinn (2003) defines mindfulness as “the ability to pay attention on purpose in the present moment, without judgment, to the development of one’s own experiences moment to moment” (Kabat-Zinn, 2003). • Also, based on the studies of Walsh & Shapiro (2006) entitled “The meeting of meditative disciplines and western psychology: A mutually enriching dialogue”, and of Lomas et al. (2015) named “A systematic review of the neurophysiology of mindfulness on EEG oscillations”, mindfulness training programs are associated with people’s need to self-regulate their attention and consciousness, improve their control in terms of mental analysis and mental processes, and, also, center on increasing the level of well-being and mental health.
• Kwon & Lee (2021)	• Key focus on: the advantages and the benefits of meditation, mindfulness-based intervention, autogenic training, yoga, tai chi, qigong, breathing exercise, music therapy, guided imagery, biofeedback, prayer, and faith-based techniques, which have recently managed to (re-)appear in several areas of our daily lives – both at a personal level and work-related level, in the attempt to ensure people’s mental health and sanity, in a world faced with COVID-19 pandemic diverse changes. • In their study on “A Protocol for a Systematic Review and Meta-Analysis of Mind–Body Modalities to Manage the Mental Health of Healthcare Workers during the COVID-19 Era”, C.-Y. Kwon and B. Lee (2021) are focused on “intervention studies using mind–body modalities, including meditation, mindfulness-based intervention, autogenic training, yoga, tai chi, qigong, breathing exercise, music therapy, guided imagery, biofeedback, prayer, and faith-based techniques for HCWs” – where healthcare workers (HCWs) (Kwon, C.-Y. & Lee, B., 2021, p. 1). • The specialists acknowledge the importance of the interventions mentioned in the lines above, highlighting the fact that “a wide range of mind–body modalities designed to facilitate the mind’s capacity to affect health has been used for a long time to improve mental health, well-being, quality of life, and physical health of clinical populations, and the general population in various occupations” (Kwon, C.-Y. & Lee, B., 2021, p. 2). • In particular, in the case of healthcare workers (HCWs), the specialists made the following comments: “Previous studies have reported that mind–body modalities such as yoga, mindfulness-based interventions, and tai chi can benefit the health of HCWs. Today, mind–body medicine has re-emerged for its mental health benefits in the context of COVID-19, and some health systems use mind–body modalities to build strategies to improve the mental health of the public, patients with COVID-19, and HCWs” (Kwon, C.-Y. & Lee, B., 2021, p. 2).

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Mindfulness at Work, a Sound Business Investment

Table 3. Continued

Authors:	Main ideas presented in the studies and dominant relationships specific to mindfulness at work:
Guerrero-Miranda & Luque González (2021)	• Key focus on: mindfulness at work in the context of the challenges derived from individuals' need to foster social responsibility, sustainability, and public policy coherence at all levels, thus showing the importance of leading a healthy and happy life even in special conditions – such as, for instance, the case of natural disasters and the affected regions in the world.
	• In the article “Social responsibility, sustainability, and public policy: the lessons of debris management after the Manabí earthquake in Ecuador”, the researchers P. Guerrero-Miranda and A. Luque González (2021) display a deep concern towards “the health of the population”, thus showing the association between mindfulness at work and the need to ensure individuals' necessary level of health and well-being (Guerrero-Miranda & Luque González, 2021, p. 1).
	• The study is centered on the impact of “natural disasters (...) on the environment” in the context in which such ample phenomenon “can generate millions of tons of debris and waste” which may “(...) poses direct risks to the health of the population” (Guerrero-Miranda & Luque González, 2021, p. 1).
	• Since such aggressive phenomenon are, in most cases, the results of human beings activity, the authors promoted in their work “the need to analyze public policy”, with reference towards “the environmental impact (...)”, including its taxonomy of inconsistencies within public administration, alongside the processes of decentralization and shared decision-making”, as well as the “(...) the links between corporate social responsibility (CSR), public policy, and sustainability (...) at both the national and local level for their wider implications and ramifications” (Guerrero-Miranda & Luque González, 2021, p. 1).
	• What is more, in terms of individuals' mindfulness at a general level and mindfulness at work, “the study highlighted the gaps in the management of such a crisis, exposing a lack of ethics and the shortcomings of social (ir-)responsibility in the distorted processes of public welfare in the country, aspects that should rather work in concert to achieve full sustainable development” (Guerrero-Miranda & Luque González, 2021, p. 1).
	• Furthermore, based on the authors' results, mindfulness at work depends on creativity and innovation, as well as on research, innovation, and development. The authors pointed out that “the costs of recovery and reconstruction are much higher than those of prevention and mitigation, and applying the criteria of the circular economy goes beyond simple collection and final disposal. This occurs by incorporating important, such as promoting research and development of new technologies for the separation of materials and applying innovative techniques for the quantification and qualification of debris, including the recycling and reuse of materials as raw material for new constructions” (Guerrero-Miranda & Luque González, 2021, p. 12).
	• Under these circumstance, the article “Social responsibility, sustainability, and public policy: the lessons of debris management after the Manabí earthquake in Ecuador” illustrated the following key aspects: (a) based on the fact that “an entire system exclusively for the management of debris from disasters cannot be expected, especially as such events are difficult to foresee”, the need for “applying the principles of the circular economy to the processes of the dynamics of the city is the starting point for institutional improvement and its preparation to face crises of even greater proportions”; (b) in continuation, the authors mentioned the fact that “the circular economy would help to galvanize the local financial situation by adding value to otherwise worthless debris and by promoting programs for its effective use. At the same time, this would foster the creation of formal employment at each stage of the comprehensive management process, allowing salvage workers to have a more dignified job less injurious to their health”; and (c) the authors made several references to the importance of resilience and sustainability which should be regarded as major attributes of mindfulness at work, and which should lead, in the case under analysis, to the help offered by the local authorities to the country in order to be able to “comply with SDGs and contribute significantly to the resilience of its cities” (Guerrero-Miranda & Luque González, 2021, p. 12).
• Neff (2003)	• Key focus on: mindfulness at work and addressing the implications of human experiences in our day-to-day activities, in the attempt to better understand the relationship that exists between mindfulness, self-compassion and self-compassion.
	• In the scientific study entitled “The development and validation of a scale to measure self-compassion”, Neff (2003) points out that there is a close relationship between mindfulness and self-compassion and defines self-compassion as “being open to and moved by one's own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, non-judgmental attitude toward one's inadequacies and failures, and recognizing that one's experience is part of the common human experience” (Neff, 2003).
• Popescu & Dumitrescu (2016a) • Popescu & Dumitrescu (2016b) • Popescu & Popescu (2018a) • Popescu & Popescu (2018b)	• Key focus on: mindfulness at work and the challenges of the business environment, in the attempt to determine people to become more and more aware of the benefits of a sustainable business environment, focused on competition, but under socially responsible circumstances.
	• Mindfulness at work points out to the benefits of the knowledge-based society, but also raises great concerns when it comes to understanding the increased dynamics of the business environment.
	• Mindfulness at work can be successfully associated with increased work performance, especially when facing the changes and challenges specific to today's business environment: (a) there is an increased accent on the advantages derived from the digitalization of the economy, but there are also several risks associated with these forms of digitalization, such as, for instance, the risks of cyber-attacks; and (b) there is an increased preoccupation on changing the organizational typology and its dynamics, especially with the aid of the benefits derived from the intensive use of intellectual assets, such as, for example, human resources, intellectual capital, and intellectual property.
• Popescu (2017)	• Key focus on: mindfulness at work and displaying concern towards (total) quality assessment and sustainable assessment practices.
	• Mindfulness at work implicates understanding the importance and the role of total quality in business and of total quality management (TQM), in order to ensure a creative and an innovative environment, governed by high standards in terms of the quality of the products and services offered to the customers.
	• In continuation, social responsibility comes to complete the high quality standards due to be taken under consideration by businesses, since sustainability and sustainable development rely on a healthy environment, where managers, leaders and employees should prove responsible with every action that they take.
• Popescu (2018) • Popescu (2019a) • Popescu (2019b) • Popescu (2019c) • Popescu (2019d)	• Key focus on: mindfulness at work and human resources, human resources management, and intellectual capital.
	• Mindfulness at work places a great value on human resources, human resources management, and intellectual capital – considered by specialists the major intangible assets that entities may possess, especially when trying to ensure entities competitive advantages on the marketplace.
	• Intellectual capital is vital when it comes to measuring businesses effectiveness, efficiency and performance, and may be considered a powerful source of creativity and innovation in entities these days, especially when research, development, innovation, and technology are key targets for all organizations.
• Popescu (2019e) • Popescu (2019f) • Popescu (2019g) • Popescu (2020a)	• Key focus on: mindfulness at work and integrated and inclusive strategies at all levels, capable to face the provocations of today's challenging times.
	• Mindfulness at work tackles the issues of integrated strategies at all levels, especially since these days the main focus is on finding and developing integrated strategies at multidisciplinary levels capable to address interdisciplinary tasks and accomplish interdisciplinary challenges.
	• These days, the focus is on inclusive and integrated frameworks, models, solutions, and strategies, which are capable to foster creativity, diversity, innovation, and which may lead to better and more reliable sources of development and success, in highly challenging times.

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Table 3. Continued

Authors:	Main ideas presented in the studies and dominant relationships specific to mindfulness at work:
• Popescu (2020b) • Popescu (2020c) • Popescu (2020d) • Popescu (2021a) • Popescu (2021b) • Popescu (2021c)	• Key focus on: mindfulness at work and entrepreneurship – with particular attention paid to the influence of the small and medium-sized enterprises (SMEs) on today's business environment.
	• Mindfulness at work could be associated with entrepreneurship and the will of business to survive on the marketplace – with a particular reference to the struggle of small and medium-sized enterprises (SMEs) to survive in an increasingly competitive environment, which happens to be dominated by strong multinationals.
	• In the attempt to create successful entrepreneurial models, which are focused on emphasizing the key characteristics of good leaders and good employees, specialists mention the vital importance of ensuring well-being and mindfulness programs at work, in the attempt to create a certain balance between work and individuals' personal state of mind, thus accentuating the need to operate in a healthier work-place, and in a more sustainable business environment.
• Popescu (2022a) • Popescu (2022b) • Popescu (2022c) • Popescu & Duháček-Šebestová (2022) • Popescu & Kyriakopoulos (2022)	• Key focus on: mindfulness at work and the solutions capable to lead to the avoidance of management bias at all levels in the Post-COVID-19 Era.
	• Mindfulness at work is strongly connected with the avoidance of management bias at all levels, especially when focusing on the tremendous challenges due to be faced by entities in the Post-COVID-19 Era.
	• In this particular context, as shown by specialists in the field, there is an increased concern in: (a) finding solutions capable to empower strong transformational leaders; and (b) addressing the challenges of environmental, social and corporate governance by centering on applying the most valuable mindfulness business principles capable to produce outstanding value and encouraging community connections.
	• In continuation, based on recent specialists' studies, mindfulness at work should also implicate: (a) tackling fiscally responsible businesses as a result of COVID-19 pandemic shock, with a particular emphasis on empowering countries' tax systems by putting an end to corporate tax evasion and tax havens; and (b) bringing to the attention the strategic human resource management benefits in the 21st-century organizational landscape, in the context in which both human and intellectual capital become drivers for performance management.
Ramadas et al. (2021)	• Key focus on: mindfulness and the strategies used by specialists in order to help individuals to become more empathetic with other people, in general, and with their colleagues, in particular.
	• Based on up-to-date researches, mindfulness "might employ a unique strategy of emotional regulation based on bottom-up systems (contrary to cognitive reappraisal, which relies on top-down systems)", which is "thought to be responsible for emotional processing", thus showing the fact that mindfulness is capable to make individuals more emphatic and more aware of the environment in which they are living and working (Ramadas et al., 2021, p. 8).
• Serrat et al. (2021)	• Key focus on: mindfulness at work and stress management, in order to ensure balance to people's day-to-day activities.
	• Mindfulness at work may be associated with stress management and finding the necessary solutions to cope with stressful situations and stress reduction.
	• In the recent article on "Efficacy of the FIBROWALK multicomponent program moved to a virtual setting for patients with fibromyalgia during the COVID-19 pandemic: a proof-of-concept RCT performed alongside the state of alarm in Spain", the authors show a deep concern towards finding solutions that are able to ensure individuals' healthy lives especially in the challenging living and working environment these days, making references to the importance of individuals' well-being and mental health and people's capacity to cope with anxiety and stressful situations with the aid of mindfulness training sessions and mindfulness programs.
	• Also, as pointed out by the authors, individuals' capacity to be less judgmental may bring tremendous benefits to people's lives and may increase the harmony of their body and ensure balance to their day-to-day activities.
• Verdes-Montenegro-Atalaya et al. (2021)	• Key focus on: mindfulness at work and anxiety and stress.
	• Mindfulness at work is often associated with individuals' capacity to reduce anxiety and stress.
	• A highly interesting study on "Effectiveness of a mindfulness and self-compassion standard training program versus an abbreviated training program on stress in tutors and resident intern specialists of family and community medicine and nursing in Spain" published by Verdes-Montenegro-Atalaya et al. (2021), pointed out the fact that, on the one hand, "mindfulness-based stress reduction (MBSR) training programs have been shown to decrease stress", while, on the other hand, "mindfulness training programs have proved to be an effective technique in reducing perceived stress, and improving empathy and emotional management in health professionals, with the maintenance of their effects in the medium-long term" (Verdes-Montenegro-Atalaya et al., 2021, p. 1, p. 3).
	• Verdes-Montenegro-Atalaya et al. (2021) points out that there is a powerful link between mindfulness and self-compassion, and considers this aspect highly "(...) relevant among healthcare professionals, to the extent that they have to know how to respect and accept themselves to then increase their capacity to feel and show empathy and compassion towards others, generating feelings of closeness and affection. It is a resilience factor linked to less stress and feelings of exhaustion, psychopathology, and greater well-being. Self-compassion is often included in mindfulness training programs of healthcare professionals in order to improve their relationship and communication with the patient. The combination of both practices, mindfulness and self-compassion, has proven to be an effective intervention in healthcare professionals with high levels of stress, requiring new studies to analyze its long-term effects" (Verdes-Montenegro-Atalaya et al., 2021, p. 3).
• Wongpakaran et al. (2021)	• Key focus on: mindfulness at work, meditation, equanimity, and happiness.
	• Mindfulness at work is strongly related with individuals' capacity to cope with stress and stressful situations, as presented in the article entitled "Role of equanimity on the mediation model of neuroticism, perceived stress and depressive symptoms".
	• In this given context, Wongpakaran et al. (2021) noted that: "Mindfulness, a positive psychological attribute, has also been investigated to see how it affects neuroticism and depression. (...) dispositional mindfulness partially mediated the relationship between neuroticism, posttraumatic stress disorders and depression symptoms. Along with mindfulness, equanimity, a state of psychological stability and composure which is undisturbed by experience of or exposure to emotions, pain or other circumstances, usually co-occurs with mindfulness (...)" (Wongpakaran et al., 2021, p. 2).
	• Also, the authors point out that: "The virtue and value of equanimity are celebrated and recommended by a number of ancient philosophies and major religions, albeit different in concept and application. Buddhism emphasizes the virtue and cultivation of equanimity, and it is considered a refined state of mind based on freedom. In addition to being mentioned in mindfulness or meditation, equanimity is a part of the main teaching and practice of the four divine abodes or the Immeasurable, i.e., loving-kindness, compassion, sympathetic joy or gladness and equanimity" (Wongpakaran et al., 2021, p. 2).

Source: the author, based on the sources cited above

MAIN FOCUS OF THE CHAPTER

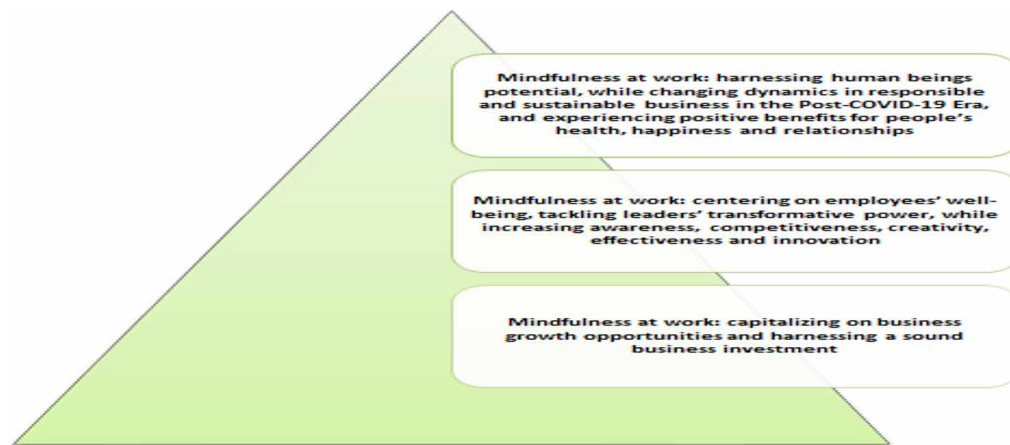
The “Main focus of the chapter” section of the book chapter “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” takes into account three main issues, as follows (see Figure 7. Main focuses of the book chapter “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”):

- First of all, the subsection “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment” is centered on the first SRQ due to be answered in this book chapter, namely: (SRQ1) Which are the main solutions capable to capitalize on business growth opportunities and harnessing a sound business investment, in order to ensure mindfulness at work and a healthy business environment? In continuation, (SRO1) the subsection “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment” is focused on the first SRO, which refers to the following dominant elements: (SRO1) This secondary research objective concentrates its attention on mindfulness at work in the attempt to determine solutions capable to capitalize on business growth opportunities and harnessing a sound business investment. There are several scientific works analyzed in this subsection, which belong to specialists such as: Gupta (Ed.) (2022a), Gupta (2022b), Nicha Andrade (2021a), Nicha Andrade (2021b), Nicha Andrade (2022), Popescu & Popescu (2019a), Popescu & Popescu (2019b), Popescu et al. (2017a), Sindhu (2022), and Venkatesan (2022).
- Second of all, the subsection “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation” addresses the second SRQ, which refers to the following major aspects, as follows: (SRQ2) Which are the main solutions capable to determine today’s business environment to center on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation, in order to ensure mindfulness at work and a healthy business environment? Also, the subsection “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation” tackles the second SRO, which focuses on the following key issues, as mentioned below: (SRO2) This secondary research objective concentrates its attention on mindfulness at work, by centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation. There are several scientific works analyzed in this subsection, which belong to specialists such as: Franco Santos et al. (2022), Oman & Bormann (2022), Popescu et al. (2017b), Popescu et al. (2017c), Popescu et al. (2015), and Şahin (2022).
- Third of all, the subsection “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships” emphasizes the third SRQ, as follows: (SRQ3) Which are the main solutions capable to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships, in order to ensure mindfulness at work and a healthy business environment? In addition, the subsection “Mindfulness at work: harnessing human beings potential, while changing dynamics in respon-

sible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people's health, happiness and relationships" points out to the elements specific to the third SRO, as mentioned in the following lines below: (SRO3) This secondary research objective concentrates its attention on mindfulness at work, in the attempt to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people's health, happiness and relationships. In order to be able to address the aspects specific to (SRQ3) and (SRO3), several scientific works are analyzed, such as, for instance: (a) the scientific article entitled "Social responsibility, sustainability, and public policy: the lessons of debris management after the Manabí earthquake in Ecuador", belonging to the researchers P. Guerrero-Miranda and A. Luque González (2021); (b) the scientific article on "How sustainability is defined: an analysis of 100 theoretical approximations", published by the authors A. Luque González, J. Á. Coronado Martín, A. C. Vaca-Tapia, and F. Rivas (2021); and (c) the article "Effectiveness of mindfulness-based relapse prevention in individuals with substance use disorders: a systematic review", published by Ramadas et al. (2021).

Figure 7. Main focuses of the book chapter "Mindfulness at work, a sound business investment: focusing on the employees' well-being, while increasing creativity and innovation"

Source: the author



Mindfulness at Work: Capitalizing on Business Growth Opportunities and Harnessing a Sound Business Investment

The first subsection "Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment", part of the section named "Main focus of the chapter", belonging to the book chapter "Mindfulness at work, a sound business investment: focusing on the employees' well-being, while increasing creativity and innovation", is centered on presenting the definitions, characteristics, role and importance of mindfulness at work, in the attempt to take constructive actions in order to capitalize on business growth opportunities and harness sound business investments in the Post-COVID-19 Era. Also, it should be pointed out that this subsection on "Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment" is centered on the first SRQ due to

Mindfulness at Work, a Sound Business Investment

be answered in this book chapter, namely: (SRQ1) Which are the main solutions capable to capitalize on business growth opportunities and harnessing a sound business investment, in order to ensure mindfulness at work and a healthy business environment? Additionally, (SRO1) the subsection “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment” is focused on the first SRO, which refers to the following dominant elements: (SRO1) This secondary research objective concentrates its attention on mindfulness at work in the attempt to determine solutions capable to capitalize on business growth opportunities and harnessing a sound business investment.

The table below is focused on presenting the definitions, characteristics, role and importance of mindfulness at work, in the attempt to take constructive actions in order to capitalize on business growth opportunities and harness sound business investments in the Post-COVID-19 Era (see Table 4. Mindfulness at work – the importance of capitalizing on business growth opportunities and harnessing a sound business investment).

Table 4. Mindfulness at work – the importance of capitalizing on business growth opportunities and harnessing a sound business investment

Authors:	Addressing mindfulness at work and the importance of mindfulness in capitalizing on business growth opportunities and harnessing a sound business investment:
• Gupta (Ed.) (2022a)	• S. K. Gupta (Ed.) (2022a) in the “Handbook of research on clinical applications of meditation and mindfulness-based interventions in mental health” highlights the connections that exist between meditation and mindfulness-based interventions in ensuring human beings mental health, which leads to the belief that psychological well-being, can be enhanced by integrating in our daily lives meditation and mindfulness techniques (Gupta (Ed.), 2022a).
• Gupta (2022b)	• The specialist S. K. Gupta (2022b) points out in the book chapter on “Meditation, mindfulness, and mental health: opportunities, issues, and challenges” the fact that in the Post-COVID-19 Era people are highly subjected to different forms of continuous and prolonged forms of stress, which may severely affect their balance mental health and capacity to cope with the day-to-day tasks. • What is more, S. K. Gupta (2022b) mentions that meditation and mindfulness techniques represent dominant practices especially in the eastern part of the world, and, in particular, in India, naming several benefits of such methods and techniques, as follows: the opportunity to contemplate, in order to obtain spiritual balance and peace; the possibility to become more attentive and more assertive to the environment, in order to be more emphatic and more connected to present situations, rather than finding resources in the past or future events; the advantage of taking into consideration the immense health benefits derived from such practices, in order to promote mental health and individuals’ well-being in all cases – both in the private and work lives of people; the benefit of being aware and remembering the positive and constructive situations, in order to center better on real situations and find viable solutions capable to diminish stress, and thus eliminate any behavior or emotional disorders (Gupta, 2022b).
• Nicha Andrade (2021a)	• The book chapter on “The role of civil society in implementing the SDGs locally: the case of Curitiba, its challenges, and practices” published by the author J. Nicha Andrade (2021a) presents the importance of mindfulness derived from the relationship that exists between the civil society and the sustainable development goals (SDGs), displaying the actions taken by the civil society at a local level, in the case of Curitiba.
• Nicha Andrade (2021b)	• J. Nicha Andrade (2021b) tackles in the book chapter entitled “Constructing and reconstructing orientalism: depicting orientalist imagery in contemporary art in the quest of self-identity” the links that might be encountered between mindfulness and individuals’ cultural values and self-identity, thus promoting the need for diverse and strong organizations’ cultural values. • Given the fact that the business environment these days is highly diverse, J. Nicha Andrade (2021b) highlights the fact that mindfulness at work might also be represented by focusing on the influence of self-identity and cultural value preservation, thus offering the world the possibility to have access to an abundance of novel ideas, cultures and creative forms of thinking and of acting in both personal and work activities.

continues on following page

Table 4. Continued

Authors:	Addressing mindfulness at work and the importance of mindfulness in capitalizing on business growth opportunities and harnessing a sound business investment:
• Nicha Andrade (2022)	• While analyzing the book chapter of J. Nicha Andrade, J. (2022) entitled “Reinventing operating models for sustainable organizational performance: the case of The Big Search”, it should be noted that mindfulness at work might also refer to individuals capacity to be creative and innovative, thus ensuring a growth in organizations’ performance which could lead to business growth opportunities and promote sound business investments.
• Popescu & Popescu (2019a)	• In order to ensure long-term business growth opportunities, mindfulness at work has the purpose of offering people the opportunity to become more aware of the importance of their work environment on their well-being and health, which, in essence, are reflected in the quality of the work performed over time. • Based on studies, the work environment is closely interrelated with the environment as a whole, which implicates individuals great concern towards the future of our planet and all those activities that might bring harm to present and future generations and the ecosystems. • In the book chapter “The social, economic, and environmental impact of ecological beekeeping in Romania” the authors Popescu and Popescu (2019a) are deeply concerned by the future of beekeeping worldwide, and present an in-depth study on the case of ecological beekeeping in Romania, prompting towards the need to ensure mindfulness at work in order to offer better chances to human beings and to plants and animals to flourish and continue their lives under healthier conditions.
• Popescu & Popescu (2019b)	• The article on “An exploratory study based on a questionnaire concerning green and sustainable finance, corporate social responsibility, and performance: evidence from the Romanian business environment” addresses the importance of mindfulness at work activities capable to make individuals more responsible for their actions and activities, since Popescu & Popescu (2019b) illustrate the connections that exist between performance – which is a vital factor in addressing business growth opportunities and sound business investments, and the characteristics belonging to the business environment. • Under these circumstances, mindfulness at work may be derived from taking strong measures towards ensuring business performance with the aid of green and sustainable finance and corporate social responsibility instruments.
• Popescu et al. (2017a)	• Popescu et al. (2017a) are making several references to the relationship that exists between organizational performance, total quality management in entities and taking actions capable to show individuals’ concern towards healthy and sustainable businesses. • In this matter, organizational performance and total quality management in entities may be accomplished with the help of mindfulness at work methods, thus making mindfulness at work a sound business investment for both managers and leaders, and offering in this way several business growth opportunities.
• Sindhu (2022)	• B. S. Sindhu (2022) in the book chapter “Mindfulness-based acceptance and commitment therapy: a practitioners view” analyzes the benefits of the Acceptance and Commitment Therapy (ACT) – currently acknowledged as one of the newest forms of mindfulness-based behavior therapies, also known for its wide range of efficient and effective clinical problem-solving solutions. • As an “existential, humanistic, cognitive-behavioral therapy”, the ACT – known to be, based on specialists’ evidence, one of the “third-wave” behavioral therapies at a worldwide level, is regarded an example of success due to efficiency “in different cultural contexts with a diverse set of clinical conditions, from depression, obsessive-compulsive disorder, chronic pain, grief, loss and terminal illness, anxiety, and workplace stress” (Sindhu, 2022, p. 1).
• Venkatesan (2022)	• S. Venkatesan (2022) in the book chapter entitled “An overview of mindfulness and its implications for children and adolescents” stresses the fact that mindfulness represents the specific technique in which people are anchored in the present moment and are focusing in a calm and serene manner to the situations they are currently facing, while concentrating on accepting and acknowledging their own thoughts, their own feelings and their own individual body sensations (Venkatesan, 2022, p. 1).

Source: the author, based on the sources cited above

Mindfulness at Work: Centering on Employees' Well-Being, Tackling Leaders' Transformative Power, While Increasing Awareness, Competitiveness, Creativity, Effectiveness and Innovation

The second subsection “Mindfulness at work: centering on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation”, part of the section named “Main focus of the chapter”, belonging to the book chapter “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”, is keen in addressing the aspects specific to mindfulness at work in the context of centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation.

It should be noted that the subsection “Mindfulness at work: centering on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation” centers its attention on the second SRQ, which refers to the following major aspects, as follows: (SRQ2) Which are the main solutions capable to determine today’s business environment to center on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation, in order to ensure mindfulness at work and a healthy business environment? Also, the subsection “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation” tackles the second SRO, which focuses on the following key issues, as mentioned below: (SRO2) This secondary research objective concentrates its attention on mindfulness at work, by centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation.

The table below is focused on addressing mindfulness at work and the need to focus on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation (see Table 5. Mindfulness at work – the need to focus on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation).

Table 5. Mindfulness at work – the need to focus on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation

Authors:	Addressing mindfulness at work and the need to focus on employees’ well-being, tackling leaders’ transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation:
• Franco Santos et al. (2022)	• Franco Santos et al. (2022) in the book chapter “Medical burnout: is mindfulness an effective coping strategy?” points out to the benefits of mindfulness at work in the cases of medical burnout – which, according to the authors is defined as “an inadequate response to chronic workplace stress, with emotional exhaustion, depersonalization, and reduced professional efficacy”, based on the 2019 documents published by the World Health Organization (WHO) (Franco Santos et al., 2022, p. 1). • The findings of Franco Santos et al. (2022) showed the fact that mindfulness represents a successful solution in better controlling and better coping with “emotional exhaustion”, since mindfulness at work might lead to individuals’ well-being, the improvement of their mental health, and even resilience as a coping strategy in the activities that take place in the Post-COVID-19 Era (Franco Santos et al., 2022, p. 1).

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Table 5. Continued

Authors:	Addressing mindfulness at work and the need to focus on employees' well-being, tackling leaders' transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation:
● Oman & Bormann (2022)	● D. Oman and J. E. Bormann (2022) in the book chapter entitled "Mindfulness through Mantram and inspired Passage Meditation: toolkit for diversity" acknowledge the advantages of the Passage Meditation (PM) as well as the benefits of both clinical and non-clinical applications is the Mantram Repetition Program (MRP) – as a subset of the PM (Oman & Bormann, 2022). ● In order to show the importance of mindfulness towards population, in the context of the diversity of spiritual and religious orientations that may be discovered at a worldwide level, D. Oman and J. E. Bormann (2022) mention the fact that mindfulness practices these days go far beyond Buddhist secular practices, thus being easily adapted to all individuals willing to make use of "contemporary mindfulness toolkits" – such as, for instance, the ones proposed by D. Oman and J. E. Bormann (2022).
● Popescu et al. (2017b)	● Popescu et al. (2017b) in the conference paper on "Sustainability leadership, the key to a better world – a case study on Romania's situation" mentions the paramount role of leadership in ensuring sustainable development and economic growth, thus displaying a great concern towards these days' challenges in the attempt to seek better solutions for the future. ● While referring to leadership in the Post-COVID-19 Era there are several changes that have occurred as a result of the COVID-19 pandemic and COVID-19 crisis, which refer to acknowledging the important role of sustainability leadership, and the vital power of transformational leaders, prompting to the idea that mindfulness at work should account for the need to focus on employees' well-being, tackling leaders' transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation.
● Popescu et al. (2017c)	● Popescu et al. (2017c) in the article on "Creating comprehensive human resources management policies and instruments by using strategic personnel planning – a case study on Romania's situation: a quantitative and qualitative analysis" illustrates the importance of having comprehensive human resources management policies and instruments, in the context in which the Post-COVID-19 Era will place a tremendous pressure on all human beings to cope with the new changes that have occurred and that are also due to occur in the daily activities, tasks, and routine. ● As noted by specialists, human resources are ones of the most vital resources that entities may possess, and since these resources are highly special they also require specific conditions and a particular environment in order to be able to regenerate and maintain the vitality and the strength required under stressful conditions – such as the ones most likely encountered in the Post-COVID-19 Era. ● Thus, it should be emphasized that when addressing mindfulness at work and the need to focus on employees' well-being, tackling leaders' transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation, human resources management policies and instruments in using strategic personnel planning become essential to all managers and leaders all over the world.
● Popescu et al. (2015)	● Popescu et al. (2015) in the article entitled "The entrepreneur's role in the performance growth of the financial audit activity in Romania" notes the importance of leaders' transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation at the level of entities all over the world. ● Mindfulness at work might prove to be a good solution in ensuring the performance growth of the financial audit activity in Romania, for instance, since it might offer several possibilities to determine individuals to become more concern with the environment's sustainable matters and the opportunities derived from adopting an attitude centered on social responsibility, corporate social responsibility and business environment sustainability.
● Şahin (2022)	● S. Şahin (2022) in the book chapter "Mindfulness-based well-being interventions in organizations and the COVID-19 pandemic" illustrates specialist's great concerns towards the challenges that were brought by the novel coronavirus illness (COVID-19), noting that "dramatic changes in social, economic, and working life have occurred with the COVID-19 pandemic", which, in turn, lead to increased levels of stress to all employees all over the world (Şahin, 2022, p. 1). ● S. Şahin (2022) centers on analyzing the advantages and the benefits of Mindfulness-Based Interventions (MBIs) – until the COVID-19 pandemic known as face-to-face program and since the COVID-19 pandemic known also as one of the digital well-being interventions, while referring to the employees' well-being.

Source: the author, based on the sources cited above

Mindfulness at Work: Harnessing Human Beings Potential, While Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era, and Experiencing Positive Benefits for People's Health, Happiness and Relationships

The third subsection “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships”, part of the section named “Main focus of the chapter”, belonging to the book chapter “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”, is centered on the importance of enabling mindfulness at work by harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships.

It should be mentioned that the third subsection “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships” points out the aspects belonging to the third SRQ, which is represented by: (SRQ3) Which are the main solutions capable to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships, in order to ensure mindfulness at work and a healthy business environment? Also, this subsection “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships” points out to the elements specific to the third SRO, which are represented by: (SRO3) This secondary research objective concentrates its attention on mindfulness at work, in the attempt to harness human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships.

In this matter, there are several aspects that need to be taken into consideration, as shown in recent studies:

- First of all, in the scientific work entitled “Social responsibility, sustainability, and public policy: the lessons of debris management after the Manabí earthquake in Ecuador”, the researchers P. Guerrero-Miranda and A. Luque González (2021) show the role and the importance of circular economy in ensuring individuals’ health, and safety, and in promoting the sustainability and the resilience of the environment. Also, based on the authors’ findings, the methods used by the circular economy – as a form of addressing waste management, are highly valuable in ensuring the environment robustness and are based on creative and innovative solutions capable to support life and help the planet revitalize. The conclusions of the research illustrate the following aspects: (a) first of all, mindfulness at work may be associated with the need of public policies to be more comprehensive in terms of waste management, since having specific instruments capable to address waste management, debris management, “is critical to successful land management” (Guerrero-Miranda & Luque González, 2021, p. 12); (b) second of all, mindfulness at work may be regarded as the specific manner in which local authorities are capable to handle a crisis situation, in the context in which these public authorities are “capable of having a more environmental

and landscape-friendly, even humane, view of disaster management” (Guerrero-Miranda & Luque González, 2021, p. 12); and (c) third of all, people’s general state of displaying mindfulness at work may be seen as individuals’ responsibility for coping with emergency situations and managing the resources in a rational manner, which lead to the necessity of implementing, at a general level, “an indispensable strategy to improve and strengthen public management and land planning processes in order to reduce the impacts and consequences of crises”, which in turn may be considered vital knowledge that confers “affected populations a greater capacity for maneuvering and the opportunity for improvement, both critical to achieving greater resilience of cities” (Guerrero-Miranda & Luque González, 2021, p. 13).

- Second of all, in the scientific study on “How sustainability is defined: an analysis of 100 theoretical approximations”, the authors A. Luque González, J. Á. Coronado Martín, A. C. Vaca-Tapia, and F. Rivas (2021) focus on the role and importance of sustainability for human beings and for our planet. Analyzing the aforementioned scientific work, the specialists mention, on the one hand, that “sustainability processes are imperfect”, which prompts to the “need to analyze their construction, evolution and deployment”, and, on the other hand, illustrate that sustainability processes are encountered “in seven dimensions: economic, social, environmental, legal, political, ethical and cultural” (Luque González et al., 2021, p. 1). The study shows that “the current concept of sustainability is based on the economic-social-ethical category” and the findings highlight “the distance between what, a priori, seems to implicitly allow any definition of sustainability and the existing reality” (Luque González et al., 2021, p. 1). While analyzing the concept of mindfulness, several connections could be made with sustainability, as follows: (a) first of all, mindfulness can be found in today’s individuals “ecological and social concerns”, which “are becoming increasingly important as everyday practices are increasingly regarded as unsustainable, leading to the emphasis on sustainability as the most effective alternative to the dominant developmental model”, and which, in turn, “has been especially questioned and criticized for its role in the global ecological crisis and in the increase in global social inequalities” (Luque González et al., 2021, p. 1); (b) second of all, mindfulness can be encountered in these days target to ensure people’s “common welfare”, general good, access to resources, and a decent, sustainable and healthy way of life, which “must be achieved in a fair and lasting way through a model of use and management of the environment that recognizes that natural resources are limited and finite” (Luque González et al., 2021, p. 1).
- Third of all, in the article “Effectiveness of mindfulness-based relapse prevention in individuals with substance use disorders: a systematic review”, Ramadas et al. (2021) remark the implications of mindfulness in individuals’ daily activities, by pointing out the fact that “mindfulness is a mental state that involves an awareness of the present moment and a non-judgmental posture towards internal and external phenomena”, thus “practicing mindfulness has been shown to help regulate attention, cultivate acceptance, and develop the ability to observe inner experiences (thoughts, feelings, and physical sensations) without judgment” (Ramadas et al., 2021, p. 2). What is more, Ramadas et al. (2021) draw attention in their work on the connections that exist between human beings potential, people’s health, happiness and relationships, especially while in the context of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and stress the fact that “mindfulness practices and exercises (...) aim to increase the individual’s awareness of internal (emotional and cognitive) and external (situational) cues (...) and help in the development of appropriate coping strategies” (Ramadas et al., 2021, p. 2). Furthermore, the same study

mentions the fact that mindfulness is responsible for “facilitating emotional regulation”, taking into consideration that “the effects of mindfulness are a result of changes in mental and brain functions pertaining to, among other self-regulatory systems, attention and emotional regulation” (Ramadas et al., 2021, p. 7). In essence, the findings illustrate the paramount importance of mindfulness, since this is a specific state of mind in which individuals are encountering “changes in self-regulation and self-awareness” that are capable to “reflect modulation in neurocognitive networks associated with various dimensions, including emotional regulation” (Ramadas et al., 2021, p. 7).

Guy Standing (2016) in the book entitled “The Precariat: The New Dangerous Class” points out to the insecurity that individuals are facing in today’s society in terms of finding a job and afterwards successfully maintaining the position obtained and the place of work desired (Standing, 2016). What is more, the author shows that there is a great discrepancy between the jobs that individuals find during their lives, and illustrates the fact that, in most cases, people are forced to accept different jobs in order to make a living and be able to survive in the modern world, but without really filling accomplished and without really being able to like the tasks they were given (Standing, 2016). In this particular matter, Guy Standing (2016) emphasizes that the precariat and its alarming growth is producing a high level of instability in our society (Standing, 2016). Furthermore, Guy Standing (2016) makes several references to these days’ political strategies which may lead to diverse forms of political extremism, which are, in essence, highly dangerous, and which lead, on the one hand, to unfair and unsatisfactory distribution of benefits in the society and, on the other hand, which may determine income insecurity due to the continuously changing business environment and abrupt decisions taken all over the world in terms of social, economic, and political balance (Standing, 2014; Davala et al., 2015; Standing, 2016; Standing, 2017a; Standing, 2017b).

DISCUSSION AND SYNTHESIS OF RESULTS

This section represented by the “Discussion and synthesis of results” highlights the pivotal findings encountered in the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”, which is centered on understanding the importance and the role of mindfulness at work, in the context in which specialists consider mindfulness a sound business investment due to its capacity to address the employees’ well-being, and, in the same time, increase people’s creativity and innovation.

One vital aspect that could be brought to light is encountered in the article entitled “How sustainability is defined: an analysis of 100 theoretical approximations”, published by the authors A. Luque González, J. Á. Coronado Martín, A. C. Vaca-Tapia, and F. Rivas (2021). While refereeing to mindfulness and awareness in terms of today’s continuously active and dramatically changing business environment, the specialists note that “the dimensions that currently contribute most to the dynamics of sustainability processes are the political, social and ethical” (Luque González et al., 2021, p. 10). In continuation, since mindfulness implicates a deep concern towards sustainability and sustainable development, the study mentions the following aspects: “Sustainability describes a phenomenon imbued with political interests, despite the lack of public policies that ensure its deployment and normal development, which should rather emphasize strong social commitment and defense of the principles that guide human behavior. In

other words, instead of being a common and widespread commitment, it is evident that sustainability processes are used as subordinate elements of economic growth and are complicit in substantial environmental degradation” (Luque González et al., 2021, p. 10). In this matter, the findings make reference to “the fact that, contrary to the a priori societal expectation, the environmental dimension is not included among the most important definitions, thereby conditioning the implementation, deployment and environmental protections offered by sustainability processes” (Luque González et al., 2021, p. 10). Thus, the scientific work points out to the fact “that if sustainability processes are not managed in a responsible manner, there is a danger of generating new adverse environmental and social impacts that may arise from the interrelationships between all dimensions that are not reflected in the concepts currently used and analyzed by experts” (Luque González et al., 2021, p. 10).

Another pivotal issue that requires immediate attention is presented by C.-Y. Kwon and B. Lee (2021) in their work on “A Protocol for a Systematic Review and Meta-Analysis of Mind–Body Modalities to Manage the Mental Health of Healthcare Workers during the COVID-19 Era”, where the authors emphasize the challenges imposed by the COVID-19 pandemic on individuals, at a general, and on healthcare workers (HCWs), in particular. These challenges are without precedent in recent history, which determine the authors to note the following aspects: “The coronavirus disease 2019 (COVID-19) pandemic has become an unprecedented threat to humanity worldwide, including healthcare workers (HCWs). Mind–body modalities have been used to improve the mental health, well-being, quality of life, and physical health of clinical and general populations, and may also be used to improve the mental health of HCWs during COVID19” (Kwon, C.-Y. & Lee, B., 2021, p. 1). As a result of the COVID-19 pandemic, in several lines of work were (re-)introduced the body-mind methods, hoping to improve people’s mental health, as follows: (a) “(...) some hospitals have reportedly introduced mind–body modalities to improve the mental health of frontline HCWs, including perceived stress”; and (b) “(...) mind–body modalities are generally considered safe and can also be delivered non-face-to-face in combination with information and communications technology (ICT), making them a promising mental health improvement strategy in the COVID-19 Era” (Kwon, C.-Y. & Lee, B., 2021, p. 2).

SOLUTIONS AND RECOMMENDATIONS

This section represented by the “Solutions and recommendations”, part of the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”, presents several aspects due to be considered for further analysis and for further improvement.

First of all, our society faces continuous pressure as a result of the COVID-19 pandemic, one of the main targets being finding solutions capable to enable sustainable development with the aid of responsible, robust and resilient policies (Popescu et al., 2017d). Also, there are several organizational processes that should be reconsidered and rethought, which make today’s tasks for entities extremely diverse and quite challenging: the quality assessment processes need to be reanalyzed (Popescu & Popescu, 2015); the organizations capacity to create, research, and innovate need to be improved and reprioritize (Popescu et al., 2016); the entities should most likely focus interdisciplinary and inter-related connectivity between factors, instruments, methods and processes (Popescu et al., 2008); competitiveness and sustainability should represent the dominant proprieties for organizations and countries (Popescu et al., 2012; Popescu et al., 2015).

Second of all, the COVID-19 Era brings significant challenges that require immediate changes in a wide range of areas that could find a wide variety of solutions, depending on the case, as follows: (a) meditation and mindfulness are believed to be ways in which both attention and awareness could be improved through specific training sessions, thus resulting in an increased state of well-being and an increased level of physical health (Agrawal & Sahota, 2022); (b) introspection and exploring the interpersonal dimensions of Zen are part of today's under-expansion spiritual industry, which positions the Buddhist practice of mindfulness "as part of corporate training by technology giants such as Google and Apple" (Kamperis, 2022); (c) "the holistic development of man" is highly positioned among these days goals, in the context in which mental peace, inner peace, and even spiritual enlightenment represent immense preoccupations for individuals belonging to diverse cultures and religions (Roy, 2022); and (d) mindfulness might be considered a possible solution "to achieve the good values and virtues" in both personal and work lives of people (Roy, 2022).

FUTURE RESEARCH DIRECTIONS

This section represented by "Future research directions", part of the book chapter entitled "Mindfulness at work, a sound business investment: focusing on the employees' well-being, while increasing creativity and innovation", brings to the attention several possible direction for analysis and research, as highlighted in the lines below:

- First of all, one possible research direction could be represented by analyzing mindfulness, at a general level, and mindfulness in different entities, and the manner in which the relationships in the society and at work were restored by the use of mindfulness instruments, methods and techniques. A good starting point for this analysis could be represented, for example, by the book chapters published by G. Roy (2022), namely "Yoga for attaining the state of mindfulness", and Ramesh Kumar et al. (2022), respectively "Experiences of meditation on twin hearts by naive practitioners".
- Second of all, another possible research direction could be represented by analyzing the benefits of mindfulness in the potentiation of creativity and the empowerment of innovation in the case of organizations' employees. Since, according to specialists' researches, creativity and innovation rely on the employees' state of well-being and on the employees' genuine and unique creative ability, mindfulness might offer new and improved perspectives on relaxation, meditation and work capacity. Hence, R. Kumar (2022) in the book chapter on "Spiritual emergency: channelizing a fire within", makes reference to human beings spiritual capacities and the opportunities that arise from different types of meditation in order to fulfill these spiritual needs, among which could be mentioned the people's requirement to constantly improve and grow at all levels (in a spiritual manner, in the private life and in the profession chosen).
- Third of all, a new possible research direction could be represented by analyzing the advantages of mindfulness in the potentiation of creativity and the empowerment of innovation in the case of educational environment, with particular reference to the academic performance of individuals. Several studies published by now have successfully managed to address this topic, since the creative and innovative capacity of employees is strongly related to their education level and academic background. Several examples could be offered in this regard, such as, for instance:

the specialists N. B. Eduljee, L. Murphy and K. Croteau (2022) addressed this topic in the book chapter entitled “Digital distractions, mindfulness, and academic performance with undergraduate college students” and, also, S. Devi (2022) in the book chapter named “Mindfulness in education: the need of the hour”.

CONCLUSION

In conclusion, the book chapter entitled “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” points out the following decisive aspects, as follows:

1. First of all, the general framework specific to the topic chosen to be presented in this book chapter is highlighted in the introductory section. By making reference to up-to-date publications and researches, such as the document entitled “Creative Europe programme 2021-2027”, published by the European Parliament (EP) in 2021, the importance of being part of and working in a creative and innovative environment is highlighted and carefully addressed (European Parliament (EP), 2021, p. 1). Additionally, based on other references to specific bibliographical specific works, numerous arguments are brought in favor of immediately addressing the challenges of the new economy, thus providing access to a creative and innovative environment, emphasizing the immense benefits of the digitalized economy and of the knowledge-based economy. It should also be mentioned that the introductory section contains the main research question (MRQ), the main research objective (MRO), the secondary research questions (SRQ), and the secondary research objectives (SRO), which have the purpose of ensuring right from the beginning that the main targets of this book chapter are brought to light.
2. Second of all, the background of this book chapter centers, on the one hand, on the literature review on mindfulness in business and mindfulness at work, while accentuating the importance of the discoveries presented in major studies on business investments, with direct reference to the role of mindfulness for employees and leaders. Also, the background of this book chapter focuses, on the other hand, on addressing the solutions proposed by specialists in order to address and foster the employees’ well-being, while increasing creativity and innovation at the places of work. In the in the Post-COVID-19 Era increasing creativity and innovation at the places of work proved to be vital to the survival of organizations all over the world, since, based on the most recent statistical data, the COVID-19 pandemic and the COVID-19 crisis have determined numerous businesses to close due to lockdown and, also, due to the high level of the financial difficulties.
3. Third of all, the book chapter centers on three pivotal subsections, namely: (a) the first subsection tackles the subject of “Mindfulness at work: capitalizing on business growth opportunities and harnessing a sound business investment”; (b) the second subsection presents the subject of “Mindfulness at work: centering on employees well-being, tackling leaders transformative power, while increasing awareness, competitiveness, creativity, effectiveness and innovation”; and (c) the third subsection brings to the attention the subject of “Mindfulness at work: harnessing human beings potential, while changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, and experiencing positive benefits for people’s health, happiness and relationships”.

4. Fourth of all, there are, also, other major sections belonging to this book chapter, which are represented by the “Discussion and synthesis of results”, the “Solutions and recommendations”, the “Future research directions”, the “Conclusion” and the “References”, and which come to complete the analysis and offer a broader perspective on the up-to-date subject on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation”.
5. Fifth of all, the book chapter on “Mindfulness at work, a sound business investment: focusing on the employees’ well-being, while increasing creativity and innovation” tackles the presentation and the analysis of numerous important concepts that are carefully taken into consideration, as follows: business, management, economics, accounting, COVID-19 Era, competitiveness, creativity, innovation, human resources, investment, responsibility, sustainability, work, mindfulness, well-being, and changes.

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KEY TERMS AND DEFINITIONS

Knowledge-Based Society and Economy: In the post-COVID-19 era our society has to find viable and precious solutions to offer a new beginning to human beings and to ensure a better capacity to develop and to succeed to entities all over the world, having in mind that the new economy will constantly bring new changes and will regularly encounter new changes depending on the rhythm of development of the region, country, or group of countries under discussion; the knowledge-based society and economy come to enhance this particular the rhythm of development of the region, country, or group of countries under discussion, since digitalization implicates adaptation, creativity, innovation, newness, and makes use of people's abilities to become more dedicated to improving their lives, the lives of the communities that they are part of, thus offering a better chance to life to the future generations that will come.

Mindfulness: In the post-COVID-19 era, due to the new order installed, individuals will have to face new challenges and will need to become more and more aware of the importance of their well-being, their mental health and their capacity to be part of new surroundings and new environments; mindfulness might be the solution to both older and newer changes in people's lives, since meditation – as a secular practice, has proven its validity for centuries and has demonstrated on several occasions the healing capacities; these days, mindfulness represents a precious asset for all human beings, offering a better and broader perspective on the situations faced and the challenges encountered, since it brings a certain balance in individuals' lives and a specific, most needed, state of mind, at work; the business environment, these days, is highly aggressive and even fierce, which weakens individuals' capacity to react over time, but with the aid of mindfulness instruments, methods, practices, and techniques, empathy and cooperation have a better chance to prevail.

Chapter 2

Organizational Greening Strategy in Times of Pandemic COVID–19

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ABSTRACT

This study analyzes the various features and elements related to strategic organizational sustainability. The analysis departs from the assumption that traditional organizations have to face a lot of challenges posed by the new global economy context confronting contradictory patterns of globalization and de-globalization processes. In order to create the new conditions for the organizations not only to survive but to succeed, it proposes a new model based on designing and implementing strategic organizational sustainability, abandoning the narrow focus on economic growth and profits to embrace the social inclusion and equity as well as the environmental sustainability issues.

INTRODUCTION

The contemporary society is going through rapid dynamic changes in the new global economy context in which organizations are facing new opportunities and threats to attain sustainable organizational development at their own pace and speed. A more comprehensive presence at work and organization embedded in the society is affected by complex economic and societal factors where besides the organizational policies and job descriptions, the individual workers involved in their interactions have their own backgrounds and personal histories. The global economy has penetrating and changing organizations and their work processes and practices lagging the organizational structures, processes, practices, etc., which are requiring organizational solutions. In the new global contextual economic and technological changes, organizations must develop under specific environmental conditions.

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Sustainability has become a relevant issue around the world because organizations and consumers today are more concerned enough on both green ecological and social issues when consuming and using products and services and therefore, they are taking more responsibility for strategic organizational sustainability and environmental management. Organizations may have different approaches to achieve these means and goals due to differential in capabilities, resources, knowledge, expertise, etc. Organizations engage in operational relationships of interactions between individuals, groups organizations and institutions at the workplace making decisions channeled for sustainable organizational and personal development.

Organizational changes in culture, structure and individual behaviors have influence on community development. The organizational structure states the responsibilities of all the workers and manage a communication and consultation system to facilitate the knowledge exchange, organizational changes, and progress, cooperation, and collective bargaining, ensures the implementation of employment policies, agreements agreed upon procedures, as well as the settlement of disputes and grievances. Traditional organizational structures are struggling with new internal, external, and environmental demands.

Organizational sustainability is affected by global and local sustainability challenges, concerns and issues which need to be assessed and analyzed for designing policies, strategies and practices that may have broader economic, social, and environmental impact.

The study begins with the analysis of the notions of sustainability and organizations to continue linking both in the conceptualization of organizational sustainability and its components: Economic growth and efficiency, social justice, equity and inclusion, and environmental sustainability. Finally, this study relates all the above components explained and analyzed in the topic of strategic organizational development before elaborating the final conclusions.

SUSTAINABILITY

Around the world, more organizations are taking responsibility for sustainability and environmental management (Rondinelli and Berry, 2000). Sustainability has become a relevant issue because consumers today are concerned enough on both green ecological and social issues when consuming and using products and services.

Sustainability originally was defined as “Meeting the needs of the present without compromising the ability of future generations to meet their own needs.” (Commission on Environment and Development 1987). (Brundtland Report to the United Nations, 1987). Sustainability is a critical issue for the organizations concerned with meeting the current needs of society without compromising the ability to meet the needs of future generations. Sustainability in essence is concerned with meeting the needs of people today without compromising the ability of future generations to meet their own needs (World Business Council for Sustainable Development, 2005).

Sustainability is an ecological concept and environmental development concerned with environmental stewardship, economic growth, and social justice, which are essential factors to characterize the sustainable organizational development. Sustainable organizational development is a concept that leads to promote growth and development (Sev, 2009). Organizational development has some basic constituents such as recognition and identification in an organizational diagnosis of the current situation, issues, and problems to be solved and improved. Then, a planned organizational intervention through actions and

corrective efforts followed by a follow up of sustainable maintenance updating the measures on results as a continuous feedback to accomplish sustainable organizational development.

The framework that leads towards the environmental sustainability (Hill & Bowen, 1997) revolves around the organizational development management of life cycle synergies, involving workers in commitment development and decision-making process. Environmental sustainability is feasible with the development of the internal competencies. The ability for organizations to create and manage sustainable core competencies enable to implement interventions and initiatives on biophysical, economic, social, environmental, and technical sustainability (Hill & Bowen, 1997).

Ethics and sustainability must do the right things when caring about others such as responding to human justice and fairness and in favor of a culture of peace. That is, the three more relevant values are: Global ethics, a culture of peace and sustainable development. Organizational sustainable ethics analyzes the issues regarding moral obligations of organizations regarding the bio socio ecosystems, environment, and natural resources to future generations. Violation of organizational obligations should produce organizationally an intense and detrimental response on the expectations in terms of individual costs and rewards that may vary in different organizations.

ORGANIZATIONS

Individuals are engaged in a system of relationships in organizations which in turn are connected in units and workplaces with different contextual characteristics, space, and time, etc., creating an interest in finding the best methods to organize them (Scott, 1992). To create and develop a sustainable organizational solution it is required to invest in resources and capabilities to create a systemic thinking patterns at all organizational levels, that is in terms of Senge (1990) a system thinking.

Individuals become integrated to organizations that meet their needs and demands, development of human relations and provide satisfaction by rewarding the work performed and contributions to production of goods and services with the best working conditions (Androniceanu, 2009). An organization is a group of individuals work together towards specific goals through the development of values used to operation and processes. The new organizational context from the economy and technology perspectives is complex, uncertain, and dynamic system. Since Taylor, organizational science has tried to define organizational solutions to the human dimension leading towards a gradual development of flexible, liberation and democratization of organizational work.

Individuals in organizations are encouraged to freely develop relationships and connections in the workplace to share their ideas more democratically, regardless of their position (Dombrowski, et al., 2007). The work organization considers the physical, the psychological needs of workers and the nature of operations and work. Organizational operations derive some internalities from connecting functional organizational structure to more centralized and controlled structure making difficult to build conscious trust and openness to match the management standards. Organizational communication enables the development of group's identity in a self-categorization process leading to the sense of organizational community.

Trust on the information and operational communication patterns between individuals in an organization is reflected on a higher motivation and sense of commitment reducing uncertainty of changes and outcomes (Elving, 2005; Mahal, 2009). A mutual trusted organization is one that improves its workplace and best performs its operations. Organizational loyalty towards its workers must be demonstrated sup-

porting them by recognizing their energy consumed at the workplace as well as the experiences of organizational fairness. Changes and developments require information and communication to find solutions to these grievances and conflicts, which may result in psychological contracts between employers and employees related to alignment of interests and goals, agreements on organizational events and actions.

The psychological contract assumed between employer and worker has the expectations to be fulfilled, being met or likely to meet focusing on the driving energy to achieve personal development. The discrepancies between organizational setting and the worker aspirations in the workplace result in tensions, stress, and burnout in the working life. Workers accept the changes of their work and the institutional setting to derive support but if they do not have this support become dissatisfied and frustrated for a sense of imbalance between their work performance and the work emerging from the organization, always having the option to leave the organization, although they may consume their own personal human resources to bridge the gap. This sense of an imbalance leads to dysfunctional experiences of social and organizational stress (Flowers and Hughes, 1973).

It was assumed that organizations operated in a stable and predictable context, (Pugh, Hickson, Hinings, & Turner, 1969). but now is not the case. Organizations are confronting a complex, uncertain, ambiguous and discontinues environment (Nonaka and Takeuchi, 1995; Weick, 1995; March 2006). Adequate organizational environment makes the workers feel genuinely interested in their own personal development and offers to provide them with the appropriate interventions and programs. Organizations that have the goals of economic growth and wealth creation must care of all the socio-ecological systems and living species. Organizations need to have a viable relationship between economic and environmental goals aimed to increase the economic growth and efficiency while at the same time improving the environment.

The organizations create opportunities and possibilities for the individuals to develop capabilities to create, manage and use resources framed by power structures and distribution of authority within an organization which enables the purposes and goals (Kanter, 2008; Leana, 1987).

The impact of economic globalization on organizations has shortened the cycles of change making faster to improve increasingly faster information, knowledge, processes, practices, uses of technologies, services, etc., leading to potential continuous need-oriented improvement, a holistic management system and business models. The organizational work activity is already changing while the organizational change is not always taking place. The organizational structure of the economy is related with the development, qualitative growth and efficiency of the economic system and the global economy.

Sustainable organizations are created by groups of individuals working together (Postmes, 2003). Organizations focused on sustainable development aimed at created common value need to be beyond profit-making. The objective of sustainable organization initiative must be aligned with the workforce motivation and awareness for the sustainable organizational development.

Organizations can be analyzed using the core competence in-out and out-in analysis (Han et al., 2010) placing relevance to the knowledge usage to identify courses of action supported by diversification strategies to develop the workforce and enable the new organizational position and the sustainable organizational growth.

Interaction among organizational stakeholders increases the potential of networked structures to achieve sustainable organizational development initiatives (Flyvbjerg et al., 2003). Organizational networking that includes collaboration among academic and research institutions, government agencies and business make up the triple helix (Etzkowitz and Leydesdorff, 2000). A sustainable work system is one that meets the needs of the wellbeing of all the stakeholders involved and develops their creative potential in a continuous individual and organizational development.

Through continuous improvement of organizational processes, organizations create an organizational climate and implement a sustainable growth and development initiative in response to the environmental changes and challenges. The development of low-carbon products was achieved through environmental training aimed to climate change mitigation (Saturnino Neto et al., 2014). Organizational development requires specialized environmental training (Perron et al., 2006) to achieve a higher organizational performance of an environmental management system (Sarkis et al., 2010).

Organizations must develop strategic leadership centered on strategic sustainability practices pervading all the functional areas across the organization and embedding them for sustainable development systems and processes and requiring greater involvement and commitment of all the stakeholders. Macke and Genari (2019) analyze the state-of-the-art and the elements of sustainable leadership and human resources management and environmental sustainability embedded in principles, organizational values, processes, and practices.

Holistic green organizations integrate and implement practices of green human resources management in facilitating the responsibilities to ensure policies and strategies, systems, and processes to achieve the goals of profit-making and to allocate resources for an environmental sustainability. The holistic green organization meets its financial objective with practices of making profits and sets a sustainable environment through the creation of common good and value.

Green organizations may limit the usage of paper and avoid printing by accessing an online portal of the organization to most of the important documents, bills, procedures, etc. Paper shreds from the organization can help waste management and be sold as a wastepaper recycle. A green cafeteria may try to make customers consciously serve themselves from the buffet with minimum use of plastic, while making them aware that the food wasted, and left is collected for making fertilizer. Jute bags can be used for fruits and vegetables. Recycle plastic dustbin can be used to dispose water cups, etc. Green organizations are responsible towards profit-making, responding to the good and wellness of all its stakeholders and for the impact of its policies, practices and activities on the environmental sustainability and the creation of common value.

Green organizations should be green corporate social responsibility creating value for the common good measured in terms of the impact in economic growth, environmental sustainability, and social development by benefitting the different involved and engage stakeholders (Freeman, 1984). A team or taskforce can have assignments to analyze the organizational environment issues, concerns, and hazards, to promote green behavior, implement environmental interventions and monitors within the organization. Some organizational green behaviors are socially responsible behaviors such as efficient use of water, energy and lights, less printing, etc., which may require organizational learning and training.

Organizations need to focus on development to overcome any challenges that arise from the environmental changes (Han et al., 2010). Organizational management play a critical role and responsibility in promoting innovation sustainability by creating the right behaviors, values and attitudes engaged toward the organizational visions. Organizations set out long-term strategic planning aiming at specific goals of increased quality and profitability and reducing the risks, costs, and time (Garrido & Martos, 2016).

Organizations are implementing management systems based on international principles and standards, organization strategies and objectives, business processes and optimization, resource management, which are implemented in a systematic and structured way. The continual sustainable organizational development needs internal structure and systems (Hill & Bowen, 1997).

Organization's design, develop and implement and incentive plan, motivation and communication system and leadership guidance. Organizations need to create support for the workers together with

managers and peer to re-confine and make sense of their own work at the workplace on priorities, tasks, roles, to make choices, personal judgments and communicate to others.

Organizational structures, norms, rules, regulations, communication processes, values, etc., are related to the logic of organizational bureaucratic model. Organizational structure defined as the organizational system of relationships between authorities and tasks has an impact on organizational sustainable development using resources and coordination of people to achieve the goals (Martin, 2014).

Sustainable organizational development needs and internal structure to constantly motivate, balance power and opportunities to perform positive behaviors (Kanter, 2008). The organizational structure is a hierarchical arrangement of communications and authorities depending on the organizational objectives and strategies. Coordination of activities is a structural factor needed amongst the organizational abilities in which communication develops the social identities within the organization (Postmes, 2003).

Organization and communication are dependently intertwined in corporate or organizational communication developing in competitive advantage and ability to retain more proficient, motivated, and talented workers (Balmer & Gray, 1999). The communication channels of the organization must focus on empowering the workers to improve the level of development, motivation and commitment of its individuals enabling sustainable organizational growth.

Organizational communication develops the structure and processes enabling the development of sustainable organizational development and growth. Organizational communication is a tool that helps to sensible all the stakeholders with the concept of organizational proudness, purpose, goal and most important with the sense of organizational community ties. Organizational communication is the foundation for the interactions among individuals and sets the group's norms and social identity, promotes social cohesion; improves communication and collaboration, and individual commitment (Elving, 2005; Haslam, 1997; Postmes 2003; Tucker et al., 1996).

Organizational communication enables development of the personnel in areas of commitment as the foundation for motivation, involvement. and quality of life (Elving, 2005; Mahal, 2009). Organizational communication enables the interpersonal relationships of all the agents and stakeholders involved in the attainment of the strategic goals of the organization (Postmes, 2003). Organizational communication results in creating, expanding, and transferring knowledge in a continuous process of the workforce while developing a feeling of community of individuals with ties in with society enabling the improvement of the local and regional communities.

The organizational models of Barley and Tolbert (1997) and Crossan et al. (1999) are in contradiction between the organizational setting and work to emerge with societal changes which have an impact in the work processes and challenge the institutions and organizations to adopt new post-bureaucratic organizational designs. Regenerative work emerges through collectively organizing the transitional development of work processes from bureaucratic structures to more post-bureaucracy challenging the implications on the work organizations and the working life.

Models for organizations across different contexts may duplicate organizational structures and processes although may be presented as autonomous analysis are based on similar decisions and norms for how to organize (Meyer and Rowan, 1977) in what is well known as organizational isomorphism.

The organizational post-bureaucratic work is emerging and changing in human considerations, an approach that should support work despite the classes between work without boundaries and the bureaucratic type of traditional work with strict rules and norms. Creating collective and regenerative work is specific to the type or organization but may be generalized to organizations with more post-bureaucratic working quality of life. Post-bureaucratic working quality of life is influenced by economic, ideological,

social, technological, and political issues and developments leading to more sustainable organizational work systems characterized by more elusive and subtle nature of control subject to internal and external factors. There is a mismatch between the organizational post-bureaucratic design and work. This current situation leads to the need to design new organizational approached to work.

The post-bureaucratic characteristics and problems of work systems can be related to traditional bureaucratic workplaces and occupations subject to the internal and external factors as well as the type of organizations. Some elements of the organizational post-bureaucratic structures can co-exist beyond the formal structures in the functions within the bureaucratic structures making it more stable. The nature of organizational work is changing rapidly and drastically with the transitional emergence of post-bureaucratic structures and posing new challenges to traditional organizational structures, although certain elements of post-bureaucratic organizations may be still found in more traditional ones with bureaucratic work (Howard, 1995).

Self-organizing structures in horizontal interaction have a synergetic effect to manage the large-scale economic system. The organizational synergic effects of resources and capabilities leads to innovativeness and productivity. Self-organization system aiming at synergetic effect is open and provides feedback of processes to the organizational structure based on objectives, resources, capabilities, policies, rules, values, etc. to strengthen the organization.

Human resources motivation and job satisfaction are relevant behavioral factors supporting sustainable organizational development and main priorities of long-term management (Deal et al., 1994; Erez et al., 1993). Human resources motivation, job satisfaction and wage policies are critical factors for economic and social activities (Ciocoiu, 2011; Colesca, 2010; Sims & Veres, 2007), supporting sustainable organizational development (Deal & Jurkins, 1994; Erez & Early, 1993). Workers hope that the wage policy of the organization can meet their personal needs by requiring a salary, duties, functions, benefits, cash rewards (Tyson, 2006) in exchange of work performance and contribution to production.

The development of traits and human relations at work is related to the existing work conditions and welfare state benefits (Androniceanu, 2009). The wage policy of the organization is linked to work satisfaction and to organizational climate which results and the level of organizational stress influencing the organizational development. There is a need to introduce an integrated differential motivation system including incentives to encourage performance of human resources and contribute to a sustainable organizational development. Organizations must confirm that the organizational performance appraisal must develop, adopt, adapt, implement, and receive feedback on pro environmental policies and criteria thought the involvement of human resources and the stakeholders in the execution of the environmental management system.

Organizational motivation is created by an enabling organizational climate that maintains communication and improves performance among the involved members (Patterson, West, Shackleton, Dawson, Lawthom, Maitlis & Wallace, 2005). Organizational communication has a relevant role on the attainment of the workforce commitment (Elving, 2005) to develop a sustainable competitive advantage within the organizational strategic core competencies (Tucker et al., 1996). Organizational communication allows members to interact and participate in solving problems and making decisions empowering them for innovation.

Empowerment has a significant positive impact on organizational sustainable development. (Mumford et al., 2017). The empowerment awards powers to employees to get involved in making decisions and performing them within the organization, has an impact on organizational sustainable development

while creating citizenship behavior by giving gives moral, ethical, psychological, social, and financial support (Bandura, 2002).

Trust and accuracy on information leads to make organizational decisions across the hierarchical structure with an impact on the overall performance (Roberts & O'Reilly, 1974). Many decision-making issues and details decided at the management group vanish in a black hole at the top management of the organization, one of the deteriorated symptoms of bureaucracy (Heckscher, 1994). Top management is responsible of making the organizational work system more comprehensible and manageable at all the levels of the organization.

The quality of information transmitted between individuals hinges on their level of trust, organizational behavior, and satisfaction (Roberts & O'Reilly, 1974). Trust development among individuals emerges from interpersonal relationships and interactions through communication which are tied to organizational behavior and structure that create a cohesive work environment enabling organizations to facilitate the transferal of information (Roberts & O'Reilly, 1974).

Organizational structures may miss-match work activities consuming more resources that challenge for a more balanced situation demanding more rational consumption and a more comprehensive presence of resources at the workplace. One possible solution is that work activities may be pre-defined in many workplace situations. Organizations adopting structures, practices, processes, etc., like other organizations is the result of organizational isomorphism and may be dysfunctional when the local factors are not considered. An organizational structure emerging from the internal interaction patterns and responsibilities may be more directive top-down decision-making while from the external factors may emerge as functional organizational structure with the expert departments and supporting functions.

The organizational structure correlates with the organizational behavior, motivation, communication, and the overall cohesion through the organizational climate. Organizational climate is the representation of the events that affects the level of motivation and performance at individual and organizational levels within an organization (Patterson et al, 2005; James, Choi, Ko, McNeil, Minton, Wright & Kim, 2008).

Organizational climate is the symbol of organizational ambitions that refers to the collective opinions on regulations, processes, protocols, etc., and the method of attained goals (Elving, 2005). Organizational climate allows all the stakeholders and actors to reach a consensus regarding the methods to be used to achieve the goals of the organization. Actions consistent with the goals enables the improvement of relationships leading to a higher level of performance (James et al., 2008). The organizational climate has effects within the organization with a high degree of validated impact on the workforce.

The organizational climate enhances positive motivation, balance the structure of power, and improves the performance (Patterson et al., 2005) adjusted to the need's satisfaction of all the stakeholders and leads consistent and continual sustainable organizational development (Cummings & Worley, 2014). Determinants of organizational behaviors refers to the structure of proportions between the alignment of individuals and organizations in different situations, as a tool to determine the social type. This differences in proportions are referred to individual attitudes and organizational needs (Kanter, 2008).

Top management must leverage efforts to improve sustainable organizational practices by creating an environment where the talent retained work in harmony with the strategic vision of leadership. The Organization top management must be confident about support for the promotion of initiatives for green behaviors in favor of greening and sustainability of the environmental development of the organization with green products, protecting natural resources, combating climate change. The environmental management system as an independent variable has challenges and offers opportunities mediated by the

teamwork empirical-environmental training and employee involvement and the organization's environmental performance (Daily et al. 2011).

The organization's performance is measured in terms of a balance between economic, social, and environmental outcomes on attaining organizational growth and protecting, conserving, and maintaining natural resources for the use of future generations (Daily and Huang, 2001; Jennings and Zandbergen, 1995; Ramus, 2002).

Organizations must report on sustainability initiatives implemented in conformity with regulations to show their commitment with their results. Organizations designed with agile sustainability structures are more responsive to internal and external environmental changes.

The future of organizations presents several challenges, risks and opportunities requires the development of abilities and capacities to cope with these concerns to make decisions on planning organizational change and improvement for sustainable organizational growth and development.

ORGANIZATIONAL SUSTAINABILITY

Mindful organizations invest in sustainability is one of the key drivers of economic, social, and environmental sustainability, with a positive impact on brand image, improving morale, increasing return on investments, etc. Sustainable organizational practices are a mindset that affects all levels of the organization through effective change management that enable economic growth and customer satisfaction. Organizational transformation structures and processes are subject to the innovative development and maturity of the economic system able to ensure economic growth, social and sustainable organizational development of the economic system.

A holistic approach to organizational sustainability enhances reputation, reduces costs, and gives a leadership position to the organizations. Holistic green organizations should utilize used and recycled components for design new green products and green packaging. Naudé (2012) has proposed a tridimensional approach to sustainable development to include economic, social, and environmental dimensions combined with initiatives and strategies. The organizational sustainable development has the economic, social, and environmental dimension which can be managed by strategies aimed to face the socio-economic development and environmental protection and maintenance.

Organizational sustainability has various benefits among which it builds brand reputation, improves confidence, attractiveness and environmental consciousness to talent, investors, suppliers, customers, confidence, better performance, etc. Organizational sustainability encompasses the need of motivation and cohesiveness of the teamwork towards setting guidelines and establishing the processes for the achievement of organizational goals. However, human resources management practices focused on profits and cost reduction are in tension with long term social dimension of organizational sustainability, relationships with stakeholders and performance.

Sustainability is the organizational ability to achieve its goals improving long term shareholder value by integrating economic, environmental, and social opportunities into its organizational sustainable strategies (Symposium on Sustainability 2001). The organizational sustainability framework (Hill & Bowen's 1997) analyses as determinants the biophysical, economic technical and social sustainability.

Sustainable development in organizations is guided by some principles such as the active ownership, cooperation among actors and learning through ongoing evaluation. The principles of organizational sustainability provide the foundations for the managerial strategies and policies aimed to attain sustain-

able organizational growth and development (Sev, 2009). Principles of mimic natural ecosystems affect the environmental sustainability of supply chains leading toward sustainable design and managed supply chains. Some of these ecological principles are the dialogue and synergies between industrial ecology, supply chain management and organizational ethics.

Emotional energy could be a source of individual and organizational sustainability by continuously changing the internal and external factors of the working environment and well-being issues. Developing proactive initiatives of sustainable organizational practices is dependent of the talent and leadership who are conscious of the value creation drive through the delivery of sustainability. Leadership committed to developing more sustainable organizational model must practice the values attached to sustainability with the example and encourage workers to follow while assessing accurately the economic, social, and environmental risks and opportunities derived.

The facilitator of organizational sustainability processes facilitates the formulation and implementation of strategic change taking care that the organization responds to internal, external, and environmental challenges remaining committed to the economic efficiency and growth, social justice and inclusion, and environmental sustainability.

Organizational sustainability values must have to be inculcated at all levels in the system of the organization to engage the initiatives while performing the tasks. Workforce diversity initiatives contributing to recruit, develop and retain talent responds to sustainability challenges with economic, social, and environmental awareness. Organizational values must be consistent with sustainability in the workplace supported by the leadership of top management in charge of designing and implementing the organizational sustainability strategy for sustainable organizational practices.

Critical knowledge and skills regarding organizational sustainability must be integrated to the agenda into programs, activities and practices linked with economic and social betterment. A sustainability organizational agenda drives to design and implement sustainability strategic and operational planning at all levels to device the initiatives, practices, and activities led by top management with a proactive role and with the strategic support of professionals playing the roles of facilitation and agency. Sustainability strategic imperatives are in most of the organizational agendas (Pucik 2005).

Sustainable organizations must be able to attract, retain and align the talent with the sustainability agenda and organizational practices. Organizational communication and information flows between the leaders, managers and workers engage them in the commitment to an organizational sustainability agenda. Informal organizational work structures and organizational communication must be adapted to more functional structure evolving into a more matching organizational structure supportive of a more sustainable organizational development.

Corporate and organizational communication refers to the stakeholders developing organizational reputation and identity (Balmer & Gray, 1999). The development of organizational leading to corporate communication requires investments to receive the benefits (Balmer & Gray, 1999). The quality of information transmitted between individuals hinges on their level of trust, organizational behavior, and satisfaction (Roberts & O'Reilly, 1974). Trust development among individuals emerges from interpersonal relationships and interactions through communication which are tied to organizational behavior and structure that create a cohesive work environment enabling organizations to facilitate the transfer of information (Roberts & O'Reilly, 1974).

Top management is responsible to fulfil the organizational agenda of expectations on sustainability development, from the search of new environmental, internal, and external developments design of a suitable structure, recruiting and developing the right talent to drive the sustainability initiatives and

allocating efficient resources and implement the sustainable practices using the knowledge and skills. Organizational clusters, units and groups should undergo changes and modifications toward sustainable organizational development, health, and efficiency.

Organizational practices that have an impact on the sustainability of the environment and community, have the obligation for organizations to undertake sustainable reporting. Organizations and corporations have the obligation to be show they are transparent issuing sustainability reports.

Organizational sustainability is productive as the result of a congruent ideology of economic, societal, and ecological concerns that have influence on human resources management. Organizational growth is the natural expansion of size and development is the ability to improve taking advantage of opportunities (Daly 1996). Sustainable organizational development has been considered a pervasive philosophy, but environmental sustainability makes possible to protect, maintain and manage natural resources, have economic growth, to achieve more social equality and to respond to the global outcry of climate warming. Sustainable regenerative work systems build development from individual and organizational sustainable organizations (Docherty et al., 2002) contextualized in economic growth, social equity and justice, and environmental sustainability.

Organizational ethics has a direct link with the economic growth, social justice, and environmental sustainability in relationship with practices of sustainable organizational development. The relationship between organizational ethics and sustainable development in terms of the organizational economic and social goals is the equitability, as for example in ensuring a balance between pricing and quality and health of products. The ethical principles are in usage requirement in the analysis of sustainable organizational development and growth (Bryman, 2011) focusing on issues such as economic growth, social inclusion and equity, environmental sustainability, technological innovation, policies and regulations, branding. Are all these being important factors that affect the ability for sustainable growth, must be considered when identifying the strategic focus of an organization.

Organizational performance management supported by organizational ethics and governance foster sustainable organizational development, conceived as radical change in organizational practices are economically, socially, and environmentally sustainable. That is, sustainable organizational development must be efficient, equitable and green. Sustainable organizational development environmental is concerned with the so-called triple bottom line sustainable activities and measures on natural resources and environment, the social impact on the organizational welfare, health and safety, protection of human rights, etc., and the economic wellbeing, labor productivity, investments in training and economic efficiency and growth.

Economic Growth and Efficiency

The organizational sustainable objectives of economic development are achieved through industrial development based on the industrial harmony relationship between the employer and the workers for sustainable personal development. Sustainable organizational performance focus on the economic performance more than in the narrow financial performance, incorporating the social and ecological effects of production processes while maintaining image, and sustainable outcomes. Organizational development interventions give meaning to practices, activities, duties, and commitments of personnel and facilitate accomplishments on efficiency and health performance. (citation)

The core competencies of organizations are the foundations for sustainable growth and development such as the capabilities to create organization intangible resources, knowledge, and innovation (Egbu,

2004; Spence & Mulligan, 1995) focusing on the economic benefit and encompassing environmental sustainability as the drivers for sustainable development (Vanegas et al., 1996; Ortiz et al. 2009 and Presley & Meade, 2010). Human motivation considers the effective organizational wages policies within the policy of the organization to stimulate sustainable economic efficiency (Ciocoiu, 2011; Sims et al., 2007).

Organizational development is a regulated, integrated, and planned approach designed to cope with challenges and difficulties to boost efficiency in organizations. Organizational development is a response to the contextual and environmental changes through planned and implemented effort engaging the whole structural organization to revolutionize values, attitudes, beliefs, etc., aimed to improve the efficiency and health (Bennis, 1994). The prevalent attitude within the organization is related to the motivation and the output (Mahal, 2009). The efficiency management principles are based on the equilibrium and the ability of well-balancing working and labor time, fully devotion involving activities and flexibility.

Organizational development indexes are used to diagnose and identify the organizational problems, steer the interventions, and plan the actions towards improving the organizational development through the implementation of the corrective measures by units and groups aimed to achieve organizational efficiency and health. The worker is more efficient and cohesive in a stable workplace environment that enables to maintain standards and code of conduct in a more cohesive team leading to more initiatives and better performance (Mahal, 2009). Personal development of any worker is provided by the organization through behavioral and training interventions achieved through harmonious and cordial relationships aimed to result in higher performance, efficiency, and productivity.

Organizational democracy are sound relations between management and the workforce based on motivation and consultation, to contribute with their best to the organizational performance, health, and efficiency. Organizational democracy motivates management and workers to cooperation and agreement, to increase efficiency, productivity, and other tangible benefits, to contribute with their best efforts to economic growth, development, organizational health, and prosperity.

The sustainable organizational development requires high ability for changes in the new context that cannot be avoided, taking advantage of the environmental opportunities, and achieved by the capabilities of an efficient resource management.

The institutional environment development of any economic system has an impact on the economic growth, social justice and environmental sustainability through the organizational management and property structure, distribution of income, etc. in such a way that any increase on the level of institutional development the economic growth also increases (IMF 2017 World Economic Outlook Database). High institutional quality is related with negentropic processes in economic systems of developed economies while low institutional quality creates entropic processes in less developed economies where the environment is dissipative in economic growth and human capital (The Human Development Report, 2011). The dissipative system has certain order in the organization determined by the order of the economic system and characterized as a no equilibrium open system that maximizes the efficiency with the minimum entropy and energy dissipation. The organizational entropy is measured by its orderliness based on the structure and its impact on the economic system in terms of synergies, syncretic and entropic (Prigozhin and Stengers, 1986).

Organizational development has an impact on the qualitative economic growth in national and global economic systems. Regional economic growth, competition and technological innovation networks are some external factors that can be standardized for organizational growth and development (Miyatake, 1996 and Tan, Shen & Yao, 2011).

Social Justice, Equity, and Inclusion

Social sustainability in organizations refers to sustainable human resources management practices that have an impact on the wellbeing of workers (Pfeffer, 2010). Social sustainability as a system may have institutionalized factors that provide some inertia to change. Organizational social systems are always in continuous change process in which people can be aware and participate to grow and develop in an ever-ending path (French and Bell 1973). Organizational actors have different personal contacts, informal and formal social relationships through interconnected communication networks that facilitate their presence and their roles at the workplace as a source of wellbeing and development.

A sustainable organization holds a group of individuals with different characteristics and backgrounds which lead to grievances, normal strife, and conflicts due to concerns and issues for justice and equity. Organizational conflict may be inevitable as a fact where people compete for scarce resources and power and may arise as intra and inter-personal, inter and intra organizational, inter and intra group, etc.

Organizational power is shown in the hierarchical domination where individuals have capabilities to structure resources and get the desired results (Kanter, 2008). When only a group of individuals have the monopoly of power, they make decisions regarding the management of resources and methods. When inevitable conflict emerges in the organization, it should be managed and minimized ensuring organizational harmony. Measurement of human development considers physical, psychological, and social variables such as quality of life, living standards, health, and education levels.

A sustainable organizational development has some features such as open awareness and communication, self-actualization, meets the needs for growth and development, implements open, inclusive, and transparent policies for all the stakeholders, creates an organizational environment of trust, support, and commitment for all the members.

Environmental Sustainability

Environmental sustainability and sustainable organizational growth can be maintained through the development of organizational knowledge and the community development with high standards in cultural diversity, ethics social responsibility, safety issues, etc. Organizational structure and behavior continuously evolve to cope with environmental changes and needs to develop and manage the core values. Sustainable organizational growth focuses on environmental sustainability, diversity, social responsibility, code of conduct and worksite safety, supported by a clear technological and business approaches, leadership, innovation, creativity and responsible management, alignment of individual involvement with organizational goals, all aimed to the development of core competencies to achieve a sustainable competitive advantage.

Organizations achieve environmental performance and sustainable development by developing and empirical environmental sustainability management system through the moderate and direct influence of human resources training and development. The intrinsic organizational competencies supporting the organizational development and focusing on environmental sustainability led to sustainable organizational development and growth encompassing environmental sustainability.

STRATEGIC ORGANIZATIONAL SUSTAINABILITY

Organizational sustainability is a critical concern in designing and implementing strategies and practices and leveraging management vision and leadership aimed to organizational sustainable development. Organizational sustainability is a competitive strategy to enhance the ability to develop sustainable change (Moore & Manring, 2009). Organizations adopt different approaches and initiatives for achieving environmental sustainability and protecting the environmental growth avoiding disruptions by managing internal factors such as managing the causal human behavior and the role of human behavior (Davis and Challenger, 2013; Ones and Dilchert, 2012; Oskamp, 1995, 2000), and undertaking other environmental development initiatives outside the organizational boundaries (Uzzell and Moser, 2009).

Organizational development planning and implementing the interventions for change of practices, processes, procedures, and actions in relation to the environmental and contextual factors to design, formulate and execute organizational structures, strategies and policies aimed to achieve the goals (Cum-mings & Worley, 2014). The planning and control approach for sustainable organizational development projects and programs can be supplemented it with an open process and learning to promote long term sustainability (Lindkvist and Söderlund, 2002; Morris et al., 2011; Brulin and Svensson, 2012; Svensson and Brulin 2013). Strategic organizational planning for the formulation, implementation and set up long term sustainability strategies provides a guide to all the stakeholders for theory involvement in sustainable development initiatives and practices across all levels of the organization to reap the best benefits.

Sustainable organization is the enabler of sustainable human resources management strategy (Fairfield, Harmon, & Behson 2011). Environmental and internal analysis of the organization is needed to link environmental management and human resources management to formulate sustainable strategies to contribute toward greater environmental sustainability of the organization.

Development and management of sustainable core competencies focusing on environmental sustainability can lead to design and implementation of strategies aimed to sustainable organizational development and growth. An organizational strategy designed on management and communication of the workforce is crucial to enable sustainable organizational development and growth, more oriented towards environmental sustainability.

Design and implementation of a sustainability strategy throughout the organization needs a structure to give support to operationalization of practices and activities at the workplace Sustainable organizational strategies from the perspective of the whole sustainable core competencies must fit the core business model within the environment in order to implement the sustainable organizational practices, taking into account training and development of talent to fulfill the economic, social and environmental sustainability. Global, local, and internal social networks can be used to get sustainability awareness, examining, and analyzing specific issues related to the industry to design the sustainability strategy.

Change facilitation and agency must be aware of developing structures and systems to support sustainability initiatives in accordance with the agenda and aligned with the organizational culture and environmental strategy development. Organizational strategies should be aligned with human resource system to link workforce capabilities with environmental sustainability growth management systems and sustainable development (Ichniowski et al., 1997; Mendelson and Pillai, 1999; Collins and Clark, 2003, Boselie et al., 2001; Paauwe and Boselie, 2003; Jiang et al., 2012; Daily and Huang, 2001; Renwick et al., 2013).

Organizational leaders must recognize that the human resource's function oversees implementing the sustainability strategy (Harmon, et al., 2010). Organizational sustainability strategies must ensure

to meet the short-term needs and obligations while sustain the long term as well focusing on profits and economic growth, social justice and inclusion and environmental sustainability.

An organizational strategy to integrate workers can be that the organization must develop the right organizational values, offer incentives and fulfillment of personal perspectives of the workforce framed by a common organizational vision on diversity must reflect the society to create new perspectives on benefits. The formulation and implementation of an organizational sustainability strategy is beyond public and investor relations or environmental compliance and must be mandatory integrated into the fabric of the organizational making and practices to reap the value proposition from all the economic, social, and environmental benefits.

Social and environmental sustainability assessment of the impact of organizational decisions result in incorporating social responsibility practices in sustainable social strategies. All the organizational stakeholders need more clarity on the importance and meaning of green corporate social responsibility initiatives for the organization and the benefits in terms of the environmental sustainability. Green corporate social responsibility is related to social issues and environmental development aimed to improve the impacts of organizational activities on sustainability, such as reducing carbon dioxide emissions, eco-friendly cafeterias and dining halls, planting of trees, etc.

Sustainable strategies of organizations must be held accountable for their impacts on economic growth and profits, but also on society inclusion and environment sustainability.

THE GREEN INNOVATION BUSINESS (GIB): BIO-FOM

BIO-FOM is a green innovation business (GIB) also characterized as an eco-efficient company to promote sustainable, profitable, and inclusive development through highly competitive Mexican seeds with fair prices. Using organic mineral bio-fertilizers healthily increased the profitability of the producers. It is in the metropolitan area of Guadalajara. BIO-FOM is the most complete Organic Mineral Bio-fertilizer available on the market, which is made from the interaction of elements: biological, organic, and mineral. It is a mineral organic bio-fertilizer for plant nutrition. The interaction of the BIO-FOM elements forms a Functional Plant Nutrition System; its results reflect: improving seed germination and initiation, healthy and adequate growth, larger roots, greater flowering, and tie, increase in the quality of the fruits, and provide resistance to pests and diseases. BIO-FOM increases soil fertility and contributes to the decontamination and regeneration of the soil.

BIO-FOM bases its functionality on the interaction of the biological, organic, and mineral elements that compose it: A Poly-Functional Consortium of Microorganisms, among them: antagonists to pests and diseases, nitrogen fixers, and; mycorrhizal fungi; that help release the nutrients provided by the BIO-FOM blend itself. The 17 Basic Mineral Elements of plant nutrition (nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, boron, copper, manganese, silicon, zinc, iodine, sodium, cobalt, molybdenum, selenium) Organic Matter, Amino Acids, Acids Humic, and Fulvi.

BIO-FOM contains live microorganisms: 8 bacteria and mycorrhizal fungi that help unblock the chemical components that exist in the soil allowing their absorption, in addition to an important contribution of organic matter, amino acids, humic and fulvic acids, this, together with its content of 16 mineral elements (nitrogen, phosphorus, potassium, magnesium, calcium, iron, boron, copper, manganese, silica, zinc, iodine, sulfur, sodium, cobalt and chlorine) together give rise to a molecular dialogue that results in

a functional plant nutrition system, fertile soil, larger root size and helps improve pH, which is essential for proper and healthy plant growth.

Among other benefits, it potentiates the chemical fertilizers that complement the application of BIO FOM as:

1. It recovers the soil fertility, unlocking mineral nutrients present but not available, favoring their absorption due to their bio-organic profile.
2. Increases the specific weight of grains, resulting in higher production.
3. Increases the Brix degrees of the fruit, having better sales possibilities.
4. Stimulates the immune system, so healthy, vigorous, and productive plants are achieved. Strengthens the root system of the plant, thereby improving the use of water and mineral nutrients available in the soil.
5. Respect the ecosystem, avoiding the contamination of the water table.
6. 100% assimilable, achieving a greater expression of the genetic potential of plants.
7. Retains and conserves moisture in soils.

When analyzing the green innovation business (GIB) and eco-efficient company through the comprehensive method of entrepreneurship, it is observed that just as the company has some advantages in the product also with many threats that are the large companies that are already positioned and that also compete with competitive prices. It is also determined that although the green innovation business (GIB) has a wide network that is using the best way possible, it is necessary to increase the international network of contacts so that the business can grow quickly.

Although BIO-FOM has been positioned in the local, regional, and national markets for a short time and has grown steadily, it has the challenge to enter the international markets in a very competitive position. The company Mary's poop has a competitive advantage that differentiates it from other firms, and that is that its product is innovative and ecological, as well as its processes are carried out in an ecological way which makes it an eco-efficient company.

Likewise, due to the culture of planting in Mexico, this company faces problems to become highly competitive in the country, since most farmers prefer chemical fertilizers and thus produce more in less time than caring for the land and having a product of a higher quality with organic fertilizers.

It is necessary to implement a culture of conscience in Mexico when we talk about caring for the land since the use of organic fertilizers would not only help the environment but also people, this is because the foods that are consumed will have better nutrients and they would not be contaminated with pesticides. Today some people started to make their gardens at home, so they grow their food, this is a good technique because they can be sure that the consumption of food is one hundred percent organic. Here is the importance of the topic for green innovation in urban areas.

A SPACE FOR INCLUSION, CIVIC CULTURE AND TECHNOLOGICAL INNOVATION IN IN TIMES OF PANDEMIC COVID-19

Within the programs of the Municipality's Public Space Authority, Zapopan focused on the needs of the community, to generate job opportunities and entrepreneurship in the Agroecological Park. Children connect with ecological technicians through direct and individual contact but also through workshop pro-

grams and awareness-raising seminars, training, and development, which can give them the opportunity to improve their own home, generate construction projects. and self-construction. The Agroecological Park of Zapopan is a space open to the public where, through workshops, practice and coexistence, there is collective learning on issues related to agroecology, self-sufficiency, environmental knowledge, and social awareness.

This inclusion center is a space that generates and promotes opportunities for the local population. Citizens can also have free and unrestricted access to all facilities and areas such as: an educational center built with natural materials, a meeting room / library, a classroom, and an urban garden that is an important part of the project so that the people can relate. The Park has a nursery for plant reproduction, a compound area to produce fertilizers, a main square, the first edible forest in the west, ecological toilets, a rainwater collection, and distribution system to make the park self-sustainable. and sustainable. In addition, several ecological, cultural and sports workshops are held within the areas. In this space it was discovered that it had a fertile land to cultivate radish, chard, cabbage, lettuce, parsley, parsley, corn, beans, arugula, basil, chayote, broccoli, chili, potato, chives, sunflower, etc., are some of the more than eighty species of edible consumption, medicinal plants, etc. In the garden you can find crops of various vegetables such as chard, lettuce, lavender, pumpkin, pumpkin, arugula, onion, coriander, parsley, pineapple, beans, celery, cabbage, chayote, tomato, green tomato, and African cucumber, among others.

The main objective of this project is to continue promoting social cohesion and working for better health through gardens and urban agriculture. Among other activities that are carried out to further this objective are cultural and artistic activities, courses, workshops, seminars, celebrations of civic and social days, such as Independence Day, and Children's Day, sports activities, holding the tianguis or markets open on Sundays for the sale of their production, health activities, vaccination, etc. The Zapopan government has an agroecological network of parks in strategic areas of the municipality. An agroecological park is the perfect project for public space, a component of environmental sustainability where people from the community can produce their own food.

CONCLUSION

The impact of economic globalization on sustainable organizations has shortened the cycles of change to keep the pace of environmental sustainability through the design and implementation of more holistic organizational and business models, as well as strategic management systems and policies aimed to improve the use of organizational and technological knowledge, processes, and practices. However, while the organizational change is not always taking place at the level of the economic structure, the organizational work activities and practices are already changing towards more related with the development, qualitative growth and efficiency of the economic system and the global economy.

Organizations facing sustainability challenges need to adopt an integral and holistic approach and to develop the talent by recruiting, educating, and training human resources centered on sustainability value based as the source of a sustainable competitive advantage which can leverage sustainability performance targets.

The development of a sustainable organizational vision and mission is facilitated by the incorporation of a sustainable agenda in core values. Shaping the organizational sustainability aligned on the vision and values of the organization must assess the impact the stakeholders including local communities and consider issues of cultural diversity, intercultural dialogue and organizational climate and environment to

support improved performance. Sustainable organizational development dynamics implement innovation knowledge and processes in human resource management and development practices aimed to develop infrastructure and increasing knowledge and innovativeness.

The individual and organizational abilities to the need to adapt to environmental changes is the task of developing organizational leadership and managerial effectiveness through adaptive processes in continuous developing stages gathering information, diagnosing, designing interventions, and implementing practices. Organizational leadership must be aligned with the sustainability initiatives besides that playing a modeling role and getting contacted with the external environmental communities and volunteering with nonprofit organizations for organizational and supervisory support. Organizational management is responsible motivation and communication to set what is expected of individuals on the workforce and how to improve the functions of the organization that encompass the community and society. Communication is an intrinsic organizational competency an ability to retain the workforce.

Organizational sustainable development supports and concentrate more on regenerative and collaborative working processes to develop embedded organizational roles, practices, and tasks in the organization. To create collaborative and regenerative work enables sustainable individual and organizational development to be characterized in the post-bureaucratic working practices and their influences on the organizational structures, behaviors, and technological processes, during a long period of time.

Implementing sustainable organizational practices must consider the current economic, social, and environmental needs as well as the future needs of all the stakeholders involved in sustainability to develop the organizational strategy able to transform and make it happen.

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Chapter 3

Sustainable Fourth Industrial Revolution

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ABSTRACT

The sustainable revolution constitutes a multiscalar process characterized by gradual interconnection and digitization in economic globalization. This work confronts the discourses derived from this socio-economic process with the biophysical limits of the planet through the analysis of the material requirements of the basic infrastructure necessary for the technologies of the Fourth Industrial Revolution. Through the study of the discourses and the current situation of natural resources, 13 metals have been identified whose availability in the next 30 years constitutes the limiting factors for the effective deployment of the technologies of this process. In this situation, the theoretical foundations of future potential are established where techno-optimistic and degrowth discourses coexist through uneven development, making sustainability a characteristic based on exclusivity.

INTRODUCTION

It is an easily recognizable reality that humanity is undergoing a series of socioeconomic changes derived from the vertiginous technological advance in recent decades. This change has finally been conceptualized as the Fourth Industrial Revolution (from now on 4RI). The new generations, who have not known a world without the internet, assume its penetration in more and more areas of society. The speed of transport and communications has reaffirmed that maxim Henri Lefebvre (1973) promulgated “the annihilation of space by time.” Artificial Intelligence (AI), the Internet of Things (IoT), renewable energies, or increasingly efficient and adaptable smart devices, among others, are the characteristic signs of the societies of the most economical economies. Developed from the globe. The increases in efficiency derived from technological advances are in turn revolutionizing production processes which are beginning to be distinguished by “mass customization” (Schwab, 2016). With the 4RI ready to propel humanity into the digitized future, it remains to analyze the context in which it takes place.

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The 21st century brings with it a series of material conditions typical of a finite planet. Global warming, the shortage of certain materials, or the depletion of fossil fuels will set the rates of socioeconomic development in the coming decades. Continued population growth will require an increasing volume of food and raw materials that compromise global supply capacity.

Refusing to see the two faces of the development process introduced here would constitute an example of human irrationality. This would be an unrealistic assumption within the prevailing economic perspective in the incipient digital capitalism that already governs almost all aspects of human life. Therefore, in the present work, both dimensions are addressed to understand and determine, as far as possible, the relationship between the 4RI and the resources of the planet in which it is developed.

Following the preceding, this work aims to determine the critical points of the general infrastructure of the 4RI that can help alleviate the problematic sustainability. For this, the following specific objectives have been determined:

- Analyze the geological resource requirements of an energy matrix and a mobility system based on renewable energies and the generalization of the internet in new areas of society through smart devices (Smartphones, tablets, and computers).
- Study the availability of these resources in the form of reserves on a global scale.
- Analyze the long-term effects that consumption dynamics derived from the efficiency increases implemented by the 4RI may have on material reserves.
- Approximate how the discourses about the sustainability of the 4RI are inserted within a model that includes the material conditions studied in the previous sections.

BACKGROUND

Sustainable Revolution

In 2016, Klaus Schwab, president of the World Economic Forum, conceptualized the 4RI, naming the present era of technological interconnection. His speech “Optimistic pragmatic” presents the generalization of the internet, sensors, and AI as responsible for increasing efficiencies in production processes of which the consumer will be the greatest beneficiary (Schwab, 2016). The 4RI constitutes a revolution not only in the field of industry, but its influence encompasses a vast majority of social, business, economic and technological aspects (Li et al., 2017).

As Jeremy Rifkin (2019) points out, throughout history, all major economic transformations have had three factors to drive this dynamic: a means of communication, an energy source, and a transport mechanism. These factors make up an infrastructure that makes industrial revolutions possible. Thus, in the 18th century, during the First Industrial Revolution, the telegraph, the coal-fired steam engine, and the railroad network propelled other industries such as textiles to production levels unknown a century earlier. In the 20th century, electricity, oil, and the internal combustion engine started the Second Industrial Revolution. With the emergence of information technology (ICT), automated production, and computers since the 1960s, the Third Industrial Revolution began (Xu et al., 2018) (from now on 3RI). Since the beginning of the 21st century, renewable energies, AI, IoT, and electric and autonomous mobility have shaped the 4RI scenario (Schwab, 2016).

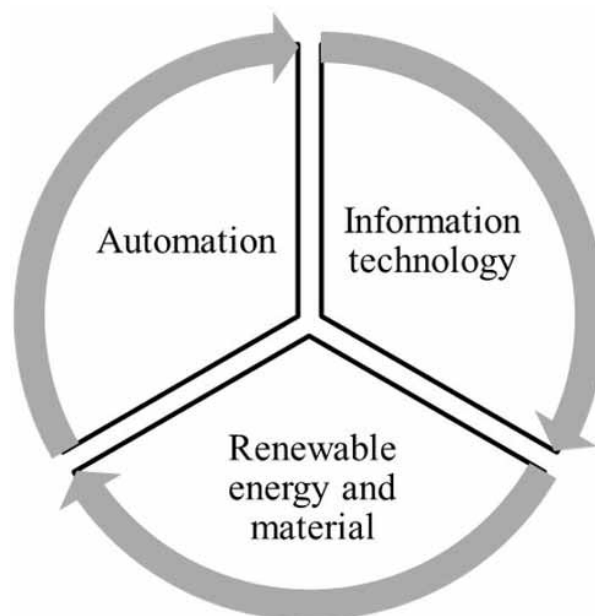
Although Rifkin, who disagrees with Schwab, maintains that humanity is still in the 3RI, the truth is that the dynamics perceived and projected by both authors bear a close similarity. However, Schwab (2016) differentiates between the 3RI and the 4RI due to the speed, depth, and impact on the latter systems in which the technologies of the physical, digital and biological world are merged. In sum, the discrepancies between the two authors are reduced to a mere conceptual question, which is why in this work, their contributions will be dealt with within the same normative framework of the 4RI.

Schwab (2016) identifies the following 4RI technology drivers:

- Physical drivers: These are perceived by society earlier. These are electric vehicles and, at times, autonomous, including the generalization of 3D printing, advanced robotics, and the synthesis of new materials with specific properties such as higher recycling rates.
- Digital drivers: The connection between objects through the IoT is playing a role of special relevance in the fields of logistics networks, industrial monitoring, public security, or environmental protection (Li et al., 2017). This, together with AI and Big Data, constitutes a disruptor in the production and consumption system, reorganizing Industry 4.0 towards an economy based on innovation in which mass production transits towards personalized mass production (Morrar et al. ., 2017). On the other hand, global digital platforms connected to the physical world make it easier for the marginal cost of producing a good or service to drop to zero (Schwab, 2016).
- Biological drivers: Understands gene editing, bioprinting, and ad hoc medical treatments with the ethical issues involved.

These drivers are supported by an infrastructure composed of, as Rifkin (2019) points out, an energy source, a means of communication, and a means of transport. Therefore, the 4RI is based on the infrastructure outlined in Figure 1.

Figure 1. The basic infrastructure of the 4RI



The generalization of the internet to new areas of life is also integrated into an electric and sometimes autonomous mobility, all supported by a renewable energy matrix and the synthesis of new materials that, theoretically, allow the 4RI to be a sustainable process.

Theories on the Sustainability of the Sustainable Revolution

The 4RI and its technological drivers have been studied in numerous works that have defined the 4.0 dynamics with a high degree of clarity from different perspectives. In 2019, the news regarding the 4RI in the Anglo-Saxon and Hispanic spheres had increased by 371% and 397%, respectively, since Claus Schwab officially presented the term in 2016 at the World Economic Forum.

The sustainability of this process is an increasingly recurring theme since 2012 in studies (Kamble et al., 2018). As observed, the sustainability of a process such as the 4RI depends largely on the degree of optimism it is conceptualized and the impacts on which the discourse in question is sustained. In any case, no special attention has been paid to the material issue of the 4RI, placing it as a specified argument in the background.

From a general perspective, based on the analysis reflected in Annex I, the most optimistic speeches focus on studying the potential opportunities offered by the 4RI based on the statistical analysis of the growth dynamics of the technologies on which it is developed. (IoT, AI, genetic manipulation, etc.). However, when it comes to identifying the impacts of the 4RI in society, economy, environment, and security, the rhetoric is blurred, and a lack of specificity is noticed. On the other hand, the less optimistic discourses tend to be based on the specific study of the impacts on the environment, natural resources, society, gender, and employment and argue the need for stationary economic dynamics or, in some cases, degrowth, in line with the biophysical limits of the planet.

According to article 47 of chapter 1.2 of the Brundtland Report, “sustainable development is a development that meets current needs without jeopardizing the ability of future generations to meet their own needs” (WCED, 1987). The sustainability of the 4RI is currently a controversial issue due largely to the material requirements of its infrastructure.

According to Schwab (2016), the IoT and Open Data would democratize information and allow, on the one hand, to raise awareness in society and hold less environmentally sustainable companies responsible, and on the other to better understand material flows to increase rates. Recycling within a dynamic that increasingly resembles the circular economy. Interconnectedness and innovative business models are vital to achieving the future of abundance outlined by Schwab.

Rifkin (2019) maintains the previous precepts but mainly affects constructing the “green infrastructure” that obtains energy from renewable sources for energy and transport systems. The IoT would allow installing a bidirectional smart grid (Smart Grid) in which consumers would also be producers and on which electric mobility would also depend. In turn, improvements in energy efficiency in buildings and production processes through the IoT would reduce energy surcharges. This, together with collaborative business models, could, in theory, allow humanity to approach a marginal cost economy close to zero (Rifkin, 2014).

Economies with a marginal cost close to zero and circular economies find their greatest obstacle at the level of material resources. The synthesis of new materials with high recycling rates could facilitate the decoupling between economic growth and the need for resources (Schwab, 2016), giving rise to a dynamic of economic dematerialization in which circular production processes would make depletion a problem the past. Some authors point to this decoupling as the main requirement of sustainable devel-

opment (Hilty et al., 2011). However, Carpintero (2003) warns that a distinction must be made between relative and absolute dematerialization of the economy. Mineral reserves, which in some cases pose a problem due to their scarcity (Soroa, 2018b), constitute one of the weak points of the 4RI sustainability discourse, the impact of which aspires to be global. Other more pessimistic authors point to the impossibility of supplanting fossil fuels with renewable energies and argue a potential collapse of the thermo-industrial civilization (Taibo, 2016).

Faced with the material question raised in this section, many economic models have been proposed to implement technology within the planet's biophysical limits. Such is the case of the steady-state economy (Daly, 2013), Thermo economic (Dale et al., 2012), or measures aimed at sustainable development not through material decoupling but degrowth (Tejero and Santiago, 2019). In short, within the branch of sustainability of the 4RI, two currents are drawn:

On the one hand, techno-optimistic currents deposit in the present and future technologies the hope of overcoming the challenges imposed by the biophysical limits of the planet. They seek to respond to the sustainability problem on the supply side by increasing efficiency and consumption rates in production processes and introducing on-demand economy, collaborative economy, and circular economy business models.

On the other hand, the most critical currents take these biophysical limits into account in the development model. Within these streams, many models have a common point the decrease or stationary growth and sustainability through a reduction in consumption and its efficiency. In other words, they seek to tackle sustainability by also acting on the demand side. However, they do not deny efficiency gains in production processes or business models following the collaborative economy and circular economy.

After an extensive bibliographic review, it is observed that, although there are models of material reserves, of material requirements by certain infrastructures and the characteristics of the 4RI, there is no study that directly correlates the data from the resource estimates with the material requirements of the basic infrastructure of the 4RI at a global level. An empirical analysis in this sense could provide a clear answer regarding the sustainability of the 4RI and determine the position of the discourses about it. Without an empirical basis, the viability of the 4RI as a global industrial revolution is displaced to the field of theoretical discourse and even opinion. A first holistic approach is necessary, capable of empirically determining the material viability of the 4RI infrastructure. The questions proposed to be answered in this work are: Is 4RI materially sustainable in the long term and globally? Once this question has been answered from the empirical study, it will be possible to return to the field of discourse to answer the following question: How do the opposing discourses mesh in a potential future where the 4RI is established? In this way, the study initially seeks to withdraw from the theoretical-philosophical field to immerse itself in scientific analysis. The estimates of mineral consumption by the 4RI infrastructures are a solid argument with which to return to this theoretical field to originate a new discourse by way of synthesis due to the dialectical opposition between the various intellectual positions. As it is an ambitious task, the present work supposes a first general approach that must be completed by later studies that in turn share the holistic vision presented here.

METHODS AND MATERIAL

To carry out the present work, an extensive bibliographic review has been carried out from which the technological drivers and the basic infrastructure necessary for the 4RI have been determined. The infor-

mation used, of a qualitative and quantitative nature, acts as a support for the arguments and conclusions presented here from an inductive perspective.

Taking as reference estimates about resource reserves and models of material requirements by smart devices and energy matrices and 100% renewable mobility systems, the degree of feasibility with which the 4RI can be applied on a global scale will be determined sustainably.

Next, from a theoretical point of view and considering the historical data collected by various authors, the potential rebound and “rematerialization” effects derived from the potential increases in 4RI efficiency will be analyzed.

Finally, with the conclusions obtained from the research, the dialectical opposition established between the different discourses about the sustainability of the 4RI will be analyzed to establish a theory that allows meshing both positions projected in the future in a context of material scarcity environmental degradation. The possible coexistence of the speeches simultaneously and space will be determined, pivoting on the question of material sustainability.

CONTEXT OF THE SUSTAINABLE REVOLUTION

A notion about the availability of natural resources can be made through estimates of resources and reserves. Resources comprise the total amount of minerals present in the earth’s crust. This is an estimate with a certain degree of speculation since its exact amount cannot be determined. Reserves are that fraction of the resource known exactly. They are divided into available reserves (those whose exploitation is economically profitable) and unavailable (Calvo et al., 2017). The latter may be available in the future, depending on market conditions and available technology.

The concept of “depletion” does not contemplate the total consumption of the natural resource in question, but rather a decrease in the Rate of Energy Return (EROEI) that makes the extraction of the resource economically or technologically impossible. The EROEI is the quotient between the energy provided by an energy source and the energy invested in obtaining it. A low EROEI translates into low economic profitability that discourages extraction. Therefore, energy constitutes one of the major determinants of the availability of mineral resources (Bardi, 2013). Currently, mining costs increase gradually as extraction costs increase (Bardi et al., 2016), which compromises the availability of some strategic mineral resources. This dynamic graphically establishes a theoretical extraction peak (Hubbert peak) on the resources from which the economic profitability for the extraction of said resource decreases. The estimation of the year in which the extraction peak is reached is of vital importance for the production processes in which these geological resources are used. Thus, before the end of the first half of the 21st century, it is estimated that the extraction peaks of bismuth, indium, lithium, manganese, and nickel will be reached, among others whose extraction peaks have already been surpassed, such as gold or antimony (Calvo et al., 2017). However, it should not be forgotten that, although the studies on the availability of resources enjoy the greatest possible empiricism, they are estimates and therefore show differences between authors based on the calculation methodology and its error. In turn, some strategic minerals such as copper may see their extraction peak altered due to the intense use derived from future scenarios where renewable energies predominate (Harmsen et al., 2013).

Regarding fossil fuels, even though Norouzi et al. (2020), taking into account geopolitical factors, establish the most probable peak of oil beyond 2040, other authors draw a less optimistic picture placing the “peak oil” in 2028 (with a standard deviation of 8.5 years) and the peak of natural gas in the 2030s

(cited in García-Olivares and Ballabrera-Poy, 2015). In turn, some assume that they have surpassed the peak of conventional oil extraction around 2016 (Leggett and Ball, 2012). In this situation, the depletion of oil and natural gas in the absence of policies aimed at promoting renewable energies could pivot the economy towards coal as the main source of energy (Zeppini et al., 2020), whose peak extraction is projected around 2049 (with a considerable standard deviation of 25.9 years) (Leggett and Ball, 2012). This scenario would have disastrous consequences for the environment.

In the case of a complete transition towards renewable energy by 2038, humanity will have to face a potential crisis towards 2094 derived from the shortage of minerals such as copper used in said transition (García-Olivares and Ballabrera-Poy, 2015). Added to the scarcity of mineral resources is the demographic increase of the world population, compromising the availability of food from crops fertilized with phosphates, whose peak extraction is around 2030 (Cordell et al., 2009).

In short, in the coming decades, society will have to face the incipient scarcity of mineral resources by increasing efficiency rates and recycling rates so that production processes tend towards a circular dynamic (Bardi, 2013). However, it is expected that in the next 100 years, the dynamics of continuous growth prevailing today will come to an end due to peak oil and fossil fuels, the difficult replacement of copper as a strategic resource in the electrification process, and the demographic pressure on agricultural production and freshwater reserves (García-Olivares and Ballabrera-Poy, 2015). All of this paints a panorama of incipient material scarcity in which the 4RI speeches are developed. In this context, the analysis of the availability of materials necessary to make up the infrastructure of the 4RI acquires importance when determining the positions of the existing discourses on it and its sustainability.

MATERIAL IN THE INFRASTRUCTURE SUSTAINABLE REVOLUTION

To carry out the analysis of the material requirements of the 4RI infrastructure, the energy matrix and sustainable mobility have been grouped in the same section because the former is highly energy-dependent on the latter. The production of electrical energy from renewable sources is distributed to all areas of society and especially to the mobility sector due to its significant energy consumption. Although smart devices and the internet have electricity consumption within the matrix, this is not comparable to potential mobility consumption. These smart devices will be studied in their respective subsection.

100% Renewable Energy Matrix and Mobility

To achieve the sustainability of the 4RI, it should be built on an energy matrix fed with renewable energies to avoid dependence on the extraction of fossil fuels, which could experience a dynamic of depletion. Implementing a renewable energy matrix at a global level has been the subject of numerous studies, opening a debate between the most optimal renewable energy mix and its material viability. In turn, there are differences in the projections of future global electricity consumption and the capacity of the renewable matrix to supply said demand.

Regarding the consumption of electricity by the population, the model created by Jacobson and Delucchi (2009), based on the projections of the U.S. Energy Information Administration, establishes that by maintaining the energy system based on fossil fuels, the annual electricity demand of 12.5 TW in 2010 would increase to 16.9 TW in 2030. However, due to the efficiencies derived from the electrification of the system energy demand, the energy demand of 2030 should be satisfied with the installation of 11.5

TW from renewable energies distributed in solar, wind, and hydroelectric energy. The characteristic intermittency of these energy sources has been the subject of strong criticism (Trainer, 2012) that should be supplemented with geothermal and maritime energy contributions. Overall, an electrified system whose installed power does not exceed 12 TW would have an Energy Return Rate (EROEI) of 18, 25% less than the EROEI of 2016, although it would be enough to maintain an industrialized economy (García-Olivares, 2016). On the other hand, the demand projected by the World Energy Outlook report stands at 12.48 TW in 2040 (IEA, 2018)

Regarding sustainable mobility, taking as a reference the transport system in force in 2014, a complete reconversion of this based on renewable energies would require 18% less energy due to the efficiencies derived from electrification (García-Olivares et al., 2018). While in an internal combustion vehicle, only between 17% and 20% of the energy coming from the fuel is used in its movement, in the electric vehicle, this index rises between 75% and 86% (Jacobson and Delucchi, 2009). Even so, the complete replacement of the combustion automobile fleet (around 1,850 million vehicles, including cars, vans, trucks, and motorcycles) with a similar electric one would require 33% of the known lithium reserves, 48% of nickel, and 59% of platinum (Soroa, 2018a). On the other hand, the energy consumption of maritime and air transport would increase by 163% and 149%, respectively, due to the high cost of producing fuels from electricity for said transport (García-Olivares et al., 2018) which suggests a rethinking of the mobility model. A more realistic scenario estimates that by 2050 the fleet of 1,500 million light vehicles (whose weight does not exceed 3,500kg) will be made up of internal combustion vehicles (21%), plug-in hybrid vehicles (45%), and 100% electric vehicles (33%) (Valero et al., 2018).

Faced with the prospects for the horizon of approximately 12.5 TW electric in 2040, there is a great variety of energy models based on renewable energies. García-Olivares et al. (2012) propose to install 12.5 TW from onshore and offshore wind energy (51%), concentrated solar thermal (CSP) (28%), parabolic solar thermal (12%), and hydroelectric (9%). Photovoltaic solar energy is out of their study due to its strong dependence on scarce materials. However, solar photovoltaics aims to be one of the fastest-growing renewable technologies in the coming decades (IEA, 2018). In turn, the implementation of maritime energy technologies is analyzed within offshore wind.

The model proposed by Valero et al. (2018) assumes a linear increase in renewable technologies, forming a mix of installed power in 2050 made up of wind energy (2.5 TW), photovoltaic solar (3.5 TW), and thermal solar (0.9 TW). The total 6.9 TW would complement hydroelectric, maritime, and geothermal energy, even without reaching the 12.5 TW projected for 2040. However, the study by Valero et al. (2018) remains optimistic regarding the International Energy Agency (2018) projections in which, although the set of renewables slightly surpass fossil fuels in 2040, the former do not exceed the former 6.73 TW of installed power globally. In turn, the model keeps the demand for resources from other sectors constant, a very optimistic condition considering that by 2050 the world population will have increased by approximately 1.9 billion inhabitants.

It can be concluded that the 4RI energy matrix is moving towards solar (photovoltaic and thermal), wind, and hydroelectric energy with a high degree of probability. To carry out the analysis of the materials required by these technologies, as well as by transport vehicles, the main study carried out by Valero et al. (2018) as it is the most synthetic and recent and therefore capable of determining with greater precision the current material requirements of these technologies. In turn, it is the one that best adapts to the predictions made by the International Energy Agency (IEA). Therefore, photovoltaic solar energy, solar thermal energy, wind energy, and electrical transport will be considered.

Although hydraulic energy constitutes one of the fundamental pillars of renewable energies both in the production and storage of energy, it is currently established in the electricity mix. An increase as marked as that currently experienced by the solar and wind industry is not expected. (IEA, 2018) so, for intensive consumption of raw materials, it is not of interest for the present analysis. Biofuels are excluded from all the models studied beyond a local and discrete use due to the ecological footprint they produce, the greenhouse gas emissions they generate (De Castro et al., 2014), and the potential competition between the production of biofuels and food (García-Olivares, 2016). On the other hand, even though geothermal energy does not have a notable degree of relevance, it has sufficient potential to change the composition of the energy mix with very positive consequences for the material sustainability of the 4RI once the technology facilitates its exploitation and generalization.

Valero et al. (2018) classify the critical elements necessary to promote renewable technologies and electric mobility when comparing reserves, estimated production, and their requirements between 2016 and 2050. In this way, they identify those whose accumulated demand exceeds reserves or resources in that period. These data will be taken into account in the next section when comparing them with the material requirements of ICT.

García-Olivares (2016) warns that installed power should not exceed 12 TW if the supply of raw materials, including copper, is not at risk. It is estimated that by 2050 the copper recycling rate should increase from 43% to 70% due to intensive use (Harmsen et al., 2013). Approximately 60% of the estimated reserves should be used for the production and transport of electricity (40%) and electric mobility (20%), which would be equivalent to the total copper production of 20 years (García-Olivares et al., 2012) so, although there are sufficient reserves for this, consumption exceeds production in the 2016-2050 period (Valero et al., 2018). In turn, the potential effects on the demand of the rest of the economic sectors and the resource price derived from an increase in consumption intensity in the coming decades must be considered.

Tellurium is at high risk due to the requirements of photovoltaic solar energy. In an optimistic scenario in which in 2040, 25% of the electricity produced comes from photovoltaic installations, the accumulated consumption of tellurium at that time would exceed the known reserves by 2.5 times (Zuser and Rechberger, 2011)

The highest consumption of critical elements comes from the electric transport sector with an intense consumption of rare elements such as neodymium and dysprosium, which could experience an increase in demand of 700% and 2,600%, respectively (cited in Valero et al., 2018). Neodymium is also one of the limiting elements of the wind industry as it is used to build magnets (Roelich et al., 2014).

Depending on the type of batteries built for electric cars, some elements may see their availability compromised. Thus, in using nickel batteries (NaNiCl_2) for a car fleet of 1094 million light vehicles (electrification of all vehicles in 2011), it would be necessary to have 95% of the estimated reserves. Using lithium batteries as an alternative would mean having to have 1.9 times the current reserves of this resource. Faced with this situation, zinc batteries seem to be a promising alternative, requiring only 13.4% of the estimated reserves for electric mobility (García-Olivares et al., 2012).

As a whole, the energy matrix based on renewable energies, as well as electric mobility, are compromised in terms of the minerals necessary for its construction, not only in a 100% renewable scenario, but even taking as a reference the growth projections of said technologies carried out by international organizations.

Information and Communication Technologies (ICT)

Within ICTs are grouped all devices capable of receiving, storing, processing, and transmitting digital information through the internet. However, this section focuses on the most popular devices through which the internet is accessed (smartphones, tablets, and computers) and data storage and processing centers.

The diffusion of the internet is one of the characteristic aspects of the 4RI. If in 2000 only 6.5% of the world's population had access to the internet, in 2018, this percentage rose to 50.7% (ITU, 2019), with the forecast of reaching 66% in 2023 (Cisco, 2020). However, about half of the world's population currently does not have access to the internet gives an idea of the uneven diffusion of technologies that enable 4RI. Access to the network is done through smart devices, especially smartphones, whose sales between 2013 and 2016 increased more than ten times (Han and Cho, 2016), and mobile broadband subscriptions already in 2017 exceeded 4,000 million (Soroa, 2018a). These devices have been marketed even in those less developed territories with a series of very positive consequences for the local economy due to improved telecommunications (Aker and Mbiti, 2010). However, the unequal quality of the internet connection cannot be ignored, a factor of inequality that does not diminish over the years (Hilbert, 2016). The number of installed computers doubling every three years from 1980 to 2008 (Hilty et al., 2011) has reduced their number of sales compared to smartphones, which are increasingly more capable, cheaper, and portable (Morley et al., 2018). Tablets enjoyed great popularity when the first iPad was launched on the market in 2010. However, the sector has experienced a gradual reduction in sales since 2015 (Rivero, 2016), thus accentuating the dominance of the smartphone over the tablet. And the computer in terms of the number of devices sold.

The multiplicity of components necessary for the manufacture of smart devices and the maintenance of the infrastructures that support the internet greatly diversifies the material analysis proposed in this work. In turn, the dizzying pace of innovation observed in the last 30 years makes it impossible to establish a static regulatory framework to understand the dynamics of this industry. However, in this section, we try to have the most up-to-date data on the material issues of ICT. This field lacks analysis, probably due to the difficulty this entails and the high probability of being out of date by less than ten years.

The spread of the internet through smart devices is a constant of the 21st century associated with the incipient 4RI. Not surprisingly, Klaus Schwab (2016: 12) characterizes it by

“A more ubiquitous and mobile internet.” Data traffic on the internet increases every day. If in 2001 the exabyte (equivalent to 10¹⁸ bytes) was exceeded, in 2018, the flow was already measured in zettabytes (10²¹ bytes) (Soroa, 2018a). This flow is transmitted from data centers (where servers are located) to smart devices through an extensive global fiber-optic network and vice versa. This infrastructure requires considerable amounts not only of materials but also of energy.

In recent years, the electricity consumption by ICTs has tended to move from smart devices to data centers, the latter being responsible for 90% of energy consumption. This is due to the notable increases in energy efficiency by smart devices and the increase in the flow of data and its storage on servers. In 2012, ICTs accounted for 5% of global electricity consumption (cited in Morley et al., 2018). However, the increase in electricity demand at an annual rate of 7% predicts that by 2030 ICT will account for 21% of global consumption (Morley et al., 2018). Global digitization could compromise the energy matrix, and the sustainable mobility model studied in the previous section depends on energy consumption and materials.

The consumption of materials in the manufacture of smart devices reveals a significant ecological footprint on the sector. According to Carpintero (2003), only 0.1% of all the materials used in the pro-

duction process are integrated into these devices. On the other hand, the consumption of ICT materials is reduced to those necessary in their construction and those required to recycle and recover materials once the devices are discarded. Although the amount of matter needed to transmit a bit of information has decreased very markedly, this process always requires a material base (Wäger et al., 2015). Even though the average size of the devices has been reduced in recent decades, the increase in production has meant in practice a greater requirement of materials whose volume has multiplied by 15.4 since the 1990s (Paiano et al., 2013). This describes a rebound effect dynamic favored by increases in efficiency that will be analyzed in the next section.

Accurately quantifying the metals used in all ICTs is a huge task due to the issues mentioned above. Therefore, the literature related to this field of study is, in general, predominantly statistical. Thus, Böni et al. (2015) determine through a sample of devices (desktop computers, laptops, tablets, and mobile phones) the most frequent metals and semimetals within ICT and the annual demand for these raw materials by this industry reflected in Annex III. The case of the annual consumption of copper, silver, indium, tin, and cobalt is noteworthy, whose accumulated estimated reserves would be exceeded by the accumulated demand for renewable energies and sustainable mobility in the period 2016-2030 (Valero et al., 2018) and However, they are the object of intense exploitation by the ICT sector, attending only to the production phase.

The comparison between energy and transport infrastructure and ICTs should be taken with caution, given the variability of the estimates. The literature has shown greater ease in making predictions about the material and energy requirements of the renewable matrix and sustainable mobility. Predictions of electricity demands with a high degree of reliability are common, and the rate of innovation in renewable technologies is considerably slower than in ICT, in such a way that the accumulated demand that these infrastructures can suppose can be estimated for 30 years. However, in the case of ICT, the dizzying rate of innovation in this field mentioned above prevents making predictions beyond 2025 in the consumption of materials and devices (not in the consumption of electricity). The smart device market is more volatile than renewable energy or electric transportation, varying from year to year based on technological advances and planned and perceived obsolescence. However, although the cumulative demand for smart devices cannot currently be estimated until 2050, the analysis carried out in this section allows us to establish a global approximation of the object of study in this section. Thus, taking the predictions and models studied in the previous sections, the elements in greatest demand can be identified by the three pillars that make up the 4RI infrastructure (renewable energy, sustainable mobility, and information and communication technologies). Annex II lists the main elements present in the infrastructure of the 4RI, some of which constitute limiting factors of this from the perspective of material availability.

It is observed that some essential elements for ICT that coincide with those required by the energy matrix and the transport system are at risk. These are limiting factors to the world economy and the 4RI. Following the dynamics of electrification and digitization of economies globally promulgated by the most optimistic advocates of the 4RI, by 2050, the cumulative demand for silver, cadmium, cobalt, copper, indium, tin, and zinc will exceed anticipated supply capacity. This will compromise the viability of the energy, transport, and communication model, that is, the infrastructure of the 4RI, which may truncate the incipient socioeconomic transformation of humanity. It would not be an exaggeration that in the coming years, the effects of the scarcity of elements such as nickel, silver, selenium, niobium, or zinc begin to be visible, the extraction peaks of which, if they have not already been exceeded, will do so in the next decades. However, the extraction peaks have been calculated without a forecast of intensive use

that would result from massive electrification in the next 30 years, as determined in the models studied. Therefore, these predictions could be anticipated as a result of the 4RI.

So far, the material requirements of the general infrastructure of the 4RI have been analyzed without paying attention to external, social, cultural, or geopolitical factors that, however, may condition the development of this industrial revolution. Next, without forgetting the static model built in the previous subsections, the most important economic dynamics will be analyzed from the theoretical level capable of conditioning the consumption of materials at a global level. At the same time, the dynamics of economic dematerialization, the backbone of the techno-optimistic discourse on the sustainability of the 4RI, will be studied.

The Rebound Effect, “Transmaterialization,” and Dematerialization

The rebound effect or “Jevons paradox” shows how the improvements in efficiency derived from technological development do not mean savings in the consumption of energy and materials on a global scale but rather translate into greater consumption of the latter (Carpintero, 2003). The decrease in the cost of production of an additional unit (and therefore its price in the market) thanks to technological efficiency, favors an increase in demand (Greening et al., 2000) which ends up responding with an increase in production and, therefore, in the consumption of materials and energy in absolute terms. In this case, using a fraction of the energy savings in the same production process would describe a direct rebound effect dynamic (cited in Galvin, 2015). Berkhout et al. (2000) make it clear. If efficiency improvements allow a car to travel a greater distance on the same fuel as before, fuel consumption per kilometer drops, and the cost of travel with it. Still, the consequent drop in fuel prices will spur more demand. In this way, a fraction of energy savings is lost on a global scale. Thus, after an increase in efficiency, the rebound effects can acquire values lower than 100% (which would suppose a real saving of energy and materials concerning the previous situation) or higher than 100% (which would imply a net increase of energy and material inputs) (Chakravarty, 2013). This depends on the policies associated with these essentially economic phenomena. On the other hand, an indirect rebound effect can occur when energy savings derived from efficiency gains are used to produce other goods or services, increasing energy consumption and materials from other production processes (cited in Galvin, 2015).

Rebound effects may be due to increases in efficiency and changes in the social structure. These can be derived from the consumption habits adopted by the demanding agents and those promoted by the producing agents. This can reduce or increase the global consumption of energy and raw materials (Berkhout et al., 2000). Structural dynamics play an essential role in the rebound effect in the field of ICT, whose efficiency increases in the field of energy consumption, component size, material consumption, and, consequently, reduction in the price of devices, have led to an increase in demand in turn due to the usefulness of such devices. The rebound effects observed in ICT in recent decades, between 120% and 130%, largely respond to changes in consumption patterns and social structure (Galvin, 2015). These dynamics are accompanied by perceived obsolescence (through marketing and consumer culture) and programmed obsolescence (Soroa, 2018a). It is inferred in demand for said devices and, therefore, in the consumption of materials and energy for their production.

An alternative to alleviate the pressure on natural resources and reduce rebound effects has been substituting natural materials for new artificial materials (Schwab, 2016). The appearance of new synthetic materials (plastics and fibers) capable of substituting natural raw materials ended up acquiring a complementary character, which again evidenced the rebound effect. In turn, the requirements for the

production of these synthetic materials sometimes exceed those based on natural raw materials (Carpintero, 2003). Therefore, “transmaterialization” does not solve the material problem. From a historical perspective, Hilty et al. (2011) warn that increases in efficiency will not reach a horizon of sustainability if adequate strategies do not accompany them.

The potential rebound effects derived from the 4RI compromise the discourse of decoupling by the economy from its material base, thus hindering the emergence of the near-zero marginal cost society defended by Rifkin (2014). In this sense, the dematerialization of economies is still an open debate.

Since the 1970s, many works have been published endorsing the so-called “Environmental Kuznets Curve” (Carpintero, 2003). This inverted “U” -shaped curve assumes that societies experience an initial process characterized by the intense consumption of materials and energy, after which this and its derived environmental impacts are reduced as a result of increases in efficiency, achieving sustainable development, and reducing dependence on natural resources (Amate, 2014). A theory already displaced from the empirical plane (Klasman, 2020) that, however, sets the precedent of the studies that support dematerialization.

First, a distinction must be made between absolute or strong dematerialization and relative or weak dematerialization. The absolute dematerialization of an economy would mean a reduction in the consumption of materials used. In contrast, the relative or weak dematerialization warns of a decrease in the consumption of materials by an economy per unit of GDP (Carpintero, 2003). This last form of dematerialization has been used in numerous studies to show the decoupling between economic growth and resource consumption. However, it carries an intrinsic contradiction. Amate (2014) exemplifies it as follows:

Country A grows at a rate of 1% per year and consumes resources at 2% in the same period. At the same time, another country, B, has a growth and resource consumption rate of 6% and 5%, respectively. In this situation, considering the consumption of resources concerning GDP, country B experiences a dematerialization following the Kuznets curve in contrast to country A. It is a relative dematerialization since, in absolute values, the annual consumption of B is greater than that of A.

This type of weak dematerialization is the one that humanity experiences at a global level, given that the world GDP has multiplied by 25.7 and the consumption of resources has done so by 9.6 in the period between 1900 and 2009 (cited in Amate, 2014). These data must be taken with caution and cannot be attributed solely to increased efficiency by the more developed economies. In the latter, there has been a strong dematerialization process (especially in the United Kingdom and Germany) in recent decades. However, strong or weak dematerialization processes will appear in rich countries as long as GDP is taken as a reference, while countries with lower per capita income will describe a “rematerialization” dynamic (Amate, 2014). Developed countries are in the final phase of the production process following the “Notary’s Rule” (Carpintero, 2003), importing raw materials and manufactured products derived from industrial relocation, which implies an externalization of environmental costs to less developed countries (Amate, 2014). An intrinsic dynamic not only in economic but also social relations (Lessenich, 2019) in which environmental impacts become a difficult factor to quantify from an economic perspective (Bartelmus, 2003). This “ecological backpack” is not considered in dematerialization studies despite the consumption of materials.

On the other hand, the most developed countries do not require the same material inputs as those in development, which must invest many materials in constructing existing infrastructures in the former (Amate, 2014). Studying the dematerialization of a single country immersed in global economic dynamics greatly reduces the spectrum of factors that influence the object of study and creates fictional narratives.

In any case, beyond the relative and intermittent dematerializations given by sector in developed countries, the global dynamics describes a continuous increase in the consumption of materials in absolute terms.

CONCLUSION

The context of material scarcity and gradual depletion of fossil fuels is not favorable for the deployment of the 4RI in a sustainable way. Throughout the 21st century, it is estimated that the extraction peaks of a large group of essential minerals in renewable technologies, electric mobility, and ICT will be reached. The gradual electrification that most developed economies are currently experiencing is based on the exploitation of renewable energies. For this, the corresponding technologies are deployed (photovoltaic solar, thermal solar, wind, hydroelectric, geothermal) that in 2050 will make up more than 50% of the installed power globally. However, the process accompanied by electrification of transport systems can jeopardize the supply capacity of raw materials. In turn, the intense use of such materials by the ever-expanding ICT sector due to digitization requires a rational supply to deploy the 4RI infrastructure incompletely. This would mean solving the energy crisis as fossil fuels were depleted and tackling a raw materials crisis later. Both dynamics must be taken into account since not falling into them depends on the management of resources and how the transition towards renewable energies, sustainable mobility, and digitization is made, that is, towards the establishment of the 4RI.

Together, the conclusions obtained through this study are collected below:

1. The context of scarcity that will characterize the 21st century, with high probability, will compromise the availability of certain raw materials of intense use by the 4RI infrastructure technologies, namely: nickel, silver, manganese, gallium, cadmium, cobalt, chromium, copper, indium, tin, lithium, zinc and tellurium.
2. The current consumption dynamics that favor rebound effects and the absence of a strong dematerialization of the most developed economies hasten the entry into this context of material and energy scarcity.
3. It is foreseeable that the techno-optimistic and degrowth discourses do not suppose an insurmountable dichotomy, but that, in the coming years, from their dialectical tension, a discourse will emerge in which both positions coexist in the same space and time as a reflection of a reality characterized by a strong uneven development in terms of sustainability and material and energy consumption.
4. Reaching this scenario will mean placing the concept of sustainability as a synonym of exclusivity based on the continuity of the externalization of the negative impacts of the more developed economies legitimized through the qualifier sustainable.
5. To acquire such legitimacy, the digitization of the 4RI is presented as the mechanism capable of processing and integrating the discourse of sustainability within economic dynamics, canceling its active principle and establishing the current socioeconomic stage: digital capitalism.

The absence of mineral reserves necessary for the effective deployment of the 4RI infrastructure and the potential rebound effects masked with attempts at “transmaterialization” and relative dematerialization of the more developed economies prevent a fair and just entered into the incipient Fourth Industrial Revolution. The 4RI can be considered the process of “flight forward” by an economic model that begins to collide with the biophysical limits of the planet. There is a “paradox of sustainability” in which the

latter is situated as a solution to the continuity of the capitalist model in its digital version capable of perpetuating and exacerbating the structural conditions of inequality necessary for its existence.

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KEY TERMS AND DEFINITIONS

Artificial Intelligence (AI): Artificial intelligence (AI) refers to the simulation of human intelligence in machines programmed to think like humans and mimic their actions.

Automation: Automation is the creation and application of technologies to produce and deliver goods and services with minimal human intervention.

Energy Return on Investment (EROI): Energy return on investment (EROI) is a ratio that measures the amount of usable energy delivered from an energy source versus the amount of energy used to get that energy resource.

Fourth Industrial Revolution(4IR): The Fourth Industrial Revolution is different from previous revolutions because of the unprecedented rate of change and increased complexity of related issues.

Information Technology (IT): Information technology falls under the IS umbrella but deals with the technology involved in the systems themselves. Information technology can be defined as the study, design, implementation, support, or management of computer-based information systems.

Internet of Things (IoT): The internet of things describes the network of physical objects, so-known as “things”—that are embedded with sensors, software, and other technologies that are used to connect and exchange data with other devices and systems over the internet.

Sustainability: Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism.

Chapter 4

Fallacies of Consumerism: An Analysis of Its Impact and Depth in Today's Society

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ABSTRACT

The concept of consumerism brings together many of the social transformations that serve as predictors of present and future behaviors and act as vehicles for today's society. Its evolution is diffuse and corresponds to different periods of history that have incorporated the characteristics of desire, superficiality, and exclusivity that drive new needs and potentialities. Its importance underlies the need to analyze 46 theoretical approaches through their categorization in six dimensions and frequency count in Google Scholar. The methodology used a higher-order association, establishing the most significant combinations and weightings. From these results, the concept of consumerism is defined by the economic-social-cultural-ethical categories according to its frequency of use in Google. This shows economic influences as a determining factor, over and above processes that are far from the common good or the general interest.

INTRODUCTION

Can consumption ever be responsible when most of the circumstances surrounding individuals are not? This is one of the great dilemmas of today's society: the reconciliation of the nature of consumption and the facilitating elements that promote it. Certainly, powerful forces work in collusion to make the dilemma seem unresolvable, from the ever-increasing expenditure on advertising to the establishment of stimulus controls by governments or the continuous bombardment in the media (especially when these are owned by companies such as Amazon following its recent purchase of The Washington Post¹). There is also the exogenous control exercised by the market when it withholds investment in advertising for media that are contrary to corporate interests. The result is consumption based on a lifestyle that appears to have no alternative: buy, throw away, buy more. In this model, individuals' happiness is deliberately

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connected to their level of spending but not to its consequences (Luque, 2017; Vanity Fair, 2021). The cycle appears unbreakable: according to Chernin (2021), “It never seems to be the right time to talk about our consumption problem. When the economy is strong, we’re told that slowing our ever-expanding appetite for goods, services, and experiences could turn the boom into a bust. When the bust comes, we hear that the solution is to get to back to the malls and shop”. Meanwhile, the economic model that generates this appears unstoppable: According to World Trade Organization (WTO, 2021a) “*The volume of merchandise trade was up 5.7% year-on-year in the first quarter of 2021, the largest increase since a 5.8% rise in third quarter of 2011*”; in fact, world trade in goods and services amounted to US\$ 22 trillion in 2020. China was the top exporter of merchandise trade in 2020, accounting for 13 per cent of the world’s total (up from 12 per cent in 2019) and totaling US\$ 2,323 billion (WTO, 2021b).

Purchasing processes are also diverse; although sometimes related to acts of responsibility, they often provoke feelings of guilt, especially when they involve leveraged purchases, that is, the use of credit. Guilt may also arise from the perceived working conditions of employees at all points of the value chain, from the conception of the product to its delivery. This is compounded by the unrestricted use of outsourcing, which breaks the causal links of labor relations by removing any type of legal liability on the part of transnational companies. Much of the made-to-measure business architecture that has been put in place around these value chains are a legal fiction that allows corporations to wash their hands of their own outsourced workers by interposing affiliate companies, thereby disguising what are really labor relations as those of a mercantile nature (Luque & Guamán, 2021). Sometimes the process of buying is anything but enjoyable. Consumers experience stress from their purchases: for example, the delivery process can be viewed as complex, generating doubts as to when the product will arrive or, if the delivery is missed at the appointed time, how it will be received and whether a new obstacle will then be imposed. Once the goods are obtained, the process of purchasing can also generate uncertainty about whether the product is really what was ordered and whether it matches the desires of the consumer that were originally provoked by the seller through their advertising; in other words, does the consumer feel they have got what they wanted? These are understandable feelings of anguish, and they persist despite the industry having striven to minimize the pain of the expense itself through the use of reverse logistics or the elimination of the notion of purchasing altogether: Advertising replaces the idea that certain products are bought with the concept that experiences are sold, portraying the purchase as something exciting and exclusive.

The discussion of the processes of consumption versus consumerism is of great importance. Certainly, they are different but related concepts: Consumption is part of daily life and the coverage of its needs while consumerism has become a central element of life in society that imposes an emotional experience on much of the public (Luhmann, 1997; Campbell, 2004; Bauman, 2007). Consumerism inexorably involves the imbalance that exists between what is produced, consumed and discarded, and its impact on the environment. The plastics and fossil-fuels industry are a clear example of this: By establishing high degrees of vertical integration, “major oil and gas producers own plastics companies, and major plastics producers own oil and gas companies. DowDuPont, ExxonMobil, Shell, Chevron, and BP are all integrated companies” (Ciel, 2017).

In view of this situation, the present study seeks to examine the following points. i) The existing trend in the conceptualization of consumerism and responsible consumption processes and their facilitating elements. ii) The derived impact of the conceptualizations collected and analyzed as registered in Google Scholar. iii) The taxonomy of inconsistencies arising from any purchase process that is able to create sensations both in favor of and against the exercise of the purchase itself, including known impacts, such as climate change, and others of an unpredictable nature.

Transnational Trade: How the World is Dominated

Sales cannot cease. Those who control trade and the tailor-made tools that facilitate it know this and continually stimulate them by land, sea, air, and by recruiting the aid of national legislatures and supranational bodies. Consumers are on the receiving end of all kinds of relationships designed to serve corporate interests, such as complex network systems and predictive artificial intelligence. Indeed, the TTIP transatlantic trade agreement between the US and the European Union, which has been resurrected in order to combat Chinese commercial dominance, is good evidence that no-one is willing to give any ground when it comes to selling a product or service (Barbara & Scott, 2021). Few forces in the global economy pack a bigger punch than the burgeoning middle class. The democratization of consumption has occurred with such dramatic speed that about two-thirds of the world's population will have joined its ranks by 2030 and this global expansion has had a measurable impact on the geography of consumption (Kharas, 2017). Currently, any economic change pivots on the new knowledge economy and its neural and behavioral functions, which are about predicting the specific trends of consumption in any given sector; for example, to forecast how the impact of an aging population and the associated possible demographic scenarios will affect and shape customized products and services (Visa Business and Economic Insights, 2019; Popescu, 2020). It should be noted that the global average life expectancy has increased from around 30 years in 1900 to more than 70 today, bringing with it greater needs and more consumption (Roser, Ortiz-Ospina & Ritchie, 2013).

This new society does not develop in the same way everywhere and for everyone due to the nature of the globalization model itself, which is one of constant asymmetries between latitudes and persistent dependences directly conditioned by the needs of business conglomerates (Luque, 2019). According to the WTO (2019), *“new digital technologies, such as robotics and big data, are reshaping global value chains and creating new opportunities for the participation of small and medium-sized enterprises, but policymakers will have to ensure that the benefits are shared by all”*; in fact, the benefits of digital technologies could include an additional boost to trade of up to 34% by 2030 (Azevêdo, 2019). Algorithmic technology serves the interests of those that create it, mainly by promoting unrestricted hyperconsumption and technological practicality. In doing so, it sometimes exceeds the accepted limits of business ethics, current legislation and public services, highlighting the ineffectiveness of states to regulate these processes. Indeed, the lack of willingness on the part of institutions to manage the situation is exacerbated by their ignorance of (or even collusion in) the continuous advantages derived from the sometimes-illicit use of new technological advances; transnational technological impunity has now become the norm and not the exception. With these conditions in place, corruption and financial pressure have permeated the market (Morozov, 2015, 2020).

In the area of labor relations, the false collaborative economy platforms have led to a clear uberization of the employment market in favor of unconditional trade. Their *modus operandi*, blind to its own consequences and impacts, is a clear example of the avoidance of liabilities that subordinates labor relations to commercial law and the conditions in which goods and services are provided. Such circumstances conspire to force the public into a cycle of permanent consumption, a situation many cannot afford despite having several jobs (Sassen, 2015): Having employment no longer guarantees being out of poverty.

The transport of goods takes advantage of the processes of economic globalization together with the facilities offered by the large number of governments eager for investment. The same representatives of popular sovereignty who clamor for action against climate change, also campaign for the freedom of trade, which favors none other than those irresponsible transnational companies that ride roughshod

over the ecosystem. This process is facilitated by a weakened regime of regulation through customized legislation and fringe benefits. Measures include the provision of free trade agreements that undermine the internal legal sovereignties of each state by imposing watered-down labor regulations (low wages, prohibition of trade unionism, extreme outsourcing, etc.), complicity with lobbies², fiscal aid in favor of vested interests, the provision of amenities and services such as sewers, ports and freight airports, all tailored to corporate needs and paid for with public money. Even free trade zones are put at the disposal of business for which limited effective regulation is permitted and morality is kept at the margin (Luque, et al., 2016; Laval & Dardot, 2017; Guamán & Luque, 2019).

Special mention should be made of the processes of environmental degradation that arise from the permissiveness of authorities who overlook their obligation to provide protections³. The hypertrophy of public attitude in reaction to environmental predation is more than evident. According to Morton (2018), ‘hyperobjects’ are the result of phenomena so extensive in time and space that the public is not able to grasp their magnitude; such is the case of the climate crisis. According to the United Nations Environment Programme’s 2020 Emissions Gap report (2020), despite a slight drop in carbon dioxide emissions caused by the COVID-19 pandemic, the world is heading toward a temperature rise of more than 3°C this century—well beyond the Paris Agreement’s goals of limiting global warming to below 2°C or, if possible, of not exceeding 1.5°C. This shows that public authorities are not effective in their current state; in fact, and according to the preliminary information of the Intergovernmental Panel on Climate Change (IPCC), capitalism as it is conceived is unsustainable. In addition to the blunt warning that the only way to avoid climate collapse is to depart from any model based on perpetual growth, the report notes that the processes of international assessment and analysis are an “organized hypocrisy” in which agreements and statements are not matched by actions, precluding one of the most important avenues for mitigation (Bordera et al., 2021). The consequences of this are clear, starting with the impunity enjoyed by a financialized system⁴ that has manifestly exceeded the limits of the Earth and is both at the service of capital and indifferent to human rights and society (Naredo, 2015; Zubizarreta & Ramiro, 2016, Kingsnorth, 2017; Landrigan et al., 2018). The current economic system is extractive, speculative and highly financialized, circumstances that feed the processes of inequality and generate, de facto, deep systemic crises.

Examples of the harm being done by the current model are not hard to come by. According to the statement by Carroll Muffett, CIEL President & CEO, “The US-EU Free Trade Agreement: Tipping over the Regulatory Barriers”, the Transatlantic Trade and Investment Partnership (TTIP) negotiations would limit access to data and information, adversely affecting efforts to improve public health, consumer safety and the environment (Muffet, 2014). One of the biggest culprits is maritime transport, which carries more than 80% of the volume of world trade, hence the pains taken by the global trading system to protect it (WTO, 2021c; International Chamber of Shipping, 2021). At the beginning of 2020, the total world fleet amounted to 98,140 commercial ships of 100 gross tons and above, equivalent to a capacity of 2.06 billion dead-weight ton(s), having grown by 4.1 per cent the previous year—the highest growth rate since 2014 (United Nations Conference on Trade and Development, 2020, p.11). These circumstances have been accompanied by an extraordinary increase in prices in maritime transport: The cost of the maritime route between Shanghai and Rotterdam rose by 659%.

THEORETICAL FRAMEWORK

In its beginnings, the consumer economy was a strategy of economic improvement that matched the circumstances of the existing reality. Post-war stages such as those following World Wars I and II stand out as turning points in this process, especially when bolstered by the subsequent international aid plans designed to stimulate consumption, an approach that has been repeated over the years. However, the notion of consumption eventually became consumerism, in which the purchase of goods and services that is not driven by necessity comes to dominate, a movement that had its political heyday during the 1960s (Nader, 1971; Cameron Mitchell, 1986). The processes of consumerism premeditatedly create their own needs, manifesting according to their diverse characteristics as habitual, occasional, experimental or compulsive. Consumerism has been amplified by the preponderant economic system and its tailor-made regulations driven by the processes of the globalization of capital (and the neglect of social rights). The expansionary policies that encourage the accumulation of debt—manifestly setting up the conditions for a perfect storm—are magnified in the media with headlines such as “the best thing you can do is get into debt, the ECB lends you free money: Ultra-expansionary monetary policy goes ahead” (Elconfidencial, 2021). Consumption is also linked with and made more attractive by success as a means of satisfying natural and/or artificial needs and as conveyed through advertising campaigns that permeate all spheres of an individual’s life. In this way, consumption becomes the measure of all things and a part of the current social system as it converges with the aspirations of its members. Online advertising (social networks, display banners, search engines, retargeting, etc.), and all of the traditional commercial channels of print, radio, television, billboards, word of mouth, telemarketing, etc. are the tools of consumerism. The communication processes that are employed are immensely diverse, ranging from branding, retail, direct response (telemarketing and e-mailing), business to business (B2B), institutional, non-profit, public service and subconscious advertising (in video games, music, gestures or acts promoted by athletes, stars in the field of their professions, music groups, etc.). In other words, consumerism adapts and mimics all of the new orders of life in society.

There is no doubt that the study of consumption has generated various lines of research: analyzing purchasing processes that include good and bad decisions; impulsive or self-destructive purchases (Vittell, 2003); boycotting (Holt, 1997; John & Klein, 2003; Makarem & Jae 2016); ethical and sustainable consumption (Keane, 2015; Wagner, 2018); the use of environmental advertising (Ruiz & Conde, 2002; Popescu, 2021) and has even analyzed those situations in which the public feels wrongly ashamed of the processes of consumerism (Stanley, 2014). It should be noted that the behavior of consumers differs in accordance with their environment, needs and means, with the public tending to become more aware of the processes involved although, in parallel, also increasingly subject to pressures to make new purchases (Lu et al., 2015; O’Connor et al., 2017).

METHODOLOGY

The analysis presented here does not represent a complete and definitive catalog of the processes of consumerism and its associated concepts since these are dynamic processes subject to frequent (de) regulation and continually respond to new needs, desires and business opportunities. The study draws on different methodological approaches applied according to the conceptualizations to be analyzed that give priority to approaches that help to understand and explain the phenomenon. As a consequence, it

was necessary to establish a reasoned theoretical approach that focused on the epistemological problems, which highlighted the difficulty of providing generalized solutions to the many questions and dilemmas that surround this area of study (Fourez, 1994). The method consisted of three steps: 1) a search within the existing academic literature relating to consumerism, which identified 46 relevant constructs (from June 2021 to October 2021); 2) the identification of six dimensions resulting from a content analysis, consisting of codification and approximation, in order to obtain descriptions that were both generalized and of sufficient depth; 3) a frequency count in Google Scholar of all definitions that refer to a specific dimension in order to calculate the relative usage of each. It should be noted that not all conceptual approaches are equally significant, that is, the most frequently used dimensions have the greatest impact, which reflects their historical application (Howes and Solomon, 1951; Murphy, 1992; Kageura and Umino, 1996; Luque & Herrero-García, 2019). The relative usage of each definition was obtained by comparing the frequency counts in the chosen internet search engine. At an empirical level, the Internet provides valid frequency counts in comparison with other linguistic databases, and Google Scholar—a site specialized in content searches of academic literature and the ordering of results by relevance—was selected as globally one of the most reliable and unrestricted of such search engines in order to give an accurate picture of the complexity of the processes of consumerism.

RESULTS, ANALISYS AND DISCUSSION

Classification of Dimensions

The structuring of the specified dimensions was designed to reflect the associations and interconnections that are an integral part of the constructs of consumption and consumerism. The grouping of related concepts resulted in six dimensions to be used for analysis: economic, political, social, cultural, ethical and environmental, which are established in Table 1 (Luque & Herrero-García 2019). In qualitative research, categorization is an essential part of the analysis and interpretation of the results (Chaves, 2005); specifically, it “consists of the identification of regularities, outstanding themes, recurrent events and patterns of ideas in the data from the places, events or people selected for a study. Categorization constitutes an essential mechanism in the reduction of the information collected” (Torres, Chamorro & Torres, 2002, p. 110).

The economic dimension is the starting point for determining the development of an organization that is in harmony with the rest of the dimensions and with alternative economic systems that provide stronger guarantees for individuals, such as those established through social economy processes (Luque & Álvarez, 2021). Hence the need to rethink the economy and its associated elements in favor of alternatives that might replace the current model of continuous growth and its developmental consequences and, instead, strictly comply with the physical limits of the planet. The current growth model promoted by consumerism processes must give way to the construction of fairer and more ethical processes of greater solidarity by establishing a global regulatory framework (one that avoids processes of economic and social dumping) that works with similar standards and powerful tools of redress and/or sanction. The power of the consumer’s decision to make a purchase or withhold it is the optimal tool for calling the attention of companies, governments and markets.

The political dimension is based on the rights and responsibilities derived from the free participation in and exercise of political power. At the formal level, it pivots on how individuals may belong to authoritative bodies and institutions while also being electors. Consequently, individuals have the ethical and legal capacity to influence the design of the democratic structure through their decision-making processes and the expression of their needs. Today, power resides in the markets and, as Alain Rouquié (1989) points out, winning elections is not winning power, hence it is not only necessary to win elections to modify irresponsible behaviors of both governments, companies and much of the public, but new forms of political organization and systemic mobilization must also be established. The current level of participation of most of society in the shaping of social and political life has remained a mere accessory procedure to be carried out every four years, or at least that is the wish of the economic forces that surround the process. Supranational bodies are chiefly responsible for encouraging the retrenchment of democracy in favor of the dominance of the market by weakening regulation or regulating *ad hoc* at both the political and legal levels. By way of example, the former president of the European Commission, Jean-Claude Juncker, gave a blunt and unusual warning to Greek voters of the problems they might expect should they vote in the “wrong” way in elections, implying that a vote against the rule of the market would be a bad decision (Reuters, 2014).

The social dimension includes aspects from the everyday to the exceptional. The current model of society is in part based on “carnival capitalism”, a system that is configured to provide small daily rewards and the expectation of enjoyment of the weekend. Much of the means of production and social reproduction work by leveraging the processes of desire generation to give a social element to day-to-day existence. This sense of emancipation projected by companies through the friendly face of consumerism is one of the great Trojan horses that assails modern society; the public knows part of the dangers it brings but lacks any effective tools to cope with it.

The cultural dimension is based on the various processes of acquisition of products and/or services in which the symbolic value of the purchase predominates over its utility. This symbolism, ranging from exclusivity to the coverage of artificial needs, has its own cost. An identity is created and commodified both by the company, as leverage for new sales, and by the individual for whom it represents a degree of elitization through the elevation of the common and the everyday. This is compounded and extended by ethno-marketing and advertising (Schein 1985; Zapata and Fioravanti, 2009).

The ethical dimension is deeply flawed. The frenetic pace of life is incompatible with considerations of well-being and the pressure of the economic and financial markets have created the commodification of life, morality, justice, politics and ultimately of all the means of social transformation. Everything is subject to the process of being bought or sold to the highest bidder. This includes the inadvertent generation of digital information while engaging in commercial activity and its accumulation by transnational companies in collusion with social networks. The defense of the public against the trafficking of their data is overlooked by national legislatures and supranational bodies since this would mean limiting the market, something that no-one is seemingly willing to do, especially not governments eager for investment and the maximization of profit. Companies operate following legal guidelines based on impact and marketing that culminate in processes of corporate social responsibility. The image presented to consumers has a value that is to be protected at all costs and considerations of ethics lie well outside of the interests of the dominant markets. According to Arsuaga (2019), “life cannot be working all week and going to the supermarket on Saturday. That cannot be. Such a life is not human.” Yet shopping centers are deliberately designed to be family friendly for precisely this purpose.

Table 1. Dimensions

Dimension	Definition Codification	Search String Example
Economic	Economy and finance that promote consumerism processes.	‘speculation and profit maximization’
		‘social economy’
		‘globalization’
		‘hyperconsumption’
Political	Organizational aspects based on a common ideology that must promote the general interest.	‘lex mercatoria (mercantile law)’
		‘systems of collective organization’
		‘free trade agreements’
Social	Elements and factors that promote conditions, relationships and organization to a set of individuals.	‘liquid society’
		‘common good’
		‘artificial needs’
Cultural	Multiple ways in which groups and societies manifest themselves. This includes non-specialized events, community and socio-cultural programs, multipurpose cultural facilities and services (civic centers, cultural centers ...), amateurism, demonstrations and any kind of cultural participation.	‘digital practicality’
		‘consumer culture’
		‘traditions’
		‘identity’
		‘false needs’
		‘commodification of needs’
Ethical	Responsibility for actions and projection into the community to build a culture of tolerance and respect that improves nature and quality of life.	‘democratization of consumption’
		‘values’
		‘categorical imperative’
Environment	Harmonious development between diverse ecosystems and the impact of humans on the land in order to achieve the objectives of social, economic and cultural order without damaging nature.	‘sustainability’
		‘climate change and pollution’
		‘limits of the Earth’
		‘extractivism’
Source: compiled by the author		

The environmental dimension has become one of the central elements of life in society. It consists of the harmonious development between the diversity of ecosystems and their relationship with human activity in order to reach social, economic and cultural objectives without damaging the environment or, if possible, tacitly promoting its conservation. The current reality greatly diverges from this picture. According to the United Nations Environment (2019), sometime around the turn of the millennium, consumption overtook global population growth as the biggest driver of environmental crises. For example, high-income countries generate the most plastic waste per person while the negative impact of plastic pollution on the health of ocean wildlife continues apace (Ritchie & Roser, 2018). Twenty leading meat and dairy firms emit more greenhouse gas than Germany, Britain or France. Raising livestock contributes significantly to carbon emissions, with animal agriculture accounting for 14.5% of the world's greenhouse gas emissions (Kevany, 2021; Friends of the Earth Europe, 2021), yet livestock companies receive billions of dollars in funding. An unsustainable model of life has been created, which, if allowed to continue unabated, will lead to a situation that is incompatible with all kinds of life. According to

Springmann et al. (2018), “The food system is a major driver of climate change, changes in land use, depletion of freshwater resources, and pollution of aquatic and terrestrial ecosystems through excessive nitrogen and phosphorus inputs [...] between 2010 and 2050, as a result of expected changes in population and income levels, the environmental effects of the food system could increase by 50–90% in the absence of technological changes and dedicated mitigation measures, reaching levels that are beyond the planetary boundaries that define a safe operating space for humanity.”

Collection of Definitions and Constructs of Consumption and Consumerism

The research design was based on an initial search for conceptualizations of “consumption” and “consumerism” that have been used by academics and other professionals who have made contributions to the corpus of literature in this area, including publications by organizations and other institutions. Keyword strings, such as those exemplified in Table 1, were used to search within four academic data bases, including Web of Science, Scopus and Latindex, with the proviso that they be also included in the Google Scholar search engine. The definitions of the search chains, as appearing in the literature review, saturated in 6 categories. From this process (from June 2021 to October 2021), 46 units of analysis (UA) were identified, as set out in the Appendix; similar studies indicate that this sample size is sufficient for the purposes of qualitative studies³ (Luque & Herrero-García, 2019). After the Google frequency count of the number of times each of the 46 definitions was cited or referenced, they were assigned dimensions according to the established system of encoding, and the corresponding absolute frequencies, f_j , were obtained, as shown in Table 2. This stage was governed by certain conditions for UAs: 1) At least one academic reference had to be included, 2) No duplication of citations in different databases were allowed 3) UAs were able to appear in any number of categories, with a maximum of 6.

Study of Dimensions

Once the qualitative approach of this research had been developed, the next step was to explore the scope of each category, as well as its contribution to constructs of consumption and consumerism. The 46 UAs were assigned dimensions within one or more categories, in this case up to a maximum of 6, and the number of times that concept of consumerism had been used in a given time period of approximately 4 months was counted (f_i) (see the Appendix). In addition, the existence of the 6 dimensions unfolds the absolute frequencies in the corresponding f_{kj} or, to express it another way, the f_i of a unit of analysis k , associated with a category j ($j = 1, \dots, 6$). Thus, it was possible to obtain the relative weighting of each j dimension according to equations 1 and 2, respectively:

$$CD_j = \sum_{k=1}^y f_{kj} \quad (1)$$

Where,

CD_j is the scope of each j dimension

f_{kj} is the frequency of occurrence in Google of each unit of analysis k associated with a j dimension.

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$$\%PD_j = \frac{CD_j}{\sum_{i=1}^x f_i} 100 \quad (2)$$

Where,

PD_j is the relative weighting of each j dimension, expressed as a percentage (%)

f_i is the absolute frequency of occurrence in Google of each UA or bibliographic reference k in a given period of time.

Following the application of equations 1 and 2, the data set out in Table 2 are obtained, in which it can be seen that the economic and social dimensions contribute most to the constructs of consumption and consumerism and with factors of 0.89 and 0.78 respectively; the political category is the least represented with 0.01.

Table 2. Scope dimension

j	Dimensions	CD_j	$\%PD_j$
1	Economic	7.913	89
2	Political	70	1
3	Social	6.879	78
4	Cultural	1.821	21
5	Ethical	4.866	55
6	Environment	5.040	57
Source: own elaboration			

Tetrad Model and Combination of Dimensions

By exploring the Appendix, it may be observed that the constructs of consumption and consumerism studied constitute anything from one to several categories with an associated f_{kj} ; the volume of information generated is compiled in Table 3.

From the 46 higher-order UAs studied, a first-order categorization was carried out to obtain the combination of dimensions shown in Table 3. The number of categories coded for the different groups of definitions was specified along with their percentage contribution in the global count, making it possible to observe that constructs comprising 3 and 4 categories account for approximately 70% of the citations related to consumption and consumerism. An association by tetrads of 11 units of analysis is the result that carries the greatest weighting at 41% (Luque & Herrero-García, 2019).

A tetrad model was used, consisting in the break-down, with respect to the initial sample, of the 11 UAs catalogued into four categories for the corresponding study of their individual contributions (% weighting fraction) as a tetrad of the dynamics of consumption and consumerism (Table 4).

As may be seen in Table 4, the processes of consumption and consumerism are vectorized by a four-fold economic-social-ethical-environmental tetra-category (tetrad 9), with a weighting fraction of 78.4%. Following the application of combinatorial analysis, the grouping of 6 elements by 4s provides

15 possible tetrads, such as those shown in Table 5. Of these, 6 tetrads appear in the study, excluding the remaining 9. This information was collected by taking the individual contribution of each dimension or $\%PD_j$ and using the algebraic sum of the tetrad to give its relative importance in descending order (Table 5). The data in the first section of the table, “appearing”, are the same as those given in Table 4 and do not provide additional information, except by the order of their scores based on relevance. It can be observed that all of the tetrads that do not appear in the study, except tetrad 14, had the same probability of having done so.

Table 3. Number of higher order UA

N° of codified dimensions	Number of higher order UA	Weighting in the Google Count (%)	Distribution
6	2	0,5	
5	1	0,3	
4	11	41,0	
3	12	28,6	
2	16	16,2	
1	4	13,4	
Total= 46		Total= 100	

Source: own elaboration

Table 4. Tetrad model

Dyad		Number of UA included	Weighting fraction (%)
1	Economic-Political-Social-Cultural	1	0,1
7	Economic-Social-Cultural-Ethical	2	19,7
9	Economic-Social-Ethical-Environment	3	78,4
10	Economic-Cultural-Ethical-Environment	2	0,4
11	Political-Social-Cultural-Ethical	1	0,5
15	Social-Cultural-Ethical-Environment	2	0,9
		Total = 11	Total = 100%

Source: own elaboration

The objective was to try to demonstrate whether, in the existing constructs of consumption and consumerism as contemplated within the literature, there are one or more dimensions in addition to the established tetrad 9. This was carried out by summing the total contribution of the economic, the political and successive dimensions. Table 6 shows the most representative dimensions in both sections since, within the “not appearing” group, they represent a mirrored value of their greater contribution to the processes of consumption and consumerism. Within this range of values, the political category can be

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viewed as a lost dimension within the current constructs of consumption and consumerism. Similarly, there is only a residual vectorization of the cultural category.

The current construct of consumption and consumerism may be induced as that which results from the most commonly used approaches within the four-fold economic-social-ethical-environmental dimension, and then complemented with the definition of greatest weighting (Table 7). The direct relationship between constructs of consumption and consumerism and the economy is evident and may be characterized as sometimes disruptive and exclusive.

Table 5. Relative importance

Tetrads		Economic	Political	Social	Cultural	Ethical	Environment	Relative importance (%1)
Appearing	9	0,89		0,78		0,55	0,57	2,79
	7	0,89		0,78	0,21	0,55		2,43
	10	0,89			0,21	0,55	0,57	2,22
	15			0,78	0,21	0,55	0,57	2,11
	1	0,89	0,01	0,78	0,21			1,89
	11		0,01	0,78	0,21	0,55		1,55
Not appearing	8	0,89		0,78	0,21		0,57	2,45
	3	0,89	0,01	0,78			0,57	2,25
	2	0,89	0,01	0,78		0,55		2,23
	6	0,89	0,01			0,55	0,57	2,02
	13		0,01	0,78		0,55	0,57	1,91
	4	0,89	0,01		0,21	0,55		1,66
	5	0,89	0,01		0,21		0,57	1,68
	12		0,01	0,78	0,21		0,57	1,57
	14		0,01		0,21	0,55	0,57	1,34

Source: own elaboration

Table 6. Mirrored Values

		Economic	Political	Social	Cultural	Ethical	Environment
Appearing		3,56	0,02	3,90	1,05	2,75	1,71
Not appearing		5,34	0,08	3,90	1,05	2,75	3,99

Source: own elaboration

Table 7. Greater weighting

Jobber, 2016, p. 732	Individuals already choose to buy products that are created through sustainable development	2511	Economic Social Ethical Environmental

Source: compiled by the author

CONCLUSION

There are a great many definitions of consumption and consumerism that are based on any or all of the six dimensions. Choosing a definition or approximation of these concepts is an unrealistic task, even in the case of those that represent a majority of the proposed dimensions. The processes of consumerism describe a phenomenon, but do not give a clear indication of how they are configured due to constantly shifting circumstances. Public institutions and companies must analyze the social construction of consumerist processes in order to develop preventive policies that re-direct both public policy and business strategies (Popescu, 2019). Nevertheless, in accordance with the analysis carried out, it can be said that the economic dimension contributes most to the constructs of consumption and consumerism through its promotion of spending. According to the distribution in Table 3, two of the six original categories are sufficient to establish the construct. From the study it can be concluded that the current tendency of consumerist processes is directed toward greater responsibility, including a greater environmental contribution and, in the longer term, toward the incorporation of cultural aspects. Meanwhile, the political dimension is excluded, implicitly taking on a residual character despite its being the natural tool to monitor much of what is produced and how it is consumed through the implementation and deployment of effective public policies that today appear inadequate.

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KEY TERMS AND DEFINITIONS

Consumer Society: A society in which people often buy new goods, especially goods that they do not need away from more sustainable processes or social economy models, and in which a high value is placed on owning many things.

Consumerism: The protection of the rights and interests of the general pool of buyers and enterprises, or an obsession with buying material goods or items without necessity.

Free Trade: Tools to push for a radical opening up of goods, health, natural resources, cultural and postal services to expand corporate profiteering and to reduce barriers to imports and exports among nations, unbalancing national and local markets.

Globalization: Concept used to describe the growing interdependence of the world's economies, cultures, and populations, brought about by cross-border trade in goods and services, technology, knowledge and flows of investment, people, and information. It also generates large asymmetries.

Lobby: Tools as law firms to attempt to influence legislation present or future with pressures of all kinds. Processes carried out by any person who, on behalf of any other group or interest (transnational companies, nations, governments) other than personal.

ENDNOTES

- ¹ Jeff Bezos turned Amazon into an e-commerce powerhouse and an essential player in the digital marketplace. Now its ambitions are greater as it has taken on increasingly important civil and business challenges. In addition, he pointed out that he bought The Washington Post because he was well placed to exercise a powerful media balance against the government. The New York Times 6/6/2016 retrieved from <https://www.nytimes.com/2016/06/01/technology/jeff-bezos-riding-high-defends-decision-to-buy-washington-post.html>

- ² A report by the Corporate Europe Observatory (CEO) and Lobbycontrol entitled “The lobby network: Big Tech’s web of influence in the EU” points out that 612 companies, groups and business associations lobby the EU’s digital economy policies. Together, they spend over €97 million annually lobbying the EU institutions. This makes tech the biggest lobby sector in the EU by spending, ahead of pharma, fossil fuels, finance, and chemicals. Retrieved from Corporate Europe 31/8/2021 at <https://bit.ly/3yI4JL0>
- ³ Ireland’s data protection authority has fined WhatsApp €225 million for hiding the amount of personal data and the nature of the data that it shares with its parent company, Facebook. The messaging application lacks transparency both for its users and for non-users for whom it also stores personal information. Retrieved from Reuters 2/09/2021 at <https://reut.rs/3zK8HUQ>
- ⁴ Conservation and the sustainable use of marine biological diversity of areas beyond national jurisdiction is a legally binding instrument under The United Nations Convention on the Law of the Sea, 1982. It sets forth the rights and obligations of states regarding the use of the oceans, their resources and the protection of the marine and coastal environment. Maritime zones under the convention include the following: the territorial sea, extending up to 12 nautical miles from the baseline (article 3); exclusive economic zones, extending from the edge of the territorial sea to 200 nautical miles from the baseline (article 57); the continental shelf, the natural prolongation of land territory to the outer edge of the continental margin, or 200 nautical miles from the baseline, whichever is greater (article 76); and areas beyond national jurisdiction, composed of “the Area” (article 1) and the high seas (article 86).

APPENDIX

Table 8.

Source	Concept	Frequency count	Dimension
Nubia, 2016, p. 32	Action carried out by every human being in terms of the use of the goods and services that are at his disposal for the purpose of satisfying his needs.	61	Social Ethical
Slavova, 2014	Consumerism is associated also with the excessive possession of goods though society believed in general that the higher rate of consumption is better for the economy as a whole and for the individual.	8	Economic Social
Drucker, 1969	Means that the consumer looks upon the manufacturer as somebody who is interested but who really does not know what the consumers' realities are. He regards the manufacturer as somebody who has not made the effort to find out, who does not understand the world in which the consumer lives, and who expects the consumer to be able to make distinctions which the consumer is neither willing nor able to make.	13	Cultural Ethical
Stearns, 2006	Describes a society in which many people formulate their goals in life partly through acquiring goods that they clearly do not need for subsistence or for traditional display.	714	Economic Social Cultural Ethical
Trentmann, 2004	Appears as mentality, behavioural motivation and individual action, as well as commercial institutions and a defining feature of society at large.	355	Economic Social Cultural
Barnett, Clarke, Cloke & Malpass, 2005	It is a source of harm in the form of environmental degradation, and the reproduction of unequal trade relations and poverty.	193	Economic Social Ethical Environment
Borgmann 2000, p. 420	Attenuates human engagement with material reality.	287	Social ethical
Barksdale & Darden, 1972	Safeguarding the rights and interests of buyers.	327	Economic
Cohen, 2010	Seek to establish a more equitable and socially responsible capitalist democracy.	42	Economic Social
Kucuk, 2016	Developed in response to the power imbalance between companies and consumers found in many types of market interactions.	41	Economic Social Ethical
Ekins 1991, p.245	The possession and use of an increasing number and variety of goods and services is the principal cultural aspiration and the surest perceived route to personal happiness, social status, and national success.	100	Economic Social Cultural
Fournier & Richins, 1991	A value structure that emphasizes the importance of material possessions and the pursuit of personal wealth.	507	Economic
Trentmann, 2004	The lure of material goods for individuals.	346	Economic
Stearns, 1997	Consumerism describes a society in which many people formulate their goals in life partly through acquiring goods that they clearly do not need for subsistence or traditional display.	165	Economic Social
Murray, 2020	As the preferred (and demanded) condition of citizenship in neoliberal capitalism. In other words, it is through consumerism that our citizenship is both secured and validated.	11	Economic Social
Padilla & Simó, 2016	Need to change our lifestyles, our consumption habits, to adopt an "alternative way" of understanding the quality of life.	6	Social Cultural Ethical Environment
Llopis, 2016, p. 155	It includes values such as solidarity, social responsibility, respect for human rights, multiculturalism or ecology.	58	Cultural Ethical Environment

continues on following page

Table 8. Continued

Source	Concept	Frequency count	Dimension
Piñeiro & Díaz, 2012	Practices of austerity, the selection of what is to be consumed, collective organization to redistribute tasks and goods, etc.	19	Political Social Cultural Ethical
Tabernero & Hernandez, 2016, p. 109	Environmental concern that people tend to buy more durable products, created with minimal damage to the environment.	20	Economic Ethical Environment
Díaz & Castro, 2017	Choice of products and services we consume according to criteria of quality, price, environmental impact, social impact, and ethics	1	Economic Political Social Cultural Ethical Environment
Castillejo, 2011	Consumption has always existed, it is part of human existence, but today it has become a singular dynamizing force of the social context.	38	Economic Social
Bianchi, 2013, p. 90	In societies, it is not a question of consuming basic and necessary goods, but what is rather characteristic is the consumption of superfluous goods. That is what makes it a consumerist society.	17	Economic Social
Sahui, 2017	One who satisfies the present generation, without compromising the ability of future generations to meet their own needs.	4	Social Cultural Ethical
Arenas & Becerra, 2006	Purchases made by consumers that take environmental issues into consideration and are not only motivated by the desire to meet their needs.	13	Economic Cultural Ethical Environment
Riquelme Martínez, et al., 2015	The opportunity to preserve the environment and the quality of life in society in a particular and local context.	26	Social Cultural Ethical Environment
Martínez & Elizazu, 2017, p. 35	It is to be aware of what we consume and how this affects our planet, body and our own future life.	24	Economic Social Cultural Ethical Environment
Hayek, 2015, p. 110	In neoliberal society every consumer is a prey and advertising is the bait.	5	Economic Political Social Cultural
Kosiak, 2017, p. 12	Choose products with environmentally friendly packaging, separate garbage, take care of the ethical behavior of companies.	4	Social Ethical Environment
Cormick & Maldonado, 2013	Acceptance of consumerist values and psychological vulnerability through messages that relate consumption to happiness, social success and personal prestige.	2	Economic Social Cultural Ethical
Lecompte, 2017, p. 59	Promote social and/or environmental causes that consumers consider important.	14	Social Environment
Urien & Kilbourne, 2018, p. 72	Variable of temptation in which one chooses between certain immediate gratification and probable future displeasure.	1	Economic Cultural Ethical Environment
Gonzales, Korchia & Menuet, 2009, p. 27	Interaction between habits and fields of action with awareness of lifestyles and their systematicity.	98	Social Cultural

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Table 8. Continued

Source	Concept	Frequency count	Dimension
Jobber, 2016, p. 732	Individuals already choose to buy products that are created by sustainable development.	2511	Economic Social Ethical Environment
Francois, Agnes & James, 2006	Socially responsible consumption can promote social and/or environmental causes that consumers consider important.	145	Economic Social Ethical Environment
Boulding, 2016, p. 1	Good consumption is both the only end and the purpose of production.	38	Economic Ethical
di Giulio & Fuchs, 2014, p. 185	A promising way to ensure a good life for all humans now and in the future.	120	Social Ethical
Villa, Perdomo, Dueñas & Duran, 2016, p. 460	Do more and better with less, increasing the net welfare gains of economic activities by reducing resource use, degradation and pollution throughout the entire life cycle.	29	Economic Environment
Sharpley, 2006, p. 12	Consumption that has either a less negative impact or a more positive impact on the environment, society, self and other beings.	511	Economic Social Environment
Kopnina, 2011, p. 218	Transformation of social change, alterations in the production system through the adjustment of ecological impact.	19	Economic Social Environment
Cohen & Murphy, 2001	Transition to a sustainable and desirable life for the people of the world in the next century.	230	Social Ethical Environment
Ariztía, et al., 2014, p. 86	Good consumption is related to greater involvement of ethical and moral values.	5	Ethical
Sheth, Sethia & Srinivas, 2010, p. 27	Business objective that requires actions that have a positive impact environmentally, socially and economically.	1063	Economic Social Environment
Geng, Liu & Zhu, 2017, p. 316	It is the key to developing a sustainable production and consumption system.	45	Economic Political Social Cultural Ethical Environment
Paxson, 1993, p. 42	Seasonal variation in income, prices and preferences.	337	Economic Cultural
Kozar & Connell, 2013, p. 318	Act in accordance with ethical concerns for products and services.	158	Economic Ethical
Rommani & Bagozzi, 2016, p. 257	Ecological and correct form of consumption.	127	Economic Ethical Environment

Source: own elaboration

Chapter 5

Strategic Adaptive Resilience Capacity

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ABSTRACT

This chapter analyzes the adaptive resilience capacity as an organizational strategy. It is assumed that the development of organizational resilience capabilities can support the transformation and adaptation strategies aimed to enhance the socio ecosystem services. One of the organizational capabilities is organizational resilience assuming that adverse conditions have an impact on the organization which may remain vulnerable unless it learns new capabilities and actions, adapts to access changing resources, and creates iteratively new forms and opportunities with the available resources. It is concluded that a strategic adaptive capacity approach to organizational resilience supports the design and implementation of more flexible and progressive strategies to face any kind of environmental disturbances, crises, and shocks to become more competitive in the global marketplace environment.

INTRODUCTION

Resilience manifests itself as resistance and adaptation (Limnios et al. 2014). Resilience is an ability to adapt and grow from adversity varying in intensity among organizations. The definition of resilience may include two or more perspectives combining the active, coping and adaptation with anticipation leading to growth (McManus et al. 2008; Burnard and Bhamra 2011; Ortiz-de-Mandojana and Bansal, 2016; Williams et al. 2017). The concept of resilience is related to the notions of risk, uncertainty, reliability, prevention, vulnerability, disasters, redundancy, recovery, robustness, adaptation, etc. Resilience is the long-term impact on anticipatory adaptation based on resistance and the capacity to absorb and recover. Resilience is a phenomenon characterized by patterns of positive adaptation in the context of adversity or risk (Masten & Reed, 2002: 75).

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Resilience in organization sciences is a desirable positive adaptation to adversity (Afuah, 1999; Mallak, 1998). Resilience is a superordinate construct subsuming the dimensions of adversity and adaptation, never measured directly but indirectly inferred on evidence (Luthar, 2006: 742). Resilience is a phenomenon and process of adaptation despite experiences of adversity and trauma. Resilience contributes to positive adaptation to events of adversity and trauma (Luthar, 2006: 742). Resilience is built through adaptation to irregular variations and disruptive shocks. Resilience is a positive adaptability in anticipation of, and in response to shocks. Resilience is the capacity of the system to sustain performance despite shocks by the adaptation of its structures, functions, and organizations.

A process oriented organizational resilience and adaptation framework consist of anticipatory adaptation, recovery and restoration, exposure, post-impact determination and future adaptation (Linnenluecke et al. 2012). The organizational theory offers limited insights to build a framework of anticipatory adaptation and resilience to extreme weather events leading to have expected impacts on organizational resilience and ecological discontinuities. The mechanisms of organizational resilience may fluctuate as organizations adapt to the ecological adversity. Organizational resilience and adaptation to extreme weather events requires to overcome the organizational barriers to change (Sørensen, 2002)

Resilience is a multidimensional construct comprising endurance, determination, adaptation, and new steady state (Dinh, Pasman, Gao, & Mannan, 2012; Howard & Irving, 2013). Resilience has been described as defensive response, resistance and recovery shifting towards the notions as offensive response, adaptation, and anticipation. These perspectives of resilience are summarized on the types of precursor referring to anticipation and recovery resilience (Boin and van Eeten 2013).

Resilience is a property of complex systems and not possessed by an organization but as individual traits and skills always on interaction with and among agents to facilitate and restrain feedback loops of adaptation. Resilience of complex systems depends upon optimal adaptation between emergency and interventions (Zarboutis and Wright, 2006). The adaptability of the system and its capacity to maintain functioning at high level of resilience (Gunderson & Holling, 2002). The interactions at the system level develop interactive informal practices to promote resilience more than formal organizational structures. Resilience is the quality that enable the individual, community, and organization to cope with, adapt to, and recover from an unforeseen disaster event (Buckle et al. 2000; Horne, 1997; Mallak, 1998; Pelling and Uitto, 2001; Rioli and Savicki, 2003).

The resilience stages of anticipation, coping, and adaptation can be combined and integrated in the concept of resilience (Hamel and Vaelikangas, 2003; McManus et al. 2008; Ortiz-de-Mandojana and Bansal 2016; Williams et al. 2017). The resilience stage of anticipation is the ability to detect critical developments in the internal and external organizational environment, prevents aspects of disturbances and adapt proactively (Somers, 2009; Ferreira et al. 2011; Teixeira and Werther, 2013).

Personal and organizational resilience denotes proactive factors to cope and adapt to psychological, physical, and socioecological stressor (Rutter, 2012). In psychology, resilience is the process of, capacity for and outcome of adaptation despite the threatening and challenging circumstances (Masten, Best and Garmezy, 1990). An organization or and individual facing with environmental stressors must appraise the situation and execute the strategies to adapt to the new situation (Richardson, 2002).

Personal resilience is the energy from within the individual that compels to make sense of stressors and adverse situations to take measures toward adaptation to the system (Richardson, 2002). Personal resilience affords organizational leadership while linked to transformational leadership attributes and behaviors style considered as the collective ability to cope with adversity and the adaptation toward organizational resilience (Masten, 2011; Windle, 2011). Resiliency affords organizational leadership the

capabilities to confront change, recover from disruptions, adapt, and learn from experiences (Howard & Irving, 2013; Li, Chun, Ashkanasy, & Ahlstrom, 2012).

BACKGROUND AND LITERATURE REVIEW

Resilience is more than a theoretical concept to be able to offer, implement and integrate a management process, methods, tools to achieve practical outcomes, to overcome unforeseen crises with appropriate resilient responses and recovery. This resilient management process must include the elements of building awareness, select the organizational components, identification, self-assessment, and prioritization of organizational and environmental vulnerabilities, increasing and strengthening the adaptive capacity.

The concept of adaptive capacity has been developed in parallel with the concepts of transdisciplinary development of resilience theory of systems undergoing change (Gallopín 2006). The concept of adaptive capacity is both related to resilience and development theories underlying regional and local conditions (Walker, Holling, Carpenter, Kinzig, 2004; Manyena, 2006; Rose, 2007). Adaptive capacity is conceptualized as the ability of systems, institutions, humans, and any other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC 2014: 1758).

The concept of adaptive capacity has concentrated on gradual and incremental changes in ecosystems (Folke et al., 2005; Schroter et al., 2005; Turner et al., 2003). Opposed to adaptation behaviors, adaptive capacity is assessed by vulnerability and adaptation research (Yohe and Tol 2002, Alberini et al 2006, Hinkel 2011). Resilience is the organizational function of the overall awareness, management of vulnerabilities, and adaptive capacity in a complex, uncertain, dynamic, and interconnected environment. Organizational resilience is a function of the situation awareness, management of vulnerabilities, adaptive capacity of an organization in a complex, uncertain, dynamic, and interdependent environment.

Resilience is shaped by an adaptive system based on multilevel dynamics interaction aiming to change (Masten, 2007: 926) which in turn resists increasing vulnerability and enhances resilience (Walker & Salt, 2012: 24). Resilient organizations direct actions enacted among the members and in concert with each other. From the strategic perspective, a resilient organization passes through an awareness of the situation, management of vulnerability and adaptive capacity (McManus, 2008).

Several theories about what constitutes capacity are related to the nature and scale of the actors and agents, assuming the existing conditions of information, human capital, social capital and networks (Mortreux and Barnett 2017, Siders 2018). The adaptive capacity needs to connect the perspectives of socio-ecological systems and the development theory (Sen, 2009, 2005, 1999, 1985). Regional and local scales of resilience along the development theory points to the adaptive capacity to vulnerabilities of an affected system based on lack of capabilities underlined by different spatial contexts of inequalities and poverty (Cutter, Ash, and Emrich, 2016).

Adaptive capacity has been mainly used to analyze climate change, vulnerability and risk and disaster management context and between different contexts and systems (Adger et al. 2007). The organizational adaptive capacity increases the likelihood of actions to adapt to climate change (Mortreux, *et al* 2020). Adaptive capacity needs to be developed further to improve adaptation and mitigation decisions and policies aimed to incorporate the interactions between the ecological and social impacts of climate extremes and their indirect effects (Bahn et al., 2014; Frank et al., 2015; Kythreotis et al., 2013).

Operationalizing the concept of adaptive capacity in resilience theory for management application is difficult due to the lack of clarity, misuse of terms and a loose normative use to guide responses to

natural disasters (Brand and Jax 2007; Angeler and Allen 2016). Ecological, resource, capabilities and ethical issues complicate the principles of theory on adaptive capacity and limits its implementation (Green et al. 2015).

ORGANIZATIONAL RESILIENCE ADAPTABILITY

Organizations have different reactions when facing disruptive environment and unexpected events precipitating into crisis challenging for successful adjustments and adaptations to continue growing. Organizational resilience is more than adaptations and crisis responses to implement resources and capabilities to combine and activate adverse events and disasters (Vogus & Sutcliffe, 2007). Organizational resilience is affected by the interplay between the resources and the adaptation. Organizational resilience deepens preventions, responses, and adaptations to potential destabilizing conditions, are built adjusting resources and activities to create the competitive advantage required.

Organizational resilience has an emphasis on the abilities of survival under a disruptive situation, bounce back, recovery, adaptability, and development rather than resistance after destruction of an unexpected event. The conceptual model of organizational resilience of Huber et al. (2012) proposes the dimension of commitment, adaptability, efficiency, and awareness. Adaptability is a critical concept to all forms of resilience as in engineering resilience with a focus on control and predictability by returning the system to the pre-defined state. The form of ecological resilience focus on variability and unpredictability for many possible states to match the altered environment (Gunderson & Holling, 2002).

Adverse and unexpected events preclude the need for resilience which may result in adaptation, dysfunction or disintegration (Fletcher & Sarkar, 2013). Organizational resilience is the ability to withstand systematic discontinuities as the capability to adapt to risk environments (Burnard and Bhamra, 2011p. 5583).

The conceptual development of organizational resilience identifies assumptions as the foundation for a research agenda in framing adaptation responses to adverse conditions (Martin & Sunley, 2015). The organizational resilience principles announced by Reeves & Whitaker (2020) are the redundancy, diversity, modularity, adaptability, caution and embedding. Organizational resilience includes the attributes of adaptability, flexibility, and agility (Erol *et al.* 2009), adaptability, sustainability, responsiveness, and competitiveness (Gunasekaran *et al.* 2011). Adaptation is an attribute linked to successful organizational resilience (Coullahan and Shepherd, 2008; Gilly, *et al.* 2014; Salanova *et al.* 2012).

Organizational resilience is the ability of an organization to anticipate, prepare for, respond, and adapt to sudden changes and disruptions to survive and prosper (Denyer, 2017). Through organizational change, resilience is maintained and renewed by adopting and adapting organizational forms aimed to reduce vulnerabilities to ecological adversities. Organizational resilience is the ability to anticipate, adapt to and cope with the potential surprises, failures, variabilities occurring outside their standard operating model (Carvalho, *et al.* 2016). Resilience is a counter-perspective for failing organizations as the threat-rigid and maladaptive response (Staw et al. 1981).

Organizational resilience is the double capacity of resistance and adaptation to opening the way for new pathways (Gilly *et al.* 2014). Organizational resilience is the ability to adapt as latent capability, change its behavior to focus on adaptation or manifest behavior when this is necessary (Huber *et al.*, 2012). Organizational resilience is the ability to design and implement positive adaptive behaviors matched to the immediate situation while enduring minimal stress (Mallak, 1998). Resilience is the individual

and organizational ability to design and implement adaptive behaviors matched to the situation while enduring minimal stress (Weick 1993).

Organizational resilience is defined as the organizational ability to anticipate, prepare for, respond, and adapt to incremental and sudden types of change and disruptions to survive and growth. Organizational resilience is the ability and capacity to withstand and adapt systemic discontinuities and to new risk environments (Starr *et al.* 2003). Organizational resilience is divided into threats and risks to adaptation against the protective assets, factors, and processes to enhance efficacy and motivation. Organizational resilience is the critical ability of an organization to anticipate threats, to cope with adverse events, and to adapt to environmental changing conditions (Horne, 1997; Coutu, 2002).

Most of the analysis of organizational resilience focuses on adaptability. Organizations enact resilience when exhibit ability and adaptability to use resources aimed to resolve issues when they arise (Sutcliffe & Vogus, 2003). The availability of these resources has an influence on organizational resilience by fostering the development of anticipation, coping and adaptation capabilities. The anticipation, coping and adaptation phases of an organizational resilience framework can explain their interactions with their combination of resilience capabilities. Among the characteristics of organizational resilience and adaptation framework is that the organizational resilience and adaptation ranges can contribute to incremental change processes to discontinuities from unexpected events.

Organizational resilience is the agility, adaptation, rapid response despite a turbulent and stressful environment to achieve success in developing and enduring diverse portfolio (Coullahan and Shepherd, 2018). Organizational resilience is the positive adaptation of the organization despite diversity (Sawalha, 2015). Organizational resilience is the capability of recognizing, adapting, and coping with the unexpected (Øien, 2013).

Organizational resilience is the ability to respond, be efficient and effective, make itself reputable organization at value to the environmental demands for organizational adaptation and competitiveness (Mafabi *et al.* 2012). Organizational resilience is the organization's ability to adapt and growth facing adversity (Glover, 2012). Organizational resilience is the adaptability, responsiveness, sustainability, and competitiveness in evolving markets (Gunasekaran *et al.* 2011)

Organizational resilience is the capability to decrease the level of its vulnerability, flexibility to change itself and to adapt to recover to unexpected and unexpected risks and against changing environment in the least possible time (Erol *et al.* 2010). The maturity levels for organizational resilience are the short-term capability, the medium-term ability, and the long-term ability to change, adapt and shape the organizational environment. Organizational resilience is the capability to decrease the level of its vulnerability, increase flexibility to change itself and adapt to and recover from expected and unexpected risks, and against its changing environment in the least possible time (Erol *et al.* 2010).

Organizational resilience is the ability of an owning family to adapt, respond, problem solve effectively from stressful events (Danes *et al.* 2009). Organizational resilience entails abilities and adaptabilities enacted by organizations identified in several ways (Bruneau *et al.*, 2002; Kendra, 2001; Mark & Semaan, 2008). Organizational resilience is the ability to assess situations, understand potential critical vulnerabilities and their dependencies to get adapted to new situations (McManus *et al.* 2007)

Organizational redundancy, user ability and creativity lead to organizational resilience that results from the adaptation of technological structures to communication needs. Organizational resilience is the agility, adaptation and rapid response that achieve success in developing in enduring (Coullahan and Shepherd, 2008).

Organizational resilience connects biopsychosocial phenomena between individuals and environmental resources systems to achieve adaptation of environmental exchanges (Greene, Galambos, & Lee, 2004). Organizational resilience systems are an approach to mitigate risk and prepare for threats, resist impacts, adapt and regain functionality (Meyer, 1982). Fundamental adaptable systems may be reprogrammable to a desired resilience degree (Masten & Obradović, 2006: 24).

Organizational resilience is the ability to adapt to new complex problems without disrupting the operation (Borges and Menegon, 2001, 2012). Organizational resilience is the ability of the organization develops related to the reaction that the organization must face in state of complexity and uncertainty, crisis and destruction, emergency and discontinuity which are different concerns that adaptability, recovery, flexibility, redundancy. The complexity in resilience brings to risks of brittleness, systems failures, and sustained adaptability to unexpected variations of perturbations and events Woods (2015).

Organizational resilience is conceptualized as a meta-capability in an embedded and complex construct decomposed in process-based stages of anticipation, coping, and adaptation which require capabilities. Organizational resilience is being regarded as an adaptive quality to allow for knowledge spillover to benefit other organizations (Välikangas, 2007). The organizational knowledge base is the foundation for the anticipation, coping and adaptation of critical events, which may be enhanced through the accomplishment of the same stages. Organizational resilience is associated with the abilities to respond adapting to unexpected events. Organizational resilience requires the organizations to prepare to react to threats and opportunities, adapting to survive over the long term, and flourish, securing prosperity and longevity.

Organizational resilience can be an adaptation instead of resistance or recovery response to unexpected events (Weick et al. 1999; Lengnick-Hall et al. 2011; Limnios et al. 2014). Resilience is an adaptation factor (Madni and Jackson, 2009) in dealing with unknown and unexpected threats and crisis (Lengnick-Hall et al. 2011) and emerging stronger. Resilience can be adaptive or transformative of sudden changes that benefit organizations (Baral, 2013; Meyer, 1982).

ADAPTIVE CAPACITY

Ecological resilience is the result of adaptive cycle changes. Conceptualization of organizational adaptation theory is an adaptive cyclical process regulated by ecological adversity disturbances. In an adaptive cycle, the exploitation is characterized by the system growth of high resilience (Dow et al. 2013; Gunderson and Holling, 2002). Theoretical notions from ecological resilience and the adaptive cycle offer support for organizational behavior. The adaptive cycle is conceptualized in resilience theory, as an adaptation process through several equilibrium states of an organizational system. These equilibrium states are attributes combined in the organizational system considered as components, structures, functions, and processes (Beisner, Haydon, & Cuddington, 2003; Gunderson, 2000).

The notions of adaptive cycle and system thinking contribute to organizational resilience considered as interconnected. The adaptive cycle considers that resilience is dependent on the phase of this system, connectedness and potential (Folke 2006). Proactive organizations are identified with resilience and do not have any other options that to follow adaptive cycles reflected in organizational development. Resilience is an adaptive cycle and panarchy considered as an alternative system between the different phases and cycles which are supported by aggregation and transformation of resources to create innovative opportunities.

Resilience is the system's capacity to prevent disasters and its adaptive capacity to absorb the impact and to recover once a disaster occurs (Gimenez et al. 2017). Resilience is a function of the vulnerability of a system and its adaptive capacity. Resilience is a vulnerability and adaptive capacity which can proactively manage and design the systems resilience in anticipation of shocks (Bhamra et al. 2011). Resilience is an adaptive capacity of a system to achieve priorities and goals aimed to absorb disruptions retaining service continuity (Boone et al. 2013)

Organizations embedded in wider ecosystems can retain, maintain, and renew resilience through adaptive cycles in response to ecological adversity. The organization highly dependent on ecosystem services is equipped to enhance low residual resilience, to cope a severe collapse of the ecosystem service, adopt organizational transformative changes, adaptation to build resilience, recover, and return to its original regime. The degradation of local socio ecosystems services affects the adaptive cycle of organizational resilience.

Socioecological and organizational resilience deterioration can lead to vicious cycles of adaptation. The lowest level of resilience is reached by the organizational system as its adaptability collapses and processes break down. As the organizational system is highly adaptable to external disturbances, resilience increases (Gunderson & Holling, 2002). When the system is in the exploitation phase of its adaptive cycle, it begins to build resilience to external conditions.

Definition of resilience is a function applicable to organizations in situation awareness, vulnerabilities, and adaptive capacity (McManus et al. 2007, 2008). Adaptive capacity is organizational resilience system (Seville et al. 2007). Resilience is the function of abilities and capabilities of adaptive capacity, awareness of situations, and management of vulnerabilities. Factors to enhance organizational resilience to be measured are the situation awareness, management of vulnerabilities, adaptive capacity, and resilience ethos (McManus *et al.* 2007; and Seville 2009). The attributes of organizational resilience are the situation awareness, adaptive capacity, and management of vulnerabilities.

Organizational resilience consists of situation awareness, management of vulnerabilities and adaptive capacity factors (McManus et al. 2008) leading to the development of new model based on planning and adaptive capacity and planning (Lee et al.; Stephenson, 2010). Resilience rebounds to previous and normal activities after a disruption, robustness to absorb disturbances, graceful extensibility to adaptive capacity and sustaining adaptability to future disruptions (Woods 2015)

The resilience construct takes a multi-disciplinary approach supported by domains of ecology, psychology, organization science and engineering focusing on adaptation to adversity (Martin & Sunley, 2015). Resilience in ecological systems is characterized as being flexible in adaptive capacity. In contrast, the engineering systems is more related to physical resilience as the ability to withstand forces without malfunction and deformation measured by robustness.

Resilience engineering is the ability to engineer resistant organizational systems to disturbances. Resilience engineering specifically focuses on the application of RAG analysis grid framework to the overall organizational resilience to make the necessary adaptations for the needs. Resilience engineering is a complex adaptive system that provide basics for the development of a resilience indicator (Huber et al. 2012).

The adaptive capacity of sociotechnical systems resilience is being modeled to understand the variability to ensure the systemic resilience dealing with synchronic and diachronic couplings (Hollnagel, 2014; Patriarca, Di Gravio, and Costantino, 2017; Ferreira, and Balfe, 2014; Hollnagel, and Fujita, 2013). The adaptive capability of the supply chain prepares for unexpected events and disruptions to

recover from them and maintain continuity of operations at the level of connectedness and control over the structures and functions (Ponomarov and Holcomb 2009).

Adaptive capacity is the ability of an organization to alter governance structure, strategy, management systems, decision making capabilities and operations to withstand disruptions and perturbations, as the concept at the core of organizational resilience methodology (Starr et al. 2004). The focus of organizational resilience management are the elements of building awareness, select the components, self-assess, identify, and prioritize vulnerabilities, and enhance adaptive capacity. The concept of adaptive resilience capacity embodies the adaptation of humans to cope with different scenarios to ensure safe productivity of the system. The human resilience plays a crucial role to maintain the capabilities of a system.

Organizational resilience is defined by McCann *et al.* (2009, p. 45) a subset of adaptive capacity, as an amount and variety of resources and skills possessed and available for maintaining viability and growth relative to the requirements posed by the environment. Organizational resilience is the process of linking adaptive capacities to outcome (Sun *et al.* 2011). Organizational resilience abilities structure a domain-dependent framework at different levels of abstraction as a resilience analysis grid to identify the systemic weaknesses and strengths to increase the adaptive capacity.

Organizational resilience is an emergent property of adaptive qualities and capabilities that enable the organization's adaptive capacity during turbulent periods. Resilience is a detection as embedded intelligence, perception and awareness of vulnerabilities, and activation processes of organizational and operational flexibilities, an emerging property related to inherent and adaptive capacities in turbulent times (Burnard and Bhamra 2011).

The organizational resilience attributes are the situation awareness, management of vulnerabilities and adaptive capacity. Organizational resilience is a situation awareness, management of keystone vulnerabilities and adaptive capacity (McManus *et al.* 2007). The assessment of vulnerability as part of the resilience management process contributes to enhance the situation awareness, the development of an adaptive capacity for more tangible outcomes aimed to take ownership and improve organizational resilience. Assessment of decision-making process at strategic and operating levels based on adaptive cycles of organizational resilience to respond and adapt to the adversities that have an impact upon the organization

There are difficulties to assess the nature and magnitude of the environmental adversity affecting the resources and capabilities experienced by organizations to adapt and maintain resilience (Kates, Travis, & Wilbanks, 2012; Linnenluecke & Griffiths, 2010). The conceptual domain of organizational flexibility as different of organizational resilience is the combination of a repertoire of organizational and managerial capabilities that allow organizations to adapt quickly under environmental shifts (Hatun and Pettigrew, 2004, p. 239). The type of managerial characteristics determines organizational resilience as the process to link adaptive capacities and outcomes (Sun et al. 2011)

The evolutionary perspective of organizational resilience refers more to adaptive processes (Bento and Garotti, 2019; Carlson, 2018; Grabowski and Roberts, 2016; Johnsen, 2012; Skjerve et al., 2012; Tveiten et al., 2012). The adaptive resilience based on selection, variation and retention is an evolutionary process that leads to the ability to withstand disruption, maintain configuration or to develop a new configuration that fits the new environmental conditions (McCarthy et al. 2017). Recovery, adaptation and renewal as an independent constructs are separated from the change domain to be considered as organizational evolvability by Kantur and İşeri-Say (2012)

From a social systems perspective, the aggregated capacity of individuals makes up the organizational resilience is reflective of the potential for adaptive responses (van der Vegt, Essens, Wahlstrom, &

George, 2015). From the sociological perspective, organizational resilience is the adaptation processes to cope with internal and external stressor. Resilience inoculations in response to stress can be installed beyond the adaptive capacity to anticipate future strains.

The theoretical frameworks must be translated from empirical data to practitioners to offer guidance for the building and development of resilience capabilities that enable to respond to threats, navigate through strategic and resource collapse and adapt to new environmental conditions of the organization.

The theoretical framework of resilience metatheory (Richardson 2002) from a sociological perspective is based on the individual deployment of adaptive processes within organizational systems. The organizational resilience metatheory framework proposed by Richardson (2002) is based on variables associated to leadership attributes and behaviors that affect the adaptation of organizational systems. Personal and individual resilience is associated to organizational resilience supported by the explanations of metatheory and found to be relevant for organizational adaptation and survival to external and internal forces of change.

Creating organizational adaptive capacities to enhance organizational and societal resilience, immediately after an unforeseen disaster and following an increase, leads to propose adaptive features (Weick, 1993; Kendra and Wachtendorf, 2003; Mallak, 1998). Organizations focused on resilience adopt adaptive capacities for proactive responses in the face of unforeseen disruptions. Organizations experiencing lower resilience display also lower adaptive capacity, lack of creative and flexible decision making and poor interactions and relationships.

The organizational resilience indicators can help to assess the adaptive capacity to the demands of an emergency or disaster. Servant leadership and culture create the adaptive capacity identified by indicators of leadership, staff engagement, situation awareness, decision making and innovation and creativity.

Resilience is measured based on organizational vulnerability, adaptive capacity, and recovery ability (Sanchis & Poler 2013). The potential of organizational resilience can be measured based on the attributes and factors organized in levels (Somers 2009; Mallak 1998) such as situation awareness, management of vulnerabilities, adaptive capacity, and quality (Van Trijp *et al.* 2012a; Van Trijp *et al.* 2012b).

Regarding multidimensional measurement scales focused on the resilience engineering is proposed by New Zealand Resilience Group, (Stephenson 2010, based on McManus *et al.*'s (2007, 2008) early case studies, analyze different factor structures and identify a second-order construct with two first-order reflective constructs is latent and reflective with two first order constructs, adaptive capacity and planning strategies. Also, the multi-dimensional measurement scale of Whitman *et al.* (2013) based on McManus and the New Zealand Research Group and short scale for measuring organizational resilience propose the dimensions of adaptive capacity and planning strategies.

Resilience requires the ability of planning in advance of interruptions and the organizational capacity to absorb the impact of a threat and adaptation thereafter (Sutcliffe and Vogus 2003). Capacity and vulnerability are determinants of organizational resilience to be adapted to a threat in the absence of planning in organizations (Bhamra, Dani, and Burnard, 2011) and the enhancement of resilience in communities and societies supported by the role of social networks (Aldrich, 2012). The spatial locations, industry sector, political, regulatory, socioeconomic and community factors influence the organizational resilience and adaptation (Linnenluecke *et al.*, 2010).

A resilience measurement scale based on planning and adaptive capacity measured with 13 indicators which was reduced for assessment with 13 items (Stephenson 2010; Whitman *et al.* 2013). The multidimensional measurement scale proposed by Mafabi *et al.* (2012) considers measurement scale for organizational resilience, one score for OR construct, latent, reflective, second-order construct, three

first-order constructs organizational adaptation, organizational competitiveness and organizational value. However, is not clearly specified relation of the identified factors to the abstract, second order, and based on conceptualization before analysis, it seems to be understood as an aggregate construct (through multiplicative function); discussion is later dropped.

ORGANIZATIONAL RESILIENCE STRATEGIES

Resilience is a capacity and adaptive process of an organization addressing strategic challenges through responsiveness, reinvention, organizational renewal, and strategic agility.

The benefits received from organizational resilience are the strategic adaptability, robust governance, and agile leadership. Resilience may be a coping strategy collectively associated with adaptive organizations (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007; McDonald, Jackson, Vickers, & Wilkes, 2015; Wei & Taormina, 2014). From the strategic perspective, McManus (2008) organizational resilience is formed by the factors of awareness, management of vulnerabilities and adaptive capacity.

Organizational resilience is influenced by the power based on shared responsibilities, expertise employee stock ownership and involvement in strategic decision-making (Lampel, et al. 2014) because they foster the adaptation capabilities development. Organizational resilience is the ability to anticipate and adapt to critical strategic shifts (Marwa and Milner, 2013). The adaptive activities build the strategic capacity for organizational resilience in the context of flexible rules to focus on the building blocks.

Organizational transformation and adaptation strategies can enhance the socio ecosystem services. Alternative assumptions to adaptive fit are required to deal with change and a robust transformation that creates capabilities and enables environmental change (Lengnick-Hall and Beck 2005). The implementation of organizational resilience strategies strengthens the adaptive capacity (Lee et al., 2013). The level of residual organizational resilience determines the transition into reorganization. If the organizational residual resilience is high, the organization design, implement and modify adaptation strategies aimed to recover and resume the operational regime as it was before the risk posed by an ecological adversity in an altered environment.

If the level of organizational residual resilience is low and the ecological adversity is severe, the design and implementation of recovery strategies may shift towards a more impoverished regime difficult to reverse leading to cease organizational activities. The resilience strategic management processes consists of building situational awareness, managing vulnerabilities and adaptive capacity which improve resilience (McManus et al. 2008; Teoh and Zadeh 2013).

Organizational resilience and strategic technology-in-practice despite their different theoretical perspectives and domains, both integrate and create adaptability and change in organizational resilience using ICT influencing the environmental and human post disaster outcomes over disaster recovery. As a new form to enact strategic organizational resilience during periods of crisis, disasters and chaos, the use of ICT helps to adapt and modify existing routines or to create new ones. ICTs as one way to enact organizational resilience, to adapt and connected to resources in changing conditions to respond to critical situations after natural disasters.

Organizational resilience after a disaster can innovate, create, and adapt new routines with the use of ICT in such a way that can provide a framework in organization recovery. The multiple use of ICTs in emergency situations in the face of disaster contributes to organizational resilience while the digital

divide may have implications in adaptability, connectivity, and redundancy as an external availability in facilitating the organizational recovery.

Strategic technology use in practice in organizations adapting ICT use have some relevant implications to overcome obstacles presented by natural disasters, chaos and other unknown events. ICT builds and extends organizational communication networks, contributes to gather resources, affords flexibility to work routines at a distance that enables organizational resilience. Strategic ICT facilitates organizational connection, coordination, and context creation as the cornerstones of organizational resilience.

Anticipatory adaptation, structural changes, protection, dispersion and diversification of resources and infrastructure in societies exposed to extreme climate conditions can contribute to the formation and development of several strategic resilience capacities (Barnett, 2001; Wilbanks et al., 2007). A conceptual framework can be developed to strengthen the strategic organizational capacities for anticipatory adaptation and resilience to climate change and events of weather extremes.

Crisis response, organizational adaptation, and resilience have applicability to develop and deliver organizational responses to climate vulnerabilities and weather extremes events. Building anticipatory resilience and adaptation to climate change and weather extremes is linked to positive implications. Organizational ideologies reduce or enhance the organizational resilience and adaptation through their influence on climate change and weather-related disasters as well on the awareness and policy responses.

Crisis management strategic approach enhances organizational resilience and adaptation focusing on reactions to disasters and crisis situations and the mitigation of losses (Mitroff & Pearson, 1993; Mitroff et al., 1996; Smart & Vertinsky, 1984). A conceptual framework of organizational resilience and adaptation can be integrated with crisis management.

The stages of strategic organizational resilience are the anticipatory adaptation, exposure, recovery and restoration, post-impact of the organization's resilience, and future adaptation. Each stage has its own characteristics and implications. Anticipatory adaptation to climate changes and more severe weather extremes contributes to the creation of resources and capabilities to building organizational resilience. When the thresholds for organizational adaptation exceed the frequency, magnitude and abruptness leading to persistent effects of adverse impacts, the organizations require to adapt measures aimed to enhance the organizational resilience.

SMEs resources and business model's challenge crisis events leading to organizational adaptation and resilience (Battisti and Deakins, 2017; de Vries and Hamilton, 2017). SMEs resilience in crisis management focuses on the identification on factor contributing including the experiences of crisis and post-crisis adaptations (Battisti and Deakins 2017; de Vries and Hamilton 2017; Doern, 2016; Herbane, 2013; McGuinness and Johnson, 2014; Spillan and Hough, 2003).

Development of organizational adaptation and resilience capacities could become strategically prepared to be applied in disaster and crisis management to counter the effects of weather variabilities and climate change. Anticipatory adaptation to strategic organizational resilience considers the projected possible changes in climate and weather patterns to strengthen the organizational capacities for long-term adjustments.

The increasing intensity, variability and severity of the weather extreme events demands organizational resilience and adaptation to the ecological discontinuities. To respond to adverse events from natural ecological adversity, organizations can manage their resilience by developing an ability to cope and adapt with the uncertainties of operating environments.

Building strategic organizational resilience and adaptation to the effects of climate change vulnerabilities and weather extremes variabilities, organizations must address issues and concerns on natural

environment for transition paths from carbon intensive towards lower-emission technologies (Winn & Kirchgeorg, 2005, Pinkse & Kolk, 2010).

CONCLUSION

After a sudden disorder and chaos, organizational resilience provides long term strategic renewal through responses, recovery, and adaptation. Resilience is a relatively stable quality that adapts the organization to recover and return to its original equilibrium from a crisis, disaster, or discontinuity events. Resilience is the organism and system's capability to bounce back, adapt and respond when facing adversity. The ability to undertake adaptation is central to the resilience capability of the system as the need to sense for change and enact the transformation. Organizational resilience has an emphasis on survival, bounce back, adaptability and development under any disruptive event. The organizational resilience ability withstands and adapts to disruptive and adverse conditions that threaten the organization survival.

Conceptualizations, methods, and measures of organizational resilience rest in the ability to respond, reorganize and communicate to situations across periods of rapid change, unexpected events, disasters, and chaos and to adapt creating new solutions. Resilience in organizations focuses on assuring security, safety, adjustment, adaptation, and effectiveness necessary for the organizational system, operations, and network environment

Organizational resilience is the ability to anticipate, prepare for, respond, and adapt to incremental change and sudden disruptions to survive and prosper. Organization-theoretical approaches offer insights that contribute to provide a framework to be used for organizational resilience management and adaptation against climate changes, weather extremes and ecological discontinuities. Organizational resilience adapts rules and practices to be applied to survive the adverse conditions when the strategy is failing and resources becoming more unstable, although there are several and different options that reflect the different realizations of resilience capability.

Organizational resilience is measured in terms of adaptability and flexibility in a systematic approach and methods to address the specific threats and achieve an impact on time and the capacity of recovery. The overall resilience of the system is categorized by its impact of functions of mitigation, response and adaptation and recovery. The performance measures of organizational resilience and adaptation may capture preparedness to absorb and deal with the exposure to climate change and weather extremes.

Organizational resilience is closely related to organizational culture adaptability and contribute to enhance the level of motivation.

Communities can develop unique concepts, approaches e indicators to resilience such as the ability to adapt and be flexible to threats. Ecological communities with the ability to adapt new threats enable resilience of the entire system and flexibility and the ability to withstand events.

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Chapter 6

COVID-19 and the Electricity Market: A Strategic Planning Framework for Sustainable Management in the Time of Crisis

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ABSTRACT

This chapter investigates the effects of COVID-19 on electricity consumption in some countries, especially in Iran. The effect of COVID-19 in the electricity industry and the amount of electricity consumption in Iran and in the countries that have been most affected have been studied. A study of COVID-19's impact on the world shows a reduction of about 15% in electricity demand during the short term of the COVID-19 outbreak. This amount varies from country to country. Studies show that the countries under study have experienced a relative decline in electricity demand in the short term, but with the continued prevalence of COVID-19 and the removal of some restrictions, the state of electricity consumption has more or less returned to pre-COVID-19 levels. It is worth noting that at the time of writing this chapter, the COVID-19 pandemic continues.

INTRODUCTION

Covid-19 pandemic is a pandemic of the SARS-COV-2 virus acute respiratory syndrome. The disease was first identified in December 2019 in Wuhan, Hubei Province, China. On 11 March, the World Health Organization announced the outbreak of the disease. The disease has swept the world in a short time and is still affecting it months later (Abu-Rayash & Dincer, 2020). Measures taken by governments to combat Covid-19 have directly impacted individuals' daily lives and most industrial and commercial manufacturing companies and their activities, and as a result, have severely affected the energy sector.

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The full range of consequences for the energy sector has not yet been revealed and is difficult to predict; however, it is clear that the demand for energy resources in the short term has declined worldwide. In this study, the Covid-19 pandemic's effect on electricity consumption in Iran and the world is examined by providing relevant statistics. Also, the damage that Covid-19 has caused to the electricity industry in Iran is discussed, and finally, suggestions for elimination are discussed damages are provided(Agdas & Barooah, 2020).

A large number of studies have analyzed the impact of COVID-19 on electrical systems. These can be grouped into documents that i) describe variations in electricity demand, ii) develop methodologies or statistical analyzes that determine the impact of the pandemic on electricity markets, iii) analyze the medium and long-term impacts of COVID-19 on electricity markets, and iv) study the impact of the pandemic on industrial electricity consumption according to its economic category(Bahmanyar et al., 2020).

The first group of descriptive studies is found (Moreno et al., 2020), which analyzes the impact of the different health policies applied in Europe to contain COVID-19. They exemplify six countries whose adopted measures have a different depth. In this way, countries with more restrictive policies such as Spain and Italy show large decreases in their consumption on working days, while in countries with softer measures, such as Sweden's case, it is observed that consumption has increased during the weekends. Likewise, Abu-Rayash & Dincer (2020) analyze changes in consumption variations in Ontario, distinguishing changes in demand patterns between pre-and post-pandemic periods.

Santiago et al. (2021) delve into the analysis of the Spanish case. For this, they analyze the decrease in demand, the decrease in CO₂ emissions, and changes in prices, considering the Spanish system operator's data. Besides, possible residential demand changes are analyzed, considering the variation in demand of a single private client located in Cordoba, corresponding to a four-person household. They also study how health centers have changed their consumption patterns due to the pandemic.

In line with the above, Snow et al. (2020) study the behavior of 17 households in Queensland, Australia. In this way, they identify that the increases in residential consumption are due to greater use of electronic devices and kitchen elements.

In the studies that develop methodologies to analyze the impacts of COVID-19 in the electricity markets, it can be found that in Norouzi et al. (2020), a neural network is proposed to study the elasticity of demand for electricity and oil according to the percentage of people infected by the pandemic. In Agdas & Barooah (2020), the pandemic's effect on the electricity demand in the United States is studied. One of the main challenges is that the consumption time series mixes the pandemic's effects with other effects such as climatic conditions. As a solution to this problem, it is proposed to apply regression models to separate the effect of climatic variables and thus isolate the effects of the pandemic. This methodology is applied to Regional Utilities that have all the clients' information in their service area.

On the other hand, Ruan et al. (2020) propose an interdisciplinary analysis to analyze the pandemic's real impacts in the United States. It has the Covid-19 Disease and Electricity Market Data Aggregation (COVID-EMDA) database containing information on electricity demand, health information, climate information, and mobility indices. Among others. With a backcasting methodology, the electricity demand is estimated in the absence of COVID-19. Thus, compared to this benchmark, the impact of the pandemic on electricity demand is quantified.

Another group of studies analyzes the prospects in the electricity markets. In Zhong et al. (2020), the impacts on demand are analyzed, highlighting a reduction in global demand and increased residential demand. Besides, it explains the impacts on the generation market and the increase in renewable generation participation. Similarly, Gillingham et al. (2020) analyze the short and long-term effects on the US

market based on consumption at the national level. Thus, a decrease in CO₂ emissions is expected in the short term because lower consumption has displaced generation from fossil fuels. However, in the long run, lower demand would reduce the incentives to invest in renewable technologies. Finally, Kanda & Kivimaa (2020) raises the opportunities associated with COVID-19 in the sustainable transition of Norway and Finland's electricity markets.

Finally, other studies have analyzed electricity demand changes in different industries according to their economic category. In the Brazilian market, in de Mello Delgado et al. (2021), the pandemic's impact on the electricity consumption of different economic sectors is analyzed. Thus, it can be deduced that the sectors most affected have been the automotive, service, and textile industries, with consumption drops of around 25%. In Leach et al. (2020), the impact of COVID-19 in different economic sectors and the different Canadian provinces is analyzed, highlighting the impacts on the oil industry and its associated electricity consumption. The vehicle manufacturing industry saw consumption declines of up to 60% in Ontario.

In summary, the latest studies on the impact of COVID-19 on electrical systems analyze how demand changes its consumption patterns, mainly from a systemic perspective. In Snow et al. (2020) and Santiago et al. (2021), they analyze the impact of the residential sector on the behavior of a group of households. Furthermore, some studies, such as Krarti & Aldubyan (2021) and Leach et al. (2020), disaggregate the impact of COVID-19 in different industries according to their economic sector. Along these lines, this article analyzes the impact of quarantines associated with COVID-19 on demand for electricity disaggregated by type of customer (residential, commercial, and industrial) in Chile. Besides, the impact of COVID-19 on the electrical consumption of different socioeconomic levels in Santiago, Chile, is analyzed.

The article's structure is as follows: The second part refers to the Covid-19's impact on global electricity demand based on the International Energy Agency's information. In the third part, Covid-19's effect on the electricity industry in Iran, especially the amount of consumption based on the management of Iran's electricity network in the short and medium-term, and the electricity industry's damage to Covid-19 discussed. The fourth part is related to the proposed solutions to improve the Covid-19's damage.

BACKGROUND

Impact of Covid-19 on World Electricity Demand

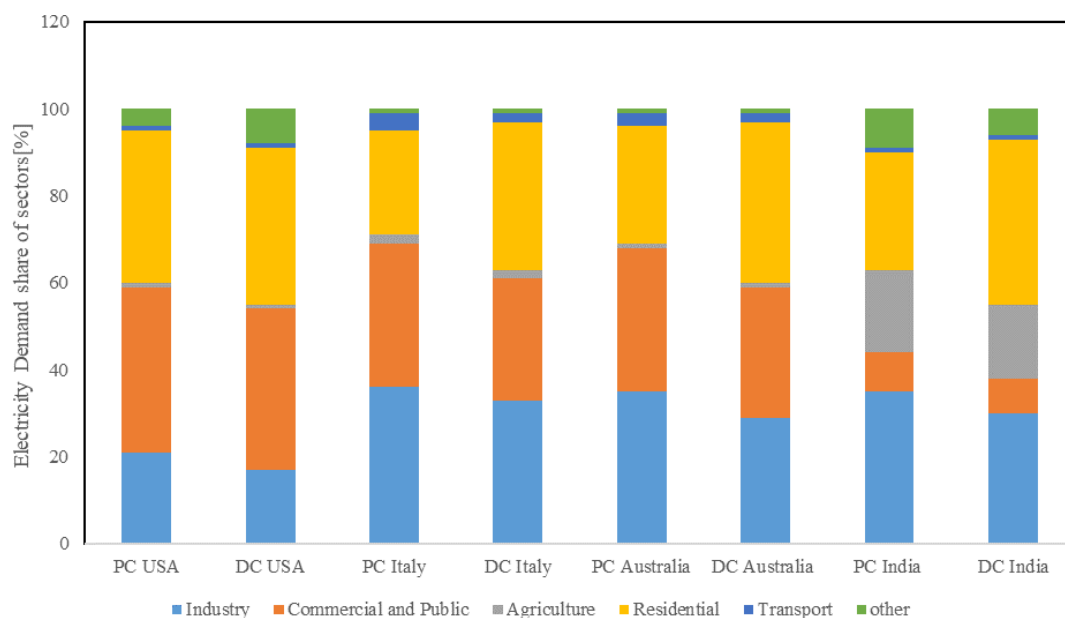
In this study, the effect of Covid-19 on electricity demand in different world countries has been investigated according to the statistics provided in various sources. In the short term, what has been observed globally is the reduction in electricity demand due to the implementation of social distancing plans and the quarantine and closure of industrial units. According to the International Energy Agency, electricity demand in most of the economies affected by the virus had decreased during the implementation of the restrictions, and declining demand for electricity reduced electricity prices in the market. However, with the continuation of the Covid-19 outbreak and the removal of some restrictions, the state of electricity consumption has more or less returned to the state before the Covid-19 (Lu et al., 2021). The burden of power systems can be classified into residential, commercial, and industrial types. These types of loads have a specific load pattern, and installation operators manage production accordingly. However, the burden of transportation and agriculture has also become a significant burden on the electricity grid. During the Covid-19 outbreak, the percentage of electricity demand for these sectors has changed; the

new load composition and its comparison with before the Covid-19 outbreak are shown in Figure 1 (Edomah & Ndulue, 2020). In general, in most cases, it is clear that due to quarantines during the Covid-19, the consumption load of commercial and industrial units has decreased, and the residential load has increased (Graf et al., 2020).

Impact of the Covid-19 on Electricity Consumption in China

The Covid-19 outbreak has reduced factory production in China, and this event in the Chinese industry has reduced energy consumption by about 5.1 percent. Last year, industrial users consumed 85.4 billion kilowatt-hours of electricity, accounting for 67 percent of their electricity consumption. Industrial productivity rates point to a sharp drop in electricity consumption in China. The industrial sector accounts for about 70 percent of China's electricity consumption, while the commercial and household sectors account for about 14 percent (Beyer et al., 2021; Mofijur et al., 2020).

Figure 1. The distribution of electricity demand load by major sectors in the USA, Italy, Australia, and India at the time of Pre-COVID(PC) and During-COVID(DC)



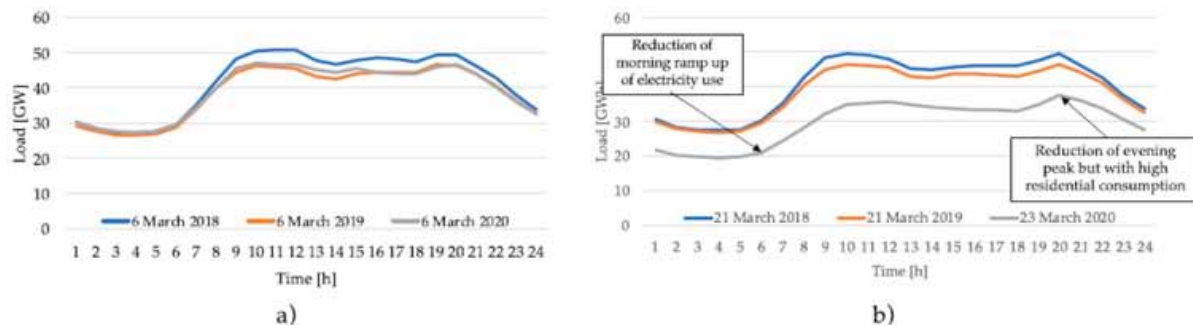
Impact of the Covid-19 on Electricity Consumption in Europe

Covid-19 outbreaks shut down much of Europe's economy during quarantine; People in business in Italy, Spain, France, Germany, and the United Kingdom were subjected to forced segregation and quarantine in their homes (Otoufat Shamsi et al., 2021). What is clear to everyone is that housing and the closure of businesses and educational centers worldwide have particularly affected energy consumption, carbon dioxide emissions, the green economy, and renewable energy. Reports indicate that electricity demand in most economies that have taken serious action in response to the Covid-19 outbreak has fallen by about

15 percent (Khurshid & Khan, 2021). Europe has seen record electricity prices during the quarantine. In many European countries, electricity prices have fallen. This is evident in the data provided by (Nord Pool, the market leader in Europe) and (HUP Hungarian Electricity Exchange) prices (Ghiani et al., 2020).

As mentioned, schools, offices, and factories across Europe, the United States, and some Asian countries were closed during the quarantine period, which caused many people to work from home, and this telecommuting increases home energy consumption, but still, Total consumption indicates a sharp decline. Statista, four database analysis, shows that electricity consumption in Italy at the peak hours of consumption on 8 April 2020, compared to the same day on 27, 2019, has decreased by one percent (Brown & Botterud, 2021). The reduction in power consumption during quarantine time is well illustrated. Figure 2 compares the electricity load changes during the day in three consecutive years, 2019, 2018, and 2020. In figure 2a, the figure is not a significant difference between the graphs due to the time before the quarantine restrictions, but in figure 2b of March 21 and 23, three consecutive years, the difference between the graph of 2020 and two years ago is quite obvious, regardless of Temperature differences and the effect of major economic factors on change can be attributed to quarantines (Norouzi et al., 2021a). The following daily electricity consumption curve in Italy for five consecutive weeks from 1 March to the first week of April 2020 is shown in Figure 3. In Figure 4, the same shape of the corresponding curves in 2019 and 2018 is shown. As can be seen, with the increase of quarantine restrictions, the amount of electricity consumption has gradually decreased, and in the graph compared to previous years, the consumption load graph has a significant decrease.

Figure 2. The comparison of daily electricity consumption load variation on (a) 6 March and (b) 20 March for the years 2018, 2019, and 2020 in Italy



Impact of Covid-19 on Electricity Consumption in the United States

The US Energy Information Administration (EIA) (Mamoon, 2020) daily electricity consumption statistics have been used to study electricity consumption changes in the United States. As shown in Figure 5, the graph for 2020 shows a decrease in consumption from late March to late June compared to the graph for 2019. After removing and reducing the quarantine restrictions, according to the decisions taken by the authorities. The power consumption situation has reached the state before the existence of the Covid-19 and is close to the 2019 graph.

Figure 3. Load profile of the year 2020

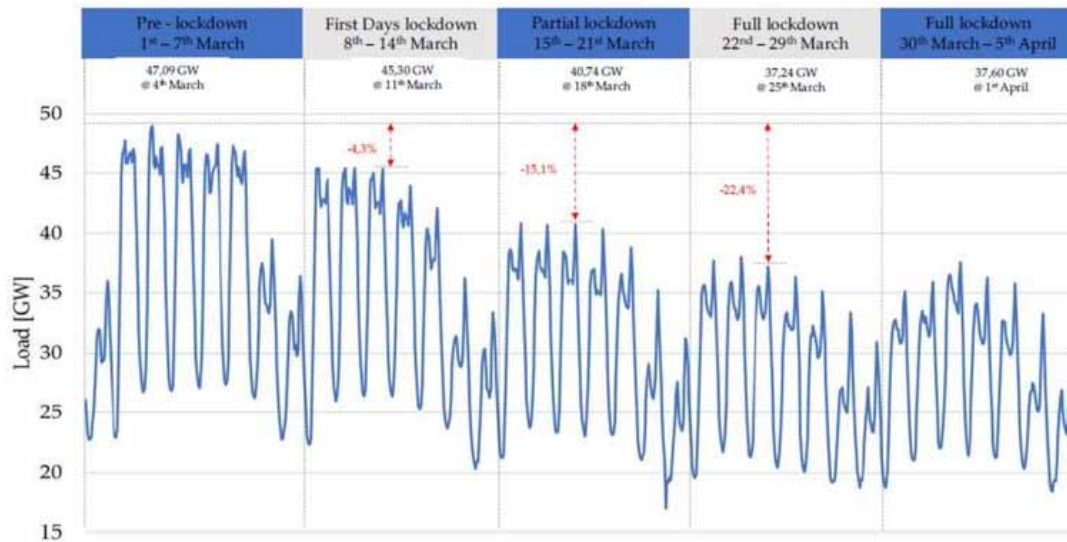
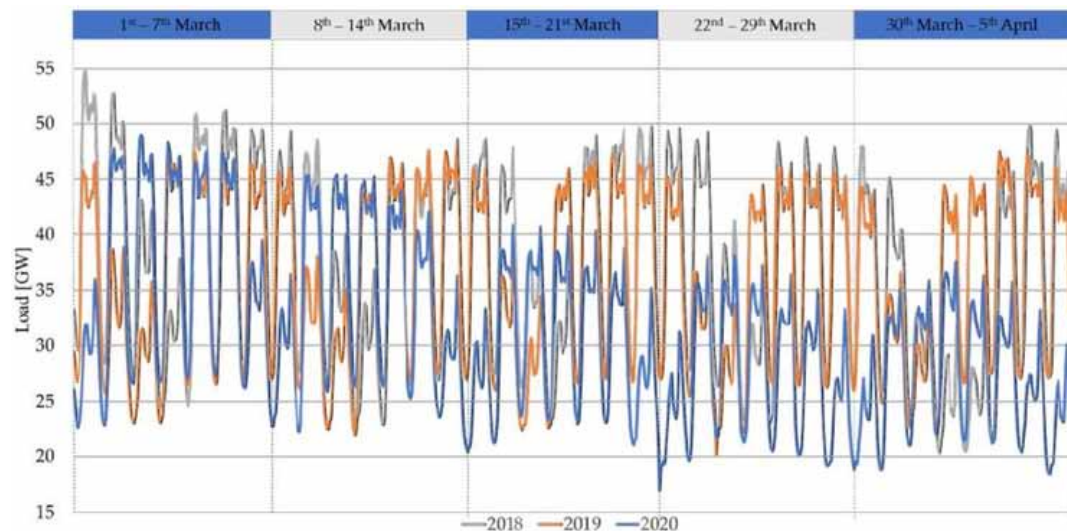


Figure 4. Load profile comparison for 2018-2020



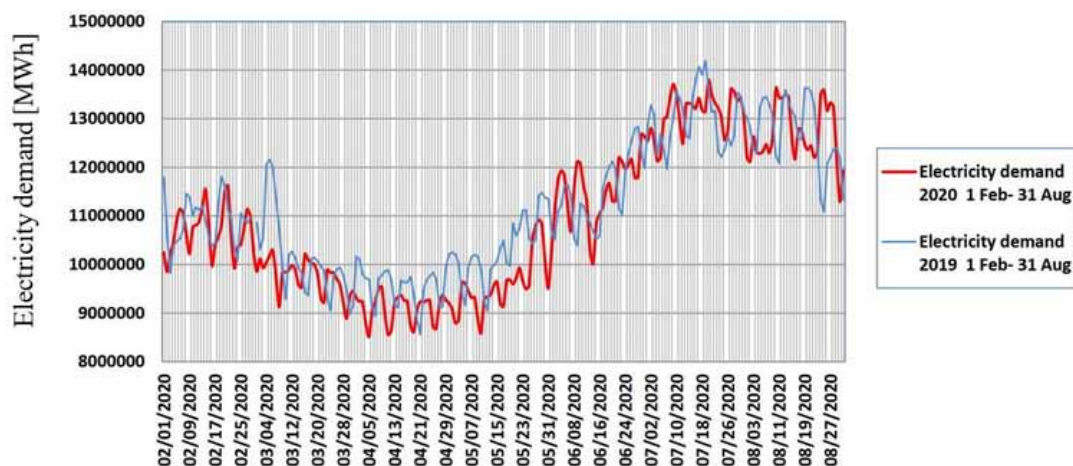
Impact of Covid-19 in New York City During the Quarantine

Given the different prevalence of the disease and the application of quorums in different US states, this issue is specifically examined in New York City and the graph of daily changes in electricity demand in the study period for New York City using the information of the US Energy Information Administration website of EIA is shown in Figure 6. As can be seen, the decline in demand in New York is from mid-February to about the end of April 2020, which coincides with the quarantine period. In this graph, the return of demand to the previous year's changes after eliminating quarantine is evident. Figure 7

shows the hourly changes in the average monthly electricity demand of New York overnight in February, March, and April 2020 and is compared with the corresponding values in terms of temperature compared to 2019. It can be seen that with the imposition of quarantines in New York, the real demand for electricity has decreased compared to the expected amount of the previous year. Of course, as the chart below shows, this decline has not been uniform, and the biggest difference between actual demand and expected demand is in the hours of the day that many schools and businesses before the Covid-19 outbreak. They were working normally but were shut down during quarantine (Klemeš et al., 2020). Therefore, it can be argued that the main cause of this reduction in consumption is the measures taken to combat the Covid-19 (Zanocco et al., 2020).

The US Energy Information Administration (EIA) analyzes electricity demand data for 64 major US grid areas. It combines these data with data from the National Oceanic and Atmospheric Administration (NOAA) (6 on ambient temperature per hour, electricity demand per hour per day). For all days of the week (excluding holidays) from 2020 to 1 May, compared to the average demand for all isothermal samples (as temperature-comparable demands) in 2019. According to the survey, New York City has the largest difference in electricity demand. In April 2020, compared to temperature-comparable demand due to the Covid-19 in 2019, from 7:00 to 11:00, it was evident that electricity demand was 22% lower than expected, as shown in figure 7 below. From 11:00 a.m. to 6:00 p.m., the difference is about 20 percent, the deviation from the forecast demand gradually decreases in the evening and reaches 10 percent by midnight, the difference decreases in the last hours of the night and from midnight to 4 p.m.: 00 in the morning, deviation from demand comparable to the temperature at its lowest and It is calculated at about 7% (Vinardell et al., 2020). This is because most people are normally asleep during these hours. Patterns of electricity consumption in these conditions are very similar to a snowy day in the United States with relatively heavy rainfall. On snowy days, the peak consumption, which usually occurs in the early morning hours, is shifted to noon due to a decrease in demand from commercial consumers and increased home subscribers' consumption (Chang et al., 2020).

Figure 5. The comparison of USA daily electricity demand variation from 1th Feb. to 31th Aug. in the years 2019 and 2020



COVID-19 and the Electricity Market

Figure 6. The comparison of New York daily electricity demand variation from 1th Feb. to 31th Aug. in the years 2019 and 2020

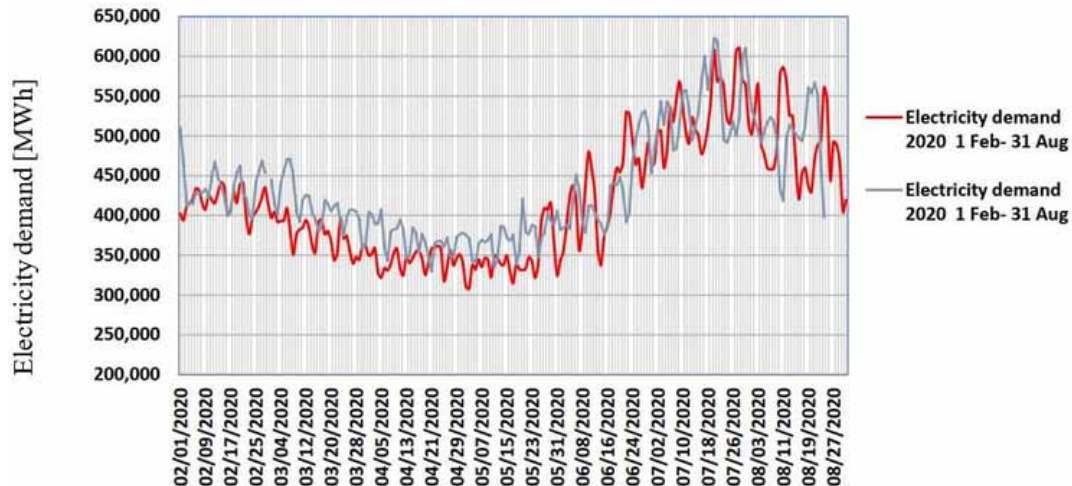


Figure 7. New York city's hourly profile of monthly average weekday electricity demand on February, March, and April in 2020 and the comparison with the corresponding value of 2019 (thousand-megawatt hours)

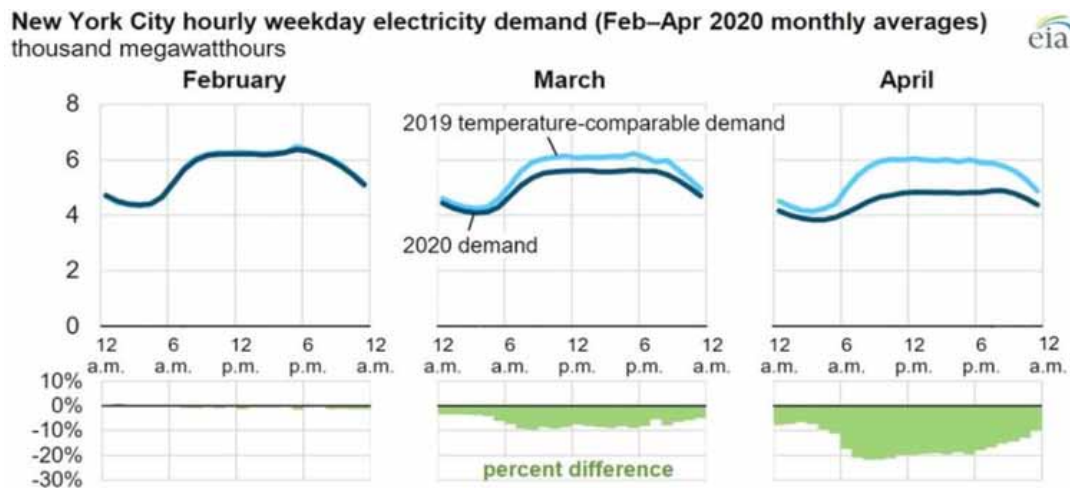
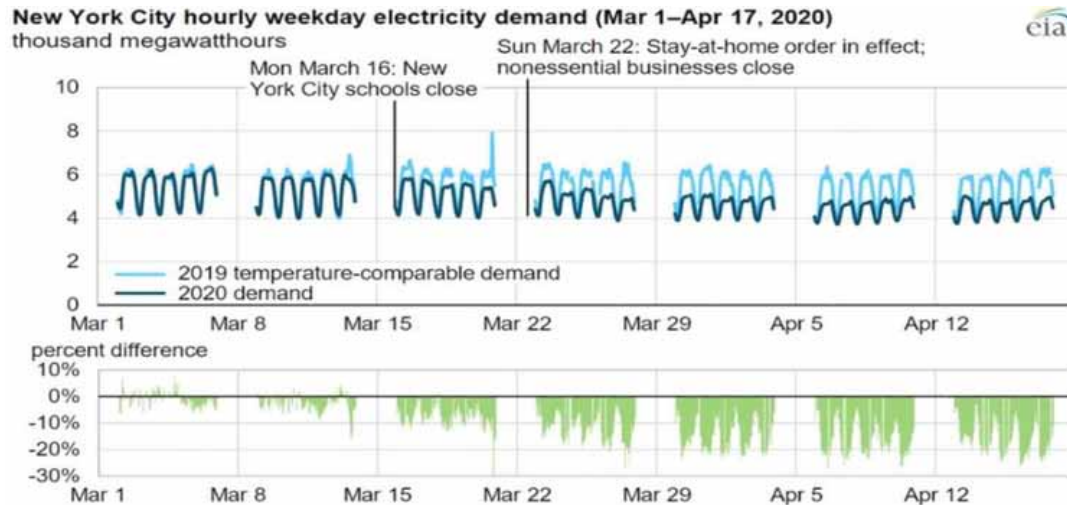


Figure 8 shows the changes in demand from 1 March to April 2020 in consecutive weeks in New York, which over time and with increasing quarantine restrictions, the percentage of demand decline has increased. “Studies show that New York City officials’ response to the Covid-19, especially the closure of schools and offices, has reduced electricity consumption by 16 percent compared to the month before quarantining in the state (Chofreh et al., 2020).”

Figure 8. New York city's hourly profile of weekday electricity demand from 1th Mar to 17 April of the year 2020 and its comparison with the corresponding value of 2019



Impact of Covid-19 on Electricity Consumption in India

On the first day of the quarantine in India, which was held to prevent the further expansion of COVID-19, its electricity consumption was reduced to a minimum (Lu et al., 2021). Of course, this is different in different states. High air temperature during quarantine is also effective because heating the air leads to increased energy load due to cooling sources. However, on the first day of the initial three-week holiday set by the Indian authorities to combat the Covid 19 outbreak, the country saw a reduction of 2.78 billion units in electricity consumption, which, according to the analysis, was almost 20 percent lower than the average of 3 billion. And 45 million units are projected for the entire three-week period. The decline comes as India's widespread recession has led to India's largest use of force over the past 12 years (Graf et al., 2020). Although some Indian states have seen a 40 percent drop in energy consumption since the quarantine began on 25 March, there has been no reduction in consumption in its most populous state, Uttar Pradesh. Even though there was no traffic on this state's streets except freight forwarders, electricity consumption was about 3.4 percent more than the average energy consumption. This increase probably uses air conditioning systems and other household appliances, as India was facing rising temperatures during the quarantine. On the other hand, according to the received reports, some industrial weavers located in East India, which do not need a large number of workers to continue their activities, despite the sensitivity of the issue and the strict order for closure, operated at night, which increased electricity demand becomes commercial consumption (Zhou et al., 2021).

IMPACT OF COVID-19 ON ELECTRICITY INDUSTRY IN IRAN

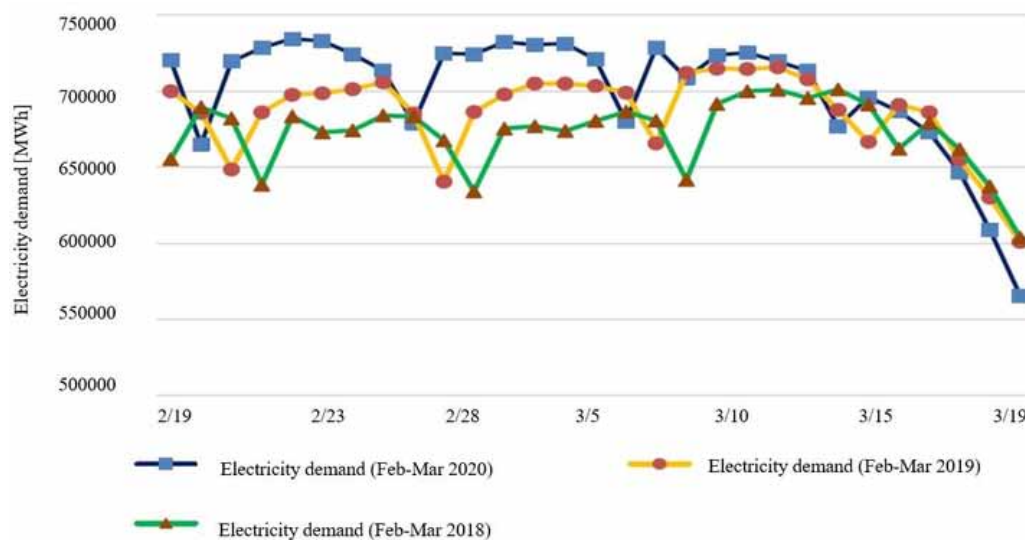
Iran's electricity industry, like other countries, has been affected by the Covid-19 pandemic. According to a study conducted by the Research Center of the Islamic Consultative Assembly (Norouzi & Fani,

2020), the effect of the Covid 19 virus on electricity demand in Iran can be examined from two dimensions: The prevalence of this disease has affected electricity consumption in the short term, and another is the study of changes in its demand in the medium term.

Impact of Covid-19 on Short-Term Electricity Consumption in Iran

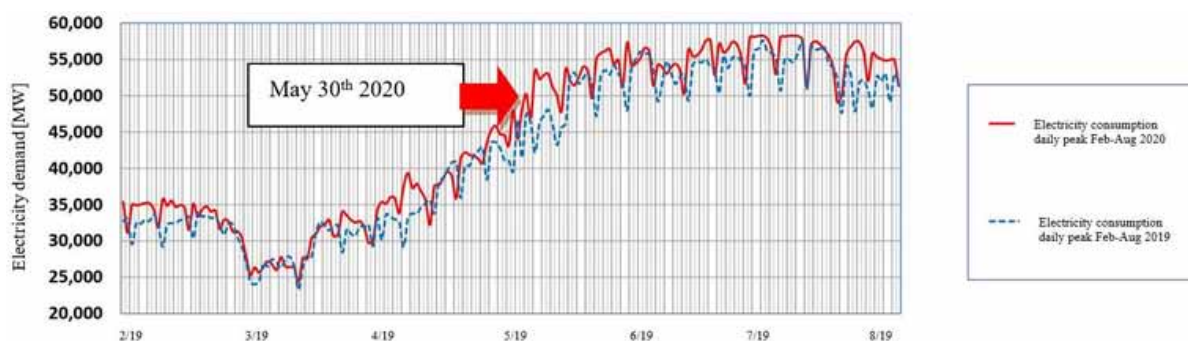
According to the Islamic Consultative Assembly's Research Center, Figure 9 shows electricity consumption statistics at purchasing companies from March 2018 to 2020. This variable is the amount of electricity measured (recorded) in the meters approved by the Iran Electricity Grid Management Company at the location of regional electricity purchasing or distribution companies. If network losses are ignored, this variable can be a representation of total electricity consumption per day. The trend of this variable in the second half of March 2020 compared to the first half of March of this year, compared to the same trend for March 2020 and 2019, can indicate the negative effect of Covid-19 on electricity consumption. As can be seen, the decline of this variable in the second half of March 2018 at the same time with the widespread prevalence of this virus has been more severe than the previous two years. While from the beginning of March to the end of the first half, the chart related to 2020 is much higher than the last two years, consistent with the growth of electricity demand based on the general statistics of 2020 compared to 2019. Calculations show that the average energy consumption in purchasing companies in the second half of March 2020 compared to the first half has decreased by 5%, while in 2019, this amount was only 1.1% (Norouzi & Fani, 2021a). This means that with the spread of the Covid-19, electricity demand has decreased compared to expectations.

Figure 9. Comparison of Iran daily electricity consumption variations on March in the years 2018, 2019 and 2020



Considering that the report prepared by the Research Center of the Islamic Consultative Assembly, considering the time of its preparation, was limited to reviewing electricity consumption until the end of March, in this article, it was decided to review further the process described in the report. August 2020, which includes the time of full quarantine and, after that, in Iran, to be analyzed. For this purpose, the daily consumption statistics provided on the website of Iran Electricity Network Management Company have been used (Norouzi & Fani, 2021b). Due to the lack of statistics related to the total daily electricity demand on the site, only the daily peak (peak) values are presented, which is used to represent daily consumption because this analysis aims to examine consumption changes (Norouzi et al., 2021b). It is considered over time compared to the previous year's corresponding time and shows these changes' peak values. Electricity consumption in Iran has two peaks that occur around the clock. The first peak usually occurs around 11 a.m to 2 p.m., which is related to the peak of commercial and industrial consumption and offices, and the second peak is around 6 p.m to 9 p.m, depending on the season, which is related to electricity use for lighting and home use. To study Iran's electricity consumption during the quarantine period and after, the daily peak consumption statistics in Iran from 1 March 2020 to 31 August 2020 have been extracted from the relevant site and the corresponding statistics last year to compare changes in consumption trends and the graph is shown in Figure 10. What can be seen in the graph of daily peak electricity consumption until the end of August 2020 is somewhat similar to the trend that was reviewed and proposed by the Research Center of the Islamic Consultative Assembly. As can be seen in the graphs until the end of mid-March, the difference between the graph for 2019 on most days and the previous year is significant, which is reasonable considering the increase in demand compared to the previous year because the change curve for daily electricity consumption is expected in each The year compared to the previous year, due to the increase in expected demand, shows the growth of values and is above the previous year's graph. Still, with the greater prevalence of Covid-19, the light graph approaches the dark graph, and the demand gap with the previous year decreases. It continues until the end of April, to the point wherein some places the two graphs intersect. But with the end of quarantine and the reopening of most jobs, we see an increase in the charts' gap. It should be noted that the peak changes in electricity consumption depend on various parameters such as temperature, etc. Still, by comparing and examining this year's peak changes with last year in 6 months and approaching two graphs in a period corresponding to the quarantine time can be concluded that the decrease in consumption observed in the period corresponding to the quarantine time in this year's chart is affected by the Covid-19.

Figure 10. Comparison of the electricity consumption during daily peak hours in the study period with the last year's corresponding value



Impact of Covid-19 on Electricity Consumption in the Medium Term in Iran

Studies have shown that in the medium term, with the reduction of the Covid-19 rate and the reduction of restrictions on economic and social activities, commercial and service activities will be reopened, and industrial units will emerge from the recession. Suppose this issue is accompanied by increased cooling consumption in the home sector due to the heating season's arrival and increased traffic. In that case, it can lead to a sudden increase in electricity demand, in which case electricity consumption will increase significantly compared to the same period in previous years. In the following, by examining the statistics, it can be seen that this issue has occurred to some extent. This year, the record of electricity consumption, contrary to previous years' routine, was hit in the summer, was recorded in the third month of spring. According to estimates, peak consumption in the first half of June increased by 12.8 percent compared to the same period last year, and since the beginning of the year, a 4.2 percent growth in energy consumption has been recorded in the country. Electricity industry analysts believe that the increase in home consumption due to housing on the one hand and quarantine and eight telecommuting platforms, on the other hand, has led to parallel electricity consumption at home and work and a record of electricity consumption before the beginning of summer 2020. Simultaneously with the continuous increase of air temperature in different parts of the country, the peak of electricity consumption has also taken an unprecedented upward trend. Estimates show that the country's electricity consumption has reached 53,502 MW, unprecedented in June's first half. According to the latest Electricity Network Management Company latest report, the country's daily electricity consumption has increased sharply this year and in the third month of spring, 42,185 MW last year and in the same period (Ghiani et al., 2020). This is quite evident in Figure 10 is indicated by an arrow. As can be seen, the graph changes in June indicate an early peak compared to the previous year. According to estimates, the difference in electricity consumption on 10 June this year with the same period last year has reached eleven thousand and 317 megawatts.

According to a spokesman for the electricity industry, the average temperature has risen by one degree Celsius, which has led to an increase in cooling devices and an upward trend in electricity consumption. The amount of electricity consumption in the industrial sector reached 4,293 MW on 10 June, which has decreased compared to the previous day, which was 4,898 MW; Thus, it can be said that electricity consumption in the home and office sector has increased due to the use of more cooling devices and has snatched the lead from the industrial sector in this period. The increase in consumption in the domestic sector came when economic and industrial activities, which had been halted due to the spread of Covid-19, were previously expected to accelerate. Due to the unprecedented increase in electricity consumption in the third month of spring, the power plant reserves reached their lowest level of 552 MW on 10 June, and the production of electricity from renewable energy and electricity efficiency was 212 MW. Experts in Iran's electricity industry believe that the change in electricity consumption is due to several parameters: The first parameter is that this year the air has warmed up earlier in the summer, and the temperature has increased more than in previous years. As a rule, this issue will have a significant effect on increasing electricity consumption. The second parameter that has effectively increased electricity consumption is increasing housing and a new activity called telework. Studies show that going out is much less, and this issue has caused people who were at work daily (morning to afternoon) and did not use home electricity during this period to be added to the group of electricity consumers in peak consumption. Employees will have twice the electricity consumption due to telecommuting by being present at home and offices simultaneously. This has led to parallel electricity consumption

at home and work, and instead of eliminating one side of consumers (offices or homes), especially at noon, being at home has led to parallel consumption and demand for electricity on both sides. The third influential parameter is telecommuting platforms, the consumption of which is not very significant, but in the country as a whole, it can be a significant number. Here again, two parallel uses are formed. You need to have a platform at home and a platform at work. The combination of these three cases has made electricity consumption in June show itself as follows. Regarding the increase in electricity consumption, experts believe that the condition of hydropower plants is good this year, and the rains that occurred in the last water year and this year have made it possible to use the capacity of hydropower plants in orbit as the main arms of electricity supply (Zanocco et al., 2020). In general, in the medium-term analysis of Figure 10, it is concluded that with the adjustment of restrictions and reopening of jobs, the electricity consumption in Iran, as seen in the same graph in the US, has returned to pre-Covid-19 virus status and an expected consumption increase compared to the previous year is observed, and the graph of 2020 is located at the top of the graph of 2019.

Covid-19 Damage to Iran's Electricity Industry

In a report, the Iranian Electricity Industry Syndicate, while evaluating the economic effects and statistical analysis of the losses caused to this industry due to the Covid-19's spread, has presented the Ministry of Energy issues Tavanir Company. In this statistical analysis, which was prepared using quantitative risk assessment technique, it was emphasized more than anything that the economic conditions of supply chain companies, including contractors, consultants, and manufacturers, and due to non-timely payment of claims to The severity of the disease and the prevalence of Covid-19, which has limited and stopped the normal activities of society suppliers of equipment which has limited and stopped the normal activities of the society, has made the industry more vulnerable. In a statistical-analytical report, the Vice President for Research and Planning of the Electricity Industry Syndicate of Iran examined the "economic effects of the Covid-19 on the electricity industry and strategies to deal with its negative effects and solutions the production jump in the electricity industry." According to the obtained results, Covid-19 through five channels: "Damage to electricity industry construction projects," "Damage to electricity supply companies," "Damage to export and import of electricity industry," "Grid instability and blackout," and "Exacerbating liquidity problems and tightening debt chains" will hurt the electricity industry's economy (Khurshid & Khan, 2021). The issues, as mentioned earlier, are discussed in the following bullet points:

- A- Damage to electricity industry construction projects: With the outbreak of Covid-19 and the adoption of social distancing policies and legal restrictions, the volume of executive activities is practically decreasing, and as a result, ongoing projects are delayed; Preliminary estimates indicate that the supply chain and construction of infrastructure projects in the electricity industry will face a financial loss of at least 3 trillion toman.
- B- Losses on electricity supply chain companies: The occurrence of Covid-19 has reduced the volume of production and stopped the production units, contracting, and consulting, and estimates indicate that production units will face temporary closure and will suffer at least one thousand billion in this area. Tomans will be lost; also, due to the closure and cessation of activities, the risk of downsizing and a wave of unemployment in the electricity industry increases.

- C- Losses on the electricity industry's export and import: With disease outbreaks and disputes, and cessation of trade, the electricity industry is also disrupted. According to electricity industry experts, industry imports are expected to lose \$ 20 million, and industrial exports lose \$ 10 million.
- D- Grid instability and blackouts: With the disruption of the electricity industry infrastructure development process, experts predict that next year with a probability of up to 30%, the power grid will be unstable, and we will face blackouts; This is especially important for critical departments such as hospitals, service centers and vital arteries in cities(Behzadi Forough et al., 2021).
- E- Exacerbation of liquidity problems and debt chain intensity: Delays in private sector claims of companies affiliated with the Ministry of Energy and Tavanir Company in a situation where the outbreak of Covid-19 has caused harmful economic consequences for business activists, led to closure and bankruptcy of manufacturers and contractors in the electricity industry. And the crisis caused by this trend can affect workers and employees of companies who have not received their salaries for several months. Despite the disruption of economic activities caused by Covid-19 in the country's industries, the payment of bank debts, social security insurance, and taxes must be done, and this issue puts additional financial pressure on the liquidity of firms while their incomes have stopped. The electricity industry economy may suffer direct and indirect losses due to delays in bank debts, social security insurance, and taxes (Chang et al., 2020).

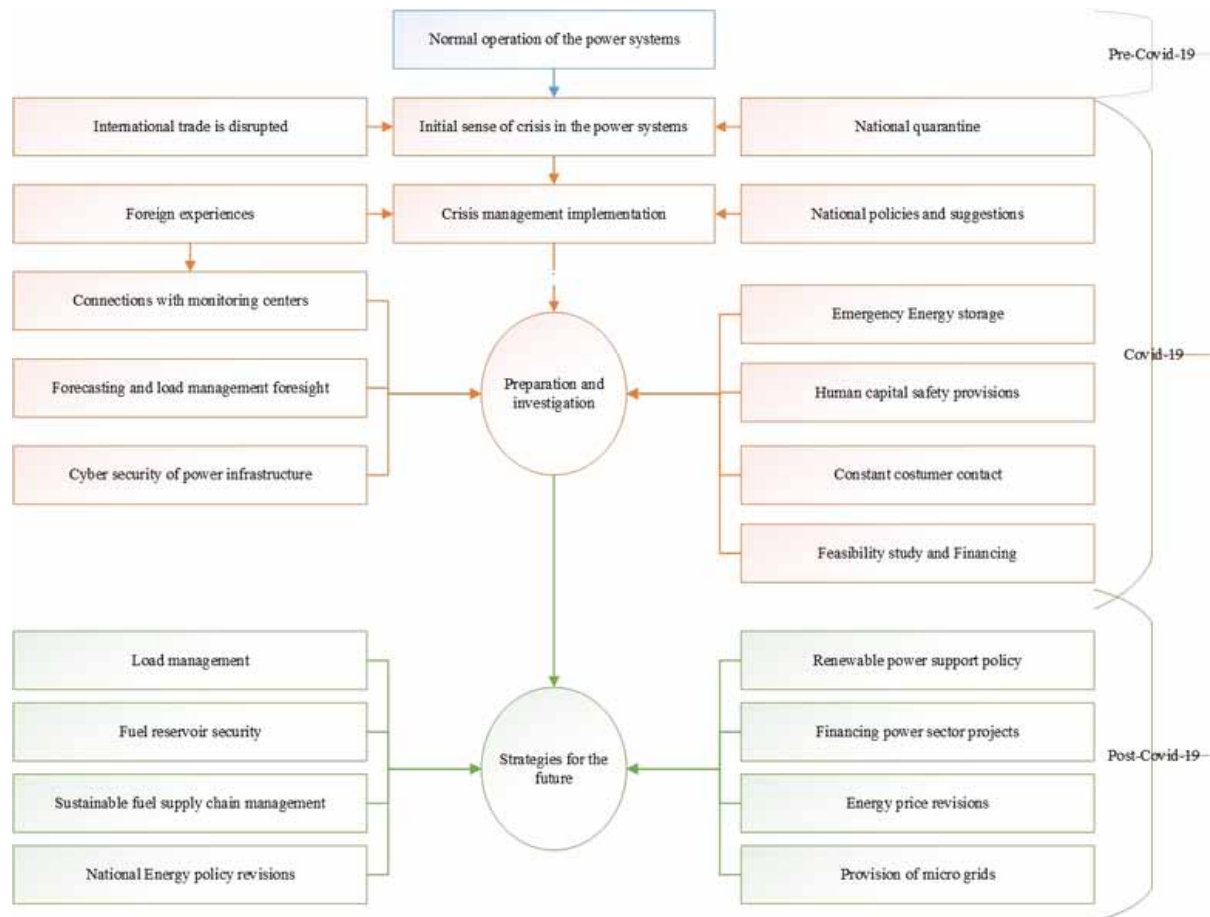
Strategies to Manage the Electricity Industry in the Period of the Healthcare Crisis

The following figure has been prepared using the US government's global solutions to manage the energy crisis's Covid-19 crisis. This figure refers to managerial actions during and after the COVID-19 outbreak(see figure 11).

Due to the Covid-19 pandemic, there are support measures related to the electricity industry based on global experience. Studies show that actions taken in other parts of the world for the electricity industry in the Covid-19 crisis can be divided into the following three categories:

- A- Payment of electricity: help pay the bills of home subscribers only for the target groups; In the form of discounts, avoidance of late fines, and non-interruption of electricity in case of non-payment of electricity.
- B- Monitoring the operating conditions of the network: The following can be mentioned:
 - Determining the necessary conditions for the suspension of operating laws based on the electricity market rules and competition rules.
 - Arranging an agreement between the electricity market stakeholders so that the system security restrictions are observed without considering economic costs in system instability.
 - Determining extraordinary and emergency conditions for lack of sufficient resources and considering island operation of the network.
- C- Manpower health concerns in the electricity industry (Norouzi & Fani, 2021c): Manpower health concerns include the following:
 - Develop guidelines for coordination between human resources, staff planning, and management,
 - Execution of educational programs

Figure 11. Recommendations on operational and political-oriented management in the Energy sector at the pre-Covid-19 situation, the period of the Covid-19 outbreak, and solutions for the time after the virus's outbreak



CONCLUSION

In reviewing the collected materials and analyses performed in this article, it can be said that the effect of Covid-19 on the electricity industry of Iran and the world is significant, and this effect can be seen in various areas of supply and demand. In the present article, more emphasis has been placed on electricity demand, and the electricity consumption statistics of Iran, the United States, China, India, and some European countries during the Covid-19 outbreak have been analyzed and studied. Based on the analysis performed in this paper using the available statistics, it can be generally concluded that the effect of Covid-19 on electricity demand in a short period has been decreasing, which is clearly shown in the analyzed graphs. Electricity consumption has far-reaching economic consequences. Besides, changing the electricity consumption pattern during the Covid-19 outbreak is another issue raised in this regard.

Examination of changes in daily electricity consumption in Iran during the outbreak of Covid-19 and comparing it with the corresponding period last year showed that lifting the restrictions on the abolition of quarantine has returned electricity demand to normal and even in electricity consumption

early peaks of about 53,000 MW were in the first ten days of June. It can be said that one of the main reasons is the change in consumption patterns is due to the Covid-19 outbreak. These unforeseen peaks in electricity consumption have special consequences in managing the supply and demand of electricity and related damages. Also, by examining the daily electricity consumption statistics in New York City in the United States and Italy in Europe, it can be concluded that other countries, such as Iran, faced a decrease in electricity consumption during the quarantine. Still, with the removal of quarantine, electricity consumption has returned to normal. Therefore, it can be concluded that the Covid-19 has had the greatest impact on electricity consumption during the quarantine period. With the removal of quarantine, this effect has been greatly reduced. It should be noted that with the occurrence of subsequent waves of Covid-19 outbreaks and the application of possible quarantine restrictions, the occurrence of further reductions in electricity consumption will not be unexpected, which should be considered in the management of the electricity network.

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KEY TERMS AND DEFINITIONS

COVID-19: Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. These droplets are too heavy to hang in the air and quickly fall on floors or surfaces. You can be infected by breathing in the virus if you are within proximity of someone who has COVID-19 or by touching a contaminated surface and then your eyes, nose, or mouth.

COVID-19 and Economics: The outbreak is a major destabilizing threat to the global economy. One estimate from an expert at Washington University in St. Louis gave a \$300+ billion impact on the world's supply chain that could last up to two years. Global stock markets fell on 24 February due to a significant rise in COVID-19 cases outside China. On 27 February, due to mounting worries about the COVID-19 outbreak, US stock indexes posted their sharpest falls since 2008, with the Dow falling 1,191 points (the largest one-day drop since the financial crisis of 2007–08) and all three major indexes ending the week down more than 10 per cent. On 28 February, Scope Ratings GmbH affirmed China's sovereign credit rating but maintained a Negative Outlook. Stocks plunged again due to coronavirus fears, the largest fall being on 16 March.

COVID-19 and Environment: The worldwide disruption caused by the pandemic has resulted in numerous positive effects on the environment and climate. The global reduction in modern human activity, such as the considerable decline in planned travel, was coined andropause and has caused a large drop in air pollution and water pollution in many regions. In China, lockdowns and other measures resulted in a 25 percent reduction in carbon emissions and a 50 percent reduction in nitrogen oxides emissions, which one Earth systems scientist estimated may have saved at least 77,000 lives over two months. Other positive effects on the environment include governance-system-controlled investments towards a sustainable energy transition and other goals related to environmental protection, such as the European Union's seven-year €1 trillion budget proposal and €750 billion recovery plan "Next Generation EU" which seeks to reserve 25% of EU spending for climate-friendly expenditure. However, the pandemic has also covered illegal activities such as deforestation of the Amazon rainforest and increased poaching in Africa. The hindering of environmental diplomacy efforts combined with late capitalism also created economic fallout that some predict will slow investment in green energy technologies.

COVID-19 and Lifestyle: The pandemic has resulted in many people adapting to massive changes in life, from increased internet commerce to the job market. Social distancing has caused increased sales from large e-commerce companies such as Amazon, Alibaba, and Coupang. Online retailers in the US posted 791.70 billion dollars in sales in 2020, increasing 32.4% from 598.02 billion dollars from the year before.[747] The trend of home delivery orders has increased due to the pandemic, with indoor dining restaurants shutting down due to lockdown orders or low sales. Hackers and cybercriminals/scammers have started targeting people due to the massive changes, with some pretending to be part of the CDC

and others using different phishing schemes. Education worldwide has increasingly shifted from physical attendance to video conferencing apps such as Zoom as lockdown measures have resulted in schools being forced to shut down. Due to the pandemic, mass layoffs have occurred in the airline, travel, hospitality, and some other industries. (There were no signs of permanent recovery as of May 2021).

Decision Analysis (DA): Is the discipline comprising the philosophy, methodology, and professional practice necessary to address important decisions formally. Decision analysis includes many procedures, methods, and tools for identifying, clearly representing, and formally assessing important aspects of a decision; for prescribing a recommended course of action by applying the maximum expected-utility axiom to a well-formed representation of the decision; and for translating the formal representation of a decision and its corresponding recommendation into insight for the decision-maker, and other corporate and non-corporate stakeholders.

Ethnocentric: Competition is a rivalry where two or more parties strive for a common goal that cannot be shared: one's gain is the other's loss (an example of which is a zero-sum game). Competition can arise between entities such as organisms, individuals, economic and social groups, etc. The rivalry can be over attaining any exclusive goal, including recognition: (e.g., awards, goods, mates, status, prestige), leadership, market share, niches, scarce resources, or a territory.

Family-Centricity: In management, strategic management involves the formulation and implementation of the major goals and initiatives taken by an organization's managers on behalf of stakeholders, based on consideration of resources and an assessment of the internal and external environments in which the organization operates. Strategic management provides overall direction to an enterprise and involves specifying the organization's objectives, developing policies and plans to achieve those objectives, and then allocating resources to implement the plans. Academics and practicing managers have developed numerous models and frameworks to assist in strategic decision-making in complex environments and competitive dynamics. Strategic management is not static; the models often include a feedback loop to monitor execution and inform the next planning round.

Market Research: Market research is an organized effort to gather information about target markets and customers: know about them, starting with who they are. It is a very important component of business strategy and a major factor in maintaining competitiveness. Market research helps to identify and analyze the needs of the market, the market size, and the competition. Its techniques encompass both qualitative techniques such as focus groups, in-depth interviews, ethnography, quantitative techniques such as customer surveys, and analysis of secondary data.

Multiple-Criteria Decision Making (MCDM): Multiple-criteria decision analysis (MCDA) is a sub-discipline of operations research that explicitly evaluates multiple conflicting criteria in decision making (both in daily life and in settings such as business, government, and medicine). Conflicting criteria are typical in evaluating options: cost or price is usually one of the main criteria, and some measure of quality is typically another criterion, easily in conflict with the cost. In purchasing a car, cost, comfort, safety, and fuel economy maybe some of the main criteria we consider – unusually, the cheapest car is the most comfortable and the safest one. In portfolio management, managers are interested in getting high returns while simultaneously reducing risks; however, the stocks that can bring high returns typically carry a high risk of losing money. In a service industry, customer satisfaction and the cost of providing service are fundamental conflicting criteria.

Chapter 7

Corporate Social Responsibility (CSR): Effects on Organizational Identification and Employee Creativity

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ABSTRACT

Corporate social responsibility (CSR) is no longer a legal obligation but discretionary aimed at fulfilling the needs of stakeholders. The failed leadership in Africa has made discretionary CSR initiatives very important in the life of employees and local community. The chapter reports a micro-level study that considered the effect of CSR initiatives directed to employees and local communities on employee organizational identification (OID) and employee creativity (ECR). The results obtained show that CSR directed to employees has both direct and indirect relationships with ECR through OID, while CSR directed at local community has only indirect relationship with ECR through OID. The results position CSR initiatives as strategic to the performance of business instead of just being philanthropic. This means that managers must take special interest in developing and implementing CSR initiatives since their outcome has an effect on employee behavior. The study also demonstrates the need to factor the importance of each CSR initiatives directed at various stakeholders in future study.

INTRODUCTION

Since the adoption of the United Nations Sustainability Development Goals in 2015, there have been calls for organizations in Africa to consider the triple bottom-line criteria in measuring effectiveness (Amah, 2018; Amah & Oyetunde, 2019). Amah (2018) advocated two mindset changes for leaders in Africa, which are, a redefinition of the constituents of responsible leadership, and the measure of organizational efficiency. COVID-19 has reinforced these calls and revealed the need for organizations to look beyond the emphasis on economic performance to evaluating performance using the economic, social,

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and environmental triple bottom-line (Bhalla *et al.*, 2011; Dang, Dang, & Danladi, 2014). A redefinition of responsible leadership will ensure that organizations operate in sustainable ways that cater for all stakeholders through the provision of corporate social responsibility (CSR) initiatives.

CSR is defined as a range of activities provided by organizations and aimed at “ensuring community health and safety; sponsorship; enabling employees to do voluntary work in the community” (World Business Council for Sustainable Development, 1998, p.8). It is a way for organizations to transcend the legal obligations they owe stakeholders and do what is morally and ethically necessary for stakeholders even if these are outside the operational demands of organizations. The leadership challenges in Africa, for instance, have resulted in situations of poor infrastructural development, and so organizations are being called upon to go beyond the legal obligations and take part in the provision of infrastructures needed for the comfort of their stakeholders. CSR has moved from organizations providing only legally obligated benefits to the undertaking of discretionary initiatives that can enhance the life of stakeholders. This implies a shift of emphasis from shareholders to stakeholders. Evidence exists that in considering CSR as a worthwhile project with strategic implications, the reputation and relationship between the organization and its stakeholders are affected. The situation in Ogoni land in Nigeria, for instance, is a widely recognized case. The negative effects of oil exploration and exploitation led to the degradation of the environment and destruction of the community’s means of livelihood. This action damaged the reputation and relationship of the oil companies with the community. More so, the existence of militants in the region demanding ethical behavior from the oil companies remains an offshoot of this neglect over time. To reposition CSR initiatives therefore, organizations will have to determine how these initiatives affect behavior, organizations’ reputation, and positive productive environment.

The book chapter contains the result of a study on the effects of CSR initiatives on employee organizational identification (OID) and creativity, both of which are behaviors found to be important during COVID-19 as well as post-COVID-19. Organizations require employees who can identify with their struggles and who are creative enough to drive decisions in an everchanging business environment. The social exchange theory alludes to the fact that employees consider CSR initiatives as a social currency which must be reciprocated through positive behaviors to the organization.

BACKGROUND

There is a long history behind CSR initiatives. At one end are those supporting Friedman (1970) who stated that the only purpose of an organization is to make profit and that CSR is a distraction involving resource wastage. The foundation of this belief is that organizations exist to maximize benefit for their shareholders. The second faction opines that CSR initiatives are legal requirements that ensure organizations contribute to the maintenance of their operating environments. Under this regime, organizations argue that tax payment represents the legal obligation for making a fair contribution to environmental functioning. For instance, oil companies in Nigeria were legally required to perform an environment impact analysis prior to and after any operation to ascertain the level of environment degradation arising from their operations (Anago, 2002; Owoyemi & Bamigboye, 2013). They were legally required to develop remedial actions for maintaining the integrity of the environment on completion of their operations (Ibrahim *et al.*, 2020). However, these requirements were not in place at the onset of oil exploration in Nigeria; rather, they were introduced after communities complained of the degradation of their means of living by the activities of oil companies. More so, these requirements did not address the issue

of being a corporate and responsible citizen who proactively sees what is wrong and plans to remedy it even when it requires discretionary efforts. For this to happen, therefore, there must be a mindset shift that regards CSR as a way of doing well by doing good. This has resulted in the final form of CSR as a set of discretionary efforts undertaken by organizations who go far and beyond legal requirements to do what is good for their stakeholders. The United Nations Sustainability Goals demonstrated the ethical component of CSR indicating that organizations must view the social responsibility they owe people and the environment. The need for this is further highlighted by the poor developmental efforts of governments in developing countries where people expect organizations to go beyond legal requirements to fill the developmental lapses created by failed leadership. To achieve this, organizations must believe that money can grow on trees, and that optimizing stakeholders' interest is broader than maximizing shareholders' interest, as the former produces better corporate results when measured against the triple bottom-line criteria.

Nigeria, the context of this study, has witnessed devastating effects of the activities of communities protesting the unethical behavior of oil-producing companies whose activities have also affected regions where oil is not produced. Thus, communities in Nigeria are constantly demanding fair and ethical treatment from companies located in their region. They desire these organizations to go beyond the legal requirement of tax payment to being corporate citizens who take care of developmental needs. Lack of this has often led to disruption in the organizations' activities, further leading to loss in revenue, and sometimes, lives. For instance, the budget for security in oil-producing areas has increased tremendously due to the unrest arising from the activities of its youths. The Guardian Newspaper of 17 November 2019 reported that despite the annual security budget of \$0.7 billion, Nigeria lost \$4.2 billion annually in revenue due to oil theft. Oil theft and deviant behaviors are more in strained relationships. Therefore, organizations must consider CSR as a strategic goal aimed at positively influencing the minds of their stakeholders to elicit positive behavior that can drive productivity and profitability. People in Africa demand that organizations go beyond the pursuit of profit to taking care of all stakeholders. Organizations must also recognize the needs of all stakeholders and factored these into their operations. This will invariably affect how employees view and act in line with the needs of the organization.

It is generally believed that the effectiveness of CSR initiatives lies at the nexus of the number of relevant initiatives, the context provided by effective governance, and the response of stakeholders to the CSR initiatives (Eweje, 2006; Idemudia, 2010). Due to the poor level of infrastructural development caused by "failed statehood" in sub-Saharan Africa (Nwoke, 2019), there is no effective context for CSR initiatives. Consequently, in a situation of failed leadership, organizations must identify their stakeholders and work cooperatively to provide CSR initiatives that can drive symbiotic relationships between them (Glavis & Piderit, 2009). Since failed statehood has limited infrastructural development in Africa, copying CSR initiatives developed in neoliberal developed countries are of little use to developing economies. Hence, organizations must understand their stakeholders, their perception of the CSR initiatives, and how these affect their behaviors so as to craft initiatives that cover the unique needs of each stakeholder (Glavis & Piderit, 2009).

When CSR was accepted as a worthwhile venture, CSR research was directed at establishing the positive effects of CSR initiatives on overall organizational performance. This is the macro-level study which has demonstrated the positive effects of CSR initiatives (see Yin et al., 2015). Micro-level CSR research, on the other hand, aims to establish how CSR initiatives affect individuals' behavior within and outside an organization, and how such behavior affects their response to the organization (Chaudhary, 2020; Lavas & Piderit, 2009). For instance, Yue et al. (2020) stated that consumers' perception of poor

emphasis of CSR affects their purchase decisions. Although, the micro-level study is scanty in developing economies, CSR studies have progressed from the macro-level to the micro-level, swinging from the determination of the effect of CSR on organizational performance to how CSR initiatives affect the behavior of individuals within and outside organizations. The micro-level study elicits three important stakeholders' belief that drive positive behavior towards organizations (Goodstein & Wicks, 2007), which are, seeing CSR initiatives as social exchange currencies that must be reciprocated, signaling stakeholders and organizations in an interdependent relationship for the mutual benefit of all parties, and the consideration of the effects of stakeholders' actions on organizational productivity.

This study gives great emphasis to two stakeholders' groups which are employees and the local community. Employees have a vantage position as they stand between the organization and its external stakeholders and can influence this relationship with their behaviors (Reimer, 2004; Wai, 1978). For instance, in Ogoni Land in Nigeria, failed CSR initiatives gave rise to violence which affected the performance and wellbeing of employees (Amnesty International, 2005; Idemudia, 2007; Ikelegbe, 2005; Ogula, 2012; Omeje, 2006). Hence, how an organization handles its local community has a spillover effect on its employees.

MICRO-LEVEL STUDY OF THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY ON ORGANIZATIONAL IDENTIFICATION AND EMPLOYEE CREATIVITY

Theoretical Background and Hypotheses Development

Signaling Theory and Issue Intensity Hypothesis

The social exchange theory (SET) and the norm of reciprocity drive the hypotheses tested in this study (Blau, 1964; Gouldner, 1960). Employees and their leaders are in a social exchange relationship governed by certain principles, and this interaction produces certain obligations that each party must fulfil to maintain the quality of the relationship (Blau, 1964). Hence, for the continuity of the relationship, the individuals involved must provide social exchange currencies which form the basis of the exchange. The norm of reciprocity states that when an individual receives a valued social exchange currency, such individual is obligated to reciprocate with a valued social exchange currency if the relationship must continue. For instance, employees see CSR initiatives provided by organizations as a social exchange currency which they are bound to reciprocate with valuable behaviors to the organization. In this study, these behaviors are operationalized as OID and employee creativity.

Organizational Identification Behavior

Employees identify with organizations that provide the need they desire (Bergami & Bagozzi, 2000). Organizational identification (OID) is defined as "the perception of oneness with or belongingness to an organization, where the individual defines self in terms of the organization" (Mael & Ashforth, 1992, p. 104). Organizational identification provides a link which allows employees to use the organization as a reference for "self-definition" (Pratt, 1998, p. 172). When this happens, there is an alignment between individual and organizational values and goals (Schwarz, 2017). Antecedents of OID have been established

as effective organizational culture, effective communication, and managerial actions (Bergami & Bagozzi, 2000), while its outcomes include greater compliance and job satisfaction (Schwarz, 2017), perception of organizational support (He, Pham, Baruch, & Farooq, 2016), performance, organizational citizenship behavior, employee voice, and low turnover intention (Blader & Tyler, 2009; Schuh et al., 2016).

Employee Creativity Behavior

In a highly volatile environment like COVID-19, employee creativity behavior is critical in unlocking opportunities that can help organizations survive the constant changes and remain effective (Amabile et al., 2005; Rogers, 2014). Creativity therefore is defined as a “complex human capacity to produce novel ideas, generate new solutions, and express oneself in a unique way” (Abraham, 2015:1). Personal attributes such as cognitive styles drive employee creativity (Anderson et al., 2014; Lang & Lee, 2010; Unsworth, 2001). There is a considerable variation in the level of creativity and its outcome among individuals (Abraham, 2015). Though the definition alludes to the role of personal characteristics, employee creativity is a function of both organizational process/context and the personal attributes of the individual (Amabile, 1998). This means that employees will not exercise creativity if the environment created by organizational procedures is inconducive. Employee creativity gives rise to products, ideas, or procedures (George & Zhou, 2002; Zhou, 1998), and must be novel/original and explore new areas of organizational operation. It must also be relevant to the need of the organization by driving functions currently required by the organization.

Creativity has been categorized based on the location of its drivers (external/internal), and problem types (open/closed). In the external category, outside forces drive creativity, while in the internal category, creativity is driven by the individual. Open ideas come from the individual while closed ideas are presented to the individual. Hence, four typologies can be identified, namely (Unsworth, 2001): responsive, expected, contributory, and proactive. It has however been postulated that proactive and contributory creativity are preferred (Unsworth, 2001). In constantly changing environments, for instance, proactive and contributory creativity see ahead and plan for change. Additionally, contextual factors that drive creativity include goals, expectations of creativity, social influence, relationship with supervisor, coworker, and organizational setting (Rogers, 2014).

Employee creativity benefits the organization since it unlocks opportunities that can lead to superior performance. To be creative therefore, individuals must be willing, and the organizational setting must be favorable to such act. Organizational contexts such as CSR initiatives directed to different stakeholders is a sign that an organization cares for its stakeholders and has positive identity. Based on the SET and norm of reciprocity therefore, perception of CSR directed to stakeholders will indicate to the employee that the organization cares for its stakeholders and has a positive identity that can be related with. Hence, the employee will see this as a social exchange currency which must be reciprocated through high organizational identification and creativity. Similarly, employees with high OID see the congruence between their values and those of the organization, leading to self-identification with the organization and the willingness to creatively enhance organizational productivity. Hence, the following hypotheses are proposed:

Hypothesis one: Employee perception of CSR directed to employees is positively related to organizational identification behavior.

Hypothesis two: Employee perception of CSR directed to the local community is positively related organizational identification behavior.

Hypothesis three: Employee perception of CSR directed to employees is positively related to employee creativity.

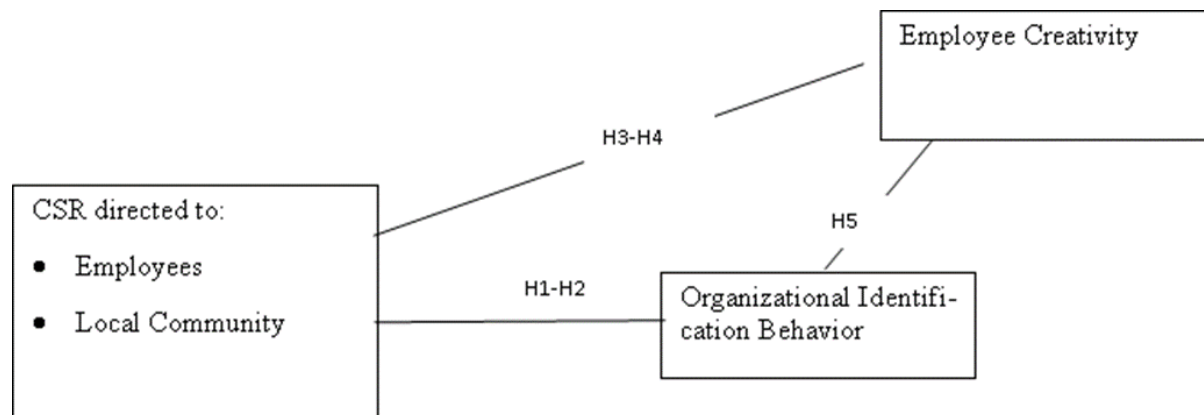
Hypothesis four: Employee perception of CSR directed to the local community is positively related employee creativity.

Hypothesis five: Organizational identification behavior is positively related to employee creativity behavior.

The model tested is given below:

Figure 1. Proposed model of CSR (Author, 2021)

Note. CSR = corporate social responsibility



Method

Procedure

Five organizations provided the participants for this cross-sectional study. The participating organizations granted access to their telephone directories which were used in generating a random number of participants. Since the study occurred during the era of remote work, questionnaires were emailed to the employees. The questionnaires contained three parts namely, description of the purpose of the study and assurance of confidentiality of the information provided, demographic variables, and the items that measured CSR initiative directed at employees and the local community, OID, and employee creativity. Unless otherwise started, all variables were captured with Likert scale from 1=strongly disagree to 5=strongly agree.

The participants supplied data on their perception of CSR directed at employees, local community, organizational identification, and employee creativity. To minimize common method variance, the data for the CSR initiatives and organizational identification were collected at time 1 while those for employee creativity were collected at time 2, two months after time 1 (Lu & Kao, 2013; Podsakoff et al., 2003).

Data Collection and Sample

1500 participants from the organizations received the email containing questionnaire at time 1 of the study. The questionnaire contained the demographic variables, and items for CSR initiatives directed to employees and local community and organizational identification. Two reminders were sent to the participants, and only 1200 participants responded (80% return rate). The second questionnaire containing items for employee creativity was sent to the 1200 participants at time 1, and only 900 people returned the filled questionnaire (75% return rate). Most of the participants worked for organizations with 1001-3000 employees (55%), male (53%), between ages 30-40 years (37%), in the oil industry (25%), and tenure of between 6-10 years (42%).

Measures

All the scales used were previously validated by past studies.

Corporate Social Responsibility

Turkey (2009) scale was used for CSR directed to employees, while the items for CSR directed to society in the scale were modified and used for local community. Example items for CSR directed to employees and local community are “The management of our company is primarily concerned with employees’ needs and wants,” and “Our company emphasizes the importance of its social responsibilities to its local community.” Cronbach Alpha obtained for the variables in this study are .77, and .76 respectively.

Organizational Identification

The measures used came from the modification of the scale in the work of Mael and Ashforth (1992). An example item is “When someone criticizes my organization, it feels like a personal insult.” Cronbach Alpha obtained is .80.

Employee creativity

This was measured with a scale taken from Rice (2006). An example item is “I am on the lookout for new ideas from all the people with whom I interact as part of my job.” Cronbach alpha obtained is .93.

Preliminary Analysis

Data analysis was done with PROCESS 3.5 in SPSS and Analysis of Moment of Structures (AMOS 23). The fitness of models was tested using the goodness of fit index (GFI), comparative fit index (CFI), and root mean standard error of approximation (RMSEA). Values of at least 0.9 was adequate for GFI and CFI, while the RMSEA value must fall between 0.05 and 0.08 (Hu & Bentler, 1999).

To determine the factor structure for CSR due to its multidimensionality, confirmatory factor analysis (CFA) was carried out. Two-factor and one-factor models were tested for the variable. In Table 1, the one-factor model had better fit index, and the significant difference in chi-square confirmed that a four-factor model better represents CSR.

Table 1. Confirmatory factor analysis for corporate social responsibility

Factor models	χ^2	df	$\Delta\chi^2$	χ^2/df	GFI	CFI	RMSEA
One factor (all loaded on one factor)	155.113	20	-	7.756	0.83	0.79	0.184
Four factors (items loaded on different dimensions)	27.042	14	128.071**	1.932	0.97	0.98	0.068

Source: (Author, 2021)

GFI goodness of fit index, CFI comparative fit index, RMSEA root mean standard error of approximation

Common Method Analysis

Apart from the instruction on the questionnaire and the capture of data at two points, two other methods were used to establish the level of common method variance. Exploratory factor analysis extracted four factors with the first extracting only 25% of the variance compared to 75% extracted by the others. This is an indication that the level of common method variance is low and acceptable (Podsakoff & Organ, 1986). A common method factor with all the loadings constrained to one (Chang *et al.*, 2010; Eichhorn, 2014) was included to the four-factor model representing the study variables. The constrained loading of the items on the common factor was 0.45. Thus, the common method variance was 20% which is below the threshold point of 50% (Chang *et al.*, 2010; Eichhorn, 2014).

Construct, Convergent, and Discriminant Validity Analysis

Construct and convergent validity were satisfied since all factor loadings exceeded 0.50, average variance extracted exceeded 0.05, and Cronbach alpha exceeded 0.70 (see Table 2) (Hair *et al.*, 2010; Nunnally, 1978). Table 3 indicates that the variance extracted by each factor is more than the variance shared with other factors showing evidence of discriminant validity.

Table 2. Convergent validity

Variable	Range of item loadings on factors	Average variance extracted	Cronbach's alpha	Composite reliability
CSR to Employee	0.734–0.910	0.68	0.77	0.70
CSR to Community	0.786–0.801	0.63	0.76	0.82
Employee Creativity	0.768–0.850	0.65	0.93	0.85
Organizational Identification	0.685–0.836	0.59	0.80	0.80

Source: (Author, 2021)

CSR=Corporate social responsibility

Corporate Social Responsibility (CSR)

Table 3. Discriminant validity

Study variables	1	2	3	4
1. CSR to Employee	0.68 [†]			
2. CSR to Community	.24	0.63 [†]		
3. ECR	.08	.01	0.65 [†]	
4. OID	.30	.05	.25	0.59 [†]

Source: (Author, 2021)

[†]The average variance extracted, and all other entries are squared correlation matrix.

Results

Table 4 shows the mean, standard deviation, Cronbach alpha, and correlation between the study variables. The correlations show support for some of the hypotheses. For instance, the correlation between CSREM and ECR is .26 and is significant. The study variables have acceptable Cronbach alpha, average variance extracted, and composite reliability (see Tables 2 to 3). Two respective regression analyses were run for CSR directed to employees and to the local community.

Table 4. Mean, SD and correlations among variables

Study variables	M	SD	1	2	3	4	5	6	7	8	9
1.Organizational size											
2.Gender			-.03								
3.Age			-.03	-.09							
4.Industry			-.44**	.04	.10						
5.Tenure			.08	-.11	.41**	.07					
6. CSR to Employee	3.56	.82	.01	-.04	.13	-.09	.03	.77			
7. CSR to Community	3.78	.72	-.03	.07	.08	-.03	.02	.49**	.76		
8. ECR	3.51	.67	-.01	-.03	-.04	.02	-.18*	.26**	.04	.93	
9. OID	3.39	.59	-.09	.01	.07	-.02	.13	.38**	.23**	.50**	.80

Source. (Amah, 2021)

Items in bold are the Cronbach Alpha.

CSR Directed at Employees

The results in Table 5 show that CSREM was positively related to OID ($\beta = 0.28$, $t = 5.097$, $p < 0.01$), and positively related to ECR ($\beta = 0.20$, $t = 3.025$, $p < 0.01$). The indirect effect is .18 with LLCI of -.149 and ULCI of -.225. This indicates that OID mediates the relationship between CSREM and ECR.

CSR Directed at Local Community

The results in Table 6 show that CSRLOC was positively related to OID ($\beta = 0.23$, $t = 2.795$, $p < 0.01$), and not related to ECR ($\beta = 0.08$, $t = .698$, $p < .790$). The mediation effect is .15 with LLCI of .136 and ULCI of .326. This indicates that OID mediates the relationship between CSRLOC and ECR.

Table 5. Hierarchical regression of CSR directed to employee on organizational identification and employee creativity

Variables	OID	ECR
Organizational size	-.06	-.03
Gender	.05	-.04
Age	-.02	.05
Industry	-.01	.03
Organizational tenure	.12*	-.14*
CSR directed to employee	.28**	.20**
Organizational identification		.20**
R ²	.24**	.20**
F	5.943	3.217

Source: (Author, 2021)

CSR=Corporate social responsibility; OID=Organizational identification; EE=Employee engagement

Table 6. Hierarchical regression of CSR directed to local community on organizational identification and employee creativity

Variables	OID	ECR
Organizational size	-.06	-.03
Gender	.05	-.04
Age	-.02	.05
Industry	-.01	.03
Organizational tenure	.11	-.14*
CSR directed to local community	.23**	.08
Organizational identification		.22**
R ²	.09*	.20**
F	2.735	3.217

Source: (Author, 2021)

CSR=Corporate social responsibility; OID=Organizational identification; ECR=Employee creativity

DISCUSSION

Past studies have concentrated on the macrolevel where the effect of CSR on organizational productivity is determined. However, the essence of this study is to explore the micro-level analysis of CSR on individual behavior that ultimately affects organizational productivity in developing economies where CSR initiatives are highly valued due to governance failure. Two forms of CSR were explored namely, CSR directed to employees and local communities. A simple mediation model was stipulated in which the relationship between the CSR dimensions and ECR were mediated by OID.

The study confirms a positive significant relationship between CSREM and OID as well as ECR. The mediation index was significant, indicating that while CSREM has a direct relationship with ECR, it also has an indirect relationship with ECR through OID. However, the direct relationship between CSRLOC and ECR was insignificant while the indirect effect through OID was significant. This demonstrates that CSR initiatives directed at employees are more salient for decisions on ECR than CSR directed at the local community. Thus, the decision as to how CSRLOC affects ECR is made based on the level of OID. Organizational identification indicates that employees associate with the organization's standing and see it as a reflection of their values. The positive relationship between OID and CSRLOC is also an indication of how employees value and associate with their organization and will depend partly on how the organization treats its local communities. Thus, the study positions CSR initiatives directed at

Corporate Social Responsibility (CSR)

employees and local community as important variables in establishing employees' behavior. This supports the notion that in environments of failed leadership resulting in lack of development, employees look onto their organization to play discretionary roles in their lives and in maintaining the development of the community (Nwoke, 2019).

Employee creativity is crucial in an environment that necessitates new ways of doing things. Creative people take the initiative and proactively seek better ways of doing things. They provide competitive advantage to organizations because of their insatiable quest for innovation and process improvement. The relationships obtained here position CSR directed at employees and the local community, and OID, as important variables in driving ECR. This means that the discretionary interest shown by organizations in the wellbeing of their stakeholders pays off in improved employee behavior represented by ECR and OID. These behaviors enhance organizational productivity indicating that investment in CSR initiatives has a positive effect on revenue and profit. Hence, organizations can do well by doing good.

Managerial Implication

The journey to deriving positive benefits from investments in CSR initiatives is a joint responsibility of the organization and their stakeholders to invest in the mutual benefit of those involved in the social exchange relationship. Stakeholders believe and want organizations to be involved in discretionary CSR initiatives, and so managers must have a mindset change that maximizes total stakeholders' benefit rather than shareholders' benefit.

The fact that this study satisfies the CSR micro-level analysis points to what managers should be doing with CSR initiatives. It means CSR initiatives can drive employee behavior which will in turn drive organizational performance. Managers should therefore consider CSR as not just a philanthropic venture, but as strategic to organizational performance, leading them to go beyond legally implied initiatives to show concern and discretion which employees can see and reciprocate in positive behaviors to the organization. To achieve this, the selection of CSR initiatives must be a co-creation between stakeholders and the organization. Since employees are closer to the local community, they are in a better position to identify urgent developmental needs of the community which provision will drive positive behaviors such as OID and ECR.

Future Research

The differential effects of the CSR dimensions on ECR suggest that the importance attached to the initiatives directed at different stakeholders may not be the same. Hence, future research should consider capturing the importance of CSR directed at various stakeholders as a possible moderator of the relationship established here. Future research should also consider CSR initiatives directed to stakeholders other than those captured here, such as in situations like COVID-19 where challenges regarding the revenue realized by organizations abound; CSR directed at suppliers aimed at alleviating cash issues may also be positively viewed.

CONCLUSION

The United Nations Sustainability Development Goals imply that to attain sustainability, organizations must define effectiveness based on the triple bottom-line criteria of economic, social, and environmental measures as it is the only way to take care of the present generation as well as prepare for future generations. It has therefore become unethical for organizations to concentrate on making profits for shareholders at the detriment of other stakeholders. It is also established that organizations can do well by doing good since money grows on trees. The activities of some organizations raking in huge profits after strategically replenishing their environments point to the fact that organizations can do well by doing good. For example, Ecosia invests 40% of its profits in improving its environment, and the results are improved patronage and referrals (Breetzke, 2021).

Despite its vast natural and human resources, Africa remains the least developed continent owing to poor leadership (Amah, 2018, 2020). CSR should therefore take central stage in Africa, thus helping employees see organizations as alternatives that can fill the role abandoned by the continent's leaders. Employees see CSR initiatives as going beyond legal requirements to being discretionary in fulfilling the real needs of people. Organizations that accept this increased responsibility therefore can earn the trust and collaboration of their employees, and in turn enhance their performance.

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Chapter 8

Fiscally Responsible Businesses as a Result of COVID-19 Pandemic Shock: Taking Control of Countries' Tax Systems by Putting an End to Corporate Tax Evasion and Tax Havens

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ABSTRACT

The COVID-19 pandemic and COVID-19 crisis represent impressive motivating forces for advancement, change, evolution, and improvement at a global level. The study focuses on the OECD latest developments in international tax reform work on base erosion and profit shifting (BEPS) in the courageous attempt to promote novel global initiatives for responsible tax and to support ambitious global actions for responsible tax principles. The results show the need to establish fiscally responsible businesses as a result of COVID-19 pandemic shock, thus taking back control of countries' tax systems by putting an end to corporate tax evasion and tax havens. The findings address the importance of being in line with tax principles, encouraging responsible financial transactions and behaviors.

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INTRODUCTION

Nowadays, the European Commission (EC) is seriously concerned about the organizations' actions taken in order to protect human beings and the environment, based on two of the most valuable principles that should govern all business activities at the European Union's (EU) level as well as at a global level, namely: Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC) (European Commission, 2021a).

What is more, both CSR and RBC have become integrating priorities on the EU agenda, and the strategies promoted by the EU that are meant to enable both CSR and RBC are constantly updated and highly praised both at the European level and at the international level.

Furthermore, the EC strategy on CSR and RBC are strongly connected with the dissemination of good practices in terms of acting socially responsible as organizations, in the attempt to focus more on the well-being of individuals and the health of our planet. In like manner, it should be stressed that, both in terms of European policies as well as in terms of international strategies, CSR and RBC are regarded as integrating points in key areas such as, education, training, and research, due to their high value and undeniable implications for all the major fields, namely: social, political, economic, and financial.

Based on the EC's documentation, acting socially responsible as an entity, as an organization, implicates being aware of all the actions taken and also of the fact that all these actions and activities will have, in the end, both positive and negative impacts for the human lives and the environment, thus referring to the manner in which a company affects the society itself (European Commission, 2021a). In continuation, also derived from the EC's documentation, it should be underlined that CSR is highly important for the society as a whole, for the enterprises and for the EU economy (European Commission, 2021a). In like manner, having and promoting a RBC has been defined as "making a positive contribution to economic, environmental and social progress", focusing on "achieving sustainable development and avoiding and addressing adverse impacts related to an enterprise's direct and indirect operations, products or services" (OECD, 2011; European Commission, 2021a).

In this particular matter, the EC's documentation on "Corporate Social Responsibility and Responsible Business Conduct" takes into consideration numerous consistent aspects, such as (European Commission, 2021a) (see Table 1. Influences derived from the European Commission's principles on Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)):

In addition to the aspects illustrated so far, the EC's documentation on "Corporate Social Responsibility and Responsible Business Conduct" gives a description of the aspects specific to the relationship that exists between business and human rights, such as (European Commission, 2021a) (see Table 2. Influences derived from the European Commission's principles on CSR and RBC on the relationship existing between business and human rights):

On top of the aspects evoked so far, the EC's documentation on "Corporate Social Responsibility and Responsible Business Conduct" shows a high interest in ensuring the well-being and constant development of small and medium-sized enterprises (SMEs), as follows (European Commission, 2021a) (see Table 3. Influences derived from the European Commission's principles on CSR and RBC on small and medium-sized enterprises (SMEs)):

Table 1. Influences derived from the European Commission's principles on Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)

Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)	
CSR:	• According to the EC, CSR is defined “as the responsibility of enterprises for their impact on society”, which implicates that CSR “should be company led” (European Commission, 2011). • What is more, the manner in which entities can become socially responsible is twofold: (a) on the one hand, “integrating social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations” ensures the fact that organizations are concerned to be socially responsible; (b) on the other hand, “following the law” strengthens the entities activities in the business environment in which they are activating, thus keeping them socially responsible and socially aware of their implications in the general ecosystem balance (European Commission, 2021a). • There are numerous benefits when acting socially responsible, such as: (a) for instance, for the society as a whole, when acting responsible and when being aware of the organizations’ impact on the surroundings, it has the power to “offer a set of values” on which “a more cohesive society” can be built, and, in the same time, which can represent the base of “the transition to a sustainable economic system”; (b) in continuation, for example, for the entities when being socially responsible “important benefits in terms of risk management, cost savings, access to capital, customer relationships, HR management, sustainability of operations, ability to innovate and eventually profit” are being provided; (c) also, at a general level, for the EU economy, acting socially responsible enables companies to become “more sustainable and innovative, which contributes to a more sustainable economy” on the medium and long run (European Commission, 2021a). • Based on the EU guidelines, public authorities play a decisive role in ensuring that the companies are acting responsible and are maintaining an appropriate business conduct centered towards responsibility, good governance, and respect for human lives and the planet. • For the EU the lives of the European citizens and the lives of citizens all around the world are seen as extremely valuable. • According to the EU principles, all the organizations should be concerned about the well-being of individuals and should take into account that their actions affect the present generations as well as the future generation, the environment and the entire ecosystem as a whole. • Based on EU regulations, entities should focus on bringing positive inputs with the aid of their activities, by taking into consideration the utility of the products and services they offer to the customers, the job they are able to create in order to perform their activities, the opportunities they bring to life for their employees, in terms of working conditions, education and training. • At a general level, companies should be centered on respecting the human rights, should show a great concern towards individuals health, should constantly consider the actions that they take in order to protect and to preserve the environment and should encourage creativity and innovation. • In this line, by encouraging creativity and innovation, organizations are called to support the use of intangible assets (IA), thus being able to see the benefits derived by putting to good use the knowledge, know-how, intellectual capital (IC), and human resources (HR).
RBC:	• These days, showing a RBC and being able to maintain a RBC is crucial for the EU countries, proving that the organizations are strongly concerned and deeply preoccupied about the well-being of individuals and the future of our planet. • What is more, displaying a RBC represents an important part of the EC strategy on CSR, especially since the EU constantly “encourages enterprises to adhere to international guidelines and principles” by using numerous sets of actions and by being constantly involved with CSR and RBC behaviors (European Commission, 2021a). • Furthermore, based on the documents published on a regular basis by the EU and the EC, it should be noted that the EU policy on CSR and on RBC aims to align the European approach to the global approach on CSR, thus remarking that it is an international effort to promote and foster a sustainable economic system with the aid of both CSR and RBC. • The EC strategy has multiple implications for organizations and the business environment as a whole, since, on the one hand, it focuses on “the importance of enhancing the visibility of CSR and disseminating good practices, through the integration of CSR into education, training, and research”, and, on the other hand, is keen on helping the improvement of “self and co-regulation processes and companies’ disclosure of social and environmental information” (European Commission, 2021a). • The EU citizens are rightfully concerned about the implications derived from opening and maintaining a business in the EU, since the main focus is on the positive and negative impact of these activities on human lives and their health, on the environment, on the capacity to maintain the health of the ecosystem. • The EU acts decisively when it comes to ensuring and supporting a RBC, since all businesses should act responsibly, thus respecting “the UN guiding principles on business and human rights (UNGPs) and the UN 2030 agenda for sustainable development” (European Commission, 2021a). • Based on the EU requirements, the CSR and RBC strategies should be periodically renewed, in order to ensure the continuity of the entire process. • Taking into consideration the most recent developments in this regard, it should be noted that the EC has published in 2011 an updated version belonging to the CSR strategy, “which combines horizontal approaches to promote CSR/RBC with more specific approaches for individual sectors and policy areas” (European Commission, 2021a). • In terms of other renewed documents on CSR and RBC, could be mentioned the following ones: (a) EC, Commission Staff Working document - Corporate Social Responsibility, Responsible Business Conduct, and Business and Human Rights: Overview of Progress, (document date: 20/03/2019, publication date: 20/03/2019, last update: 21/03/2019) (European Commission, 2019a); (b) EC, Corporate Social Responsibility, Responsible Business Conduct, and Business & Human Rights. - Overview of Progress (document date: 16/04/2019, publication date: 16/04/2019) (European Commission, 2019b).

Source: the authors, based on the ideas stressed by the European Commission (2021) in the documentation on “Corporate Social Responsibility and Responsible Business Conduct”

Table 2. Influences derived from the European Commission's principles on CSR and RBC on the relationship existing between business and human rights

Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)	
Relationship business and human rights:	• To start with, the relationship between business and human rights is highly sensible since it addresses the manner in which business leaders and managers respect the working conditions for their employees, the health of their employees, the human rights, at a general level (European Commission, 2021a). • Second of all, the relationship that exists between business and human rights is closely taken under consideration when addressing the “businesses’ global supply chains” (European Commission, 2021a). • Third of all, due to the crucial importance given to the relationship that exists between business and human rights, there are numerous guiding plans, such as: the UN guiding principles on business and human rights endorsed by the UN Human Rights Council in 2011 and the UN guiding principles in its 2015 action plan (UN, 2020a; UN, 2020b; European Commission, 2021a). • Fourth of all, the EC has shown a constant interest in promoting a harmonious relationship between the business environment and the human rights, which could be noticed by the “number of guiding materials and promoted the development of national action plans (NAPs)” (European Commission, 2021a). • All in all, as see in other research studies previously published, sustainability relies on the valuable principles of principles on CSR and RBC, while all entrepreneurial activities need to respect the principles specific to human rights and the well-being of individuals (Popescu, 2019g; Popescu, 2020b; Popescu, 2020c).

Source: the authors, based on the ideas stressed by the European Commission (2021) in the documentation on “Corporate Social Responsibility and Responsible Business Conduct”

Table 3. Influences derived from the European Commission's principles on CSR and RBC on small and medium-sized enterprises (SMEs)

Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)	
Small and medium-sized enterprises (SMEs):	• To begin with, it should be acknowledged that SMEs are, according to the most recent statistical data available, “the most common type of businesses in the EU” (European Commission, 2021a). • Second of all, due to the characteristics belonging to SMEs, it can be stressed that these particular types of businesses are closely connected with the “employees, the local community, and their business partners”, and “they often have a naturally responsible approach to business” particularly due to the fact that these businesses are highly dependent to the surroundings and the environment where they activate (European Commission, 2021a). • Third of all, even though specialists describe the manner in which SMEs strive to reach “their social responsibility goals” as being “likely to remain informal and intuitive”, SMEs manage to play a decisive role in accomplishing the SDGs and need a lot of help and determination in respecting the principles of CSR and RBC (European Commission, 2021a). • Above all, specialists have demonstrated that SMEs need strong leadership figures in order to be competitive in the marketplace and require consistent investments in innovation, research and development in order to be able to support the know-how enabling them to succeed and to empower their human resources contribution to the well-being of the entities over time (Popescu <i>et al.</i>, 2017a; Popescu <i>et al.</i>, 2017b; Popescu <i>et al.</i>, 2017c).

Source: the authors, based on the ideas stressed by the European Commission (2021) in the documentation on “Corporate Social Responsibility and Responsible Business Conduct”

Consequently, both CSR and RBC represent attributes specific to fiscally responsible businesses at the European level and worldwide. And therefore, as a result of Covid-19 pandemic shock and the need to successfully ensure economic growth and sustainable development even in times of Covid-19 crisis, fiscally responsible businesses should be further on analyzed from the perspective of correctly applying tax regulations, thus taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens.

The book chapter “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens” proposes a novel approach on finding viable solutions for businesses these days in order to ensure their most desired sustainability, most praised responsibility, as well as their economic and financial robustness on the long run. In continuation, the book chapter sheds a new light on the implications of tax evasion and tax havens on countries well-being and financial system, with a key focus on corporate tax evasion and tax havens, by promoting the idea of applying correct tax systems.

The main research question (RQ) is: “How can businesses become more fiscally responsible as a result of Covid-19 pandemic shock?”

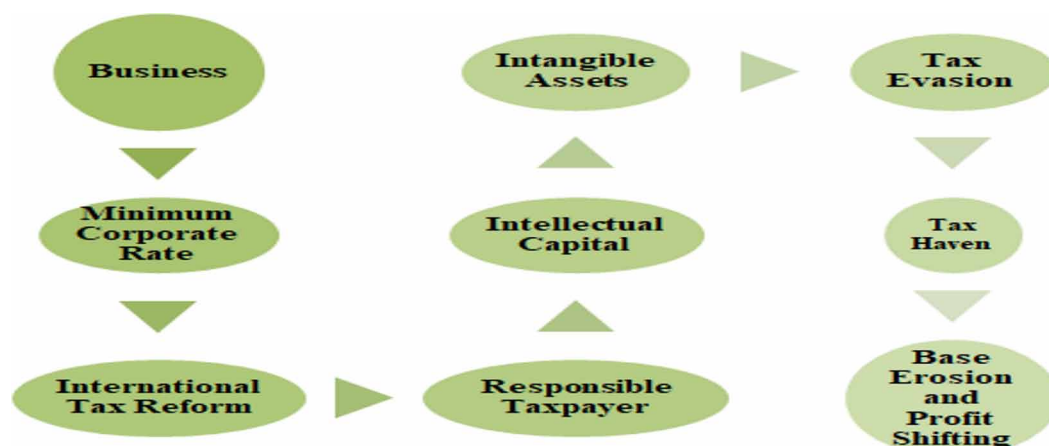
The specific research objectives (SRO) are as follows:

- The first SRO tackles the subject of fiscally responsible businesses and addresses the aims that fiscally responsible businesses take into consideration as a result of Covid-19 pandemic shock. In this context, SRO1 is represented by: Identifying the basic characteristics of fiscally responsible businesses and offering examples of ways in which businesses should act in order to demonstrate their fiscal responsibility.
- The second SRO approaches the subject of corporate tax evasion and tax havens and intends to present both the advantages and the disadvantages brought by the existence of tax havens. In this context, SRO2 is represented by: Exploring the implications of tax evasion and tax havens and explaining the benefits of tax havens as well as the impact of their existence on countries’ tax systems.
- The third SRO outlines the subject of responsible tax and responsible tax principles, by applying a minimum global corporate tax rate. In this context, SRO3 is represented by: Highlighting the OECD latest developments in international tax reform work on Base Erosion and Profit Shifting (BEPS), contemplating on the G7 nations “historic” decision on applying a minimum global corporate tax rate of 15%, and assesses the G20 finance ministers commitment on backing-up this initiative by creating a framework for international tax reform due to include a minimum corporate rate of 15%.

The main key concepts (KC) are: business, business administration, business sustainability, business robustness, Base Erosion and Profit Shifting (BEPS), Minimum Corporate Rate (MCR), tax evasion, tax haven, international tax reform, intangible assets (IA), intellectual capital (IC), multinationals, responsible taxpayer, Sustainable Development Goals (SDGs) (see Figure 1. Key concepts for fiscally responsible businesses as a result of Covid-19 pandemic shock).

In the lines below, the analysis of the main research question (RQ) and specific research objectives (SRO) for “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens” is displayed in the attempt to further this current research (see Table 4. Analysis of the main research question (RQ) and specific research objectives (SRO) for “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”).

Figure 1. Key concepts for fiscally responsible businesses as a result of Covid-19 pandemic shock
Source: the authors



Nevertheless, the “World Investment Report 2021. Investing in Sustainable Recovery – Overview” puts a clear accent on the importance of international investment flows and on the nations’ need to support economic and sustainable development in the less fortunate regions of the world, which highlights the need for creating a better and a more robust financial system, as follows: “This is a major concern, because international investment flows are vital for sustainable development in the poorer regions of the world. Increasing investment to support a sustainable and inclusive recovery from the pandemic is now a global policy priority. This entails promoting investment in infrastructure and the energy transition, in resilience and in health care” (UNCTAD, 2021, p.5).

When referring to SDGs, it should be noted that the civil society plays a major role. For instance, in this respect, Julijana Nicha Andrade highlighted in a book chapter published in 2021 and entitled “The role of civil society in implementing the SDGs locally: the case of Curitiba, its challenges, and practices” – part of the book “Handbook of Research on Novel Practices and Current Successes in Achieving the Sustainable Development Goals”, that an important solution for implementing the SDGs is to take action at a local level, rather than at a general level, offering details about “the case of Curitiba” as well as examples of good practices and threats specific to such a demanding work load and project (Nicha Andrade, 2021).

The next section is represented by the “Background” and tackles the following dominant elements: (a) the Organization for Economic Co-operation and Development (OECD) latest developments in international tax reform work on Base Erosion and Profit Shifting (BEPS); (b) the G7 nations’ actions taken in the spirit of supporting the OECD latest developments in international tax reform work on BEPS, thus reaching the “historic” decision on applying a minimum global corporate tax rate of 15%; and (c) the G20 finance ministers commitment on backing-up the OECD latest developments in international tax reform work on BEPS and the G7 nations’ initiative on applying a minimum global corporate tax rate of 15%, thus acknowledging the need of creating a framework for international tax reform due to include a minimum corporate rate of 15% and, in turn, starting the process of preparing a framework for international tax reform which will include a minimum corporate rate of 15%.

Fiscally Responsible Businesses as a Result of COVID-19 Pandemic Shock

Table 4. Analysis of the main research question (RQ) and specific research objectives (SRO) for “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”

Basic characteristics to be considered:	
Main research question (RQ):	• RQ: “How can businesses become more fiscally responsible as a result of Covid-19 pandemic shock?” • The business environment specific to organizations plays a crucial role in their development process (Duháček Šebestová, 2015). • These days, learning organizations are extremely important for our society in terms of their capacity to absorb information and to produce valuable knowledge for the society and for the environment (Duháček Šebestová & Rylková, 2011) • Based on the results of the most recent studies published, there are numerous factors to be considered when discussing about a thorough analysis of factors influencing organizations, in general, and Small and medium-sized enterprises (SMEs), in particular, which should include, for instance: the differences that arise based on the type of country where they are performing their activities, the degree of development, the leadership skills, the availability to be opened to new challenges and changes, their capacity to maintain and to increase their revenues, the fiscal rules and regulations that apply and so on (Duháček Šebestová, 2007). • When focusing on the way in which businesses can become more fiscally responsible as a result of Covid-19 pandemic shock, the accent should fall on the role and the importance of intangible assets at the level of the organizations, since these assets represent the most valuable assets that entities possess, and among which could be mentioned human resources and intellectual capital (Popescu, 2018; Popescu, 2019a; Popescu, 2019b; Popescu, 2019c). • In the same way, in order to how businesses can become more fiscally responsible as a result of Covid-19 pandemic shock, it would be recommendable given the results promoted by different studies in the field, to focus on an integrated and inclusive strategy mainly focused on assessing the companies’ performance (Popescu, 2019d; Popescu, 2019e; Popescu, 2019f).
Specific research objectives (SRO):	• SRO1: Identifying the basic characteristics of fiscally responsible businesses and offering examples of ways in which businesses should act in order to demonstrate their fiscal responsibility. • Based on recent studies, each business should be oriented towards being part a fiscally healthy activity, demonstrating in this matter an appropriate business conduct and responsible business practices (Popescu, 2017). • In addition, “reforming international investment governance” represents a key step, according to specialists, in order to ensure the basic characteristics of fiscally responsible businesses at a European level and at a global level (UNCTAD, 2015; United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2019). • Investments represent a key aspect for any successful type of business, especially since making investments in businesses may provide them with the necessary stimulus to be able to innovate, continue the research started and increase the dynamics on the internal and external markets, thus becoming more and more competitive (Popescu <i>et al.</i>, 2008; Popescu <i>et al.</i>, 2016; United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2019).
	• SRO2: Exploring the implications of tax evasion and tax havens and explaining the benefits of tax havens as well as the impact of their existence on countries’ tax systems. • Investment flows and policies as well as the investment landscape at a global level should be able to support a competitive environment, especially when taking into consideration the unfolding of today’s regional, national and international social, political, economic and financial risks (Popescu & Popescu, 2018a; United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2019). • According to the latest statistics, it has been noted that foreign direct investments (FDI) inflows are slightly shifting from the manufacturing sector (where they are still predominant) to the services sector – which has seriously been affected by Covid-19 pandemic shock and Covid-19 crisis (Popescu <i>et al.</i>, 2015; United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2019; UNCTAD, 2021). • According to the latest updates on the role played by Covid-19 pandemic shock and Covid-19 crisis in the case of foreign direct investments (FDI), the “World Investment Report 2021. Investing in Sustainable Recovery – Overview” emphasizes the following issues: “Global flows of foreign direct investment have been severely hit by the COVID-19 pandemic. In 2020, they fell by one third to \$1 trillion, well below the low point reached after the global financial crisis a decade ago. Greenfield investments in industry and new infrastructure investment projects in developing countries were hit especially hard” (UNCTAD, 2021, p.5). • Taking into consideration this general framework, the conclusion that was reached in the case of this current scientific work is that by exploring the implications of tax evasion and tax havens and by explaining the benefits of tax havens as well as the impact of their existence on countries’ tax systems, more awareness will be raised and the need for a serious and coherent international tax reform will be better understood and acknowledged by policy makers at a global level.
	• SRO3: Highlighting the OECD latest developments in international tax reform work on BEPS contemplating on the G7 nations “historic” decision on applying a minimum global corporate tax rate of 15%, and assesses the G20 finance ministers commitment on backing-up this initiative by creating a framework for international tax reform due to include a minimum corporate rate of 15%. • Seeing that the OECD latest developments in international tax reform work on BEPS proved to be extremely important in determining the G7 nations “historic” decision on applying a minimum global corporate tax rate of 15%, and in encouraging the G20 finance ministers to show a great commitment on backing-up this initiative, creating a framework for international tax reform is believed to be the imperative for ensuring a healthy tax system and of prevailing more financial losses due to the existence of tax evasion and tax havens (UNCTAD, 2018). • Estimating the fiscal effects BEPS is of major importance these days, especially when taking into analysis the implications of COVID-19 pandemic and Covid-19 crisis on countries’ economies and the latest economic trends and evolution (UNCTAD, 2018; OECD, 2021a; OECD, 2021b; OECD, 2021c; OECD, 2021d). • Above all, sustainability assessment should also include the OECD latest developments in international tax reform work on BEPS and the new decisions taken by the G7 and G20 nations in the complex process of creating a framework for international tax reform (Popescu <i>et al.</i>, 2017d; Popescu <i>et al.</i>, 2015; Popescu, 2015; Popescu, 2020a).

Source: the authors, based on the references cited in the text

Background

The second section that belongs to the chapter titled “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens” is represented by the “Background” and is centered on the following dominant elements:

- The first dominant issue is represented by the Organization for Economic Co-operation and Development (OECD) latest developments in international tax reform work on Base Erosion and Profit Shifting (BEPS).
- The second prominent aspect is constituted by the G7 nations’ actions taken in the spirit of supporting the OECD latest developments in international tax reform work on BEPS, thus reaching the “historic” decision on applying a minimum global corporate tax rate of 15%.
- The third outstanding element is portrayed by the G20 finance ministers commitment on backing-up the OECD latest developments in international tax reform work on BEPS and the G7 nations’ initiative on applying a minimum global corporate tax rate of 15%, thus acknowledging the need of creating a framework for international tax reform due to include a minimum corporate rate of 15% and, in turn, starting the process of preparing a framework for international tax reform which will include a minimum corporate rate of 15%.

The main questions due to be answered in this section are the ones mentioned in the lines below:

- (Q1) What is tax evasion and in what manner can it be diminished and even stopped?
- (Q2) What is a tax haven and who benefits from the existence of a tax haven?
- (Q3) What does the acronym BEPS stand for and what does BEPS implicate?
- (Q4) What is a Minimum Corporate Rate (MCR) and who has the power to fix and implement it?
- (Q5) What are the role, influence and position of the OECD in terms of international tax reforms?
- (Q6) What are the OECD latest developments in international tax reform work on BEPS?
- (Q7) What were the G7 nations’ actions taken in the spirit of supporting the OECD latest developments in international tax reform work on BEPS?
- (Q8) What were the reasons for considering the G7 nations’ decision on applying a minimum global corporate tax rate of 15% a “historic” move?
- (Q9) What were the G20 finance ministers’ motives on backing-up the OECD latest developments in international tax reform work on BEPS and the G7 nations’ initiative on applying a minimum global corporate tax rate of 15%?
- (Q10) What determined the G20 representatives’ to reach the decision to start preparing as soon as possible a framework for international tax reform which will include a minimum corporate rate of 15%?

These main questions due to be answered in this section are synthetically presented in the lines below, in order to highlight their importance for this current study (see Figure 2. Main questions (Q1-Q5) addressed in the “Background” section and see Figure 3. Main questions (Q6-Q10) addressed in the “Background” section):

Figure 2. Main questions (Q1-Q5) addressed in the “Background” section

Source: the authors

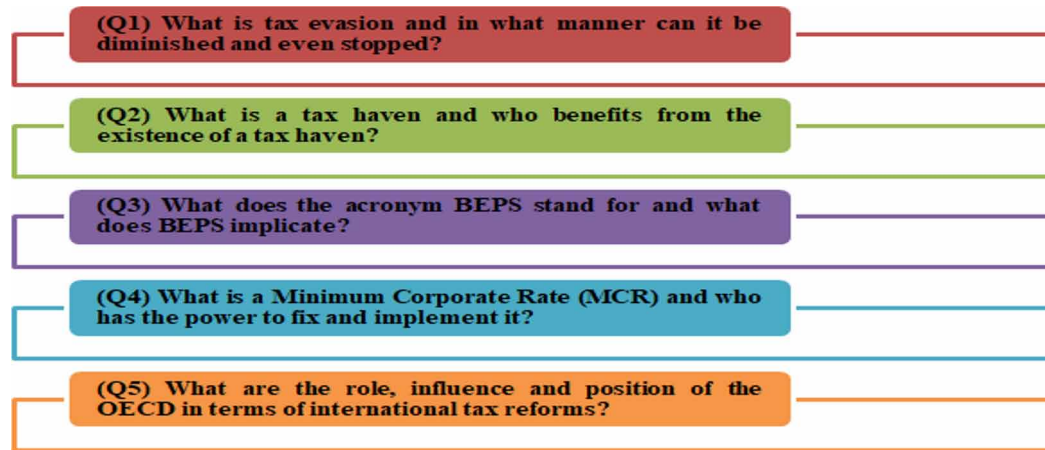
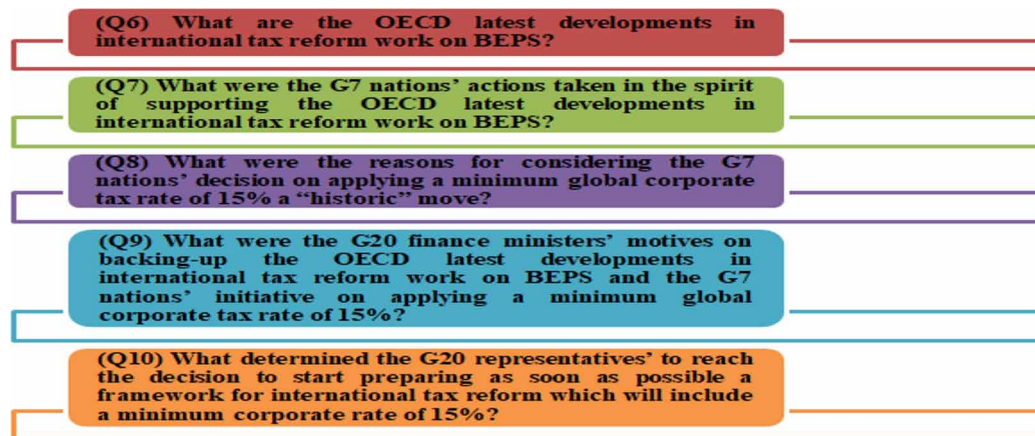


Figure 3. Main questions (Q6-Q10) addressed in the “Background” section

Source: the authors



Notably, the European Commission (2021) documentation on “Corporate Social Responsibility and Responsible Business Conduct” includes a selection of some important publications meant to display the role and the influence of CSR and RBC policy in our society (see Table 5. Key documents for CSR and RBC policy and main ideas, based on the European Commission (2021) documentation on “Corporate Social Responsibility and Responsible Business Conduct” and other key documents for CSR and RBC policy).

The first question that needs to be answered in this context is: (Q1) What is tax evasion and in what manner can it be diminished and even stopped?

Table 5. Key documents for CSR and RBC policy and main ideas, based on the European Commission (2021) documentation on “Corporate Social Responsibility and Responsible Business Conduct” and other key documents for CSR and RBC policy

Main Ideas:
• In the first place, the document that needs to be mentioned is “Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A renewed EU strategy 2011-14 for Corporate Social Responsibility” (European Commission, 2011). • CSR is defined here as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (European Commission, 2011, p. 3). • In continuation, CSR is regarded as the companies’ concern “towards society and the environment” which is higher than their legal obligations and which helps increase the companies’ competitiveness, bringing multiple benefits, such as, for instance in the following areas: “risk management, cost savings, access to capital, customer relationships, human resource management, and innovation capacity” (European Commission, 2011, p. 3). • Besides the elements pointed out in the lines above, CSR implicates the involvement from the internal and external stakeholders, offering organizations the opportunity to firmly connect to the “fast changing societal expectations and operating conditions”, acting as a key driver for “the development of new markets” and the creation of “opportunities for growth” (European Commission, 2011, p. 3).
• In the second place, the work that needs to be closely analyzed is “Council Conclusions on the Action Plan on Human Rights and Democracy 2015-2019” (Council of the European Union, 2015). • This documents focuses on addressing the challenges specific to human rights in relationship to the business environment, thus “advancing on business and human rights” and taking action on ensuring “a strong focus on business and human rights in the overall EU strategy on Corporate Social Responsibility including priorities for the effective implementation” (Council of the European Union, 2015, p. 17). • Another area of interest that needs immediate attention refers to the trade and investment policies, based on the fact that the EU Member States are concentrating their efforts “to include in new or revised Bilateral Investment Treaties (BITs) that they negotiate in the future with third countries provisions related to the respect and fulfillment of human rights, including provisions on Corporate Social Responsibility, in line with those inserted in agreements negotiated at EU level” (Council of the European Union, 2015, p. 23). • In line with the steps due to be followed that were mentioned above, CSR guidelines and principles at an international level are to be systematically included “in EU trade and investment agreements”, being in this way able to provide a quick response to all situations that might arise in order to support the EU human rights and the EU democracy (Council of the European Union, 2015, p. 24; Council of the European Union, 2015, p. 5).
• In the third place, the “Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Next steps for a sustainable European future. European action for sustainability” needs further consideration (European Commission, 2016a). • In this particular case, CSR and RBC are being considered as integrating components of the EU policy for sustainable development, especially since sustainable development is positioned “at the heart of the European project” (European Commission, 2016a, p. 2). • Given today’s general context, the EU commitment for sustainable development has been prompted by the manner in which individuals are capable to meet their present needs “without compromising the ability of future generations to meet their own needs” (European Commission, 2016a, p. 2). • In this context, a key aspect requires immediate attention, as follows: “Pursuing responsible fiscal policies and implementing reforms will strengthen the sustainability of our healthcare and pension systems” (European Commission, 2016a, p. 2).
• In the fourth place, another document that sheds a new light on Europe’s plans for a sustainable future is represented by “Reflection Paper towards a Sustainable Europe by 2030” (European Commission, 2019c). • On the one hand, the document emphasized the need for CSR and RBC policy, citing the KPMG Survey of Corporate Responsibility Reporting 2017 “The Road Ahead” according to which “in 2017, 78% of the world’s top companies included corporate social responsibility (CSR) in their annual reporting”, and stressing the importance of implementing a “responsible business conduct, corporate social responsibility and new business models” (European Commission, 2019c, p. 26). • On the other hand, the document presents numerous arguments towards sustainable finance, as part of “the Action Plan on Sustainable Finance”, emphasizing the fact that both public and private funds “need to be better and more intelligently oriented towards the pursuit of the SDGs” (European Commission, 2019c, p. 24).
• In the fifth place, the “Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups” represents an important document still in force which discloses the role and the importance of CSR and RBC policy (European Parliament & the Council of the European Union, 2014). • As a result of several actions taken over the years by the EU, all Member States came to the conclusion that “the transparency of the social and environmental information” has the power to raise awareness among the countries and the citizens (European Parliament & the Council of the European Union, 2014, p. 1). • Also, all Member States presented the fact that “further improvements to the transparency of undertakings’ non-financial information, which is by its nature a continuous endeavor” is required in order to be able to account for CSR and RBC behaviors (European Parliament & the Council of the European Union, 2014, p. 1). • At the same time, the EP and the Council of the EU “acknowledged the importance of businesses divulging information on sustainability such as social and environmental factors, with a view to identifying sustainability risks and increasing investor and consumer trust” (European Parliament & the Council of the European Union, 2014, p. 1). • The purposes of disclosing non-financial information are rather complex, as it can be seen in the lines below: (a) this “information is vital for managing change towards a sustainable global economy by combining long-term profitability with social justice and environmental protection”; (b) the information “helps the measuring, monitoring and managing of undertakings’ performance and their impact on society”; (c) all these data and information offer a “high flexibility of action, in order to take account of the multidimensional nature of corporate social responsibility (CSR) and the diversity of the CSR policies implemented by businesses matched by a sufficient level of comparability to meet the needs of investors and other stakeholders as well as the need to provide consumers with easy access to information on the impact of businesses on society” (European Parliament & the Council of the European Union, 2014, p. 1).
• In the sixth place, the next important document published by the United Nations (UN) Global Compact on the 19th of January 2021 is represented by the “UN Global Compact Strategy 2021–2023” (United Nations (UN) Global Compact, 2021). • This document presents and promotes a new strategy capable “to accelerate and scale the global collective impact of business” based on Ten Principles that have the capacity of supporting the SDGs and determine organizations to assume their responsibility for the well-being of the entire ecosystem and act more responsible towards individuals and our planet (United Nations (UN) Global Compact, 2021).

continues on following page

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Table 5. Continued

Main Ideas:
• In the seventh place, the UN (2011) document on “Guiding Principles on Business and Human Rights. Implementing the United Nations “Protect, Respect and Remedy” Framework” is extremely valuable when it comes to ensuring the CSR and RBC policy (United Nations (UN), 2021). • The document closely analyzes the obligations belonging to all Member States to respect and to ensure the protection and the fulfillment of human rights and the fundamental freedoms of individuals (United Nations (UN), 2021, p. 1). • In continuation, another principle that governs all Member States in this context is represented by the duty of all business enterprises to respect the laws and to respect, at all times, the human rights, thus demonstrating the profound bond that exists between CSR and human rights, which can be found in the documentation on “Guiding Principles on Business and Human Rights. Implementing the United Nations “Protect, Respect and Remedy” Framework” with the title “The corporate responsibility to respect human rights” (United Nations (UN), 2021, p. 1, pp. 13-26).
• In the eighth place, it should be pointed out that “The Sustainable Development Agenda” belonging to the UN (United Nations, 2021) explores the results of “The Sustainable Development Goals Report 2020” published by the UN (United Nations, 2020c). • “The Sustainable Development Goals Report 2020” published by the UN has embodied a “Progress summary for SDG targets with a 2020 deadline”, which presented, in brief, the progress made towards 21 of the 169 Sustainable Development Goal which have matured by the end of 2020 (United Nations, 2020c, pp. 60-61). • Also, “The Sustainable Development Goals Report 2020” encourages “finding transformative pathways in turbulent times” in order to be able to cope with “the devastating initial impacts of COVID-19 on specific Goals and targets” (United Nations, 2020c, p. 3).
• In the ninth place, the ISO 26000 Social Responsibility (2010) should be mentioned since it tackles entities commitment to perform the businesses in a responsible manner, operating based on CSR and RBC policies (ISO 26000 Social Responsibility, 2010). • Under these circumstances, it should be noted that ISO 26000 Social Responsibility (2010) provides guidance to all businesses that consider that showing a deep respect for our society as a whole and for the environment and the ecosystems represents a determining success factor (ISO 26000 Social Responsibility, 2010). • Also, the guidelines contained by the ISO 26000 Social Responsibility (2010) offers organizations a basic understanding of the standards due to be taken into consideration in order to act in the spirit of CSR and RBC, enabling the organizations to achieve the CSR and RBC principles (ISO 26000 Social Responsibility, 2010). • It should be stressed that ISO 26000 came to life by the aid of a working group that included more than 500 experts in the field (ISO 26000 Social Responsibility, 2010). • Furthermore, there are other additional documents that come to support the implementation of ISO 26000, as follows (ISO 26000 Social Responsibility, 2010): (a) ISO 26000 Communication protocol, which presents the appropriate wordings organizations, thus showing the manner in which the standard can be used at the level of entities (ISO 26000 Communication protocol, 2012); (b) ISO 26000 basic training materials which can be found in the form of a PowerPoint and training protocol guidance (ISO 26000 basic training materials, 2014); (c) the documents that connect ISO 26000 with the OECD Guidelines for Multinational Enterprises and the United Nations 2030 Agenda (SDGs) – many of which are displayed in this current research chapter and are thoroughly analyzed and commented.
• In the tenth place, the OECD (2011) has published “OECD Guidelines for Multinational Enterprises” which contains numerous valuable recommendations for RBC in a global context that take into consideration the following key aspects: (a) the importance of disclosing financial and non-financial information (OECD, 2011, p. 27); (b) the vital role that businesses play when it comes to ensuring and supporting human rights and individuals’ freedoms (OECD, 2011, p. 31); (c) the crucial role that leaders and managers play when in terms of employment and industrial relationships (OECD, 2011, p. 35); (d) the entities strong relationship with the environment and the organizations’ capacity to act in favor of preserving our planet’s resources for the present and future generations and of conserving the ecosystems (OECD, 2011, p. 42); (e) the continuous actions taken in order to combat bribery, bribe solicitation and extortion helping in this way to maintain a healthy and sustainable business environment capable to support competition and non-discrimination (OECD, 2011, p. 47); (f) the idea of promoting fair business practices as well as correct marketing and advertising practices constitutes the premises of a healthy business environment and of healthy business activities that take place by respecting consumers interests and by offering reliable goods and services that are in accordance with the quality standards (OECD, 2011, p. 51); (g) since science and technology portray, in essence, the solution for a bright future, all businesses are encouraged to embrace creativity, innovation and newness and to invest in education, training, research and development (OECD, 2011, p. 55). • In spite all the challenges and disadvantages that Covid-19 pandemic and Covid-19 crisis has brought so far, the “OECD Guidelines for Multinational Enterprises” stand-in-for fair competition governed by laws and regulations promoted by proper authorities in this matter, thus eliminating all arising anti-competitive effects (OECD, 2011, p. 57). • At the same time, the “OECD Guidelines for Multinational Enterprises” make way for fair competition and fair competition practices by discouraging anti-competitive agreements among potential competitors, among which could be mentioned: operating with “fix prices”, making “rigged bids”, establishing “output restrictions or quotas”, and “allocating customers, suppliers, territories or lines of commerce” by sharing or dividing different types of markets (OECD, 2011, p. 57). • Therefore, the “OECD Guidelines for Multinational Enterprises” illustrates different types of situations in which enterprises are urged to cooperate with the EU authorities in order to promote effective and efficient CSR and RBC policies and practices, raise all employees awareness towards competitive issues, laws and regulations and successfully promote competitive practices for domestic and international enterprises (OECD, 2011, pp. 57-58)
• In the eleventh place, the “OECD Due Diligence Guidance for Responsible Business Conduct” brings a tremendous contribution to the CSR and RBC policy, laying out the general guidelines capable to ensure a practical support to businesses in order to encourage them to make use of correct practices and act in the spirit of correct business relationships (OECD, 2018b). • This document brings forth an overview of the due diligence for RBC (OECD, 2018b, pp. 14-20), highlights the benefits of the due diligence process (OECD, 2018b, pp. 20-37), offers answers to 54 questions on the due diligence for RBC and the due diligence process (OECD, 2018b, pp. 37-92), and displays the valuable recommendation of the Council on the OECD due diligence guidance for RBC (OECD, 2018b, pp. 92-95).
• In the twelfth place, the International Labour Organization (ILO) document “Tripartite declaration of principles concerning multinational enterprises and social policy (MNE Declaration) - 5th Edition” represents a precious resource in terms of supporting the CSR and RBC policy (International Labour Organization, 2017). • The ILO document makes reference to the CSR and RBC policy and shows that ILO firmly encourages “the positive contribution which multinational enterprises can make to economic and social progress and the realization of decent work for all; and to minimize and resolve the difficulties to which their various operations may give rise” (International Labour Organization, 2017, p. 2).

Source: the authors, based on the ideas stressed by the European Commission (2021) in the documentation on “Corporate Social Responsibility and Responsible Business Conduct” and other key documents for CSR and RBC policy

The EC highlights the existence of three concepts that need immediate attention, namely: (a) tax fraud; (b) tax evasion; and (c) tax avoidance. With reference to the concept “tax evasion” the EC offers a broad definition, stressing the fact that it usually implicates “illegal arrangements where tax liability is hidden or ignored”, emphasizing the case of taxpayers who are expected to pay a certain tax according to the laws and regulations in force in that state, but instead end up by paying taxes “under the law by hiding income or information from the tax authorities” (European Commission, 2021b). The EU statistics showed that tax fraud, tax evasion and tax avoidance affect all Member States and can be encountered not only in the EU territory but at an international level, which implicates that common efforts and correlated actions need to be taken in order to respond to these threats and to “fight” against these dangerous phenomenon (European Commission, 2021b; European Commission, 2021c). In this matter, based on OECD figures, tax avoidance and tax evasion seriously threaten government revenues at an international level (OECD, 2021e). In order to illustrate the manner in which tax avoidance and tax evasion manage to threaten government revenues, OECD offered the case of USA, mentioning that the “US Senate estimates revenue losses from tax evasion by U.S.-based firms and individuals at around 100 billion dollars a year” (OECD, 2021e). Taking into consideration the aspects highlighted above, it should be noted that the EU authorities are taking action since collecting taxes and fighting and combating tax fraud, tax evasion and tax avoidance fall in the responsibility of the EU countries’ national authorities by: (a) using the benefits derived from information and technology (IT) and encouraging cooperation between countries as well as exchange of information between all Member States and international authorities (European Commission, 2021b); (b) using the benefits derived from common frameworks and common action plans on different types of taxes that should be aligned at the EU level by the Member States, while monitoring the procedures of savings taxation and value-added tax (VAT) (European Commission, 2021b); (c) using the benefits derived from “an EU system of mutual assistance enables national tax authorities to recover unpaid taxes from one EU country to another” (European Commission, 2021b); and (d) using the benefits derived from the agreements signed by the EU authorities with other countries “aimed at preventing tax abuse” and which also target in an intense manner tax havens (European Commission, 2012; OECD, 2012; Council of the European Union, 2016; European Commission, 2016b; European Commission, 2021b; OECD, 2021f; Exchange of Tax Information Portal, 2021).

The second question that needs to be answered in this context is: (Q2) What is a tax haven and who benefits from the existence of a tax haven?

In order to define tax havens the EP has addressed, on the one hand, the need of being mindful of the interconnections that exist between several key terms, such as, tax jurisdictions, good governance in tax, tax avoidance, tax evasion, tax fraud, money laundering, and has drawn attention, on the other hand, to the fact that the concept of tax haven may often be associated with terms such as offshore center or non-cooperative jurisdiction (European Parliament, 2017). A tax haven is the one that gives taxpayers the opportunity to avoid paying taxes, which may signify that the taxes due to be paid are either zero or much lower than the laws and regulations normally required (European Parliament, 2017; European Parliament, 2018). Also, a tax haven ensures the secrecy and the opacity of the transactions that are taking place which may represent a way in which the origin of revenues does not need to be disclosed, thus hiding, in some cases, the fact that the sums of money might be the result of illegal and criminal activities (European Parliament, 2017; European Parliament, 2018). In this matter, tax havens are not only seen as part of harmful tax practices, but are also associated with complex and global schemes that facilitate individuals and entities to escape taxation, that encourages individuals and entities to declare a fictitious residence which has absolutely no reflection on the reality and that makes individuals and

entities responsible for major discrepancies that are afterwards discovered between the real economic activities, the real earnings made by individuals and organizations and the earnings declared (European Parliament, 2017; European Parliament, 2018).

The third question that needs to be answered in this context is: (Q3) What does the acronym BEPS stand for and what does BEPS implicate?

In this matter, the aspects related to the acronym BEPS stand for and what BEPS implicates are displayed in the lines below, as follows (see Table 6. Base Erosion and Profit Shifting (BEPS): meaning, role and importance for enabling EU principles on Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)):

Table 6. Base Erosion and Profit Shifting (BEPS): meaning, role and importance for enabling EU principles on Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC)

Base Erosion and Profit Shifting (BEPS) general meaning and implications	
Definitions:	• The acronym BEPS stands for Base Erosion and Profit Shifting and it implicates understanding the need to combat tax avoidance and to cope accordingly with the challenges derived from the relationship that exists between tax avoidance and digital tax challenges (European Parliamentary Research Service, 2019, p. 1). • In essence, the G20/OECD Base erosion and profit shifting action plan (known as BEPS) has been strongly promoted by OECD forum in order to strengthen the fight against corporate tax avoidance (European Parliamentary Research Service, 2019, p. 1).
Role:	• The role of BEPS action plan is of great importance to all Member States but it has wide implications at an international level, since it was initially designed to be flexible and to function by consensus (European Parliamentary Research Service, 2019, p. 1). • The role of BEPS action plan is crucial to a great number of countries, since it comprises numerous recommendations due to be found in specific documentations, such as: general minimum standards, guidelines, reports, and best practices (European Parliamentary Research Service, 2019, p. 1).
Importance:	• Firstly, as a result of the aspects illustrated above, it should be stressed that the European Parliamentary Research Service (EPRS) in the document titled “Briefing: Understanding BEPS. From tax avoidance to digital tax challenges. Members’ Research Service” mentions the importance of BEPS action plan which is represented by the steps that need to be taken into consideration in “covering elements used in corporate tax avoidance practices and aggressive tax-planning schemes” (European Parliamentary Research Service, 2019, p. 1). • Secondly, also as a result of the aspects illustrated above, it should be emphasized that the European Parliamentary Research Service (EPRS) in the document titled “Briefing: Understanding BEPS. From tax avoidance to digital tax challenges. Members’ Research Service” displays the importance of BEPS action plan which is represented by combating “the avoidance techniques” as well as “addressing tax challenges of the digital economy” and shows the need of finding the fit instruments capable to “modify the provisions of tax treaties related to BEPS practices” and to put into practice BEPS action plan by creating “a more inclusive framework able to involve more countries beyond the OECD and G20 members, and build on cooperation between international organizations” (European Parliamentary Research Service, 2019, p. 1).
Examples:	• For instance, in the document published by Her Majesty’s Treasury (HM Treasury) & Her Majesty’s Revenue & Customs (HM Revenue & Customs) in March 2014 entitled very suggestively “Tackling aggressive tax planning in the global economy: UK priorities for the G20-OECD project for countering Base Erosion and Profit Shifting”, BEPS action plan is mentioned as a powerful instrument for international cooperation, capable to help authorities to take concrete actions against any abuses that may arise in terms of the UK tax rules, especially in the global economy which is mainly characterized by the free flow of goods and services between countries as well as by “the widespread adoption of new and more powerful information technologies and the growth of the digitized economy” (Her Majesty’s Treasury & Her Majesty’s Revenue & Customs, 2014, p. 3). • Also, for example, in the document published by Her Majesty’s Treasury (HM Treasury) & Her Majesty’s Revenue & Customs (HM Revenue & Customs) in March 2014 entitled very suggestively “Tackling aggressive tax planning in the global economy: UK priorities for the G20-OECD project for countering Base Erosion and Profit Shifting”, BEPS action plan is intended to shed a new light on “where multinationals are paying their tax and making their profits”, who owns these multinationals and ensure transparency to the entire process of taxation (Her Majesty’s Treasury & Her Majesty’s Revenue & Customs, 2014, p. 3).

Source: the authors, based on the sources mentioned

The fourth question that needs to be answered in this context is: (Q4) What is a Minimum Corporate Rate (MCR) and who has the power to fix and implement it?

The work entitled “OECD/G20 Base Erosion and Profit Shifting Project. Addressing the tax challenges arising from the digitalisation of the economy”, which was published in July 2021, mentions the necessity of implementing a Minimum Tax Rate (MTR) or a Minimum Corporate Rate (MCR) for purposes of the Income Inclusion Rule (IIR) and the Undertaxed Payment Rule (UTPR) of at least 15% (OECD, 2021d, p. 6). It should be added, in this context, that the Income Inclusion Rule (IIR) and the Undertaxed Payment Rule (UTPR) represent according to the document on “OECD/G20 Base Erosion and Profit Shifting Project. Addressing the tax challenges arising from the digitalisation of the economy” “two interlocking domestic rules (together the Global anti-Base Erosion Rules (GloBE) rules)” (OECD, 2021d, p. 6).

The fifth question that needs to be answered in this context is: (Q5) What are the role, influence and position of the OECD in terms of international tax reforms? The answer to this question was given together with the answer to the sixth question that needs to be answered in this context, namely: (Q6) What are the OECD latest developments in international tax reform work on BEPS? (see Table 7. OECD role, influence and position in terms of international tax reforms and OECD latest developments in international tax reform work on BEPS).

The seventh question that needs to be answered in this context is: (Q7) What were the G7 nations’ actions taken in the spirit of supporting the OECD latest developments in international tax reform work on BEPS? Also, the eighth question that needs to be answered in this context is: (Q8) What were the reasons for considering the G7 nations’ decision on applying a minimum global corporate tax rate of 15% a “historic” move? In addition, the ninth question that needs to be answered in this context is: (Q9) What were the G20 finance ministers’ motives on backing-up the OECD latest developments in international tax reform work on BEPS and the G7 nations’ initiative on applying a minimum global corporate tax rate of 15%? In continuation, the tenth question that needs to be answered in this context is: (Q10) What determined the G20 representatives’ to reach the decision to start preparing as soon as possible a framework for international tax reform which will include a minimum corporate rate of 15%?

The answers to these questions were emphasized in the lines below, as follows (see Table 8. Key questions for the book chapter “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”):

In continuation to all the pivotal aspects accentuated in the lines above, SMEs fundamental role and importance in these days society need to be taken into consideration. In this matter, Jarmila Duháček Šebestová noted in the chapter entitled “Crisis situation and financial planning for sustainability: a case of the Czech SMEs” – recently published in the book “Sustainable and Responsible Entrepreneurship and Key Drivers of Performance”, that SMEs financial matters represent a real provocation for all entrepreneurs, especially when addressing delicate, unexpected and crisis situations (Duháček Šebestová, 2021). Also, on the challenging and demanding road towards sustainability, financial planning for the Czech SMEs rises other connecting matters that call for immediate attention, such as: for the Czech entrepreneurs, the need to act more responsible; for the Czech policy makers, the need to strengthen the regulations; for the Czech organizations, the need to attract more funds, which are indispensable for ensuring a bright future (Duháček Šebestová, 2021).

Fiscally Responsible Businesses as a Result of COVID-19 Pandemic Shock

Table 7. OECD role, influence and position in terms of international tax reforms and OECD latest developments in international tax reform work on BEPS

OECD role, influence and position in terms of international tax reforms and OECD latest developments in international tax reform work on BEPS	
OECD role, influence and position in terms of international tax reforms:	• The OECD is highly preoccupied and deeply involved in “reforming the tax system for the 21st century”, leading global “efforts since the 1990s to enable countries to prevent tax evasion and corporate tax avoidance” (OECD, 2021d, p. 8). • What is more, in this particular case, under the OECD/G20 BEPS Project, the OECD has come with the proposal of creating an Inclusive Framework to which currently all member states “are collaborating to put an end to tax avoidance strategies that exploit gaps and mismatches in tax rules to avoid paying tax” (OECD, 2021d, p. 8).
OECD latest developments in international tax reform work on BEPS:	• (OECD, 2010): “Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. International Organizations’ Documentation IBFD (IBFD - International Bureau of Fiscal Documentation)”. • (OECD, 2011): “OECD Guidelines for Multinational Enterprises”. • (OECD, 2012): “The Global Forum on Transparency and Exchange of Information for Tax Purposes. Information Brief”. • (OECD, 2013a): “Addressing Base Erosion and Profit Shifting, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2013b): “Action Plan on Base Erosion and Profit Shifting”. • (OECD, 2014a): “Part 1 - Report to G20 Development Working Group on the Impact of BEPS in Low Income Countries”. • (OECD, 2014b): Part 2 - Report to G20 Development Working Group on the Impact of BEPS in Low Income Countries”. • (OECD, 2014c): “Strategy for Deepening Developing Country Engagement in the BEPS Project”. • (OECD, 2015a): “Transfer Pricing Documentation and Country-by-Country Reporting, Action 13 – 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2015b): “Addressing the Tax Challenges of the Digital Economy, Action 1 – 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2015c): “Measuring and Monitoring BEPS, Action 11 – 2015 Report, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2018a): “Tax Challenges Arising from Digitalisation – Interim Report 2018: Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2018b): “OECD Due Diligence Guidance for Responsible Business Conduct”. • (OECD, 2019): “Programme of Work to Develop a Consensus Solution to the Tax Challenges Arising from the Digitalisation of the Economy, OECD/G20 Inclusive Framework on BEPS”. • (OECD, 2020a): “Corporate Tax Statistics”. • (OECD, 2020b): “Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy”. • (OECD, 2020c): “Tax Challenges Arising from Digitalisation – Economic Impact Assessment: Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD). (2020d): “Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint: Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD). (2020e): “Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint: Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2021a): “Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy”. • (OECD, 2021b): “International Collaboration to End Tax Avoidance”. • (OECD, 2021c): “OECD/G20 Base Erosion and Profit Shifting Project”. • (OECD, 2021d): “OECD/G20 Base Erosion and Profit Shifting Project. Addressing the tax challenges arising from the digitalisation of the economy”. • (OECD, 2021e): “Fighting tax evasion”. • (OECD). (2021f): “Publications Documents News Release”.

Source: the authors, based on the sources mentioned

The next section, represented by the third section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, emphasizes the importance of “Fiscally Responsible Businesses: Taking back Control of Countries’ Tax Systems”. What is more, this section brings to light the need for a better and a deeper understanding of countries’ tax systems in the attempt to discover the most valuable instruments capable to perform the sustainability assessment procedures in the spirit of transparency, creativity, innovation, digitalization and the benefits derived from the use

of intangible assets at the level of entities – and, in particular, intellectual capital (Popescu, 2020d). Furthermore, this section stresses the main characteristics of fiscally responsible businesses, with reference, for instance, to the advantages and disadvantages that multinational corporations bring, and illustrates the need to take control over countries’ tax systems by putting an end to corporate tax evasion and tax havens.

Table 8. Key questions for the book chapter “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”

Key questions answered in order to understand the importance of fiscally responsible businesses as a result of Covid-19 pandemic shock	
(Q7) answers:	• (Q7) What were the G7 nations’ actions taken in the spirit of supporting the OECD latest developments in international tax reform work on BEPS? • The G7 – also known as the Group of Seven, is represented by a group of seven countries that have the largest economies at an international level and the most developed economies worldwide and which include Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States (European Commission, 2021d). • The current leaders of the G7 nations are: Justin Trudeau, Prime Minister of Canada; Emmanuel Macron, President of France; Angela Merkel, Chancellor of Germany; Giuseppe Conte, Prime Minister of Italy; Shinzō Abe, Prime Minister of Japan; Boris Johnson, Prime Minister of the United Kingdom; and Joe Biden, President of the United States (Council on Foreign Relations, 2021). • It should be highlighted that, due to the Covid-19 pandemic shock, all countries worldwide were severely affected which led to the Covid-19 crisis that requires specific attention from all leaders and prominent political figures at an international level, as well as coordinated actions towards more strict taxes and more strict laws and regulations that would be encountered in the global tax reform acknowledged by OECD and set out in the OECD BEPS 2.0 plan (KPMG, 2021a; KPMG, 2021b). • The G7 nations’ actions are very complex, especially due to the implications deriving from the Covid-19 pandemic shock at the level of countries worldwide (European Commission, 2021d). • The G7 nations’ actions are oriented towards giving political responses to the most recent global challenges, among which should be mentioned the latest G7 leaders’ support towards the OECD latest developments in international tax reform work on BEPS (European Commission, 2021d). • In this way the leading industrial countries and the leading democracies at an international level are supporting the inclusive “framework for ongoing global economic coordination” and are all working towards financial stability, thus being most recently preoccupied by initiating an international tax reform work on BEPS (European Commission, 2021d; Hanappi, González Cabral, 2020; Millot, V. <i>et al.</i>, 2020).
(Q8) answers:	• (Q8) What were the reasons for considering the G7 nations’ decision on applying a minimum global corporate tax rate of 15% a “historic” move? • Based on the latest documentation that belongs to the G7 nations, the countries’ leaders are extremely preoccupied with the challenges that rose from digitalization, and due to the most recent economic dynamics generated by the Covid-19 crisis, the countries’ leaders are extremely preoccupied with the challenges that rose especially from tax digitalization (OECD, 2021g). • Hence, addressing the new implications of tax digitalization clearly represents a major priority and a top challenge for the OECD/ G20 Inclusive Framework (OECD, 2021g). • The most recent advancements on the OECD documentations have prompted the fact that the G7 nations reached the decision on applying a minimum global corporate tax rate of 15%, which is indeed a “historic” move that was made in the time period June - July 2021 during the preparations for the G7 Summit as well as during the G7 Summit (OECD, 2021g). • All in all, it was remarked that starting with the month of July 2021 over 130 countries and jurisdictions (more accurately 139 countries and jurisdictions) “have joined a new two-pillar plan to reform international taxation rules and ensure that multinational enterprises pay a fair share of tax wherever they operate”, the common decision being on applying a minimum global corporate tax rate of 15% (OECD, 2021g).

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Fiscally Responsible Businesses: Taking back Control of Countries’ Tax Systems

The third section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, represented by the “Fiscally Responsible Businesses: Taking back Control of Countries’ Tax Systems” takes into consideration the following key aspects:

Table 8. Continued

Key questions answered in order to understand the importance of fiscally responsible businesses as a result of Covid-19 pandemic shock	
(Q9) answers:	• (Q9) What were the G20 finance ministers' motives on backing-up the OECD latest developments in international tax reform work on BEPS and the G7 nations' initiative on applying a minimum global corporate tax rate of 15%? • The Group of Twenty (also known, in short, as G20) represents a highly important multilateral forum for global economic cooperation which includes the world's most influential economies, having as members, as follows: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union (Australian Government, Department of Foreign Affairs and Trade, 2021). • The OECD has published recently (on the 1st of June 2021) a statement that includes the latest developments in international tax reform work on BEPS under an extremely suggestive title "130 countries and jurisdictions join bold new framework for international tax reform", in the attempt to demonstrate the conclusive and decisive actions taken on the road of "establishing a new framework for international tax reform" (OECD, 2021h). • Recent developments in the field have shown that the G20 finance ministers' are backing-up the OECD latest developments in international tax reform work on BEPS as well as the G7 nations' initiative on applying a minimum global corporate tax rate of 15%, which will be the hottest subject of debate on the agenda of the G20 Summit due to take place in Italy in October 2021 (OECD, 2021h).
(Q10) answers:	• (Q10) What determined the G20 representatives' to reach the decision to start preparing as soon as possible a framework for international tax reform which will include a minimum corporate rate of 15%? • The G20 representatives' reached the decision to start preparing as soon as possible a framework for international tax reform which will include a minimum corporate rate of 15% mainly due to financial concerns and financial restrictions faced by all countries worldwide as a result of Covid-19 pandemic shock and the challenges that have inevitably occurred at a global level (Popescu, 2021a; Popescu, 2021b; Popescu, 2021c). • Nevertheless, the Joint Committee on Taxation (2015) in the document titled "Background, Summary, and Implications of the OECD/G20 Base Erosion and Profit Shifting Project" has showed the need and the implications of the OECD/G20 BEPS and the benefits arising from fostering transparency for the taxes due to be applied, for instance, to multinational companies (Joint Committee on Taxation, 2015). • A highly interesting study published by Popescu (2020a) and entitled "Sustainability Assessment: Does the OECD/G20 Inclusive Framework for BEPS (Base Erosion and Profit Shifting Project) Put an End to Disputes Over The Recognition and Measurement of Intellectual Capital?" comes to highlight the need OECD/G20 Inclusive Framework for BEPS and the imminent changes that the international system of taxation will have to face in order to become more robust and more sustainable in the current context (Popescu, 2020a).

Source: the authors, based on the sources mentioned

1. First of all, the main aspect presented in this section aims at illustrating the characteristics of fiscally responsible businesses.
2. Second of all, the next aspect presented in this section aims at highlighting the need to take back control of countries' tax systems, in order to foster fiscally responsible businesses.

Nowadays, understanding the challenges of the business environment and seeing the constant dynamic surrounding the business environment represents a crucial element in order to ensure organizations' success, continuity and health (Popescu & Dumitrescu, 2016a). What is more, these days the challenges specific to aggressive forms of competitiveness have determined the need to change the entities managerial paradigms, thus focusing more on the social side of the economy, being more concentrated and concerned on ethics, transparency, correct and resilient organizational practices (Popescu & Dumitrescu, 2016b). Furthermore, based on the results derived from different forms of sustainability assessment, the new trends in the business environment have shown the need to ensure the existence of fiscally responsible businesses (Popescu & Popescu, 2018b; Popescu, 2020a). Hence, the Covid-19 pandemic shock and the Covid-19 crisis have accelerated the process already started that concerns fiscally responsible businesses on the road to create a framework for international tax reform which will include a minimum corporate rate of 15% (United Nations, 2015; United Nations & International Bureau of Fiscal Documentation, 2015; Popescu & Popescu, 2019a; Popescu & Popescu, 2019b).

In order to support the issues highlighted in the lines above, it should be stated that Mathias Cormann (OECD Secretary-General) has recently acknowledged the tremendous progress made by international authorities in terms of supporting fiscally responsible businesses and sustainability (OECD, 2021g). In this matter, Mathias Cormann mentioned that, after years of heavy negotiations, a “historic package” represented by the “Global anti-base erosion mechanism” (the second OECD pillar, that is due to be implemented since the first pillar “Re-allocation of taxing rights” successfully reached its target) has been agreed upon, thus enabling “that large multinational companies pay their fair share of tax everywhere” (OECD, 2021g).

When it comes to analyzing the main characteristics of fiscally responsible businesses, the following elements need to be mentioned:

1. First of all, fiscally responsible businesses are the ones that comply with the laws, the rules and the regulations that apply in terms of taxes, being connected in this way with the needs of the community they are part of and showing respect towards individuals and the environment through the actions that accompany every step taken in their evolution and development.
2. Second of all, fiscally responsible businesses are the ones that act in the spirit of CSR and RBC, having implemented constructive and strong CSR and RBC policies.
3. Third of all, fiscally responsible businesses are firmly preoccupied by the tax challenges arising from digitalization, being greatly concerned about covering the entire changes specific to “both direct and indirect tax issues” (OECD, 2021g).
4. Fourth of all, fiscally responsible businesses are due to align to the recent reform movement that implicates international taxation rules meant to “ensure that multinational enterprises pay a fair share of tax wherever they operate”, supporting vigorously the solutions and plans referring to OECD/G20 Inclusive Framework for BEPS (OECD, 2021g).
5. Fifth of all, fiscally responsible businesses are acting in the spirit of sustainability, thus “securing the integrity of the global tax system” (OECD, 2021g).

In continuation, the following steps need immediate attention in order to take back control of countries’ tax systems, in order to foster fiscally responsible businesses:

1. First of all, the solutions and plans referring to OECD/G20 Inclusive Framework for BEPS should be aligned with today’s challenges derived from the Covid-19 pandemic shock and the Covid-19 crisis.
2. Second of all, the “Global anti-base erosion mechanism” should be strengthened and put to action, thus acknowledging the role and the importance of OECD/G20 Inclusive Framework for BEPS (OECD, 2021g).

The next section, represented by the fourth section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, emphasizes the importance of “Discussion and synthesis of results”.

DISCUSSION AND SYNTHESIS OF RESULTS

The fourth section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, represented by the “Discussion and synthesis of results”, highlights the benefits of the fiscally responsible businesses and the challenges of a “Global anti-base erosion mechanism” as well as the role and the importance of OECD/G20 Inclusive Framework for BEPS (see Table 9. Challenges of “Global anti-base erosion mechanism” and role and importance of OECD/G20 Inclusive Framework for BEPS).

Table 9. Challenges of “Global anti-base erosion mechanism” and role and importance of OECD/G20 Inclusive Framework for BEPS

Challenges of “Global anti-base erosion mechanism” and role and importance of OECD/G20 Inclusive Framework for BEPS	
Key issues:	• Countries need to protect their tax bases, thus the countries need to implement a global minimum corporate tax rate (a minimum rate of at least 15%) in order to generate additional global tax revenues (OECD, 2021i).
	• The continuous digitalization of the economy has imposed the necessity of the implementation of a “robust global minimum tax” due to be applied to multinational enterprises (MNEs) “carrying out real economic activities with substance” (OECD, 2021j).
	• The work on promoting a “Global anti-base erosion mechanism” and the OECD/G20 Inclusive Framework for BEPS have the purpose of more transparency, more fairness to the countries tax systems and have the scope of implementing BEPS standards in order to ensure multilateralism in adopting international solutions capable to make the global tax system more robust (OECD, 2021k).
	• The digitalization of the economy brings with numerous challenges, such as: the distortion of tax reporting and inequities in applying tax rates on businesses revenues; the harsh competitive environment especially challenging for small economies and small entities (OECD, 2021k).
	• The benefits of a “Global anti-base erosion mechanism” and the OECD/G20 Inclusive Framework for BEPS might refer to “the stabilization of the international tax system and the increased tax certainty for taxpayers and tax administrations”, in order to aid the countries part of this bold project and “to help optimize the strength and the quality of the post-COVID recovery” (OECD, 2021k, p. 5).
	• The World Economic Forum (WEF) highlighted in “White paper. Corporate Tax, Digitalization and Globalization. Platform for Shaping the Future of Trade and Global Economic Interdependence”, published in December 2019, the fact that digitalization brings multiple benefits for companies in those cases in which the organizations need to connect with their clients, their users and the economy, without necessarily having a physical presence in the area, but, in the same time, brings numerous challenges when it comes to valuing intellectual assets in the context of a high number of principles due to be applied in order to value the transactions that occur in different countries (World Economic Forum, 2019).

Source: the authors, based on the sources mentioned

It should be pointed out that the abbreviations used in the book chapter are presented below and explained (see Table 10. Abbreviations used in the book chapter):

The next section, represented by the fifth section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, is represented by “Solutions and recommendations: proposed improvement model and framework development for fiscally responsible businesses”.

Table 10. Abbreviations used in the book chapter

List of abbreviations	Meaning of the abbreviations
BEPS	Base Erosion and Profit Shifting
BITs	Bilateral Investment Treaties
CFR	Council on Foreign Relations
CSR	Corporate Social Responsibility
EC	European Commission
EP	European Parliament
EPRS	European Parliamentary Research Service
EU	European Union
FDI	Foreign Direct Investments
G7	The Group of Seven
G20	The Group of Twenty
HM Revenue & Customs	Her Majesty's Revenue & Customs
HM Treasury	Her Majesty's Treasury
HR	Human Resources
IIR	Income Inclusion Rule
IA	Intangible Assets
IBFD	International Bureau of Fiscal Documentation
IC	Intellectual Capital
ILO	International Labour Organization
IT	Information and Technology
KC	Key Concepts
KPMG	Klynveld Peat Marwick Goerdeler
MCR	Minimum Corporate Rate
MTR	Minimum Tax Rate
MNE	Multinational Enterprises
NAPs	National Action Plans
OECD	Organization for Economic Co-operation and Development
Q	Question
RBC	Responsible Business Conduct
RQ	Research Question
SRO	Specific Research Objectives
SDGs	Sustainable Development Goals
UTPR	Under-taxed Payment Rule
UN	United Nations
UNGPs	UN Guiding Principles on Business and Human Rights
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
VAT	Value-Added Tax
WEF	World Economic Forum

Source: the authors

SOLUTIONS AND RECOMMENDATIONS

Proposed Improvement Model and Framework Development for Fiscally Responsible Businesses

The fifth section of this chapter entitled suggestively “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, represented by the “Solutions and recommendations: proposed improvement model and framework development for fiscally responsible businesses” proposes an improvement model for fiscally responsible businesses and illustrates the need for creating a framework development for fiscally responsible businesses (see Figure 4. Proposed improvement model and framework development for fiscally responsible businesses: first and second stage and see Figure 5. Proposed improvement model and framework development for fiscally responsible businesses: third and fourth stage).

The section “Solutions and recommendations: proposed improvement model and framework development for fiscally responsible businesses” is followed by the sixth section of the chapter “Fiscally responsible businesses as a result of Covid-19 pandemic shock: taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens”, the “Conclusion”.

CONCLUSION

The particular section displays the most relevant conclusions that come to support the need for fiscally responsible businesses as a result of Covid-19 pandemic shock, by taking control of countries’ tax systems by putting an end to corporate tax evasion and tax havens.

Figure 4. Proposed improvement model and framework development for fiscally responsible businesses: first and second stage
Source: the authors



Figure 5. Proposed improvement model and framework development for fiscally responsible businesses: third and fourth stage

Source: the authors



These ideas are carefully illustrated in the lines below (see Table 11. Conclusions on fiscally responsible businesses as a result of Covid-19 pandemic shock).

Table 11. Conclusions on fiscally responsible businesses as a result of Covid-19 pandemic shock

Conclusions on fiscally responsible businesses as a result of Covid-19 pandemic shock	
Key issues:	• The Covid-19 pandemic and the Covid-19 crisis are tremendous motivators for supporting change and development at a global level. • But, in the same time, the Covid-19 pandemic and the Covid-19 crisis forced governments to display a great concern towards their revenues, the way in which their taxes are administered, and the manner in which their revenues can be increased in order to support their economies and investments (consistently diminished). • Although corporate tax is not the only source for governments' revenues, it is an important source for governments' revenues, based on recent analysis and statistics (World Economic Forum, 2019; OECD, 2021k). • For developing countries in particular, corporate tax is a very important source for governments' revenues (World Economic Forum, 2019; OECD, 2021k).
	• The European Commission's principles on CSR and RBC play a crucial role in supporting fiscally responsible businesses and in advancing the practices of fiscally responsible businesses (European Commission, 2011). • The OECD latest developments in international tax reform work on BEPS have come to promote novel global initiatives for responsible tax and to support ambitious global actions for responsible tax principles. • What is more, the OECD efforts are supported by the G7 nations "historic" decision on applying a minimum global corporate tax rate of 15%, as well as by the G20 finance ministers commitment on backing-up this initiative by creating a framework for international tax reform due to include a minimum corporate rate of 15%. • Furthermore, although it is clear that there are numerous challenges facing the international tax reform work on BEPS, derived from the fact that this complex project targets different economies, different tax administrations, and different taxpayers, an international tax reform work on BEPS is needed in order to display responsible actions in establishing and applying taxes.
	• Nevertheless, establish fiscally responsible businesses as a result of Covid-19 pandemic shock will enable governments to taking back control of their countries' tax systems by putting an end to corporate tax evasion and tax havens, thus leading to more inclusive tax principles, encouraging responsible financial transactions and behaviors. • In continuation, the taxpayers will have to become more responsible and support the ongoing reforms that target the proper allocation of taxing rights, the transparency of the international tax system, the implementation of new business models and strong CSR and RBC policies.

Source: the authors, based on the sources mentioned

Nowadays, sustainability and responsibility are common trends in business today. This philosophy was presented within the chapter as an idea of an open and interconnected market and includes adapting today's business model to the ever-changing economic, financial, social, political, and demographic context, not least to increase the organization's competitiveness under tax optimization. However, it is necessary to ensure that resources and tax policy are used responsibly and efficiently, which today are more than ever considered limited, be they financial, material, or human resources, not just as an effect of the current Covid-19 pandemic (Popescu & Popescu 2019b; Pokorná & Duháček Šebestová, 2021).

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KEY TERMS AND DEFINITIONS

Fiscally Responsible Businesses: Are strongly focused on the following the Corporate Social Responsibility (CSR) and Responsible Business Conduct (RBC) principles and policies and are vigorously preoccupied with supporting the OECD latest developments in international tax reform work on Base Erosion and Profit Shifting (BEPS).

Healthy Tax Systems: Are considered the ones that are based on inclusive agreements, supporting transparency and fairness in terms of implementing correct and robust taxing rates that make corporations more accountable for their activities in a specific region or in a certain area.

Chapter 9

Legal Review of the Government's Responsibility in Compensating for the Damage Caused by the COVID-19 Crisis

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ABSTRACT

The onset and spread of COVID-19-related disease and the measures taken by the government to combat it have given rise to several legal issues. The most important of these issues can be considered the government's legal framework in the fight against this disease and the responsibility for compensation. Examining the first issue through Iran's current laws and regulations, it became clear that choosing the appropriate legal framework in the fight against this disease could be more than the basic and ordinary regulations. Instead of creating a national headquarters to fight COVID-19 under council approvals, the Supreme National Security Service shall use the capacities of the crisis management organization and the relevant law and the provisions of Article 79 of the Iranian constitution.

INTRODUCTION

Covid-19 is the cause of a contagious disease of external origin divided into infectious and lethal diseases. For this reason, strict quarantine and preventive measures were taken in different countries to prevent the entry of the disease carrier and its spread. Iran is one of the countries that became widely affected by this disease. The arrival of this virus in Iran was revealed in early March 2017, and with its widespread and infecting a large number of people, it caused great damage in terms of life, financial

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and economic. This situation has led to several actions by the government. Actions that can be legally investigated in terms of why and how. There is no doubt about the reason for these actions; Because they have their roots in the constitution, ordinary laws, and international documents. From the constitutional point of view, the traces of public health can be followed in principles 43, 30, 29, 21. Article 29 of the Constitution makes it the duty of the government to ensure equitable access to health services. Also, in Article 43 and paragraph 12 of Article 3 of the said law, the provision of basic needs for housing, food, clothing, health, treatment, and education, removing any restrictions in nutrition, housing, work, and health are emphasized(Ando et al., 2020).

Regarding ordinary laws, it can be mentioned that the law “How to prevent sexually transmitted diseases and infectious diseases” was approved on 1 June 1941, according to which the Ministry of Health, Treatment, and Medical Education is required to implement plans to combat infectious diseases. Article 113 of the Charter of Civil Rights also emphasizes the right to a healthy and germ-free living environment. The rules of the World Health Organization are also among the international documents whose final version was approved in 2005 and communicated to all member states for implementation from 2007. The purpose of these regulations is “to prevent, protect, control, and facilitate the public health response to the international spread of disease in a manner that is proportionate and limited to the risk of public health and to avoid patient interference in travel and international trade.” The scope of these regulations is not limited to a specific disease or specific method of transmission but also includes any illness or medical condition (regardless of its source or origin) that could potentially or cause significant harm to humans. According to the law of permission of the Iranian government, Iran has become a member of this organization to join the World Health Organization approved in 1948 and has committed to implement its regulations. Also, the International Covenant on Economic, Social, and Cultural Rights is one of the international treaties that Iran acceded to in 1975, and in this pact, the requirements and obligations of member states regarding health are stated in more detail. Article 12 states that the States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Regardless of why these measures were taken, how the government operated became the source of numerous legal issues. This practice led to the approval of some directives and sections and the creation of special organizations. In other words, regarding the various dimensions of the phenomenon, such as the manner of temporary closure or change of the mode of operation of commercial, educational, administrative, political, and judicial centers, the existing regulations were not effective enough and were incomplete. Coronas (on human, institutional, and trade union activities) and directives were issued by the executive branch (including on the operation of trade union offices and centers) and the judiciary (on the administration of prisons and courts), and the legislature to exercise legislative responsibility. Encountered a health barrier. It should be noted that the first measures were initially taken by the government and the Ministry of Health. Shortly afterward, however, the Supreme National Security Council stepped in, and with the formation of a special staff called the “National Headquarters for Corona Disease,” responsibility for all matters related to the disease was placed on this headquarters(Raoofi et al., 2020).

However, regardless of how the virus enters Iran and its effects, what will be examined in this article is the legal basis of the process adopted by the government in the fight against the disease and the legal responsibilities associated with it. Thus, this paper can answer some key questions: First, is the process created to deal with the virus and the formation of the National Corona Headquarters following Iran’s laws and regulations? And was there no other legal way to take action to combat the disease? Second, given the government’s decision to close or not close some companies, businesses, and organizations,

especially private companies and businesses, can he be held responsible for compensating for the damage done to these jobs and individuals' personal or financial losses?

BACKGROUND

As mentioned, the government's actions in combating the disease were carried out by forming the National Headquarters for Corona Disease. The founders of this headquarters base their action on the constitution. But it should be noted that in the case of Covid-19, the constitution has authorized this action? Is there no other process in other regulations governing Iran? Isn't Iran's crisis management organization a suitable alternative to the mentioned headquarters?

National Headquarters for Corona Disease

The National Corona Anti-Corruption Headquarters is an organization established in early March 2017 following the coronavirus outbreak in Iran with the approval of the Supreme National Security Council. The first meeting of this headquarters was held on 27 March 2017, and all decisions regarding the necessary measures to combat Covid-19 disease, including the closure, were made by this headquarters. Therefore, the legal origin of the formation of the said headquarters should be sought in Article 176 of the Constitution. Following this principle, to ensure national interests and protect the Islamic Revolution and the territorial integrity and national sovereignty of the "Supreme National Security Council" chaired by the president, with the tasks of determining defense-security policies, coordinating political, intelligence, and cultural activities, The economy is formed in connection with the general defense-security measures, the use of the material and spiritual resources of Iran to deal with internal and external threats. According to the recent addition of this principle, the Supreme National Security Council resolutions can be implemented after the leadership's approval (Tahan, 2020).

It should be noted that the decisions of this council are confidential and cannot be accessed. However, in this regard, the council has stated that the approvals of the National Headquarters for Corona Disease are the same as the approvals of the Supreme National Security Council and for all elements of Iran, all agencies and institutions, including the armed forces, non-armed forces, public institutions, even public institutions. In some cases, it is necessary for the private sector. There are now two questions that can be raised about this action of the Supreme National Security Council: First, is it fundamentally within the competence of the National Anti-Corona Headquarters to restrict the rights of individuals through its mandate? And that, assuming the authority of the Supreme National Security Council to enter into this matter, can this authority be delegated to a headquarters called the National Anti-Corona Headquarters? In response to the first question, it should be said: As clearly stated in Article 176 of the Constitution, the council's competence is summarized in three issues of policy-making, coordination, and use of material and spiritual resources of Iran. Considering these three issues, it is clear that the Supreme National Security Council has acted as a policy-making body and is far from the executive, especially regarding the restriction of the rights of the people. Therefore, "the three powers of the High Council of National Security contained in Article 176 of the Constitution have nothing to do with the specific decision or the establishment of a general rule by this institution regarding the restriction of public rights and freedoms." This competence is related to the relationship between the governing institutions and does not conceptually include the people and government relations. The executive affairs of national security and other execu-

tive affairs of Iran are in the leadership, the president, and the ministers. "Recognition of competence in this regard for the Supreme National Security Council violates Article 60 and a series of constitutional principles that relate to the powers of the leadership, the president and the ministers." In other words, considering the general competence of the legislature in the Constitution of the Islamic Republic of Iran (Article 71) and considering the three axes of competence of the Supreme National Security Council in Article 176 of the Constitution, this council can not be general and especially in the relevant field. The authority of the Islamic Consultative Assembly to take action to pass a resolution (Shirzad et al., 2020).

Regarding the second question, it has been stated: "The principle in public law is not to delegate authority; Because the powers have been delegated to the institution and the position and composition of the council and need to be clarified about the delegation; As for leadership, Article 110 stipulates the possibility of delegating some duties and powers to another person. "Therefore, if the Supreme Leader has approved this delegation of authority, these resolutions can be considered as resolutions of the Supreme National Security Council." However, it should be said that considering the position of the Supreme National Security Council, which some of its resolutions, as well as the type and nature of its jurisdiction, are higher than ordinary laws and even in the line of government decree, the council is a policy-maker. Another institution and the recognition of the equality of the validity of the decisions of that institution with the decisions of the council shall be contrary to the spirit of the said principle.

Crisis Management Organization

The Crisis Management Organization is one of the governmental organizations in Iran, which started operating in June 2008 under the supervision of the Ministry of Interior and is responsible for preparing and preventing crises, managing them and providing first aid to the victims, and organizing and rebuilding the damaged areas. Although the organization became inactive in 2013 after its five-year term expired, it resumed operations in 2018 with the passage of the Crisis Management Act (Articles 5 and 8). Paragraph (b) of Article 3 of this law, in explaining the concept of crisis, states Serious disruption of the performance of a society, which is caused by the occurrence of danger and leads to widespread damage, negative human, economic or environmental effects, so that it can be confronted. The affected society and the responsible bodies are the subjects of Article (2) of this law (Abdi & Mirzaei, 2020). The pillars of the implementation of this law, according to Article 5, are the Supreme Council, the Crisis Management Organization, and the headquarters. In this law, the legislator has provided special measures to deal with crises and emergencies. However, all these measures and decisions must be within the framework of the laws and regulations of Iran.

Therefore, using this law, it is impossible to make decisions that restrict the rights and freedoms outlined in the constitution, as seen concerning Covid-19. Perhaps this is why, in the opinion of some, "given the wide scope of the issue and the importance of treatment on the one hand, and large and effective political and security decisions, this scenario also does not have sufficient justification for an effective fight against Covid-19." However, Article 79 of the Constitution and the use of emergencies seem to be the way forward here. According to this principle, "the establishment of military rule is prohibited. In the event of a war or emergency, the government has the right to temporarily impose the necessary restrictions with the approval of the Islamic Consultative Assembly, but this period may not exceed thirty days, and if the need persists, the government is obliged re-convene the assembly. "Get a license." As can be seen, this principle prescribes the imposition of necessary restrictions in an emergency. A state of emergency is a critical situation in which Iran is somehow involved in problems that overshadow the normal lives

of its citizens. Conflict with internal miscreants, economic imbalances, the effects of the Cold War, and sanctions by other states, disturbances due to ethnic strife, and the like, are among the cases in which the state is forced to establish special and restrictive systems, such as certain rights and freedoms. And temporary press, demonstrations, rallies, or part of economic activities or freedoms. In any case, there is the possibility of imposing restrictions in case of emergency, but the principle has mentioned conditions for it, which are: a) the existence of a state of war or emergency. The legislator has not explained the concept of emergency and the criterion for its realization and has merely mentioned an example of an emergency; It means a state of war. Recognizing such a situation is with the executive branch, and the final decision is with the legislature. In any case, the concept of an emergency and its instances must be clarified; Because ambiguity in this matter can increase the state's authority and impose unjustified restrictions on freedoms. It may be possible to use paragraph "z" of Article 3 of the Crisis Management Law to explain emergencies. According to this clause, an emergency is a situation that arises after the occurrence of dangers and the imminence of an accident or after its occurrence and requires extraordinary measures to respond. Article 1 of the International Health Regulations also defines the concept of "international health emergency." According to this definition, a state of emergency means an unusual health event that, through the international spread of the disease, poses a risk to public health for other countries and potentially requires a coordinated international response(Bergkamp, 2020).

The condition caused by Covid-19, which has spread rapidly, on the one hand, infects countless people, and on the other hand, due to the lack of a cure, leads to a large number of deaths, is an emergency, and is subject to Article 79 will be. B) The need to submit a bill to establish the necessary restrictions by the government to the Islamic Consultative Assembly. It is the right of the government to impose the necessary restrictions, but the parliament must approve the right of the government to impose the necessary restrictions. This issue is mentioned in Article 210 of the House Rules of Procedure. Also, according to Article 441 of the by-laws, as mentioned above, if the government imposes restrictions without obtaining a permit, the parliament speaker is obliged to demand the submission of the bill from the president. In this regard, the delegates have the right to question or impeach the President and the Ministers. Obviously, according to various principles of the constitution, including Article 94, all resolutions of the Islamic Consultative Assembly, including the bill, must be sent to the Guardian Council. C) Temporary and short-time necessary restrictions. According to Article 79 of the Constitution, the declaration of an emergency must not last more than thirty days, and if the need persists, the government must obtain permission from the parliament again. As a result, if an unrighteous government can put pressure on the parliament and get permission for the state of emergency and the parliament is forced to issue such permits, it will take a maximum of one month, and the parliament will not approve or renew it for the second time; So the emergency returns to normal. Thus, the centralized powers arising from emergencies are always exceptional and short-lived. After the crisis has been resolved and normalcy has been restored, the political powers must be restored to the responsible authorities; Otherwise, an authoritarian government would be established, and freedoms would be lost. Of course, it seems that the MPs had prepared a plan to limit the citizenship rights and a one-month holiday of Iran, which with arguments such as its contradiction with Article 176 of the Constitution (Contrary to Article 75 of the Constitution) because this plan increases or decreases government spending. The Supreme Economic Council) could not be considered in the parliament.

GOVERNMENT LIABILITY FOR DAMAGES RESULTING FROM COVID CRISIS

On the one hand, Covid-19 has led to damage to the body and health of individuals; As of 2/13/2020, according to the announcement of the Ministry of Health, the number of people infected with this virus was equal to 120,198 people, of which 6,988 people died, and 94,464 people have improved. On the other hand, businesses, guilds, and companies' forced closure has led to financial losses. Therefore, according to the definition of loss, "wherever there is a defect in the property or a natural benefit is lost, or the health, dignity and personal emotions are harmed, it is said that the damage is proven, and the effects of government actions in its occurrence are possible.". Thus, the way the government operates in taking or not taking the necessary measures will be examined. After this position, the governing laws and regulations and the principles related to the assignment of responsibility are considered.

Investigating the Government's Fault for Covid-19

Although the government has taken many measures to combat the disease, such as announcing daily statistics of the disease, sending educational and warning text messages, imposing restrictions, etc., and these measures are considered honorable, this practice has sometimes faced criticism; As some experts have spoken about the negligence and lack of timely action of this institution. These are the government's first negligence in not closing its air borders with China promptly; The negligence of the Deputy Minister of Health has not been done, despite the serious request of the Minister of Health. The government's second concern is not to announce the virus's arrival in Iran quickly and on time. In this regard, the Deputy Minister of Health said: "This virus had already entered Iran; Because there also had been a flu epidemic in Iran, many of them were thought to be H1N1 flu, and because of that, it was thought that it was the flu and China had not announced it, and the country certainly should have been more vigilant. Also, this official states that the government was a little late in announcing. Which he states was because they did not know and did not think it was the Covid-19. According to an interview with the Deputy Coordinator of the Army on the Second Television Network in late April, the army has been aware of the outbreak of Iran since late January.

The government's duty to announce the virus quickly and promptly in Iran is based on the relevant laws and enjoys the protection of jurisprudential rules. In this regard, it can be considered under the rule of caution. Explaining that "if a person in the position of doing something, informs others of the existence of a danger that may cause them material or personal damage and warns appropriately, and the recipient of the warning, by describing the information, puts himself in danger(Colmer, 2020). "The tenant will be excused and will be exempt from civil and criminal liability under certain conditions." The opposite meaning of this phrase is a person's civil liability and criminal liability in the absence of information. In addition, given the early onset of the disease in China, the principle of due diligence was to be more vigilant and careful in investigating suspicious cases and accurately announcing the results. Some also explain the government's responsibility in this regard based on the rule of pride. According to them, the government should immediately inform the outbreak of the disease in any area. Otherwise, the victims can be brought to justice based on the general rules of civil liability, including the rule of pride. The third concern is the lack of control and effective remedies in the fight against this virus. These and seventeen professors caused that on 20 March 2017, the five former ministers of health of medical Iran wrote in a letter to the president, referring to the high number of cases of illness and the resulting deaths: "The damage is definite." The letter from the 100 members to the president and the request to accept

the responsibility of managing the National Anti-Corona Headquarters also indicate the inadequacy of the government's actions. "Given the prevalence of Covid-19 and the need for rapid coordination of all agencies in Iran to manage its prevention and treatment, it is necessary to form a daily staff headed by you," he said in the letter. In any case, in the opinion of these people, due to procrastination and negligence, the government should, based on the indisputable principle of public law, be obliged to state the reasons and factors of actions and decisions, not act promptly regarding its procrastination or negligence or relevant institutions to the people. And the citizens, be accountable and responsible, ... if the delay in adopting optimal and effective policies and decisions or preventive measures or the lack of effective and timely use of public authority and government in the fight against Covid-19 disease, has led to the death of thousands of people. Or leads to the continuation of unnecessary closures of businesses and factories and financial and economic damage to workers, business owners, and factory owners; restorative justice requires such damages and damages by the government to be released without compensation. "Society should be restored(Drenovak-Ivanović, 2020)."

The Approach of Laws to Government Responsibility

The laws of Iran include various provisions regarding the responsibility of the government in compensation. Some of these regulations have been enacted in such a way as to cast doubt on the principle of government accountability. In this regard, Article 11 of the Civil Liability Law can be referred to. According to this article, the government employees and the municipalities and their affiliated institutions who intentionally inflict damages on persons on the occasion of performing their duties or as a result of carelessness are personally liable for compensation. However, if the damages are not documented in their actions and are related to the defects of the equipment of the said departments and institutions, the compensation of the damage is the responsibility of the relevant department or institution. However, in the case of the exercise of the state's sovereignty, the state shall not be liable to pay damages whenever measures are taken following the law as necessary to secure social benefits and cause further harm. As can be seen, the legislature in this article has removed the responsibility of compensation for damages in acts of sovereignty from the government. However, this article does not define such actions. The lack of definition of the conceptual framework of this term has led to different definitions by jurists. Nevertheless, the Civil Service Management Law adopted in 2007 in its Article 8 defines governance matters. According to this article, governance affairs "are those matters whose realization causes the authority and sovereignty of Iran and its benefits include all sections of the society without restriction, and the use of this type of service does not limit the use of others." In this regard, paragraph "k" of this article considers matters related to "promotion of public health and education, control and prevention of infectious diseases and pests, confrontation and reduction of the effects of natural disasters and general crises" as governmental matters. Therefore, the prevention and treatment of the outbreak of Covid-19 due to its rapid spread, which can lead to death, can be considered a form of government, and according to the last paragraph of Article 11 of the law, Government responsibility commented. "Common dangers" have been mentioned. In the opinion of these people, the sentence to compensate damages is unreasonable because of these dangers. However, assuming the acceptance of the rule of non-responsibility of the government in exercising sovereignty under Article 11, some have commented on the abrogation and invalidity of this rule. These individuals have argued that the issue of non-responsibility of the government in carrying out these actions is contrary to international regulations and some domestic regulations. These arguments are as follows: - Considering that the International Covenant on Civil and Political Rights, adopted in

1975, considers any action of the government that violates the inherent right of “right to life” as a cause of responsibility, this Covenant is a violation of the last part of Article 11 and litigation. There is no legal prohibition against government sovereignty to compensate for the damage caused. The course of legislation after 1339 indicates the responsibility of government authorities and the unification of the exercise of sovereignty and tenure in terms of compensation (Fay & Ghadimi, 2020). In other words, concerning the enactment of various laws on the obligation of the state to compensate for damages resulting from the exercise of sovereignty, such as Article 171 of the Constitution on the mistake of a judge, the bill on the manner of purchase and acquisition of land 1979, the National Forest Nationalization Law approved in 1962, and the Program and Budget Law approved on 1972. The belief in irresponsibility towards these actions will not be accepted. - Considering that according to Article 44 of the Constitution, all current regulations of Iran must be approved within the framework of Islamic standards and in Islam, there is no distinction between sovereign and tenure so that this principle will be repealed at the end of Article 11 of the Civil Liability Law. The lack of distinction between these actions can be seen in some of the views of the jurists of the Guardian Council. Of course, it should be noted that some with a different reading of this article have not accepted the principle of the absolute exemption of the government from paying damages in acts of government. For example, it has been said: “In the phrase mentioned above, the act of sovereignty to exempt the government from civil liability is bound by several conditions and conditions, one of which is that the said act” be performed following the law. “The opposite meaning of this phrase is that if the act of sovereignty is done contrary to the law, it causes liability.” It can also be said that the exception to the end of the article applies only to the penultimate section, not to the whole article. Explaining that the legislator has stated that in case of failure to commit a fault on the part of individuals and damage if the damage is due to a defect of equipment, the department or institution is responsible. However, in this case (no fault of the perpetrator and lack of equipment), if the action leads to harm to the government’s government actions, this institution will not be responsible.

The idea of government liability in compensation has been so reinforced that the theory of government liability for natural disasters such as floods and earthquakes is emerging now and can be considered a strong probability. Events that have a very low degree of predictability; In such a way that it is difficult to explain them based on the elements of attribution of losses. Based on concepts such as “welfare state” or “responsible state,” this theory tries to establish the pillars of creating responsibility for these events for the government. In any case, it can be seen that the issue of state exemption from compensation for sovereign actions is not well received by lawyers. In addition, some laws explicitly refer to the liability of legal entities and the government, which, in addition to the above, include the following laws: If a causal relationship is established between the behavior of the legal entity and the damage caused, blood money and damages can be claimed. The imposition of ta’zir punishments on legal persons shall be following Article 20. Article 505 of the said law regarding traffic accidents stipulates: If another legal or natural person documents the accident, that person is the guarantor.

The Causal Relationship Between Damages and Government Performance

The causal relationship between the harmful act and the harmful one is one of the pillars of fulfilling civil and criminal responsibility. The cause is considered in the traditional sense in the realm of legal issues, and consequently, the causal relationship is a relationship that can traditionally be established between a harmful act and harm. According to Article 492 of the Penal Code, “a crime is punishable by retribution or blood money if the result of the document is documented in the perpetrator’s behavior,

whether it is committed in the form of stewardship, intercession, or community.” The distance between the perpetrated behavior and the murder or other harm, as stated in Article 493 of the Penal Code, is not effective, and in any case, the existence of a relationship must be established. It does not matter whether the behavior was intentional or unintentional, following Article 529 of the Penal Code, and in all crimes resulting from guilt, the crime must also be proven. In civil liability law, there is no doubt about the need to establish a causal relationship between the harmful act and the damage as one of the pillars of civil liability, especially from materials 333 and 335 BC. Article 1 of the Penal Code and Articles 519 and 520 of the Penal Code clearly state the necessity of this relationship, and in addition to them, some authors refer to Articles 492 and 528 of the Penal Code have also cited. Of course, the relationship between causality in civil liability and criminal liability has some differences. “Unlike criminal liability, the realization of which is not possible without criminal intent and the existence of a legal crime, in civil liability, sometimes the fault is a condition of responsibility, and sometimes liability arises without fault, and the intention doesn’t need to be wasted; “As stated in the statistics in this regard: In civil law, there is no need for responsibility on the part of the legislature.” Iran The basis of civil liability is merely the attribution of damages to the perpetrator of a harmful act, whether intentional or reckless or negligent(He et al., 2020). Thus, concerning the government’s liability for damages resulting from Covid-19 disease, it is necessary to prove the causal relationship between its behavior and these damages; However, it is necessary to prove guilt regarding criminal responsibility and blood money. Here, two categories of government behavior can be examined: The first category is behaviors that have occurred in the form of omission of action and have been accompanied by fault (if proven), such as failure to promptly announce the arrival of the disease in Iran, failure to act quickly. In infected areas and... In Article 952 of the Civil Code, in the case of abandonment of an act, it states: “Deviation is the abandonment of an action which is necessary by contract or custom to preserve the property of another.”

Therefore, if a custom deems an action necessary for the protection of property, leaving that action is considered a fault, whether it is the fault of the contracting party or not (application of Articles 168, 220, as well as Articles 295, 225, 334, 486, etc. in the Civil Code). Of course, the existence of this custom must be proven. The Islamic Penal Code, in describing the liability arising from the omission of an act, or in other words, the liability arising from a harmful act, states: The cause of it is a crime. Therefore, due to the government’s obligation to maintain public health and leave it and the ability to predict the arrival and spread of disease in Iran, the realized deviation will lead to responsibility. The second category is behaviors in the form of actions, and the government has no choice but to do them; Such as creating emergency restrictions and the closure of some classes, businesses, and companies. These actions have been done to prevent the spread of the disease and preserve the lives and health of the people(Nemec & Špaček, 2020).

It should be noted that, given that the government did not issue a permit for 100% full quarantine restrictions, these measures are the minimum necessary measures, and the government can not be considered as extremist and guilty of committing them. These measures have also caused financial losses to a large number of individuals and legal entities. The question, however, is whether the government can be held liable for these damages. One of the most important obstacles to government civil liability in this regard is the rule of benevolence. Ehsan, in the legal sense, means to do a good deed, and Mohsen is said to be someone who by taking financial or moral damage from a person or gaining benefit for him to take expedient actions or serve him and if as a result of this action, harm is done Come on, he will not be responsible. Article 510 of the Islamic Penal Code stipulates in this regard: “Observance of legal provisions is not a guarantee.” Article 509 of the law also states: “If a person acts in the inter-

est of passers-by following legal regulations and safety points in public places or public places and accidentally causes a crime or damage, he is not a guarantor.” The next rule is the most important in cases of conflict. This rule implies that when the two present things are desirable but disturbing each other in action, and only one is not applicable, the action of greater importance should be prioritized. Obviously, after the antagonism, the most important step will be to identify the most important thing. Some have presented two important criteria for determining the law: A) The priority of the legislator and the legislator, which according to the importance of the legislator in Articles 12 to 17 of the Civil Code, respectively: the limits of retribution, diyat, punishments, deterrent punishments; B) The priority of respected values, which, based on the values respected, according to the type and amount of punishment related to their violation, which is murder, imprisonment, flogging, fines, etc., according to the importance of punishment. The issue of law enforcement is traceable in law. In this regard, Article 158 of the Islamic Penal Code adopted in 2013 can be mentioned. According to this article, committing a behavior that is considered a crime under the law will not be punished if the conduct of the behavior is necessary to implement the law(Israhadi, 2020).

It should be noted that the issue of waiver of civil liability in implementing this important law does not agree with everyone. Some argue that the criminal description is eliminated but that the claim for damages is unreasonable and irrational due to the legislature's permission. According to others, “Basically, in civil liability, it is not necessary to have a harmful act of ugliness, but since there is no unreasonable harm in Sharia, it is necessary to compensate for the harmful consequences of repelling corruption.”

. Therefore, regarding the restrictive actions of the government that have led to the loss of both natural and legal persons, considering that these actions were performed according to the rule of benevolence and their purpose was to preserve and save the most important thing, namely the health and lives of individuals. Therefore, holding the state accountable will not be following the principles. Of course, it may be possible to incur liability and compensate for the damages in these cases. Compensation from the treasury has several instances in the law. One of the examples that refer to human and material damages is Article 13 of the Islamic Penal Code adopted in 2013, according to which, The court has been determined to violate, and any damage or loss that results from this, if intentional or faulty, as the case may be, is a criminal and civil liability. Otherwise, the damage will be compensated by public property(Martins, 2020).

CONCLUSION

The disease caused by Covid-19, although it created a state of emergency and caused material, spiritual and human damage, should not confuse Iran with different principles and laws. The most basic benchmark of a state's performance will be in these emergencies. It is in these situations that one can monitor the performance of governments and measure their readiness. This practice will be correct when done promptly and within the framework of Iran's laws and regulations. In the case of coronary heart disease, while specific legal frameworks were provided for in the principles of the constitution and ordinary provisions for this situation, the government moved to the other side. With the intervention of the Supreme National Security Council, the Crisis Management Organization and the relevant law was spent on them. In other words, the state could, in essence, use the capacities of Article 79 of the Constitution, which authorizes the imposition of restrictions in emergencies, and formally rely on the Crisis Management Act, which has established a detailed mechanism. The government's performance is not only debatable

in form and format; it is also subject to criticism in terms of its nature, with negligence in some tasks. Criticisms targeted the timely announcement of the virus in Iran and the implementation of the necessary restrictions. This issue led to many damages to the body of Iran's economy and the safety of the people. These damages and losses have been realized due to the actions and abandonment of the government's actions. As the main caretaker of Iran's health system, the government must reduce the harmful consequences of this disease with timely and immediate measures. According to Articles 952 of the Civil Code and 295 of the Islamic Penal Code, the consequence of leaving the state act in these cases will be a liability. In other words, some of the government's actions can be justified by citing rules such as the rule of kindness and law enforcement and relieve them of responsibility, but there is no justification for some omissions. In these cases, the government, as the main guardian of the life and financial security of the people, must be responsible for the damages and accept its responsibility. This accountability is not only rooted in religious principles such as the obligation to protect the population, respect for human life, harmless, etc., is based on civil and criminal laws. God has forbidden the attack on the blood, property, and reputation of Muslims. Therefore any activity or action of an individual or group that causes damage to these assets is legally condemned and rejected and causes guarantee and responsibility.

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KEY TERMS AND DEFINITIONS

Antibody Tests: The body responds to viral infection by producing antibodies that help neutralize the virus. Blood tests (also called serology tests or serology immunoassays) can detect the presence of such antibodies. Antibody tests can be used to assess what fraction of a population has once been infected,

which can then be used to calculate the disease's mortality rate. They can also be used to determine how much antibody is contained in a unit of convalescent plasma for COVID-19 treatment or to verify if a given vaccine generates an adequate immune response.

Antigen Tests: An antigen is the part of a pathogen that elicits an immune response. Antigen tests look for antigen proteins from the viral surface. In the case of a coronavirus, these are usually proteins from the surface spikes. SARS-CoV-2 antigens can be detected before the onset of COVID-19 symptoms (as soon as SARS-CoV-2 virus particles) with more rapid test results but with less sensitivity than PCR tests for the virus.

COVID-19 Vaccines: A COVID-19 vaccine is a vaccine intended to provide acquired immunity against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes coronavirus disease 2019 (COVID-19). Before the COVID-19 pandemic, an established body of knowledge existed about the structure and function of coronaviruses causing diseases like severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS). This knowledge accelerated the development of various vaccine technologies in early 2020. On 10 January 2020, the SARS-CoV-2 genetic sequence data was shared through GISAID, and by 19 March, the global pharmaceutical industry announced a major commitment to addressing COVID-19. The COVID-19 vaccines are widely credited for their role in reducing the spread, severity, and death caused by COVID-19.

Imaging Test: Typical visible features on CT initially include bilateral multilobar ground-glass opacities with a peripheral or posterior distribution. COVID-19 can be identified with higher precision using CT than with RT-PCR. Subpleural dominance, crazy paving, and consolidation may develop as the disease evolves. Chest CT scans and chest x-rays are not recommended for diagnosing COVID-19. Radiologic findings in COVID-19 lack specificity.

Personal Protective Equipment (PPE): Personal protective equipment is protective clothing, or as sometimes called EPI are helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

Polymerase Chain Reaction (PCR): Polymerase chain reaction (PCR) is a process that amplifies (replicates) a small, well-defined segment of DNA many hundreds of thousands of times, creating enough of it for analysis. Test samples are treated with certain chemicals that allow DNA to be extracted. Reverse transcription converts RNA into DNA. Reverse transcription-polymerase chain reaction (RT-PCR) first uses reverse transcription to obtain DNA, followed by PCR to amplify that DNA, creating enough to be analyzed. RT-PCR can thereby detect SARS-CoV-2, which contains the only RNA. The RT-PCR process generally requires a few hours. These tests are also referred to as molecular or genetic assays.

Rapid Diagnostic Test (RDT): RDTs typically use a small, portable, positive/negative lateral flow assay that can be executed at the point of care. RDTs may process blood samples, saliva samples, or nasal swab fluids. RDTs produce colored lines to indicate positive or negative results.

Sniff Tests: Sudden loss of smell can be used to screen people daily for COVID-19. The National Institutes of Health study showed that those infected with SARS-CoV-2 could not smell a 25% mixture of ethanol and water. Because various conditions can lead to the loss of smell, a sniff test would not be definitive but indicate the need for a PCR test. Because the loss of the sense of smell shows up before other symptoms, there has been a call for widespread sniff testing. Health care bureaucracies have generally ignored sniff tests even though they are quick, easy, and capable of being self-administered daily. This has led some medical journals to write editorials supporting the adoption of sniff testing.

Chapter 10

The Impact of Corporate Social Responsibility on Firm Value During the COVID–19 Pandemic: From the Perspective of the Malaysian Tourism Industry

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ABSTRACT

In this chapter, the authors have investigated the effect of CSR on firm value during the pandemic. They used the event study technique and noted that an engagement in the CSR activities increases the stock returns to the hospitality firms during a pandemic crisis. The results showed that the hospitality firms that showed a better stock market performance during the pandemic invested in CSR activities. This would indicate a theoretical application and practical implication on their business duties towards the society, and any future research in CSR would allow them to successfully handle a critical disaster like this pandemic in the future.

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INTRODUCTION

Dr Tedros Adhanom Ghebreyesus, Director-General of World Health Organisation (WHO) said *“This is not just a public health crisis; it is a crisis that will touch every sector. So, every sector and every individual must be involved in the fights”* (Ducharme, 2020).

The coronavirus pandemic (COVID-19) is described as a huge global health disaster, which can lead to a massive social and economic crisis. The WHO statistics (global values, as of 10:21 am CET, August 10th 2021) showed that the coronavirus infected people all around the world, with 54,075,995 confirmed cases, 1,313,919 deaths and millions of suspected cases (WHO, 2020). The people are struggling and affected by this global health disaster and the resultant financial crisis, caused by the pandemic. People form the foundation of any company (Kucharska & Kowalczyk, 2019), hence, the public health awareness campaigns initiated by the companies reflect their social engagement that increases their Corporate Social Responsibility (CSR) activities during the pandemic (Bapuji et al., 2020; Guerriero et al., 2020).

The SARS-CoV-2 virus has significantly affected the social, economic and health aspects, since all the countries in the world had to implement restraints on the movement and economic activities of the people, to control the spread of the virus. Furthermore, the pandemic affected >32.5 million people and led to >989,000 deaths, until September 2020. From the social and economic perspective, many international organisations stated that this pandemic could show a higher effect on the economic conditions of the countries than the 2008 crisis, and would lead to a 2–3-point drop in their GDP for every month of the confinement. This would further cause the unemployment of >195 million people. Thus, this pandemic would cause serious social issues in many families and along with many liquidity and survival problems for numerous SMEs.

Due to the pandemic, the world witnessed many temporary layoffs since the CEOs of the organisations did not want their firms to bear huge economic issues, and hence designed a plan for facing the economic problems arising due to the movement controls. However, the post-pandemic situation showed that most of the company executives displayed exemplary behaviour, as they adopted CSR policies and activities for fulfilling their economic, social and health needs. Thus, the crisis arising because of the pandemic has altered how the organisations pursued their social, economic, and environmental goals, and they also realised the importance of their societal role. The pandemic has highlighted the fact that the corporations must adapt their CSR strategies such that they could display their commitment to society and to the vulnerable groups, particularly those that were related to them, such as their local environment, where they operated and showed a larger presence. An equilibrium between their good social deeds and profit is regarded as an effective strategy that could help them survive in the future.

Based on the above statements, in this study, we aimed to determine the CSR activities implemented by the large Malaysian companies after the pandemic. We also determined the objectives that were pursued by these companies so that they could understand the benefits that these firms wished to derive in Malaysia, which has been severely affected by the pandemic. In the past, a theoretical framework was developed for categorising the business commitments, which was based on the determination of five business responsibilities, like legal and economic, ethical, commercial, altruistic, and strategic. The results of this study indicated that the companies were very interested in legitimising and protecting the interests of their shareholders and stakeholders. However, a majority of the large Malaysian firms showed a higher altruistic commitment to society and played a vital role in the recovery of the country’s social and economic health. Their commitments, particularly in the financial sector, were combined with their commercial strategies, for deriving maximal benefits in the medium and long term.

To the best of the ours knowledge, this was the first study that focused on the responsible business activities of the organisations during the economically-unfavourable times for them and in the presence of an uncertain environment in Malaysia. This study presented evidence regarding the business strategies that combined the ethical and altruistic activities of the organisations, without directly affecting the existing problems, so that they could be legitimised by the economic decisions that were legal but could negatively affect their business image. We also noted the altruistic commitment of the family-owned multinational business managers. This combination indicated the convergence of their interests while making discretionary managerial decisions. The results also allowed the researchers to develop a sustainability strategy model that could be easily adopted by various organisations for correcting the future negative effects of the pandemic. This was regarded as an effective opportunity for re-examining the voluntary social role played by the companies during tough times, based on their past business responses to human failures, natural disasters, epidemics/pandemics, and similar other severe crises (Monachino & Moreira, 2014).

Tourism Industry in Malaysia

The tourism industry is regarded as a strategic sector that significantly contributes to the global economy and GDP of any country (Gamage et al., 2017). ‘Tourism’ is described as the social, cultural, and economic phenomenon which causes people to move around within their country or travel to other countries for fulfilling their personal or business purposes (UNWTO, 2020). Many studies have noted that the tourism sector is very labour-intensive and is the main source of global employment. This sector is assisted by many other industries like culture, retail, transportation, accommodation, food and beverages, hospitality, and sports (WTTC, 2019). Since it offers many opportunities and advantages to the people in any country and displays some unique properties, it has been regarded as a component of the service sector in the economy (Haq et al., 2014; Gamage et al., 2017). This sector displays some characteristics which resemble the specific attributes shown by service products like inseparability, heterogeneity, intangibility, and perishability (Ventura-Dias, 2011; Loke et al., 2018). This sector is also responsible for the economic growth of any country. Numerous researchers studied the role played by the tourism sector in the economic development of a country (Gamage et al., 2020). According to the World Tourism Organisation (WTO), the tourism sector is an important driving force that increases the economic growth of the country, as it improves the employment opportunities for the local people, generates a higher foreign exchange and acts as a steady revenue source for any country (Steiner, 2006). Some researchers (Gamage et al., 2020) noted that the tourism sector was a rapidly-growing industry in developing and developed countries since it generated many job opportunities for the local population and increased revenue, leading to economic growth.

Like many other countries, even Malaysia had planned to improve its tourism sector in 2020. For this purpose, the Malaysian government had inaugurated the Visit Malaysia 2020 campaign. However, this campaign was severely affected because of the pandemic and the subsequent lockdowns. The CEO of the Malaysia Hotel Association mentioned that the hotel industry in the country had incurred >60% losses owing to the COVID-19 pandemic. Many companies were forced to execute a wage cut or grant unpaid leaves to their employees for remaining afloat during the pandemic. However, the smaller businesses could not implement these plans (Bethke, 2020). More than 50% of the foreign tourists who visit Malaysia are from Singapore and China. Since this pandemic originated in China, Malaysia noted a significant drop in the number of Chinese tourists (Foo et al., 2020). Around 17,000 hotel bookings had

to be cancelled between January to mid-March 2020, which severely impacted the Malaysian economy and led to a significant loss of »RM68 million (Foo et al., 2020). This loss did not take into consideration the other losses which occurred in this period before the Malaysian Prime Minister implemented the CMCO. The pandemic forced many hotel owners to cease their operations, which drove many hotel employees to lose their jobs. According to Star Malaysia, when they surveyed a population of 56,299 hospitality sector employees, they noted that 2041 hotel employees were fired from their jobs, 9773 employees (17%) had to take unpaid leave, whereas 5054 employees (9%) were forced to take a wage cut owing to the pandemic (Karim et al., 2020).

Hence, when the Malaysian Prime Minister announced a relaxation in the Standar Operation Procedures (SOPs) and allowed a reopening of all local hospitality industries, the tourism sector employees welcomed his move (Prime Minister Office, 2020). However, the international borders had to remain closed to prevent the entry of foreign tourists, which increased domestic tourism. This was regarded as a positive sign by the tourism industries. Domestic tourism is described as the movement of people in the country. According to the Department of Statistics (2019), more than 239.1 million people undertook domestic travel within the country, which was an 8.1% increase in comparison to the past year (RM221.3 million). The Ministry of Tourism in Malaysia carried out several domestic tourism campaigns, where they asked the different agencies to offer discounts and promotions to attract local tourists. Thus, the implementation of a recovery plan was important to improve domestic tourism in the country. The Malaysian government undertook several steps for improving the Malaysian domestic tourism sector. It was noted that the international travel restrictions would compel the country to lose a lot of its profits derived from foreign tourists; hence, the public was forced to travel domestically within the country for their vacations. This could slowly lead to the economic development of the country. Many countries across the world are still struggling to curb the spread of the COVID-19 pandemic, which has forced international restrictions and led to the closure of international borders. As the result, the tourism sector in the country had to depend solely on the local tourists to compensate for the drop in the number of foreign tourists.

The remainder of this study is organized as follows. The following section contains the literature review, where the researchers examined the different studies that were published with regards to the effect of the pandemic on the tourism sector in different countries. In Section 3, they have presented the data that was collected and different techniques used by various authors (e.g., 102 surveys conducted in September 2021). All results were presented in Section 4; while Section 5 presents the conclusions of the study. The researchers also discussed the numerous ways in which the Malaysian government were using the current circumstances for converting the tourist organisations and employees into more legitimate tourist businesses.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

CSR during the Crisis in the Hospitality and Tourism Industry

In the past few decades, many organisations have realised the significance of CSR and their social responsibility, and have started engaging in CSR activities. Though CSR has no specific definition, it is usually based on the concept that the businesses need to positively contribute to society, along with their internal and external stakeholders, and not solely focus on their interests (Jones et al., 2006; Coles et al., 2013). Carroll (1999) described a new CSR pyramid model, which stated that CSR consisted of

4 major responsibilities, i.e., legal, ethical, economic, and philanthropic. He mentioned that though the companies need to fulfil their economic objectives legally, they must also meet all the ethical standards and carry out various philanthropic activities. Lantos (2002) developed this model further and proposed 3 different pillars of CSR, i.e., ethical, altruistic, and strategic CSR. According to this model, ethical CSR includes the fact that the organisations were responsible for the environmental and social effects of their business practices. On the other hand, the altruistic CSR included all charitable activities which allowed the organisations to sacrifice their profits and increasing the benefits of the different social stakeholders. Finally, the strategic CSR described the organisation's involvement in different CSR activities, that led to societal welfare and benefitted the firms in the process (e.g., cost management, decreasing the energy expenses, brand management, etc.).

Many studies have primarily focused on the new and emerging types of CSR activities. In one such study, Torugsa et al. (2013) described the concept of proactive CSR, which included the voluntary business activities carried out for fulfilling the economic, societal, and environmental needs. Rhou and Singal (2015) presented the CSR model for strategic philanthropy, especially in the tourism and hospitality sector. They explained the responsible business activities that were undertaken by the corporations, particularly during the time of any crisis. Chilufya et al. (2019) also investigated the tourist-driven CSR activities and highlighted the vital role played by the tourists in the adoption of CSR practices within the local communities. Furthermore, several researchers used the Stakeholder theory-based view of the CSR activities for considering the broader society (e.g., community support, disaster relief etc.), economy (e.g., efficient management system, operational cost saving, etc.), and environment (e.g., water management, energy conservation, etc.)- based activities that were applauded by the internal and external stakeholders of the company, like the employees, customers, local community and society (Coles et al., 2013; Rhou & Singal, 2020).

Numerous crises such as the existing COVID-19 pandemic test the actual commitment of the organisations towards CSR activities. This was attributed to the fact that the organisations face a huge strain on their finances that can force them to pursue short-term gains and decrease their long-term investment in CSR activities. Any adoption of the CSR activities during the crises is regarded as an effective technique that can be used by the corporations for generating 'reputational capital' and improving the firm value (Muller & Kräussl, 2011). In their study, García-Sánchez and García-Sánchez (2020) classified the CSR activities undertaken by the organisations during the COVID-19 pandemic into three types, i.e., commercial activities carried out for protecting the interests of the stakeholders; altruistic activities conducted for protecting the society and all vulnerable people, and the activities carried out for fulfilling their commercial and altruistic interests. Many firms, like the local and global manufacturing, telecommunications, and retail organisations are engaged in different CSR activities during any crises, such as monetary donations, or donating products, provision of unlimited mobile data to their customers, production of personal protective equipment, decreasing the insurance rates, and adjusting the working hours for the health care workers (He & Harris, 2020; Manuel & Herron, 2020). The inherent connection between the local community and the hospitality sector is primarily responsible for the CSR activities, and encourages the hotel owners to provide relief by offering their hotel properties to the people in need. Many hospitality firms have implemented steps for serving the communities during crises. For example, in 2004, during the Indian Ocean Tsunami, the local hotels in Phuket adopted many CSR initiatives like providing complimentary accommodation to the relief workers; allowing the hotel staff to help with the rescue and recovery and delivery of food and water to the affected people (Henderson, 2007).

The current COVID-19 pandemic has negatively affected the tourism and hospitality sectors across the globe; however, many hospitality-based organisations are still engaged in implementing CSR activities and are helping in combating this crisis. For instance, many prominent Chief Executive Officers (CEOs) in the industry (e.g., CEOs of Marriott, United Airlines, Disney, Lyft, etc.) have taken a voluntary cut in their pay checks as a step for navigating this crisis (Manuel & Herron, 2020). In particular, the Fiji hotels and tourism association offered many virtual training programs and certification courses to the tourism and hospitality employees who were severely affected by this pandemic (Pacific Office in Fiji, 2020). Furthermore, Rhou and Singal (2015) stated that the strategic philanthropy-based CSR activities must be carried out by different hospitality organisations during any crisis, as they are applauded by the community, such as offering unoccupied rooms and food, engaging in different activities for improving the wellbeing of their residents, volunteering for different tasks in the community, etc. Not only have the tourism and hospitality sector showed an increased interest in CSR activities, but there has been an emergence of many studies which have focused on their CSR activities during the pandemic. In one study, Huang and Liu (2020) investigated the impact of the donation appeal messages during the pandemic, as a means for gaining insight into effective CSR-related marketing strategies. Mao et al. (2020) also determined the positive effect of the CSR activities adopted by the tourism-related organisations on the psychological state of the employees, which could offer them hope, resilience, optimism, and a sense of self-efficacy. Ou et al. (2021) studied the evolution of CSR activities carried out by the restaurants during the COVID-19 pandemic, with regards to the process of crisis, the focus of stakeholders in CSR, and the response of the organisations through their CSR activities. Despite these studies, in comparison to the broad CSR research, the research into CSR activities was still neglected by the hospital and tourism sector-based organisations during the pandemic (Hao et al., 2020). Rhou and Singal (2020) stated that additional research needs to be carried out for understanding the tourism and hospitality-related CSR issues like disaster relief programs conducted by the organisations that could help in the future conceptualisation and theory development. In this study, the researchers have focused primarily on the CSR activities related to the provision of accommodation to the healthcare workers during the pandemic. On 6th April 2020, Hilton Hotels & Resorts declared that they would help the local and national governments by offering 1 million hotel room nights for the healthcare workers who were fighting the pandemic. Thereafter, on 9th April 2020, Marriot International declared that they would offer accommodation, necessary protective equipment, food, and similar other resources to the frontline healthcare workers. Even the InterContinental Hotels Group offer their hotel rooms at a decreased rate to the essential workers and the medical staff for their stay during the COVID-19 pandemic. Though these organisations generated a lot of goodwill with these activities, it must be noted that these activities involve an inherent risk owing to the nature of the pandemic.

Financial Effects of the CSR Activities During Crisis

During any disaster, the public expects the organisational CSR activities to decrease their suffering (Madsen & Rodgers, 2015). However, based on the slack resource perspective, the companies that are affected by the disasters need to decrease their CSR investment for containing all their costs (Lee et al., 2013). This paradox is observed while determining that any investment in CSR activities during a disaster was essential for consolidating the corporate financial performance. The stakeholder attention theory and social capital concept can offer varied perspectives (Madsen & Rodgers, 2015; Lins et al., 2017). The media coverage of the CSR-related news can affect investor decisions (Greening & Gray,

1994; Mitchell et al., 1997). A favourable CSR news helps in the fulfilment of the CSR objectives as it promotes a positive corporate reputation amongst the individual investors (Patten, 2008). Perez et al. (2020) analysed the media coverage of various CSR activities in 8 categories and noted that the effect of CSR news was not very significant for the low-profile industries (e.g., consumer goods and services) compared to the high-profile industries (e.g., finance). Here, the stakeholder attention was a vital factor that determined the success of the CSR activities in the generation of financial benefits (Madsen & Rodgers, 2015). Any engagement in CSR during a disaster draws public attention to the companies who aim to improve their corporate image and impact investor decisions.

Lins et al. (2017) used the social capital concept and stated that the high-CSR firms have a higher stock return during any financial crisis owing to higher margins, sales growth, profitability, and employee productivity, than the low-CSR firms. They noted that the social capital that was built through the CSR activities facilitated the stakeholder cooperation as it increased trust and decreased the need for any formal contracts. During a financial crisis, the investors sought different metrics like social capital ratings that indicate the trustworthiness of the firms rather than a declination of public trust. He and Harris (2020) supported this argument and noted that the pandemic would increase the people's expectation regarding CSR and they classified the businesses based on their CSR attitude. The pressure of survival and few disposable resources tests the genuineness of corporate CSR activities and only the companies with actual CSR can build a strong rapport between the public and customers. The researchers predicted that the companies that thrived during the post-pandemic period showed a strong CSR commitment and implemented better CSR strategies (He and Harris, 2020). In another study, Kim et al. (2020) stated that the restaurants' CSR engagement improved their resilience to unexpected negative events like epidemics owing to better brand reliability. In this study, the combination of the social capital concepts and stakeholder attention allowed the researchers to propose that the firm CSR activities, reported in the news during the pandemic, draws the stakeholder attention and increases the firm social capital, which further helps in improving the stock performance.

Hypothesis 1 (H1): CSR activities improve the stock returns of the hospitality firms during the COVID-19 pandemic.

METHODS

Population and Sample

For determining the CSR strategies implemented by the corporations during the pandemic, the researchers selected 20 different companies that were listed on the Bursa Stock Exchange (Malaysia) under the hospitality sector as their target population sample. These companies were selected as they had the largest capacity and resources for implementing CSR activities that could benefit Malaysian society. The selection of these Malaysian-listed companies was the result of the massive economic, social and health crisis which Malaysia was facing owing to the pandemic.

The listing of the company in the stock market indicated the recognition of its solvency, as it had to show that it had generated higher profits in the recent past and would doing so in the future. Furthermore, when the company plans to go public, it has already displayed a higher degree of control and organisation, which has led to the generation of a constant incentive. This would increase the company's

competitiveness as the investors were willing to invest funds in the company that would highlight every effort that was made for restructuring and professionalising the company management. The prestige of the firm is recognised by its investors, clients, financial partners, and suppliers.

The final population sample consisted of 20 companies that displayed their CSR activities on their websites, usually in the “News” section. However, few of the companies used dissociative tactics while presenting the information regarding their CSR activities to the public, so the news of their activities was determined from the media reports. This problem was only noted in the AirAsia Group since the company did not present any information regarding their CSR activities on their corporate website. Based on the significance and magnitude of their activities, the researchers determined their commitments by browsing the news that was published in the major national newspapers. The Air Asia business group is recognised by the Malaysian society owing to its active work and fighting the pandemic, thus, setting an example of humanity and solidarity.

Here, the researchers considered only the CSR activities conducted between 31st March 2020, when the Malaysian government imposed the Movement Control order (MCO) Phase 1, for preventing human-to-human viral transmission, and 19th February 2021, Phase 5, when the government issued orders for Recovery MCO, wherein domestic tourists could travel in the country. This period highlighted the duration between the lockdown (free cancellation began on 31st January 2020) and the reopening of hospitality businesses in the country. The hospitality firms faced maximal financial pressure when MCOs were issued by the government.

The organisation’s CSR activities were determined from the news reports that discussed the COVID-19-related firm activities carried out during the pandemic. The researchers retrieved all the news articles using the Baidu news search engine with the help of the Python program, where they used the “all news” + company name + COVID-19-related keywords. For example, when we used “AirAsia+ social + responsibility + pandemic” as the search keywords, they derived all the news reports that included the pandemic-related events that were associated with the AirAsia company. Thereafter, they manually identified the CSR-related news reports based on the definition and operationalisation of CSR activities, as described by Hu et al. (2018). In their study, the researchers conceptualised the CSR structure of the hospitality firms and presented a good foundation of the CSR activities carried out by the hospitality industries. For example, the CSR activities presented in the news reports had to be consistent with the CSR activity classification presented by Hu et al. (2018) (e.g., community, customer, economy, employee, environment, law, partner, and politics), before it was identified as a CSR activity.

The initial information regarding the pandemic-related CSR activities that are released in the news reports includes the event date of the company. For determining the market reaction to the CSR activities during the pandemic, the researchers have only selected the companies that carried out CSR activities. Their population sample consisted of 20 firms with complete stock return data included in the Eikon database related to the CSR activity-based press releases.

Methodology

After identifying the companies, the researchers used a content analysis methodology on their websites for determining the sections that highlighted their plan of action, strategies, and contingencies during the pandemic. This technique was used as the explanatory or descriptive format used for presenting the textual data regarding the organisation’s policies, objectives, and qualitative activities. Hence, they used textual reading as an effective tool for collecting the objective, systematic and replicable valid data. This

technique also helped them collect data for further research, and combine the observations with the data interpretation.

Then, we coded the qualitative data that was determined using the content analysis technique into a few categorical variables that considered a value of 1 when the organisations developed a particular action against the pandemic risks. This analysis is presented in the summary tables below for indicating the priorities and patterns of the organisations concerning their business commitments. The earlier section has highlighted the generation of responsible activities and their classification into 4 types of CSR activities. For this purpose, we considered the objectives displayed by every activity. Thus, the activities were categorised as 1) 'economic and legal responsibilities that ensured the interests of the employees, stakeholders and customers based on the existing regulations; 2) 'commercial CSR' activities that describe the activities related to the products and services; 3) 'ethical CSR' activities that described fair and equitable actions for avoiding any damage, and 4) 'altruist CSR' presented philanthropic actions aimed to prevent potential harm and alleviate the negative externalities affecting a welfare state. We regarded the ethical or altruistic activities as strategic when combined with the commercial CSR activities. They have also used descriptive statistics and graphs for numerically and visually determining the similarities and differences between the proposed CSR activities and the probable interrelationships existing between them.

Event Study Method

This study used the Event Study Method (ESM) for investigating the movement of the stock price when the firm's CSR activities were reported in the media. ESM is used for determining the effect of a specific event on the stock returns, like crises occurring in the hospitality sector (Chen et al., 2007; Seo et al., 2013; Hadi et al., 2020). Chen et al. (2007) used the Taiwanese stock market data and noted that the performance of hotel stocks was affected by the pandemic. Zopiatas et al. (2019) noted the negative effect of global crises (like natural calamities, terrorism, and wars) on the tourism and hospitality-related stock return indices. Hadi et al. (2020) noted the adverse effect of terrorist activities on the performance of hospitality stocks in 6 countries. Thus, any crisis leads to a negative stock return, which severely affects the firms' future value.

All above studies indicated that ESM could assist the researchers in determining the instant stock price movements owing to the macro or firm-specific events and their overall impact. The firm value variation was determined using the Abnormal returns and Cumulative Abnormal Returns (CAR). Though ESM has been used for assessing the negative effect of any crises on the firm value, very few researchers studied the corporate response to such events for mitigating this decline. Numerous researchers noted the influence of CSR activities on the financial performance of hospitality-related organisations. However, only a few studies noted its impact on controlling the stock prices during any industrial crisis. Here, the researchers used the ESM for determining the impact of CSR practices on the stock returns of some firms during the pandemic.

Research Design

Initially, the researchers carried out an event study for determining the CAR after the CSR activities were reported in the media. This analysis included the stock market's reaction to these CSR activities. $CAR_i(t_1, t_2)$ refers to the Cumulative Abnormal Return of the Security i in the period surrounding the

CSR press release, which is measured over a specified window (days t_1 to t_2 , relative to release date). The researchers used the market-adjusted technique and value-weighted market returns for determining the expected returns (Brown & Warner, 1985; Arthur & Cook, 2004). The market-adjusted method was used for every firm for 30 days, with a minimum of 5 days before the CSR report for the company. Firstly, the firm's stock returns were regressed against the return of the market index for controlling the general market effect (Model (1)) as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

R_{it} = return of security i on day t ; R_{mt} = return of market index on day t ; ε_{it} = random disturbance

Then, the researchers carried out the Ordinary Least Squares (OLSs) regression analysis for determining the estimates of the market model parameters, $\hat{\alpha}_i$ and $\hat{\beta}_i$ (Model (2)) as follows:

$$ER_{it} = \hat{\alpha}_i + \hat{\beta}_i R_{mt} \quad (2)$$

They also calculated the Abnormal Return (AR) after subtracting the expected returns from Stock returns (Model (3)) and CAR for security i over the event window of days t_1 to t_2 (Model (4)) as:

$$AR_{it} = R_{it} - ER_{it} \quad (3)$$

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (4)$$

Result and Discussion

After all the firms without any financial data were excluded, the final population sample considered in this study included 20 firms (3040 firm-day observations), out of which 16 carried out CSR activities during this pandemic. These firms were included in the treatment sample. The other 4 firms did not carry out any CSR activity during the sampling period, hence were regarded in the control sample. For determining the extent of CSR activities carried out by the firms, the researchers looked for news releases for identifying the date when they started their CSR activities.

The researchers searched for data between 1st December 2020 and 31st May 2021, which included 2259 CSR activity and 781 non-CSR activity firm-days. They noted that the CSR adopting firms had higher stakeholder attention compared to the control firms. When studying the firm characteristics, they noted that the CSR adopters were bigger, with a higher liquidity and sales growth, low leverage and high profitability compared to the non-adopters. Also, concerning corporate governance, the CSR adopters had a large board and numerous shareholders.

Table 1 presents the results of the ESM that studied the impact of CSR adoption on the CAR. The mean CAR for the sample ranged between 0.021 and 0.163 for different event windows. The CSR activities led to a higher positive reaction (with statistical significance) and effect on the company stock returns, which increased by 2.1% and 16.3% during the window period (+1, +5) and (+1, +60), respectively. All results indicated that the stakeholders had rewarded the firms engaging in the CSR activities during the COVID-19 pandemic, which was consistent with the H1.

Table 1. Abnormal market returns related to the CSR activities (Event Study Method)

Event Window	CSR = 1 (N=20)	
	Coefficient	t-value
[1-5]	0.021**	2.34
[1-10]	0.036***	2.32
[1-20]	0.083***	3.54
[1-30]	0.149***	3.93
[1-40]	0.124***	2.60
[1-50]	0.163***	3.50
[1-60]	0.024**	2.36

Note: ***, ** and * represent 1%, 5% and 10% levels of statistical significance, respectively.

CONCLUSION

The researchers conducted the ESM for determining the market reaction to the hospitality firms engaged in CSR activities during the pandemic. After sampling the major Malaysian hospitality firms, the researchers noted that the investors highly approved of the pandemic-related CSR activities carried out by the firms, who aimed to protect their employees, customers, and the communities from the transmission of the coronavirus. Thus, the positive impact of the CSR activities on the stock returns is usually noted within 5 days, which can last up to 50 days. Here, the researchers have shown that hospitality firms attracted a lot of public attention when their pandemic-related CSR activities were published in the media reports. This increase in public attention converts to a positive firm evaluation. Higher stakeholder attention indicates more awareness of potential investors, which leads to an active exchange of company shares, thereby protecting the firm value against the effect of industrial crises. There is very little evidence that highlights the impact of CSR activities on the movement of stock prices in the hospitality sector compared to other sectors (Rhou & Singal, 2020). However, the institutional theory (Greening & Gray, 1994) stated that the bigger organisations must be more sensitive to CSR news (Pérez et al., 2020). As discussed earlier, hospitality firms have garnered a lot of attention during the pandemic as people expect them to be more socially responsible regarding public health than before (Jiang & Wen, 2020). Thus, it could be possible that the influence of CSR activities-related news would show a higher effect on hospitality firms and other high-profile organisations. The findings of this study could be limited to only the socio-economic and institutional environments similar to those in Malaysia. Therefore, one needs to be careful before applying these results to other financial markets.

Theoretical Implications

This study has attempted to fill the gap in the literature as the researchers noted that when the hospitality firms engaged in CSR activities during the pandemic, it positively affected their stock price movement. These findings have contributed to the debate regarding the fact that should companies invest in CSR activities during any crises, by using the data from the Chinese stock market during the pandemic. Though engaging in CSR activities during any crisis can cause a higher financial burden on the organisation, the stock market returns that are generated can justify this investment since the capital market evaluations

are necessary for improving the firm's ability to survive any crisis. Similar results were noted by Lins et al. (2017), who stated that any social capital that was based on CSR investments is beneficial during a financial crisis. This step has taken this argument further and showed that continuing the CSR investment even during a crisis could improve the organisation's well-being. Yoshino et al. (2020) also presented a similar theory and suggested that the governments and investors need to focus on the organisation's CSR engagement, after the pandemic, in fulfilling their Sustainable Development Goals. These results also highlighted the expectations put forth by He and Harris (2020) that the companies, who engaged in genuine and authentic CSR strategies, would thrive after this pandemic, as was evidenced by their stock market returns. A positive stock return during the pandemic highlighted the positive attitude of the stakeholders towards the corporate decisions to increase societal well-being and indicated their readiness in supporting these companies.

Though the CSR activities carried out by the firm for any community does not immediately improve the company's financial performance in an unfavourable economic environment (Lee et al., 2013), it could help their stock returns if their CSR activities generated more stakeholder attention. For instance, during the industrial crises that were caused by the disasters in the past (e.g., pandemics), the companies that contributed to the disaster relief drew positive attention, particularly from the potential investors (Madsen & Rodgers, 2015).

Some of the earlier studies highlighted the different effects of CSR activities in different crises (e.g., financial, economic, natural disaster) (Lins et al., 2017). This study has further contributed to this field as it presented the effect of CSR activities on the company's financial performance during the COVID-19 pandemic. In line with the argument presented by Lins et al. (2017) that the CSR activities offered the companies a higher social capital to resist the effect of the financial crisis that destroyed trust, the researchers in this study showed that the social capital acquired through CSR activities for the vulnerable stakeholders even supported the hospitality firms, who were not operating at their full capacity during the pandemic.

Managerial Implications

Many managerial implications could be concluded from this study that would help hospitality firms to prepare better for future crises. The findings indicated that the publicly traded hospitality firms need to invest in more CSR activities during the pandemic for protecting the value of their firms in the stock markets. Even though the profitability of the hospitality firms is not certain during the pandemic, their CSR activities that protect public health could garner a lot of stakeholder attention and the investor assessment. The results of this study showed that the CSR activities of hospitality firms must not be restricted only during a crisis, but they should engage in these activities regularly for improving the effectiveness of their CSR investments during any future crisis. Though it is important to take care of the stakeholders during a pandemic, the companies need to understand that the different CSR activities show a varying effect on the stock returns. Some of the activities like donating to charities and protecting public health for preventing viral transmission would attract a lot of attention from external stakeholders, which would further improve the potential investor evaluation. However, these potential investors would not be interested in the CSR news related to internal stakeholders (e.g., employees). They could also be worried that the financial benefit owing to employee protection does not justify the high cost if the whole sector is facing a financial burden. Yet, the CSR activities that target the employees also deserve additional investment for ensuring proper firm performance (Mao et al., 2020).

Limitations and Future Studies

This study had a few limitations. Here, the researchers focused on the CSR activities carried out by the firms that were listed on the Malaysian Stock Market, during the lockdown period. In future, the researchers need to study a large sample population with a longer period, for understanding the different CSR activities. They could also compare their results from those noted in other countries for obtaining a comprehensive picture. Here, the researchers only studied the public companies, hence, the findings could not be applied to the private companies, which also needed investments during the pandemic. Very few studies have determined the effect of the stakeholders' attention on the financial performance of private organisations. Since the ESM determines the effect of events on the stock market reaction, the researchers could study the long-term effect of the CSR activities. Hence, a positive stock return cannot be generalised for an extended period. In future, the researchers can determine the long-term effect of CSR activities during the pandemic on corporate financial performance. It is difficult to compare the stock price movement of companies engaging in CSR activities and those that did not, using ESM. For extending the findings of this study, in future, the researchers need to use different techniques for determining the probable differences in the stock return of these 2 types of organisations.

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KEY TERMS AND DEFINITIONS

Altruistic Commitment: Principle and moral practice of concern for other parties in obligations.

Corporate Financial Performance: Evaluation of a company's overall standing in categories of assets, liabilities, equity, expenses, revenue, and other financial measurements.

Corporate Social Responsibility: Business self-regulation with the objective of being socially accountable.

Firm Value: Market value of a business.

Philanthropic: Individual or organization focusing to promote the well-being of others.

Social Capital: Shared values between individuals working together to achieve common goals.

Stakeholder Theory: Theory of organizational management and business ethics that accounts for multiple constituencies impacted by business entities like employees, competitors, customers, business partners, suppliers, government, and other parties.

Chapter 11

Strategic Analysis of the Organizational Learning Approach to Dynamic Resilient Capability

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ABSTRACT

The purpose of this study is to analyze the strategic organizational learning approach to dynamic resilient capabilities. A scoping review of the theoretical and empirical literature on organizational dynamic resilience capability reveals gaps to be addressed to improve the conceptualization. Under the assumption of some attributes and properties, it is viable to study the organizational resilience learning process leading to the analysis of the organizational resilience strategies.

INTRODUCTION

Organizations are complex and dynamic systems continuously changing (Norris et al., 2008; Tyler & Moench, 2012; Young, 2010). Resilience is the organizational function of the overall awareness, management of vulnerabilities, and adaptive capacity in a complex, uncertain, dynamic, and interconnected environment. Resilience is shaped by an adaptive system based on multilevel dynamics interaction aiming to change (Masten, 2007: 926) which in turn resists increasing vulnerability and enhances resilience (Walker & Salt, 2012: 24).

Organizational resilience is related to change phenomena such as ecological unexpected and disruptive events and to environmental characteristics such as complexity, uncertainty, turbulence, dynamic, etc. Resilience organizations develop the ability to be dynamic and stable to continue operations after any major mishap (Woods & Hollnagel, 2006).

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Organizational resilience is a function of the situation awareness, management of vulnerabilities, adaptive capacity of an organization in a complex, uncertain, dynamic, and interdependent environment. The economic, social, political, and cultural organizational environment are being considered as dynamic trait that may enhance organizational resilience.

A scoping review of the literature on organizational resilience reveals gaps to be addressed to improve the conceptualization, often presented as a normative, and the dynamic adaptation in emergent patterns of the systemic interactions. One school promotes the actions to cope with turbulences and the other fosters the dynamic ability to develop new capabilities to monitor changes and take actions to mitigate environmental challenges.

Organizational resilience frameworks align to build a system adaptation based on dynamic capabilities constructs (Limnios et al., 2014). The contribution of other disciplines to the resilience conceptualization is critical to understand the dynamics or organizational resilience capabilities related to the issues where there are gaps of information, such as in areas of the role of organizational knowledge, culture, structure, determinants of the resilience process, preparation for unexpected events, abilities to deal with threatening events at different levels of analysis.

Research on organizational resilience has been undertaken in high-reliability organizations operating in uncertain, complex, and dynamic environments where errors may lead to catastrophic consequences (Bigley & Roberts, 2001; Weick & Roberts, 1993; Weick & Sutcliffe, 2001; Weick et al., 2005). Resilience offers different thinking to contribute to the theoretical debates based on resource-based and dynamic capabilities. Theory building of organizational development is focusing on heuristic based dynamic capabilities under strategic and resource collapse conditions (McGrath, 1999; Mellahi & Wilkinson, 2004; Probst & Raisch, 2005; Sheppard & Chowdhury, 2005).

Economic theories assert that organizations aim to efficient economy balanced by turnarounds and dynamic capabilities (Barker & Duhaime, 1997; Morrow, Sirmon, Hitt, & Holcomb, 2007; Shein, 2011) and dynamic capabilities (Helfat et al., 2007; Teece, 2007; Zahra, Sapienza, & Davidsson, 2006) and the ability of organizations to endure, recover and adapt from distress.

The concept of resilience is complex and dynamic. Organizational resilience includes several attributes and elements (Gibson & Tarrant, 2010). Organizational resilience is essentially a dynamic capability used to manage unstable organizational systems to develop reliable functions (Weick & Sutcliffe, 2007). Organizational resilience is dynamic and incremental (Alexiou, 2014; Kamalahmadi & Parast, 2016; Ortiz-de-Mandojana & Bansal, 2015).

The study begins with the conceptualization of the dynamic resilient capability leading to consider the attributes and properties that are relevant in the organizational resilience learning process. Finally, it is analyzed the organizational resilience strategy.

CONCEPTUALIZATION OF THE DYNAMIC RESILIENT CAPABILITY

Resilience is a dynamic concept and evolves over time from fragile to antifragile (Taleb, 2012). The notion of organizational resilience is related to the concept of dynamic capabilities. The conceptual and empirical study of organizational resilience provide evidence of the dual change mechanism of dynamic capabilities construct used as a framework to reconfigure existent routines and resources, creating opportunities through alliances and entrepreneurial actions (Peteraf et al., 2013, Zahra, Sapienza, & Davidsson, 2006, Alvarez & Barney, 2007; Barreto, 2012).

To build a conceptualization of organizational resilience it is necessary to clarify and use some assumptions to underlie different orientations to enable the building and development of dynamic capabilities. The assumptions of resilience can be accommodated in the dynamic capabilities framework as the platform to build the foundations for the conceptualization of organizational resilience.

Organizational resilience is the ability to strengthen firms by harnessing experience to become adaptive, robust, agile, and competitive in increasingly ever-changing, dynamic, and complex environment and embracing opportunities. Organizational resilience is the dynamic capability of exploitative adaptations or engineering resilience, explorative transformation, or ecological resilience to maintain performance and longevity (Eltantawy, 2016). Ecological resilience requires the anticipation of risks, reduction of environmental degradation, and organizational preparedness of ecosystem dynamics dependent upon natural resources (Whiteman and Cooper 2011). The engineering resilience akin to self-restoring equilibrium dynamics in mainstream economics. The conceptualization of capability performance provides insights into the complex dynamics to rebuild opportunities and development.

Organizational resilience is a strategic ability to adapt, integrate and reconfigure internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment resulting from a set of dynamic capabilities (Limnios *et al.* 2014). A dynamic capabilities perspective of organizational resilience provides more understanding of adaptive conditions of adversity with the purpose.

Organizational resilience is the ability to anticipate, cope effectively, learn from these events from trends and potential threats with unexpected events to produce a dynamic capability directed towards organizational change (Duchek, 2014). Organizational resilience is the ability to continually evolve and thrive over time in the face of adverse and hostile circumstances which naturally arise in dynamic environments (Demmer *et al.* 2011).

The impact of resilience on dynamic capabilities of the organization is well known. Organizational resilience encourages recovery and growth from adversity that may involve adopting an entrepreneurial mindset and develops dynamic capabilities that turns adverse experiences into opportunities for strategic renewal. Organizations build dynamic capabilities in resilience to design strategic opportunities out of adversity.

Organizational resilience is the ability to continually evolve and thrive in adverse and hostile circumstances arising in dynamics environments (Demmer *et al.* 2011). Organizational resilience is a trait to thrive in a dynamic and volatile business environment (Chan, 2011). Organizational resilience is concerned with the adaptation process to challenge complex environmental conditions through the capability dynamic alignment aimed to avoid a path dependency approach and rebuild efficient performance (Lengnick-Hall & Beck, 2009; Sydow, Schreyögg & Koch, 2009; Eisenhardt *et al.*, 2010). Organizational resilience is the ability and the dynamic capability of an organization to resist, absorb, cope, recover, and adapt to the altered environment following a disaster (Kahan, Allen, George, & Thompson, 2009; McManus, Seville, Vargo, & Brunsdon, 2008).

Resilience is conceptualized as a dynamic process of ongoing and reciprocal transactions between the organizations and the environment (Vanderbilt-Adriance & Shaw, 2008: 31). Organizational resilience is the intrinsic ability of a system to maintain a dynamic stable state and continue operations after a mishap in the presence of a continuous stress (Woods and Hollnagel, 2006). Organizational resilience is the ability to thrive in a dynamic environment (Cho *et al.* 2006).

Luthar et al. (2000) defines resilience as the dynamic processes encompassing positive adaptation in a context of significant adversity (p. 543) and adapting to sudden changes. The resilience process-oriented is a dynamic nature interaction between the organization and the environment (Williams et al. 2017, p. 20) responding before, during and after to adverse events (Linnenluecke et al. 2012; Alliger et al. 2015; Williams et al. 2017).

Organizational resilience is the dynamic organizational capability to facilitate organizational change through the development of abilities to anticipate, cope and learn from potential threats, unexpected events, and trends. Resilience is conceptualized as a normative construct the system of capabilities for dynamics adaptive process and outcomes. The sociological resilience of organizational system is more dynamic and determined by the adaptation process undergoing during the adaptive cycle.

Dynamic and operating capabilities and division of routines in the context of organizational resilience contributes to build adaptations through segmented actions at several levels. From this perspective, a reliable action of resilience beyond the evolution and revolution phases addressing sequences of crisis for growth and maturity functioning of the organization (Greiner, 1972). The resilience capability perspective incorporates a hierarchy of activities that yield competitive advantages while reconfiguring responses as dynamic capabilities to environmental changes (Ambrosini et al., 2009; Danneels, 2012; Hine, Parker, Pregelj, & Verreynne, 2014).

PROPERTIES AND ATTRIBUTES

Resilience is conceptualized as a generic quality linked to dynamic capabilities. Organizational resilience as an emergent system is a dynamic property that integrates the processes of adaptation and integration processes in inter-systemic in nature (Clement and Rivera 2017: 30). The dynamic nature of organizational resilience provides the inference of causality in a longitudinal evaluation that contributes to organizational renewal based on employee work-role performance (Gover & Duxbury, 2018). Organizational resilience uses the interactions of assets, attributes and routines that recognize the effects of risk over time and their emerge in unexpected ways (Vanderbilt-Adriance & Shaw, 2008: 30-31). Organizational resilience is a dynamic capacity that develops over time (Wildavsky, 1988)

As a dynamical property, organizational resilience requires new core properties of the system's capacity to be ready to respond by anticipating and synchronizing events and proactively learn (Hollnagel and Woods 2017). Resilience can be desirable and non-desirable depending on the proactive development and adaptation of dynamic capabilities (Limnios et al. 2014). The socio-ecological systems have derived in the resilience (Folke, 2006) referring to a dynamic capacity of adaptation and to the system's capacity to absorb the internal and external disruption and perturbations and return to a stable state.

Organizational resilience analysis as a dynamic property requires building inter and transdisciplinary bridges aimed to integrate processes of both organizational adaptation and transformation of the operative ecosystems and dependent networks to build and enhance resilience aligned to more holistic sustainable development goals (Folke et al., 2010).

Organizational resiliency is a relevant attribute when dealing during crisis through preparation, dynamic and flexible planning and proactive behavior built with specific training on psychological capital of personnel. Risk readiness is a concept developed in a dynamic model associated with resilience (Cook and Rasmussen 2005). The concept of resilience links to the change from a static to more dynamic paradigm of safety management. Organizational resilience in safety of complex systems copes

with highly risky variability (Bergström et al., 2015), although safety is a dynamic non-event and the ability of dealing with shocks and unexpected events (Weick and Sutcliffe 2001).

It remains unclear how organizations may achieve resilience (Boin and van Eeten, 2013; Duit, 2016) and their antecedents, relationships, interactions and drivers between the different stages in an explicit conceptual framework for a comprehensive conceptual and dynamics understanding (Lynham, 2002, p. 232; Meredith, 1993; Jabareen, 2009; Burnard and Bhamra, 2011). Some principles of organizational resilience are the learning, flexibility, and adaptability.

Organizational resilience is an intrinsic attribute to the ethos of the organization and provides a shared common platform adapted to the dynamic complexity of the organizational environment, providing confidence to take measured risks, and responding appropriately. To ensure organizational resilience is important to develop a dynamic leadership, understanding the needs of all the stakeholders involved and have well-trained staff.

The different nature of organizational resilience capabilities is based on the antecedents either a heuristics-based dynamic capability, or the adoption of routine actions in the absence of survival conditions. An organizational resilience capability loop can be based on heuristic dynamic capabilities. Heuristics in organizational resilience are linked with dynamic capabilities (Bingham & Eisenhardt, 2011). Heuristics-based dynamic capabilities must be pertinent to some contextual circumstances while others may require routine-based capabilities to provide the organizational resilience. Organizations tend to use more heuristic-based resilience dynamic capabilities in scenarios of major resource loss and uncertainty.

Dynamic organizational resilience capabilities resilience focuses on the shift from the capability hierarchy perspective to heuristics-based capabilities (Barreto, 2010; Hine et al., 2014). The heuristics insight provides a decision structure to assess the organizational resilience preserving behavioral flexibility to deal with the collapse in any dynamic nature of a specific context. Organizational resilience can be assessed based on the functions of monitoring, responding, anticipating, and learning (Apneseth et al. 2013) and on the ability to respond, monitor, anticipate and learn (Hollnagel 2010).

According to the resilience orientations framework of Teece (2007) the reintegration, homeostasis, and loss have different dynamic capabilities for sensing, seizing, and transforming. Heuristic processes with recovery and growth from adversity can be invoked to build a dynamic resilience building with the support or sensing, seizing, and transforming processes in response to specific threats. A comprehensive heuristic dynamic capability model characterizes threats for the types of strategic, operating and resource disorganization.

Each type of disorganizations requires deployment of different heuristic resilience dynamic capability at different times and across the processes of sensing, seizing, and transforming. The result of these processes differs in resilience outcomes. The heuristics-based dynamic capabilities (Bingham et al., 2007) and the operating capabilities built on routines (Helfat et al., 2007) for organizational resilience under conditions of sustainability and competitive advantage (Peteraf, di Stefano & Verona, 2013).

An elaborate dynamic organizational resilience capability supported by a portfolio of heuristics (Gigerenzer & Brighton, 2009) the organization is challenged to deploy sensing, seizing and transformation. The heuristic-based dynamic organizational resilience capability portfolio is more critical for an unstable organization more than resources and routines. Under stable conditions of resource management and strategy, the heuristic-based dynamic capabilities can configure and re-configure the operating routing-based and entrepreneurial capabilities (Hine, Parker, Pregelj, & Verreynne, 2014; Teece, 2012; Teece et al., 1997).

Resilience is an emergent property of complex systems related to the capacity of a system to reorganize after internal or external disturbances (Folke, 2006) and adapt to organizational settings through the emergence of new behavioral patterns, learning and changes in the structure of social interactions.

THEORETICAL AND EMPIRICAL LITERATURE REVIEW

A systematic theoretical foundation of organizational research has not been formed and developed until now. The organizational dynamic resilience perspective indicates the growing of resilience to maintain a positive position to face crisis. The microfoundations of the dynamic capabilities are explored by Tabaklar, Sorkun, Yurt, and Yu, (2021) and propose a social innovation framework in highly dynamic settings to build and reconfigure capabilities that may apply in organizational resilience.

Because organizational resilience is an effective means to achieve sustainable growth in crisis situations, Chen, Liu, and Zhou, F. (2021), using the mapping and literature analysis methods, have developed an organizational resilience framework for research. Global health actors can harness the opportunities offered by pathways of change, according to Held, Kickbusch, McNally, Piselli, Told, (2019), one of which is the degree of organizational learning and active feedback loops between organizational epistemic and practice communities aimed to enhance a polycentric system of governance and the political leadership for governance innovation. An organizational dynamic resilience perspective from the capability perspective considers that resilience is a dynamic developmental and progressive process-based of organizations in improvisational response to crisis and involving identity management (Ishak, and Williams, 2018; McCarthy, Collard, and Johnson, 2017).

A theoretical organizational learning frame has been developed by Willems, Busscher, van den Brink, and Arts, (2018) to analyze the anticipation of change in agencies and the empirical research implications into the practice of waterway renewal in practice in which change is pragmatic. The dynamic capability perspective of organizational resilience research is based on evolutionary economics, the resource base view, and capabilities (Davies, and Brady, 2016).

Flexible and changing organizations only can thrive to keep aligned in a volatile environment enhancing the ability to be able to respond to crisis and supported by organizational learning, the organization can develop the dynamic resilient capacities to promote change (Duchek, 2014). Organizational learning theory is incorporated into organizational resilience by Umoh et al. (2014) and developed a measurement scale based on McManus *et al.*, (2008) to include planning capacity, organizational learning capacity, dynamic capacity, and adaptive capacity. Only flexible, changing, and agile organizations can thrive in dynamic and evolving environments (Lengnick-Hall *et al.* 2011)

One of the promised perspectives is the theory of organizational resilience based on the dynamic capability theory considered as the ability of firms to perceive threats and opportunities, make decisions, solve problems, and change their resource bases (Barreto, 2010). Internalized the dynamic capability as the organizational resilience based on the safety audit of resilience engineering by Huber *et al.* (2009), the results of their research show that the organizational dynamic capability determined the safety performance.

Organizational resilience is the function of the ability of adaptation to the dynamic environment of the organization (Wicker, Filo, and Cuskelly, 2013, Mcmanus, Seville, Vargo, and Brunsdon, 2008). Dynamic capabilities evolve with the changing environment where learning plays an important role (Zollo & Winter, 2002). The organizational dynamic capability was proposed by Teece *et al.* (1997) as

the ability of the firm to establish and reconfigure its internal and external resources to gain competitive advantage in the turbulent and changing environment.

ORGANIZATIONAL RESILIENCE LEARNING PROCESS

The resilience is the combination of anticipating, learning, responding, and monitoring sociotechnical systems comply with the variability of activities, the nature of work and the nonlinear activities (Patriarca, Di Gravio, Constantino, Falegnami, Bilotta, 2017). In the broad social sciences, resilience is the anticipated effort to predict and prevent potential dangers and the capacity to cope after the dangers manifest, learning to bounce back (Wildavsky, 1988: 61).

Organizational resilience is the ability to handle and respond threats and hazards to unexpected trouble, using pre-existing and pre-planned capabilities, by learning, changing, and developing new capabilities (Dalgaard-Nielson, 2017). Organizational resilience is the capacity and ability to respond positively, adaptively for adaptation, for learning, withstand in disruptive change and external shocks (Stewart and O'Donnell, 2007). The organization can evaluate its resilience and learn after the event in terms of the resources employed and the capacity to absorb the impact of the climate change and extreme weather event and recover. Organizational learning after these events can develop new resilience and adaptation capacities (March et al., 2003)

Organizational resilience is critical in a volatile environment and adversity where some organizations survive, others thrive, and others perish. Organizations must manage their specific resources, structures, capabilities, etc. Some building blocks affect anticipating, coping with and adapting and learning from adversity, entailing leadership, environmental scanning, initiating change processes and resilience planning in the complexity and uncertainty of the world (Vakilzadeh and Haase, 2020). Leadership enhances organizational resilience in times of change as capacity to respond adaptively to disruptive change, and implies the ability to withstand shocks and the capacity for adaptation and learning (Stewart and O'Donnell 2007)

Organizational Resilience is about learning to bounce back (Wildavsky, 1988) and the ability to bounce forward (Manyena, O'Brien, O'Keefe, and Rose, 2011) to grow and prosper (Reich, 2006) through the mechanisms of performance optimization and adaptive innovation. Organizational resilience is the response to a crisis and learning over time how to face with new challenges (Sutcliffe & Vogus, 2003). Organizational resilience is linked to overcoming the crisis and emerge strengthened successful to growth (Freeman *et al.* 2004, Sutcliffe and Vogus 2003; Teo *et al.* 2017) and learning to develop new capabilities and the ability to thrive despite diversity (Dalgaard-Nielsen 2017; Stewart and O'Donnell 2007; Teo *et al.* 2017; Wildavsky, 1988; Williams *et al.* 2017; Chan 2011; Cho *et al.* 2006).

Organizational resilience comprises adaptation implying long-term learning (Madni & Jackson, 2009). Long-term adaptation of anticipatory adjustments and learning to respond to the impacts on ecological discontinuities from climate vulnerabilities and weather extremes should be considered in the design and implementation of resilience strategies. Resilience is a learning process of protective actions to build resilience against perceived vulnerabilities over time that needs to be explicit for organizations (Hale & Heijer, 2006; Masten, 2001).

The social-ecological perspective of resilience incorporates learning, adaptation and transformation beyond constancy and recovery. The concept of resilience has gradually moved from an assumption of single equilibrium to multiple equilibrium in socio-ecological systems with the increasing recognition

of complexity, uncertainty, variation and learning in living systems (Folke 2006). Socioecology systems resilience can be supported by heuristics to build anticipation, recovery, learning and adaptation (Walker et al., 2006; Madni & Jackson, 2009).

Organizational resilience may result of learning from disasters (Roberts, Madsen, & Desai, 2005) and from unexpected events. Resilience must respond to what is happening by the identification, anticipation and learning from the critical problems (Hollnagel, 2009).

Organizational resilience is an iterative practice of learning the dynamic capabilities to reconfigure resources and activities for strategic opportunities by enhancing change and unintended consequences (Teece, 2007: 1343). Unlearning facilitates organizational resilience (Morais-Storz and Nguyen 2017). The transformational perspective of organizational resilience capacity is tied to a dynamic process embedded in the individuals' knowledge, skills, and abilities (King et al., 2016; Kuntz et al., 2017). Organizational resilience relates to the redundancy of humans and equipment (Azadeh et al. 2016) that promotes the robustness of the system and implies learning and adaptive changes.

Resilience capabilities can be state-like open to development through training programs or on-the-job training in dynamic capability to cope and bounce back with significant change from risk and adversities. Also, organizational resilience can be trait-like stable of the individual, team, group, and organization (Luthans 2002; Coutu 2002). In a dialectic process, resilience is influenced by different levels considered as the capability of individuals, groups, and organizations to cope in dynamic context (Cho et al. 2006).

A cultural learning process of organizational resilience enables the abilities and capabilities needed by the organizations to respond properly to deal with incidents and disturbances. Some cultural factors identified include the organizational learning and learning from past experiences. Organizational culture, learning from past experiences and professional servant leadership are some of the factors that affect organizational resilience (Erol *et al.* 2010; and Boin and McConnell 2007).

Organizational learning from incidents experience at facing external environmental, socio ecosystems, spatial, societal, sectoral, etc., crises events, has an influence on the adoption of responses and other resilience activities (Toft and Reynolds, 1997) through isomorphic learning from events of other organizations with improvements and planning (Deverell, 2009; Weick and Sutcliffe, 2003). Cross-sectional learning is implicit in organizational resilience to avoid failure and cope with crisis (Crichton et al. 2009).

Nevertheless, large organizations have organizational resilience rooted in both locations and relationships, rather than resilience formalization and isomorphic learning from other vicinities and neighborhoods characterized by their strategic resilience planning formalization activities, resources, roles, and agreements to recover from disruptive events.

The experience of mild and strong dysfunctional events and disruptions may be used for learning organizational resilience reintegration with cognitive and behavioral solutions and predominant heuristic-based responses (March 1991). Seizing from reintegration resilience is learning from threats and become open to large scale organizational change as part of the organizational growth in response to uncertainty and adversity. The resilience learning capability enable organizational survival and growth to exploit advantages (McGrat, 2013). The resilience reintegration orientation engages in a deep learning process against threats.

Organizational resilience can be increased to achieve robustness by learning from previous failures. Learning from failures facilitates organizational resilience (Crichton et al. 2009). The improvement of organizational resilience learning from multiple past failures in the network and disaster recovery, quickly identify, locate, and assess the grid resilience elements of previous errors for critical missions

aimed to correct and improve processes, optimize recovery efforts, and mitigate the impacts (Chen et al., 2014). Personal networks and norms of generalized reciprocity for organizational development can be identified in the context of resilience, social learning, community recovery of disasters (Chamlee-Wright, 2010, p.21)

Group resilience develops the capacity of learning through the imperfections and failures with the combination of accountability and psychological safety as critical ingredients (Edmonson 2007). Communities approach resilience with other associated concepts and terms seeking to improve it by learning from demonstration to achieve robust designs, high-reliability, and complex adaptive systems.

Resilience stages depend on the prior organizational knowledge former crisis, the environment, actions, etc., and influence learning and knowledge base to be used in anticipation as learning for crisis, in coping by learning as crisis and adaptation as learning from crisis (Smith and Elliott 2007). Action priority can build organizational resilience through the access to information and learning. Action learning facilitates organizational learning and change leading to organizational resilience as the ability to recover unexpected exogenous environmental change (O'Hara et al. 2007).

The organizational knowledge base is enhanced by learning for and through rare unexpected events in close relationship between the anticipation and coping phases of organizational resilience (Christianson et al. 2009) and also illustrated by the feedback loop between the anticipation and adaptation. Outcomes of organizational learning at individual level facilitate change and resilience (O'Hara et al. 2007).

Organizational resilience dynamic capabilities are not concreted things or objects and do not have any boundaries, rather is dynamic consisting in a repertoire of knowledge, skills, processes, and heuristics learnt from experiences of adversity events. The dynamic capability of organizational resilience is based on learning integration skills to reduce vulnerability. Organizational resilience as a dynamic capability is a multidisciplinary concept embracing the mechanisms of learning.

The perspective of the systems, the organizational systems is a multifaceted concept used to develop capabilities to implement adaptive responses to disruptions and create organizational learning (Francis & Bekera, 2014; Lee et al., 2013; Maitlis & Christianson, 2014; Thiel et al., 2012). Richardson (2016) applied the metatheory of resilience postulating the qualities inquiring and learning to achieve mastery as the result of change

Organizations may increase resilience by learning from errors and dynamic plans. Organizations develop different resilience capacities subject to their past experiences and leading to different threats, high risks, and disorganizations disturbances, which may require behavioral flexibility and heuristics in dynamic capabilities. Past experiences, learning and creativity are resources that influence facilitates resilience in smaller businesses (Glover 2012; Richtnér and Löfsten 2014).

Organizations develop resilience capability after coping with collapse aligned with the decision dynamic context, constraints in resources, opportunities and heuristics with a decision making. Organizational collapses are source of learning resilience capabilities to build organizational resilience an applied across the operating conditions. Heuristics is an efficient mechanism embedding learning from adversity to become more resilient (Gigerenzer, 2008).

The concept of organizational resilience informs organizational practices to bring more experiential learning and knowledge to prevent challenges of future scenarios, such as demographic, social, and economic changes (Bento and Garotti, 2019) such as in the situation of post-covid-19. The application of Bayesian network models in organizational resilience has implications with business models to open spaces for communication, learning and adaptation to prevent crisis.

Organizational adaptation is a concept in organizational resilience processes (Burnard and Bhamra 2011) that comprises the phases of detection and activation, response and organizational learning. Organizational resilience includes adaptation capabilities to critical events and the ability to make adjustments using change for organizational long term learning and advancement and increasing the knowledge for anticipation (Limnios et al. 2014; Madni and Jackson, 2009).

Adaptation is a key capability that includes reflection, learning and organizational change aimed to avoid and reduce negative effects of unexpected events (Carley, 1991; Carley and Harrald, 1997). The adaptation processes in organizational resilience have implications in operational safety practices and others, becoming relevant for the emergence of learning and knowledge creation as a respond to crisis and unexpected events.

The organizational resilience process model is a framework to build and develop dynamic capabilities as high order process to respond to tensions created by adverse unknown events and disturbances that require reconfiguration of organizational resources and activities and changing environmental negative circumstances (Burnard & Bhamra, 2011: 5595). Organizational resilience building is enabled by dynamics and impact of unexplored events (Burnard & Bhamra, 2011: 5595).

Organizational resilience building covers the management of human resources, cognitive adaptation to environmental situations, reducing vulnerabilities and propensity to disruptive events and desirability of dynamic states (Limnios et al., 2014; Lengnick-Hall, Beck, & Lengnick-Hall, 2011; Watts & Paciga, 2011; Sheffi, 2005). Organizational resilience dynamic capability building proceeds across the decline, collapse, and re-building stages to withstand failure and managing collapse.

The resilience dynamic capability development of the organization requires to learn heuristics and skills emerging from specific events and cases triggered by the different stakeholders in boundary and rebuilding transitions. An organization should learn to develop a dynamic organizational resilience-based view of capability using heuristics instead of routines, enabling strategic change and reducing the threats of collapse. Development of organizational resilience enhances organizational learning enacted through routines oriented toward specific targets (Levitt & March, 1988).

The organizational resilience-based view may develop supported by dynamic capabilities and heuristics to regain stability after adversity. Resilience is a mechanism of learning and change to foster practices for stability (Bingham, Eisenhard and Davis 2007). Resilience as stability and change (Farjoun 2010) provides empirical evidence to facilitate learning and capability development for organizational change (Bingham, Eisenhard and Davis 2007).

The process model of resilience capability integrates the insights to provide resilience dynamic capability by deploying a set of skills and heuristics to bounce back from collapse.

ORGANIZATIONAL RESILIENCE STRATEGIES

Cycles of organizational learning and unlearning achieve strategic organizational resilience (Moraís-Storz and Nguyen 2017)

The best organizational resilience response occurs when strategies are designed to specific disturbance although may be cognitively demanding but still manageable (Masten, 2014). Organizational resilience is a strategy aimed to face the challenges of a dynamic, complex, and uncertain and continually changing environment. Organizational resilience is a strategy based on the adoption of best practices to survive, improve, and prosper in a context of dynamic global environment by building capabilities across all the

organizational areas. Design and implementation of organizational resilience strategies requires information availability and flexibility and adaptability processes through sharing of information flow and mission resilience awareness and assurance of the dynamic environment.

Organizational resilience strategies aim to mitigate errors and error recovery (Weick & Sutcliffe, 2007), to overcome barriers and incentive adaptation and learning (Howard & Irving, 2013; Li et al., 2012).

The strategic resilience enables the organizations to reinvent dynamic models and strategies as the circumstances and situations change (Hamel and Vaelikangas 2003; Vaelikangas and Romme 2013). This conceptualization is similar to the strategic offense (Limnios et al. 2014). The dynamics of organizational resilience when facing challenges of unknown events, natural disasters, socio-economic trends, etc., requires organizations to respond, to adapt and protect continuing sustainable performance and growth (Stephenson, 2010).

The dynamics of emerging organizational behaviors may arise from environmental changes such as disasters and unknown events (Burnard and Bhamra, 2011). Organizational resilience is an approach to disaster management based on identification of resources and assets that can support adaptive response and dynamic recovery (O'Sullivan, Corneil, Kuziemy, & Toal-Sullivan, 2015).

An approach to organizational resilience in a dynamic environment requires a balance of efficiency and reliability through flexibility and implementing measures of information availability to detect potential disruptions. Resilience are optimization and renewal as lagged indicators, and protective factors as proactive indicators are equal partners leading to the ability to evolve and thrive in the face of adversity which arise in dynamic environments (Demmer et al. 2011). Measures for organizational resilience in the context of specific goal may require moderate implementation of a feedback loop development for building dynamic emergency procedures to integrate the information required for the assessment of possible risks.

The intra and inter-groups dynamics assess the organizational resilience in which the different occupational groups distribute their activities. The notion of resilience qualifies better based on informal arrangements affected by the inter-group dynamics with negotiated and articulated tasks. The resilience of a team group increases in the face of unexpected events managed in a strong community practice. Assessing resilience requires the costs of change representing the involved working groups in their intra- and inter-group dynamics confronted with the crisis. An organizational resilience approach of containing crises regards high reliable organizations as the essence of resilience, the ability to maintain and regain a dynamic stable state in the presence of an uncertainty and vulnerability.

The dynamic capability model development has implications for the organizational resilience when resources dissipate the strategy fails to foster a long-term adversity period. The resilience dynamic capability operates the ability to manage collapse and shift towards stability and re-building. SMEs resilience is tied to strategic planning and its aspirations in terms of development of dynamic capabilities in response to a crisis, such as innovativeness, responsiveness, competition, renewal, uncertainty, etc. (Macpherson, Herbane, and Jones, 2015). The dynamic integration of logistics capabilities facilitates readiness, response, and recovery of the supply chain resilience (Ponomarov and Holcomb 2009)

CONCLUSION

Resilience is addressed through turnaround and dynamic capabilities. Organizational resilience is critical to possessing dynamic capabilities attracting new resources, design strategies and learn to overcome

rigidity and regain stability. Organizational resilience is the ability to manage workflow disturbances and regain a dynamic stable state.

A conceptual organizational resilience and adaptation focuses on a dynamic interplay between organizational activities and weather variabilities. Organizational resilience involves more than a strategic imperative and the ability of the organization to survive but enables to harness its experience and flourishes embracing the opportunities in a dynamic, complex, and interconnected environment.

Some of the ex-ante decisions are planning, learning and back-up systems and some of the ex-post adjustments are changing routines, minimizing strains on infrastructure and external support. Resilience differs from continuity management in that this one is returning to business as before, while resilience enables organizations to continue but evolves and growth from a disturbance through the transformation processes by learning, flourish, and progress.

Resilience emphasizes learning from failures and success to become reliable organizations. Organizational resilience cannot be boosted on trial and error due to the high cost but by focusing on learning from failures. Resilience is related to experiential knowledge constructed by learning beyond cumulative logic from the unexpected and open communication across units and agents. Group resilience is promoted by the interactions between individuals developing organizational learning and resilience.

Resilience can integrate findings from other areas and disciplines which can be related to other resilience stages and levels such as the anticipation through high reliability organizations, coping using crisis management adaptation to unexpected events supported by organizational learning. The organizational resilience leverages learning and experience to adjust and forge new organizational development.

The development of the resilience capability occurs when learning is embedded into the conscious mind of individuals in the organization and becomes experiential knowledge to be used in future adversity events. The resilience model becomes a resilience planning and implementing tool for organizational resilience that contributes to learning from mistakes and events underestimated.

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Chapter 12

Reshaping Beverage Retail in Urban Communities Through a Connected Platform

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ABSTRACT

Business organisations are attempting to transform themselves according to the paradigms of Industry 4.0. This chapter presents the case of Tapfrsh kiosk, an internet of things (IoT)-based beverage service platform for urban communities. It discusses the business ecosystem, system design, technology usage, machine design, aesthetics, and operational aspects of the Tapfrsh kiosk. The authors include a critical commentary on the kiosk using a multidimensional lens. Entrepreneurial insights are discussed.

1.0 INTRODUCTION AND OVERVIEW

In the case of community retail in India, products and services are often offered through Brick and Mortar (B&M), earmarked retail spaces and e-commerce. Some examples of community retail include university shopping complexes, rural agricultural produce markets and hospital retail outlets. It may further be argued that community retailers possess valuable insights about the local buying patterns (Dogra, 2010; Wright et. al., 2018; Pondiuni.edu.in, 2019). Some community retailers, with disruptive and consumer friendly methods, are gradually starting to challenge the business of B&M retailers. In response, some B&M retailers have started experimenting by moving towards multichannel methods

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(Pozzi, 2013; Ramchandani, 2016; Banerjee, 2019). Similar is the case of e-commerce players who are attempting to drive growth by venturing into community retail (Mukhopadhyay, 2016; IndiaPost.gov.in, 2018, 2019; Pattnaik and Panda, 2018; The Hindu Business Line, 2018).

Globally too, retailers have realised that emerging technologies could be used for business advantage. For example, it can be demonstrated that information generated by Internet of Things (IoT) technologies during interaction between customer, supply chain and surveillance systems could be used to make multichannel retailing efficient. Taking cognisance of such benefits, organised and unorganised retail businesses are now endeavouring to become multichannel retailers through technology (Renkis, 2016; Balaji and Roy, 2017; Li et. al., 2017; Grindley, 2018). Though mostly limited to urban or semi-urban areas, similar trends can be observed in the Food and Beverage (F&B) retail sector (Gera et. al., 2018). Technology is now deeply entrenched in everyday retail operations in the F&B retail sector, and therefore, future appears to be *connected*. For example, to avoid pilferage and staff misconduct, businesses have started employing integrated surveillance systems to monitor and regulate (Pierce et. al., 2014). Yet another technology intensive avenue being explored by the F&B industry is the way consumers pay. Because more consumers are adopting digital payment methods than ever before, more F&B retailers are accepting multi-modal payments (Singh and Gupta, 2016; Ghosh and Gupta, 2018; Sivathanu, 2018). Another emerging area being watched carefully by the F&B retail industry is that of ‘package delivery using Unmanned Aerial Vehicles (UAVs)’. This could be a novel leap towards the automation of business-consumer interaction (Bambury, 2015).

In this work, we present the case of the *Tapfrsh* kiosk machine. This kiosk has been designed and developed by Fermedicius Labs - an Indian robotics and automation startup. Through an IoT powered platform, the Tapfrsh kiosk claims to be a step towards connected F&B retail in accordance with the principles of Industrie 4.0. The rest of this work has been organised into four sections. Section 2.0 presents the conceptual foundation on which this work rests. Section 3.0 discusses the methodology and Section 4.0 presents information related to the kiosk. Subsequently, Section 5.0 draws from previous sections to present a critique of the Tapfrsh kiosk. Section 6.0 is dedicated to suggesting some solutions and Section 7.0 mentions some direction for future research. Section 8.0 presents our concluding remarks and Section 9.0 lists some resources for further reading.

2.0 CONCEPTUAL BACKGROUND

Businesses need to do much more than just automating their manufacturing processes if they wish to usher into the next industrial era. The addressal of existing and emerging issues related to this transition may require a multipronged approach. Therefore, in this section, we first provide a brief overview of Industrie 4.0. Then, we discuss six focus areas that relate to underlying principles of Industrie 4.0.

2.1 Industrie 4.0

The term “Industrie 4.0” came into being during the Hannover Messe in 2011 (Kagermann et al., 2013). This was part of the “High Tech Strategy 2020” formulated by the German government to digitalized existing systems and process of manufacturing organizations in Germany. Since then, it has been widely seen as the *Fourth Industrial Revolution* or Industrie 4.0 by many researchers, practitioners, and industry leaders (Liao et al., 2017). It is defined as the end-to-end digitalization of systems and processes in the

entire value chain of the organization (Hajoary and Akhilesh, 2021). Industrie 4.0 focuses on the development of smart products, systems, processes and procedures in the creation of *Smart Factories* with some emerging technologies like Internet of Things (IoT), Cloud Computing, Artificial Intelligence, Autonomous Robotics and Additive Manufacturing (Lu, 2017).

Interestingly, there are diverse perspectives on Industrie 4.0 across the globe. For example, it is understood as “Industrial Internet of things” in the USA, as “Factories of future” in France, as “Smart industries” in the Netherlands, as “Intelligent Manufacturing” in China, as “Industrial Intelligence” in Japan; as “SAMARTH Udyog Bharat 4.0” in India. Clearly, many countries have started to accelerate the adoption of Industrie 4.0 technologies and practices. This also shows in the charters of industrial associations and emerging forums of those countries (Smith et al., 2016; Li, 2018). It may be reasoned that the attractiveness of Industrie 4.0 may be due to its potential to improve processes, efficiency, transparency, quality, design, connectivity, and security of the manufacturing processes. However, the growth rate of Industrie 4.0 in regions like India may be limited by the rate at which enabling technologies are being adopted (NASSCOM, 2016; MEITY.gov.in, 2020; Keelery, 2021).

There have been numerous efforts to characterise Industrie 4.0. For example, it has been argued that Industrie 4.0 has six design principles: *virtualization, decentralization, interoperability, real time capability, service orientation, and modularity* (Lasi et al., 2014; Posada et al., 2015). In contrast, Gilchrist et al. (2016) reasoned that Industrie 4.0 has four distinct characteristics: *Vertical Integration, Horizontal Integration, Thorough Engineering, and Acceleration*. This chapter uses some of such conceptualisations to describe a new service platform made using some Industrie 4.0 technologies. In the following paragraphs, we briefly introduce some of these technologies.

Internet of Things: Internet of Things (IoT) may be understood as a network of ‘things’ embedded with sensors, actuators that are connected to the Internet (Roberto et al., 2015). This network allows inter-machine communication without requiring direct human intervention, thereby automating the decision and communication process.

Cloud Computing: Mell and Grance (2011) define Cloud Computing as “A model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable manufacturing resources (e.g., manufacturing software tools, manufacturing equipment, and manufacturing capabilities) that can be rapidly provisioned and released with minimal management effort or service provider interaction”. This facilitates on-demand availability of computational resources, however, issues like security, performance and availability still exist (Dillon et al., 2021)

Autonomous Robots: Autonomous Robots function without human intervention with the help of their fitted sensors installed to perform specific tasks. Earlier, humans controlled fixed robots thereby allowing low levels of robotic autonomy. However, in the emerging paradigm, robots are gradually being granted greater autonomy through use of sensors, actuators, and other devices fitted in them. This allows for better sensing, analysis, reaction, and response to changes on the basis of programmed scheduling (Wang et al., 2015).

Artificial Intelligence and Machine Learning: McCarthy (2007) defines Artificial Intelligence (AI) as “the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable”. In contrast, IBM Cloud Education (2020) views Machine Learning as “a branch of AI and computer science that focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy”. It can

be used to predict, plan, control, and detect faults in heterogeneous parameters in Industrie 4.0 (Romeo et al., 2020; Angelopoulos et al., 2020).

From a utilitarian point of view, the premise and prospects of AI appear promising. However, it has also been a subject of ethical debate from long. Issues like morality, fair distribution of AI benefits, dilemmas related to use of AI weaponry, need for open debate, and development of symbiotic relationship between humans and AI commonly feature in such debates (LaChat, 1986; Russell et al., 2015).

Additive Manufacturing: Attaran (2017) describes the term Additive Manufacturing or 3-D printing as “the technology—or additive process—of depositing successive thin layers of material upon each other, producing a final three-dimensional product”. It provides the capability to integrate complex components and enable rapid prototyping with minimal cost and relatively high quality (Campbell et al., 2012).

2.2 Embracing Principles of Industrie 4.0

In the following subsections, we describe six aspects that may be considered while formulating a strategy for adoption of Industrie 4.0 in the F&B retail industry: *sustainability*, *efficiency*, *transparency*, *quality*, *design*, and *security*. Later in this chapter, we use a lens made of these aspects to criticise the Tapfrsh kiosk.

2.2.1 Sustainability

The World Summit on Social Development (2005) led to Sustainable Development Goals (SDGs). It also led to recognition of three pillars of sustainability: *economy*, *society*, and *environment*. For a consumer-oriented business-like F&B retail, sustainability has high importance because its supply chain is heavily dependent on agricultural products and natural resources (De Brito et. al., 2008; UNDP.org, 2019). Here, we note Manning’s (2018) argument that the construct ‘sustainability’ is still evolving and has multiple interpretations. Referring to the work of Fritz et al., they lament that sustainability in food supply chain has not received much attention.

On an institutional level, F&B retail businesses could reduce their carbon footprints by focusing on five aspects: *building*, *wastage*, *food usage*, *energy consumption*, and *water* (Hu et. al., 2013). It however may be much more difficult to lower the carbon footprint of an F&B retail supply chain. Typically, such businesses have long and/or complex supply chains involving multiple actors and processes. For this, reducing emissions while transporting, using sustainable packaging and storage methods, and saving energy could provide a good start (Wakeland et. al., 2012).

2.2.2 Efficiency

Many a times, lower efficiency is an unattended training issue. This might result in issues like lower quality, higher production time, frequent breakdowns, and accident-prone workplace (Tabassi et. al., 2012). Yet another way to boost efficiency is to minimise waste and be resource efficient. In general, this might involve using clean technologies, reducing waste, emissions, and water usage. Sorting raw food materials at source and minimising packaging could also be two great ways of improving the efficiency of the supply chain (Henningsson et. al., 2004).

Another popular method for efficiency improvement is automation of existing production and related processes. In case of the F&B retail industry, gradually newer machines and robots have started taking over menial and repeatable jobs. For example, Haegermarck et al. (1999) have patented a device

for autonomous surface cleaning which could be used in many settings. Lipton (2017) has discussed the possibility of using 3D-printing family of technologies for providing healthier customized food to masses (see also: Ivanov et. al., 2017).

Regardless of the method chosen, improvement in efficiency could only be sustainable if machinery is maintained regularly and proactively. This ensures better uptime, demand-supply prediction, and lesser industrial accidents. However, organisations looking to automate their production or operations processes must undertake a careful contextual cost-benefit analysis before proceeding with an automation effort (Ivanov and Webster, 2017).

2.2.3 Transparency

An important consideration in the F&B retail industry is the ethicality of business practices. Triggered by many kinds of events and information, more and more consumers are concerned about what goes into their food platter. Perhaps, taking a clue from this governments have started laying down regulations, and retailers have started disclosing more and more about their methods and practices. For example, the multi-national restaurant giant McDonalds has listed descriptive details about food quality, ingredients, suppliers, nutrition, and consumer rights on its website. (see also: Manning, 2018).

In context of a supply chain, Trienekens et al. (2012) have accepted the following as the definition of transparency “the extent to which all its stakeholders have a shared understanding of, and access to, the product-related information that they request, without loss, noise, delay and distortion”. They identify governments, F&B companies and consumers as *claimants*; ‘food quality and safety standards’, governance and information exchange as *enablers*; information technology as a support system to the enablers. According to them, there are three main aims of transparency in F&B companies [sic]: (1) Satisfying differentiating consumer demands; (2) Incident handling; (3) Business process optimization. In contrast, Luque (2018) connects transparency with the issue of corruption. Given this, it may be argued that wide-spread corruption may be an impediment to industrial transformation.

According to Beulens et al. (2005), some of this action has gone to the whole of F&B supply chains. Now, retailers and their suppliers are being asked to comply to protocols like HACCP. Then, there are franchise businesses which usually grant smaller players licenses to use their recipes or sell trademarked products on meeting predefined criteria. Beulens et al. have used a tripartite categorisation to lay down open questions (see Table 1)

Table 1. Open Issues Related to Business Transparency [Adapted from (Beulens et. al., 2005)]

Functionality	Transparency	Connectivity
• Impact on pricing • Delivery of economic benefits • Impact on risk management • Implications for policy making • Issues in optimization of chain	• Measurement and establishment • Legal and cultural aspects • Technological barriers • Possibility of additional complexity in supply chain	• Availability of information • Reference information models • Reconciliation of information models in supply chain • Delivery platforms

2.2.4 Quality

Quality is an important consideration for the F&B retail industry. Much has been written about its potential for building a competitive advantage. The multidimensionality of this construct is also well known. Further, it could also be argued that retailers' (associations') perception of higher quality may have a positive impact on intention to buy (Das, 2014).

Caswell et al. (1998) have listed five important attributes of food product quality: *food safety*, *nutrition*, *value*, *package*, and *process* (see Table 2). They describe the idea of 'Food Quality Metasystems' as strategies that impact these attributes. Caswell et al. also argue that to ensure or sustain quality of a food product, the effect of corresponding voluntary or quasi-voluntary Food Quality Metasystems should be evaluated.

Table 2. Attributes of Food Product Quality [Adapted from (Caswell et. al., 1998)]

S No.	Quality Attribute	Inclusions
1	Food safety	Foodborne pathogens, Heavy metals, Pesticide residues, Food additives, naturally occurring toxins, Veterinary residues
2	Nutrition	Fat content, Calories, Fiber, Sodium, Vitamins, Minerals
3	Value	Purity, Compositional integrity, Size, Appearance, Taste, Convenience of preparation
4	Package	Package materials, labeling, other information provided
5	Process	Animal welfare, Biotechnology use, Environmental impact, Pesticide use, Worker safety

Akkerman et al. (2010) have looked at the three aspects of Food Distribution Networks: *food quality*, *food safety* and *sustainability*. Their treatise argues that industry needs ways which could help improve storage time with minimal decay. They also lament that usually superficial attention is given to design and operation of sustainable food distribution networks.

2.2.5 Design

Endsley (2016) identifies two types of design approaches: *technology centric* and *user centric*. According to them, the former approach largely focuses on the functional aspect of design, and often, it is not too operator friendly. User centric design, on the other hand, is not as complex and usually easier to use. They present the following three key principles of user centric design and argue that if users with greater *situational awareness* are more effective.

- Design should keep user's goals, tasks and abilities at centre
- Focus on the way users process information and make decision
- Keep user aware and in control of the system

Hermann et al. (2016) lament that the design principles for Industrie 4.0 haven't been explicitly stated or discussed. According to them, such principles are necessary because they may have an epistemological role. Therefore, they have identified four design principles for Industrie 4.0 (see Table 3).

Table 3. Design Principles for Industrie 4.0 [adapted from (Hermann et. al, 2016)]

S. No.	Design Principle	Description
1	Interconnection	Objects (via IoT) and people (via IoP) are connected to form Internet of Everything (IoE) for collaboration. For secure information exchange, we need communication protocols and cyber security.
2	Information transparency	Real time, contextually relevant information must be available to all members of the IoE. This may require aggregation of raw data into contextually interpretable form.
3	Decentralized decisions	Interconnections amongst people and object, when coupled with information transparency, can facilitate autonomous work decisions.
4	Technical assistance	Earlier, humans played role of <i>machine operators</i> , however, in the new paradigm, due to greater autonomy being granted to objects, machines will become <i>assistants</i> to humans.

The goal of human interaction design is twofold: *usability* and *user experience*. Products should be designed in a manner that it is easy for the consumers to learn and effectively use the product. Further, product interaction experience should be as joyful as possible. To achieve this, designers should have better understanding of the consumer and the context in which the machine would be used (see Table 4) (Preece, 2016).

Table 4. Goals for Interaction Design [Adapted from (Preece, 2016)]

Goal 1: Usability Effectiveness, efficiency, safety, utility, learnability, memorability
Goal 2: User experience Satisfactory, joyful, fun, entertaining, helpful, motivating, aesthetic, supportive of creativity, rewarding, emotionally fulfilling

2.2.6 Security

Networks containing Cyber Physical Systems (CPS) are growing in complexity and size as the world moves towards Industrie 4.0. Newer security risks to these networks are emerging every day. A cyberattack may damage by corrupting information or the control loop; by destroying and exfiltrating; or by inducing *denial of service*. To check such threats, designers of a new age industrial systems must focus on multiple aspects: *business continuity planning, end-user education information security, network security and application security* (Möller, 2016). Thames and Schaefer (2017) suggest that the cyber-security for the new era should use an augmented version of the current information security paradigm. The current paradigm is based on three pillars: *confidentiality, integrity* and *availability*. Thames and Schaefer propose a solution with the following characteristics: *granular authorisation, monitored operator control, device support, distributed responsibility, location independence, and data fragmentation*.

3.0 METHODOLOGY

We used a qualitative approach for collecting and synthesising information related to the Tapfrsh kiosk. Our first interaction with this machine happened between September and November 2018 while we watched it being beta tested. Subsequently, we obtained proprietary literature regarding the machine from the founders in January 2019. This literature contained design and technical information. In February 2019, we visited the Fermedicius Labs facility for a detailed demonstration and description of the machine. During this visit, we also conducted interviews with the founders to understand their entrepreneurial journey and the history of the machine. Two more short interviews were conducted in September 2019 and January 2020 to understand the progress. These two interviews yielded extra information regarding the hardware, user interface and the tentative 'Go to Market' strategy. Another follow up interview was conducted in August 2020 to understand the progress and the impact of the Covid-19 pandemic. Finally, the interactions were concluded in April 2021 as by then Fermedicius Labs had decided to change its direction in the interest of business sustenance.

4.0 TAPFRSH: THE NEW AGE AUTOMATED BEVERAGE KIOSK

Fermedicius Labs was formally incorporated as a private limited company in Karnataka state of India on 29th August 2016. It is a certified Food Business Operator (FBO). It has developed an IoT based beverage service platform for urban communities like offices, university campuses and gymnasiums.

Figure 1. Tapfrsh logo



Using its proprietary robotic technology (patent pending) and the service platform, Fermedicius Labs has created an automated beverage kiosk. The kiosk prepares customised drinks on demand. Consumers can interact with the kiosk either using the embedded Machine User Interface (MUI) or through an Android mobile phone app. The kiosk is almost the size of a domestic refrigerator and has been branded as *Tapfrsh* (see Fig. 1)

4.1 The Business Ecosystem

Fermedicius Labs is a bootstrapped startup with no institutional funding so far. The founders identify multiple key players in their ecosystem (see Table 5).

Table 5. Key Players in Tapfrsh ecosystem

S No	Type	Description
1	Stakeholders	a. <i>Category 1</i> : People in responsible positions or administrators. Typically, this category orders the installation and upkeep of the machine b. <i>Category 2</i> : Consumers of beverages dispensed by the machine c. <i>Category 3</i> : The society and environment at large.
2	Competitors	a. Packaged beverage and cold pressed juice retailers b. Brick and Mortar juice shops
3	Regulators	a. Food Safety and Standards Authority of India (FSSAI) b. Registrar of Companies (RoC)
4	Enablers	a. Karnataka government's department of IT/BT, S&T: Monetary support for prototyping under <i>Idea2PoC</i> scheme See: https://startup.karnataka.gov.in/funding/ b. Centre for Innovation Incubation and Entrepreneurship at IIM Ahmedabad: Monetary support for prototyping and business mentoring See: https://ciie.co/ c. Department of Science and Technology (DST), Government of India: Monetary support for prototyping under <i>Nidhi Prayas</i> scheme See: https://www.nidhi-prayas.org/ d. MSME Centre of Excellence, Department of Electronic Systems Engineering, IISc: Monetary support for prototyping and technical mentoring

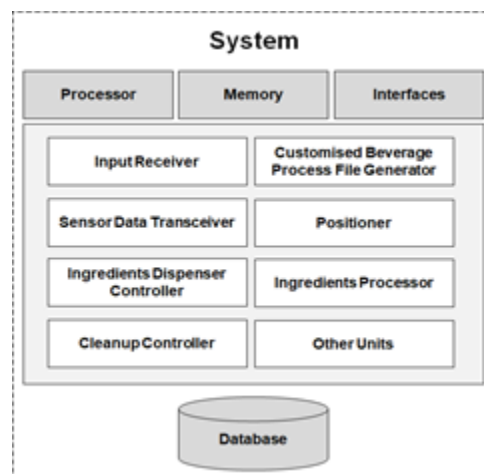
4.2 System Design

The founders of Fermedicius Labs acknowledge the influence of Ulrich and Eppinger's (2017) work on their design philosophy. Tapfrsh kiosk's system architecture could be segregated into two groups: *subsystems* and *communications*.

4.2.1 Kiosk Subsystems

The kiosk system is composed of multiple subsystems (see Fig. 2).

Figure 2. Kiosk System



1. *Processor*: Regulates working of all peripherals and motion systems, decides the logical sequence of processors and ensuring conformance to process parameters. Akin to brain in human body.
2. *Memory*: Stores the firmware, process parameters, process sequences and recipe. Also helps with transient storage of order data for input data to Customised Beverage Process File (CBPF).
3. *Interface(s)*: Machine User Interface (MUI) is a graphical user interface (GUI) enabled console where the user interacts with the kiosk for placing order. It also maintains interim instructions at the time of order preparation, payment processing and post-sale engagement
4. *Database*: Tapfrsh uses a cloud-based No-SQL database for cloning selected parts of order information collected from various consumers.
5. *Input receiver*: This is a touch-based GUI enabled interface where user makes selections and transactions. Input receiver may also include smartphones which are operationally coupled to the machine via relevant communication mediums like Bluetooth and Near Field Communication (NFC) etc.
6. *CBPF generator*: The CBPF is a programmed array that generates an *order string* unique to each order with information like (but not limited to) ingredients, amount, processing scheme and time of preparation.
7. *Sensor data transceiver*: Acts as an edge device to convert analog signals to digital to ensure compliance with process parameters. These signals are relayed to the processor for downstream processing.
8. *Positioner*: These are motion systems that position one or more receptacles with respect to one or more ingredient dispensers. Positioners also position one or more receptacles in relation to each other or with respect to one or more processors.
9. *Ingredients' dispenser controller*: This controller, upon receiving inputs from the processor, controls the prime mover (e.g., the DC geared motor) of one or more ingredient dispensers in volumetric or gravimetric manner.
10. *Ingredients' processor*: This is a food processor which processes the admixture to convert it into an intermediate ingredient or final product. Processes may include operations like mixing and crushing, resulting in change of physical state or bring heat or mass transfer, all upon receiving inputs from the processor.
11. *Cleanup controller*: This is a controller unit that regulates the sanitization subsystem. Visual and olfactory cleaning procedure is conducted after every order, upon receiving instructions from the processor.
12. *Other units*: These include a digital clock, a GPS unit and sometimes a Point of Sale (PoS) device operationally coupled with the kiosk.

4.2.2 Kiosk Subsystem Communications

The kiosk subsystems communicate with each other using standard communication protocols, viz. M2M (serial communication), HTTP, REST and SSL.

4.3 Technology Usage

Table 6 presents a list of some key technologies used while making the Tapfrsh kiosk.

Table 6. Indicative List of Technology Areas Used

S No	Areas	Components Used
1	Robotics and Automation	Motion devices: actuators and effectuators; Robotic Operating System (ROS)
2	Internet of Things (IoT)	Edge devices: sensors; Cloud server; Machine to Machine (M2M) communication
3	Embedded Systems	Microcontroller; drivers; peripherals
4	Mechanical Systems	Pumping, refrigeration and air conditioning; heat and mass transfer; food processors; fluid conveying systems
5	Software and Data Technologies	Cloud Computing; Machine Learning; Data analysis and visualization; Human Machine Interaction (including payment interface)

4.4 Aesthetics and Consumer-Machine Interactions

The kiosk employs an embedded Thin Film Transistor (TFT) based touch screen that uses the Android operating system. The MUI is rendered through this screen. Similarly, the kiosk has a ‘collection area’ from where the consumer could collect the ready drink. For a normal order, the kiosk dispenses about 250 ml of prepared drink.

Figure 3. Perspective view of Tapfrsh kiosk



The Tapfrsh kiosk appears to be inspired by the *minimalist* paradigm for interaction design. This reflects in the physical machine design, logo and in the MUI; a simple material design with known characteristics and composition of simple geometric figures. For example, the Tapfrsh logo (see Fig. 1, 3, 5 and 7) cleverly uses the projection of a button, fresh green in colour, conveying user to take an action to access something fresh (Chang et. al., 2007).

Due to the convenience offered by the simple design, consumer may be better able to establish a link between appearance and utility of the kiosk. Conversely, the idea of using symbolic features to represent functions of the kiosk may attract the consumer.

4.4.1. Machine User Interface (MUI)

Drink selection and customisation is offered to the consumer via the embedded TFT screen. For this, consumer is taken through a step-by-step process involving four steps (see Fig. 4).

Figure 4. Drink selection and customisation: Step-by-step process



Some screenshots from the MUI are presented in Fig. 5. These depict use of colourful and symbolic imagery to facilitate the buying process.

Figure 5. Screenshots from Tapfrsh kiosk MUI



The kiosk uses a certified payment gateway for enabling multi-modal payments, viz., digital wallets, credit cards, RFID coupons or cards, and internet banking.

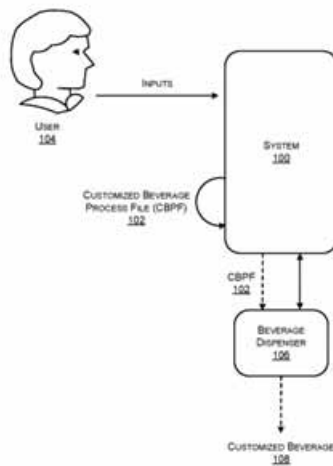
4.5 Drink Making Process

For a Tapfrsh kiosk, making a drink is a multistep process that uses multiple processors (see Fig. 6). This process is described below.

1. The process starts with 'Central Computing Device' receiving inputs from the consumer.
2. On the basis of inputs, CBPF is written. This file contains instructions for preparing and dispensing the drink.

3. The ingredient dispensers and receptacles are positioned correctly in relation to each other.
4. As instructed in the CBPF, ingredients are dispensed in the respective receptacles.
5. The ingredients are processed in receptacles according to the instructions listed in the CBPF.
6. The drink is presented to the consumer in a clean container.
7. The kiosk is sanitised using a robotic process before next order could be accepted.

Figure 6. Consumer-Kiosk Interaction



4.6 Diagnostics and Sanitisation

Three machine diagnostic and sanitization modes are provided in the Tapfrsh kiosk (see Table 7).

Table 7. Types of Diagnostics and Sanitisation Frequency in Tapfrsh kiosk

S No.	Type	Description
1	Self	A basic check automatically conducted by the machine before making a drink; machine is also sanitized before and after making a drink.
2	Breakdown	Local diagnostics in case of machine breakdown; machine sends alert to the administrator via IoT triggers on detecting a breakdown.
3	Periodic	Regular, periodic checks locally is conducted by Tapfrsh or contracted staff; thorough sanitization is also conducted.

4.7 User Trials

Fermedicius Labs conducted user trials for the beta version of the Tapfrsh kiosk between September and November of 2018 in Bangalore, India in Feremedicius' facilities (see Fig. 7).

Figure 7. User Product Trials (Beta version)



The trial user group ranged from 16 to 60 years of age with most of the users falling in the the 22 to 35 years age group. The *Payments* module was excluded from these trials. The following observations were made during beta trials:

1. Consumers would like to have customization option enabled by default.
2. Certain beverage formulations were preferred over others.
3. Overall, the kiosk was seen as usable and acceptable.

4.8 Some Insights for Industrie 4.0 Tech-Entrepreneurs

This section describes the way founders' vision and direction changed with time. We begin by reporting founders' initial vision and some entrepreneurial challenges. Subsequently, we describe the status-quo and the envisioned future.

4.8.1 Initial Vision and Directions

During our initial interactions, the founder duo described their rationale and experience of building the Tapfrsh kiosk. They argued that most of the organised beverage retail is through packaged or bottled drinks, and their vision was to change beverage retail for urban communities by making it more user-inspired, efficient, sustainable, and enjoyable. They hoped to influence the scenario by building a retail infrastructure that brings food processing and retail together, thereby giving consumers freshly made, customized beverages at the point of consumption, and consequently making the value-chain less wasteful.

The founders further reasoned that this vision requires building a full-stack retail solution through hardware for processing and software for efficient operations. They believed that such a solution could also help manage a fleet of similar connected machines and build downstream analytic capabilities to bring greater efficiency to the process. The driving thought was to provide a better consumer experience via such a retail format that matches the emerging preferences of consumers in urban communities. Further, it also emerged during the discussion that building such a solution requires an interdisciplinary approach that covers a multiple engineering, design, and management disciplines.

Talking of the challenges, founders admitted that since Fermedicius Labs is a bootstrapped startup that received only governmental grants for prototyping, it saw resource scarce situations. However, founders felt that their previous experiences added to organizational resilience by infusing a need for always being resourceful.

4.8.2 The Present and Probable Future: Through the Times of Covid-19 Pandemic

The initial thought behind this study was to witness and report the journey of the Tapfrsh kiosk from development until the end of the first year after launch. However, this journey entered a state of limbo due to the severe impact of the Covid-19 pandemic on the F&B retail industry.

The founders admitted that their initial conjecture regarding return of normalcy in 2020 proved to be incorrect and hence, their plans and actions did not fructify as expected. For example, they failed to take note of the fact the era of '*Work from Home*' had begun during the pandemic, and Indian metropolitan cities saw mass reverse labour migrations (Arora and Suri, 2020; Rajan et al., 2020). Further, even after lockdowns were relaxed, the residential communities continued to observe caution to avoid spread of infection. This directly meant that there were lesser people and communities who may have otherwise considered trying a new retail platform. All of this depleted the business prospects of Tapfrsh kiosk significantly.

As a response, Fermedicius Labs attempted to reposition the Tapfrsh kiosk by focusing on serving the demands of people on 'Essential Services' duties. For this, the ordering process was made completely contactless, sanitisation measures were made more stringent, and stratified access mode was implemented to enforce Covid-19 appropriate behaviours. Channel partners were identified and mobilised to improve the prospects. However, by October 2020, the founders realised that their new approach may not be as useful since every commercial opportunity and commitment collapsed. Further, since the founders admitted having faced issues related to capital throughout their entrepreneurial journey, so *waiting it out* would have been an unreasonable strategy.

Eventually, Fermedicius Labs decided to change their business model by moving to a 'Direct to Consumer – On Demand' approach for the pediatric nutrition sector. Since the platform was designed for precision F&B processing, the new sector was selected after considering ease of technological migration and business prospects. Consequently, the business process saw a complete change right from order acquisition to packaging to delivery. The operational model was changed from 'kiosk driven community retail' to 'distributed industrial micro-factory' whereby every machine is considered as a 'Compounding Station'. Simultaneously the 'Go – to – Market' strategy was also changed to suit the new approach. The founders are hopeful that the new approach would generate more business and therefore, be attractive to Indian venture capitalist firms.

5.0 CRITIQUE OF TAPFRSH KIOSK AS A CONNECTED MACHINE

With the premise that Tapfrsh kiosk is an innovative machine which contributes towards the concept of automated and interconnected kitchens, we'll now attempt to critique this machine. For this, we use a lens made of six aspects: *Sustainability*, *Efficiency*, *Transparency*, *Quality*, *Design* and *Security* (see Section 2.2 and Table 8). Readers may note that since the kiosk has not witnessed significant usage due to constraints described earlier, we deem it unreasonable to perform a data driven appraisal now.

Table 8. Critique of Tapfrsh kiosk

Dimension	Critique
Sustainability	The value chain of Tapfrsh kiosk is significantly simpler and shorter than organised packaged beverage retailers. The B&M retailers, on the other hand, may score better in this regard. Similar argument could be made for wastage generated by these value chains. Also, because of the <i>on demand – on site consumption</i> model, like B&M vendors, Tapfrsh need not engage in packaging and transportation of its finished goods. This is a significant gain over the packaged beverage industry. An advantage that Tapfrsh kiosk enjoys over its competitors is its physical space requirement. As compared to other players, this kiosk needs smaller space for operations and storage. Also, since it is an integrated unit, the energy consumption, food usage and water usage can be regulated with greater certainty than other players. All the players in the beverage retail space use refrigeration systems which may emit greenhouse gases. Only a data-based analysis could establish the sustainability pioneer in this context. However, since the B&M retailers serve only <i>on demand</i>, their cold-storage requirements (for food conservation and hygiene) may be lesser.
Efficiency and Quality	Through Tapfrsh kiosk, Fermedicius Labs has standardised and automated much of the drink making process. The raw materials are sourced from certified suppliers. Chances of variability due to human errors have lessened drastically thereby lowering the risk of mistakes and accidents. Further, because the recipes are standardised, the kiosk promises to offer uniform taste, appearance and compositional integrity every time. Here, we would like to remind the reader of various types of diagnostic methods and sanitisation routines (see Section 4.6). All these promise efficiency gain and quality.
Transparency	Integration of various technologies using information and communication technologies have brought in transparency. For example, through the MUI or the Android app, the consumer gets to see nutritional, sourcing, sanitisation, beverage availability, and last refill information of the drink being customised in real time. Further, the dashboard of the kiosk administrator can assist in the management of multiple assets. This dashboard presents the performance and breakdown information of every kiosk in real time.
Design	The Tapfrsh kiosk sports a user centric, simple, all-digital and complete design - aesthetically <i>and</i> architecturally. The design philosophy of this machine largely appears to align with the <i>usability</i> and <i>user experience</i> goals. While not very decentralised in its decision-making approach, the kiosk may do well on other Industrie 4.0 design principles.
Security	For physical security, the Tapfrsh kiosk is dependent on sponsoring community's security system. Chances of contamination and machine tempering have been reduced by design. Additionally, because almost all the software rests in the firmware, an attack via internet is less likely. Some of the order data is stored with certified cloud service providers who offer multi-tier security.

6.0 SOLUTIONS AND RECOMMENDATIONS

While interacting with the founders of Fermedicius Labs, we noted that their aspiration was to build a commercially successful Business-to-Consumer (B2C) organisation. However, due to scarcity of funding and the effect of the Covid-19 pandemic, Fermedicius Lab could not realise their plans. We also understood that due to the position implied by the aspiration described above, the founders have tried to avoid other business models.

In our experience, such business situations are faced by many emerging Start-up organisations in India. Unfortunately, there may not exist a universally applicable solution to this problem, and only a contextually relevant approach may provide a graceful way out. For example, given their technical capabilities and financial situation, the founders of Fermedicius Labs may consider the following approaches.

1. *Approach 1:* Instead of aspiring and working to become a B2C organisation, become an Original Equipment Manufacturer (OEM) and use a 'Sales and Service' model in a Business to Business (B2B) mode.
2. *Approach 2:* Establish Fermedicius Labs as a Deep-Science/Deep-Technology Research and Development (R&D) company and use a licensing model in a B2B mode.

3. *Approach 3:* Raise funding using sources like Venture Capital firms for infusion of capital for sustenance and expansion.

7.0 FUTURE RESEARCH DIRECTIONS

Considering our understanding of the case of the Tapfrsh kiosk machine, and the overarching principles and goals of Industrie 4.0, we list some areas for future research below.

1. Entrepreneurship: Startup financing; antecedents and consequences of startup failures; entrepreneurial development of startup founders; ease of doing business
2. Intellectual Property: Protection of technologies being developed by startups; policy frameworks and guidelines
3. Industrie 4.0: Technology based incubation and acceleration in academic institutions and business organisations; Skill development
4. General Management: Development and adoption of Industrie 4.0 technologies; future of work; ethical issues surrounding adoption of Industrie 4.0

8.0 CONCLUDING REMARKS

To swiftly move towards the new industrial revolution, businesses need to do much more than just automating their systems and processes. They must look at various aspects of *new ways of working* inspired by paradigms like sustainability, transparency, and efficiency. Organisations can no longer exist independent of their social responsibilities and engage in unsustainable methods.

This chapter described and critiqued the Tapfrsh kiosk – a new beverage retail platform. While this kiosk can be seen as a technology powered, community retailing machine; it could also be seen as a step towards the concept of automated cloud kitchens. Arguably, this connected machine brings significant gains on parameters like efficiency, quality and information transparency. If this machine is adopted as planned, we hope more data would be available for a detailed study.

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Reshaping Beverage Retail in Urban Communities Through a Connected Platform

Trienekens, J. H., Wognum, P. M., Beulens, A. J., & van der Vorst, J. G. (2012). Transparency in complex dynamic food supply chains. *Advanced Engineering Informatics*, 26(1), 55–65. doi:10.1016/j.aei.2011.07.007

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Chapter 13

Regulating Sustainable Economics:

A Legal and Policy Analysis in the Light of the United Nations Sustainable Development Goals

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ABSTRACT

This chapter fills in the gap, presents an analysis of renewable energy policies in a set of countries, and assesses how renewable energy may assist in efforts towards reducing poverty and promoting human well-being. A comparative analysis of the emphasis given to renewable energy through policies in various countries is presented. Based on the findings from the study, some recommendations to address the differences seen in pursuing renewable energy technologies are made. Additionally, it illustrates the fact that the sample countries have been tackling renewable energy with different depths of policies and with varying levels of success, and the different nature of these policies suggests that future developments depend on a change in the current emphasis and level of priority afforded to renewable energy.

INTRODUCTION

Energy has been instrumental in almost every aspect of human life, be it at the individual, national, regional, or international level. With population increases combined with economic growth, the energy demand is growing. Fossil fuels have played an important role in meeting those demands so far. Conventional energy sources such as oil, gas, and coal have been the drivers of economic progress (Ritchie, 2017), especially in oil-producing developing countries (Awodumi and Adewuyi, 2020). However, they are constantly being disputed since they represent the consumption of resources bound to become scarce, which are known to contribute to climate change, environmental pollution, and exacerbating many socio-

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economic problems in poor regions (Surroop and Raghuo, 2018). Moreover, with fluctuating fossil fuel prices, the world economy has entered through galloping inflation, leading to rampant poverty, especially in the developing world (Setyawan, 2014). Consequently, renewable energies have been given due consideration as a resilient prospect to promote sustainable development due to their environmental attributes. Most countries in the world are blessed with renewable energy resources such as solar, wind, biomass, or geothermal energy, which can be exploited to reduce their dependence on fossil fuels and reduce carbon dioxide emissions. Solar Energy is energy derived from sunlight to produce either thermal or electrical energy. Solar Energy is a clean energy source capable of substituting conventional energy sources such as fossil fuels due to its scalability and flexibility. Solar Energy can be used for distributed generation as well as for utility-scale power plants. Solar photovoltaic was one of the most proliferating renewable energy in 2017, attributed to China's largest solar farm with an installed capacity greater than the combined fossil fuels and nuclear worldwide (IRENA, 2018a). The solar photovoltaic industry provides the largest amount of employment than other renewable energy, with over 3 million jobs in 2017 (IRENA, 2018b). With technological advancement and improvement in solar PV manufacturing, solar energy prices are constantly dropping, which promotes its growth in developing countries and rural unelectrified areas. According to the IRENA report 2016 (IRENA, 2016), the possible reductions in costs, the Levelized cost of energy of utility-scale solar projects may drop to the range of 0.03 to 0.12 USD/ by 2025, which is highly favorable for the deployment of solar energy projects. Furthermore, solar PV is the key technology for increasing regional equity and promoting energy justice and inclusivity, especially due to the low variation in electricity generation potential and decrease in costs (Sasse and Trutnevyte, 2019). Although emissions are associated with the construction of turbines, the operation of wind energy does not have associated emissions (Nock and Baker 2019). Besides its several environmental attributes, wind energy may also save up to 2000 liters/MWh of electricity produced compared to a thermal power plant. The power available in the wind is the cube of the wind speed; consequently, as wind speed increases, the power output from the turbine significantly increases towards the rated power. In 2017, China had the most installed capacity of wind in the world, which is over 188 392 MW (GWEC, 2018). Wind power generation increased by 15.6% in 2016 to reach 960TWh and accounts for approximately 7% of the world's total energy generation in 2016 (BP Global, 2017). The wind energy industry employs around 1.16 million people worldwide. However, employment is concentrated in a small number of countries (IRENA, 2019). China is the leader in wind employment, providing over 44% of the wind jobs, followed by Germany (IRENA, 2019; GWEC, 2018). While the Levelized cost of energy of wind is highly dependent on the wind speed regime prevailing, studies have shown that with technological improvements from improved design, larger turbines, and capacity factor improvement, the LCOE of both onshore and offshore wind farms are showing a gradual decline (IRENA, 2018b; GWEC, 2018). Biomass energy refers to the energy produced when the organic component of plants or waste is physically, biologically or thermochemically treated to produce heat or fuel, which is used to generate electricity. Plants on earth are classified as either C3 or C4 plants, which are based on how they assimilate carbon dioxide and their water requirements. C4 plants have a competitive advantage over C3 as they have a lower water requirement, making them ideal for use as biomass as they contain less moisture. C4 plants include plants like sugar cane and corn. Sugar cane bagasse is commonly used as biomass for Energy in Mauritius, Brazil, and India. Plant biomass is considered carbon-neutral; that is, the emissions produced during the biomass processing to energy are balanced by the amount of carbon dioxide sequestered during the plant growth phase. The Levelized cost of cogenerated electricity is estimated to be around 0.06 - 0.07 USD/kWh (BP Global, 2017). Hydropower is electricity generated from the en-

ergy of flowing water or water stored in dams. Hydropower provides one-fifth of the world's electricity (Mathias, 2013). The total hydro capacity is estimated to be around 1114 GW in 2017 (IRENA, 2018a). Despite being significant, hydropower is one of the slowest growing renewable energy over the last five years (IRENA, 2018a). This may result from the varying hydrological conditions prevailing in the different countries and concerns for uncertainties in resources due to the effects of global warming. In 2016, the larger hydropower facilities had over 1.5 million employees, while the small hydropower plants were employing 211 000 employees worldwide (IRENA, 2017). The investment costs of hydropower are highly dependent on the hydrological conditions and site, which explains a comparatively high investment cost. However, with the high life expectancy of the plants, low operation, and maintenance costs, the Levelized Cost of energy is typically low, in the range of 0.041-0.125 USD/kWh (IRENA, 2018b). Part of the kinetic energy in the wind is transformed into waves when the wind strikes the ocean surface. The waves consist of rigorous vertical motion, which contains a lot of kinetic energy which can be harnessed to generate electricity. Several technologies are utilized to harness wave energy, such as the oscillating water column, line absorbers, point absorbers (Mathias, 2013). The energy output from such a system is highly dependent on the wave speed, height, wavelength, and water density (Conserve Energy Future, 2018). The wave energy sector is still not fully deployed; it is estimated that if fully deployed, around 40% of the world's energy demand may be supplied by wave energy (IRENA, 2018a; Mathias, 2013). In 2016, the world wave energy installed capacity was estimated at 536 MW (IRENA, 2017). While wave energy is a clean, widely abundant, environment-friendly, and predictable energy source, it is subjected to NIMBYism (Not in My Back Yard) syndrome associated with visual and noise pollution. Moreover, due to the distance from the shore and varying consistency of the waves, the Levelized Cost of energy may also vary with locations. Geothermal Energy refers to the thermal energy generated and stored in the earth. Geothermal energy originates from radioactive decay of material, earth crust, or volcanic origins. Geothermal Energy has no significant source of pollution as no combustion processes are utilized to produce the heat. Moreover, it does not depend on weather conditions, unlike wind, solar, or wave energy; therefore, it is a reliable energy source that can provide base or peak power loads. In 2017, the total installed capacity of geothermal energy was estimated to be around 12.8 GW (IRENA, 2018a). In 2016, geothermal energy generated over 182 000 job creations (IRENA, 2017). The Levelized cost of geothermal energy is estimated at 0.04 to 2.015 USD/kWh (IRENA, 2018b). The Levelized Cost of energy widely varies due to the cost of drilling and the efficacy of locating the resource potential. Table 1 provides the Levelized cost of electricity (LCOE) for some renewable energy technologies that show that these technologies are becoming more and more competitive.

Table 1. The Levelized cost of electricity (LCOE) for some of the most important renewable energy technologies

Aspects	PV	Wind	Solar Thermal	Geothermal	Hydro	Biomass	Tidal
Cogeneration	●	●	●●●	●●●		●●●	
Distributed Generation	●●●	●●●	●●	●●	●	●●●	●●●
LCOE, \$/kWh	0.03-0.12	0.01-0.15	0.14-0.19	0.04-2.01	0.04-0.12	0.06-0.07	0.09-0.13
Landuse intensity, sqm/mWh	1±0.05	10±0.5	15±0.7	2.5±0.1	10±0.5	500±25	-

Once they reach a critical mass that benefits from the economies of scale, the different renewable energy technologies are reliable and affordable as shown above, but they can also help curb the impact of climate change, which is among the biggest human threats present. Energy sources, including renewable ones, should be considered for sustainable electric generation and social aspects (e.g., job creation, worker safety, public acceptance) and economic and environmental ones, such as electricity costs, environmental impacts, and climate change (Nock and Baker, 2019). Table 2 shows the amount of carbon dioxide which can be avoided by using the different renewable energy sources. It also provides an estimate of the avoided emissions from other pollutants such as SO₂ and NO_x.

Table 2. Avoided GHG emissions from renewable energy

Technology	Avoided Emission per capacity	Rate Avoided Emission
PV	CO ₂ : 670 – 1500 kg/kW SO ₂ : 0.01 – 7.80 kg/kW NO _x : 0.25 – 2.40 kg/kW (Zhai et al., 2012) (Typical values for US)	CO ₂ : 674.5 g/kWh SO ₂ : 0.44 g/kWh NO _x : 0.43 g/kWh (EPA, 2018) (Typical values for US)
Wind	-	CO ₂ : 674.5 g/kWh SO ₂ : 0.45 g/kWh NO _x : 0.40 g/kWh (EPA, 2018) (Typical values for US) 0.058 T CO ₂ / MWh (Lang, 2009) (Typical values for US)
Geothermal	75 kg/W (GEA, 2014)	-
Biomass	-	Wood: 0.25 – 0.36 T CO ₂ / MWh (Raymer, 2006) Bagasse: 12.5 – 23.3 kg CO ₂ /T Cane (GoSSP, 2004)
Solar Thermal	-	0.037 T CO ₂ /MWh (Popov, 2011)
Wave	-	0.49 – 0.54 kg CO ₂ /kWh (Patrizi et al., 2019)

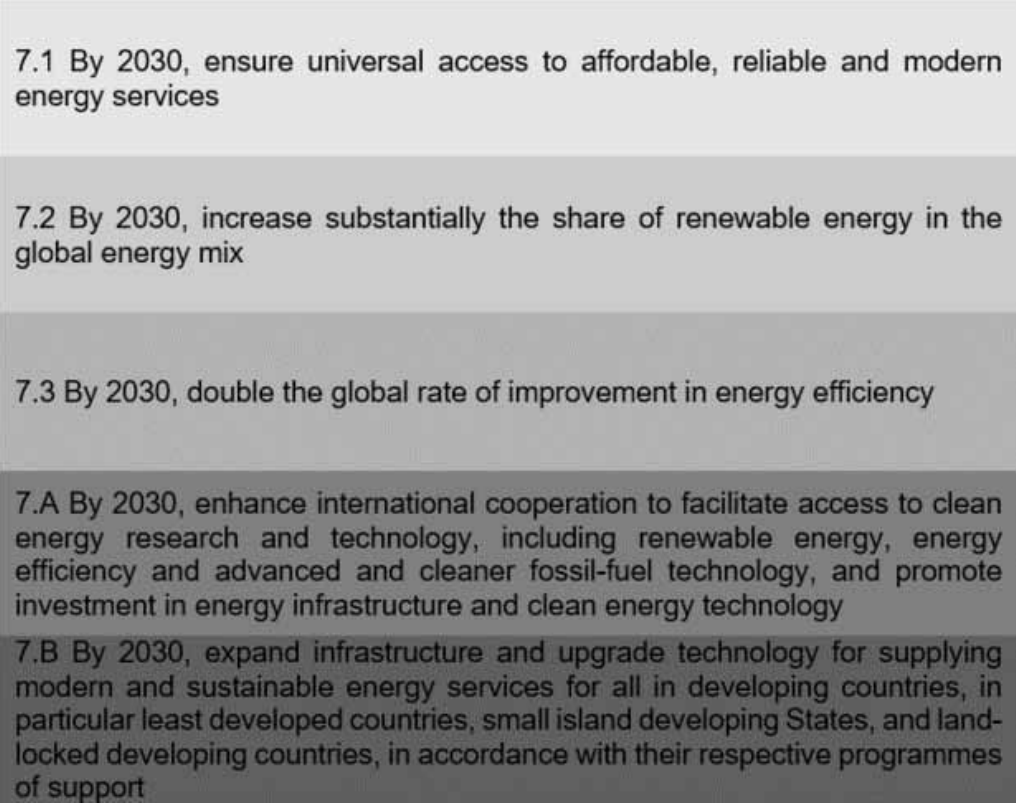
Through the previous paragraphs, it is possible to observe that different types of renewable energy technologies can contribute to a more sustainable future. In this context, this article aims to analyse the extent to which renewable energy technologies may assist in efforts towards achieving the UN Sustainable Development Goal 7 (SDG 7) of the 2030 Agenda. For this, a literature review on this goal and an analysis of case studies illustrating the status of renewable energy use in a sample of countries are presented. In the conclusion section, future trends will be discussed.

Background

Sustainable Development Goal 7 (SDG 7) refers to Affordable and Clean Energy and is among the goals presented by the 2030 Agenda. Along with other sixteen goals, it represents a global effort to end poverty and promote a more protected and peaceful world (UNDP, 2019). Signed by 193 countries and covering 169 targets, the 2030 Agenda was established in 2015 and represents a commitment for a more sustainable world by 2030. As identified by Nerini et al. (2018), more than 110 targets require actions to change energy systems and therefore represent necessary actions to achieve SDG 7. Important global issues, such as sustainable growth, climate change and energy security can be potentially tackled by renewable Energy (Swain and Karimu, 2020). In one way or another, investments in renewable energy can also contribute to several other goals of the 2030 Agenda. As a matter of fact, several studies have

been focusing on evidences which reinforce the potential of renewable energy sources to all aspects of sustainable development, reducing carbon emissions, increasing socio-economic benefits and contributing to SDG 7 (AlQattan et al., 2018; Büyüközkan et al., 2018; NamChol and Kim, 2019; Senshaw and Kim, 2018; Erdiwansyah et al., 2019). Each Sustainable Development Goal has a number of targets and indicators in order to allow progress monitoring and help countries to focus on specific actions according to their main needs. Goal 7 is totally dedicated to energy efficiency and renewable energy and its description highlights the importance of these topics to ensure access to energy for all (United Nations, 2019). All of its targets have a vast potential to catalyse investments in renewable energy worldwide – specifically target 7.2, which refers to the increased share of renewable energy in the global energy mix. Figure 1 shows the targets of SDG 7 (United Nations, 2019).

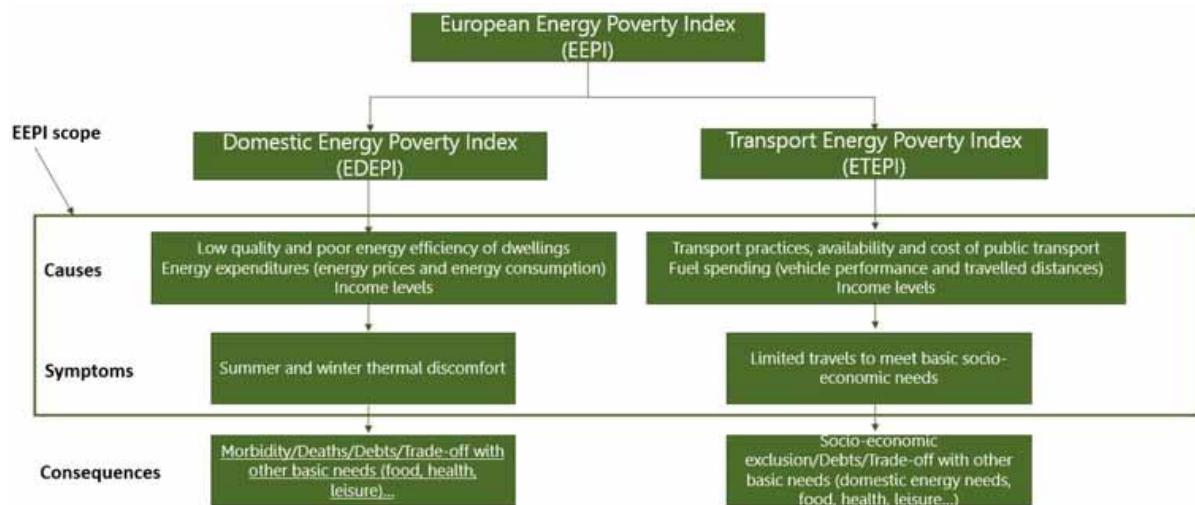
Figure 1. Targets of the Sustainable Development Goal 7



7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
7.3 By 2030, double the global rate of improvement in energy efficiency
7.A By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
7.B By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

Renewable energy has the potential to provide energy security, especially in developing countries – besides facilitating the access to clean energy sources. It may also assist them in alleviating “energy poverty”, a term herewith used to define the adverse effects of the energy deprivation which affects many developing countries today. The perception of the term “energy poverty” here should not be confused with its use in industrialised countries, where it is commonly known as the “inability to keep homes adequately warm”. In a developing country context, energy poverty is, as described in Figure 2, is a problem with far greater implications.

Figure 2. Implications of “energy poverty”



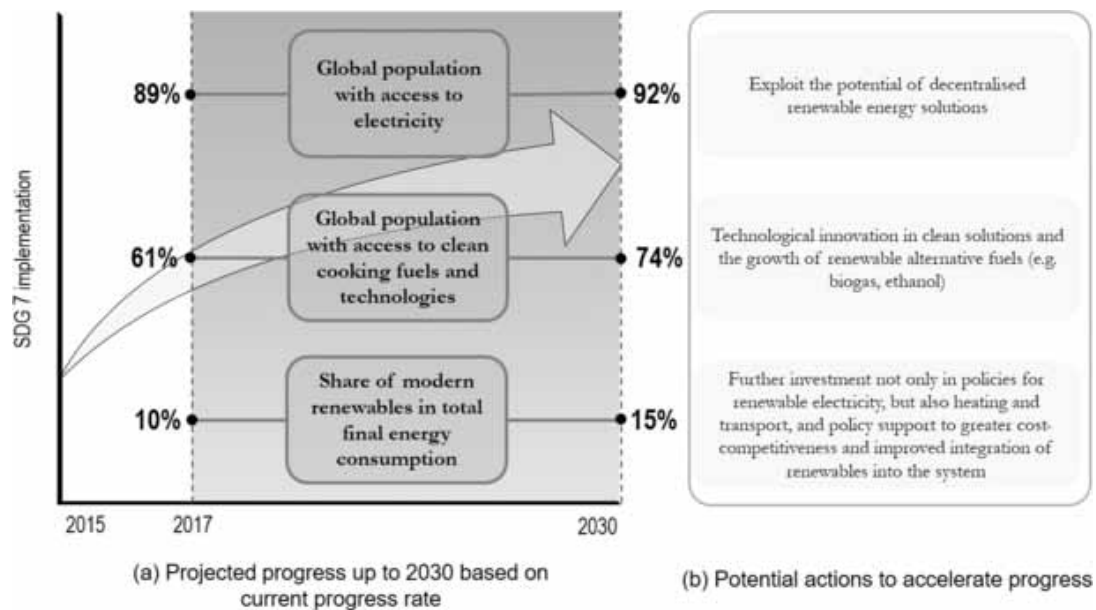
There are many studies illustrating the importance of RE to poor communities and how they can benefit of reliable and affordable services (Büyükoçkan et al., 2018; Chirambo, 2018; UN Environment, 2017). As per the Renewable Energy and Energy Efficiency in Developing Countries report (UN Environment, 2017), successful examples include the construction of waste-to-energy plants, development of residential solar installation programs, partnerships between RE start-ups and local companies to provide energy for more people, among others, allowing also the offer of job training and reduction of carbon emissions. Nevertheless, it should be considered that the use of renewable energy sources does not necessarily reduce energy poverty (Monyei et al. 2019). As presented by the authors, investments in renewable energy should be accompanied by a sequential displacement model for the transition, a reconfiguration of the current energy landscape, and actions for consumers to support the demand side (e.g. smart meters and solar PV), aiming at creating “more equitable, egalitarian, and pro-poor low-carbon transition policies” (p. 50). More equality in energy aspects also refers to justice and affordability, important aspects of SDG 7. When equality is highly considered in electricity planning, there is a tendency of having more efforts and investments in transmission infrastructure rather than in centralised generation capacity (Nock et al., 2020), favouring more mini-grids and availability of electricity not only in urban areas, for example. Research and technological studies can ensure the increase of RE in the global energy matrix, bringing about target 7.2 – in fact, IEA’s last report (IEA, 2019) showed an increase in the installed capacity of RE in 2019, contributing to the world electricity generation from RE sources to increase to 30% (from current 25%) until 2024. The report also suggests that accelerated renewables growth is possible in the next five years given challenges such as grid integration, policy uncertainty and financing options are addressed. In order to accomplish SDG 7, the most frequently used RE sources include bioenergy, geothermal, hydropower, solar and wind (United Nations, 2018), but the investments to increase the share of RE need to accelerate in order to meet the 2030 target, since currently 17.5% of total final energy consumption comes from renewable Energy (IEA et al., 2019). There is inherent connection between renewable energy use and energy efficiency (Xang et al., 2017). Target 7.3 also has the potential to catalyse renewable energy considering the need to decouple energy demand from economic growth. The

use of RE sources is among the factors that contribute to this trend, along with technical improvements and behavioural changes (Sharma et al., 2019). Even though technology might not be a problem to meet the energy efficiency target, better leadership, new collaborative partnerships and stronger regulations are required (Buén, 2018). But in order to yield the expected benefits, the cause of pursuing renewable energy needs to be supported by adequate government policies. This is so for 3 main reasons: a) a sound renewable energy policy framework provides a “sense of direction” as to where a countries want to go, as far as using renewable resources for energy generation is concerned; b) a policy framework offers a focus towards the financial supported governments need to provide, in order to achieve specific targets. Germany, for instance, set its renewable energy policy to achieve the ambitious goal of having 20% of its energy needs met by renewable energy by 2020, and achieved this goal already in late 2018. It is now set to achieve 30% by 2023, and is on set towards reaching this level; c) specific renewable energy policies give a clear sign to the market, and opens the way for investments from the private sector, which can assume they have a secure basis for developing new projects. Brazil has, for instance, become a leading producer and user of bio-fuels, due to the fact a specific policy was put in place to favour both, the production, and the use of bio-fuels by the vehicles used by both private individuals, and companies. As far as SDG7 is concerned, targets 7.A and 7.B refer to “means of implementation” targets to facilitate the aimed outcomes. Apart from policies, international financial flows and investments in infrastructure have positive correlations with renewable energy growth and consumption (Anton and Nucu, 2020; Ji and Zhang, 2019) and huge financial amounts are needed to meet renewable energy targets by 2030 (Senshaw and Kim, 2018). As stated by the authors, such an investment can be made by national budgets and private sector sources, but international assistance should play a primary role due to the limited budget of less developed nations. Figure 3 (a) shows the progress of some SDG 7 targets, considering the most recent data of the SDG 7 Progress Report 2019. In 2017, 840 million people had no access to electricity and this number is estimated to fall to 650 million by 2030 (IEA et al., 2019). Concerning clean cooking fuels and technologies (which include electricity, liquid petroleum gas, ethanol, natural gas, biogas, and solar), the most pronounced lack of access is observed in developing Asia and Sub-Saharan Africa, and current data show that 3 billion people still rely on polluting fuels for cooking (IEA et al., 2019). The share of modern renewables (which exclude the traditional use of biomass associated with inefficient cookstoves and household air pollution) in total final energy consumption is expected to increase from 10% in 2017 to 15% by 2030 (IEA, 2018), still far from what is needed to achieve good results in target 7.2. It is important to highlight that these projections are made based on current progress rate and there is a broad variation of country and social/economic contexts involved.

Since the current progression rate was used to calculate this projection, there are opportunities to improve the results and therefore accelerate the progression rate, thus avoiding the risk of falling short of meeting the targets by 2030 (Veum and Bauknecht, 2019). These potential actions include harnessing the potential of decentralised renewable energy solutions (Baruah and Enweremadu, 2019; Schaubé et al., 2018), technological innovation and growing use of renewable alternative fuels (Adewuyi, 2019; Yasmin and Grundmann, 2019), in addition to proper governance framework (Veum and Bauknecht, 2019), policies to support cost-competitiveness (Acheampong et al., 2017; AlQattan et al., 2018; Swain and Karimu, 2020) and RE system integration (PupoRoncallo et al., 2019), and investment in renewable heat and transport (Saint Akadiri et al., 2019; Long and Murphy, 2019). These opportunities ensure the fact that both developed and developing countries need to see renewable energy as “a complement or substitute of nonrenewable energy sources” (p.809) and also as a global driver towards the targets of SDG 7 (Saint Akadiri et al., 2019). On the other hand, renewables demand investment and well-established

policies to support operational and technical changes, ensure energy security and proper changes in the energy matrix and the implementation of planned targets..

Figure 3. Projected progress for SDG 7 and potential actions to accelerate progress



METHOD AND MATERIAL

Based on the departing point of the chapter, namely to examine the extent to which a country's policies influence the emphasis given to renewable energy use, the methodology adopted in this research is based on an analysis of case studies illustrating the status of renewable energy use in a sample of countries. Six countries were selected for a comparative assessment of the utilization of renewable energy, with emphasis placed on energy policies and planning. The studied countries include Brazil, Germany, Iran, France, Malaysia and Netherlands. The choice of this sample is based on the diverse geographic locations of the countries, which gives a broad overview of trends in different regions and continents. This heterogeneity means that this analysis entails countries with varying levels of economic development, and different perspectives in respect of the influence of financial resources on effective transitioning to renewable energy use, planning and policy making. Figure 4 presents the countries involved on this study, according to the shares of renewable energy in their final energy consumption.

A desk research method was adopted by analysing data from multiple secondary sources, including official government reports, journal articles and published chapters. This was complemented with the first-hand experience from the authors who live in the sampled countries and are conversant with the energy situations therein. Publicly available data on renewable energy practices and policies was also consulted. The data analyses performed were aimed at offering an accurate overview of all relevant energy initiatives and strategies. Table 3 shows the various renewable energy policies in the sample countries, which forms the data collection tool. The developed data collection matrix comprises of a number of

related parameters used to evaluate the countries' renewable energy transition approaches. In addition to the policies, we also evaluate each countries' population, Gross Domestic Product (GDP), amount of renewable energy being utilized and the various sources of renewable energy. The rationale for measuring these indicators in Table 3 is based on the need to provide a comprehensive evaluation of trends related to renewable energy technologies, planning and policy making of the countries investigated.

Figure 4. Studied countries and their classification in ranges of RE (%) in final energy consumption



RESULTS AND DISCUSSION

It is possible to verify that all the analysed countries present renewable energy policies. This is important since it shows that these countries recognize the relevance of renewable energy for their development. However, when analysed, the study revealed that differences among these policies are considerable. As it can be verified in Table 3, among the analysed countries Brazil is the nation with the highest percentage of renewable energy sources. In 2015, 43.79% of its energy matrix was from renewable energy sources. When it is considered the electrical matrix, the percentage is even higher: 80.4%, in 2017. This is particularly interesting due to the size of this country's population: more than 200 million. No other country has a similar proportion of renewable energy. Germany, in 2015, presented a proportion of 14.21%. Netherlands aims to reach 14% of the energy consumption to be from renewable sources by 2020. In Malaysia, the objective is to reach 11% by 2020 (Norouzi et al., 2021a). Iran, in 2015, presented a proportion of 0.91%. Another interesting information to observe is the distribution of energy sources of these countries (Norouzi & Fani, 2020a). In Brazil, the main source is Oil and oil products (36.4%). Regarding the electrical matrix, 65.2% of the energy is from Hydraulic source (Empresa de Pesquisa

Energética, 2019). In France, 70% of the energy used is from nuclear source. In Germany, 22.5% of the electrical energy is from Lignite. Natural Gas is responsible for 67.2% of the energy generated in Iran. Natural Gas is also the main source of Energy in Malaysia (61.7%) and Netherlands (83%). This is particularly alarming since none of these countries presented a renewable energy source as a main source. Only Brazil presented a positive result since the main source of its electrical matrix is hydraulic. The differences among countries' current scenarios can be connected to the intensity of policies focusing on renewable energy in each country. Comparing the policies in place in Brazil, United States, Canada, Mexico and Argentina, Pischke et al. (2019) showed that Brazil presented the highest score (Norouzi & Fani, 2020b). As a result of these policies, Brazil is the "world leader in the use of conventional renewable energy sources" (de Melo et al., 2016, p. 222). Germany, for its turn, is among the leaders in nonconventional renewable energy sources (NCRES) technologies (de Melo et al., 2016). According to the Renewable Energy Sources Act (EEG 2017), Germany aims to reach at least 60% of its energy and 80% of its electricity renewables until 2050 (Federal Ministry for Economic Affairs and Energy, 2017; Hansen et al., 2019). The realities of the other analysed countries are less exciting and require more attention in planning and perspectives. Netherlands is among the European countries with the lowest share of renewable Energy (Bórawski et al., 2019). Netherlands' targets on renewable energy are fully supported by the guidelines set by the European Union (Ministry of Economic Affairs, 2017), however, its path will be longer than other European countries. Indeed, Netherlands and France are the countries of European Union that are most distant from their targets regarding renewable Energy (European Commission, 2019b). Focusing on the developing countries with a longer path to be crossed, Malaysia and Iran should be considered (Norouzi & Fani, 2021a). In order to improve its energy system, Malaysia continuously update its energy policy. The first plan focused on the period from 1966 to 1970 aimed to increase power generation and efficiency. Since the third plan, in 1976, there is an incipient concern about the environment. The tenth plan (2011-2015), established as a target to generate 5.5% of country's electricity from renewable sources. At the same time, the National Renewable Energy Policy aimed to achieve 11% of the generated energy from renewable sources. As it can be verified in Table 3, Malaysia still does not reach this target (Norouzi et al, 2020b). However, it has been recognizing the importance of renewable energy for sustainable development. The reality of Iran is particularly challenging. The country is rich in fossil fuel sources and has been facing an intense water crisis. As consequences of fossil fuels extraction, pollution and underground water damage can be highlighted. Besides these problems, the Iranian current energy system mostly depends on finite resources. As it is shown in Table 3, Natural Gas (67.2%) and Primary and Secondary Oil (31.1%) and responsible for almost all the energy generated in the country (Norouzi, 2021a). In this sense, the use of renewable energy systems and desalination of sea water should be sought by Iranian government as solutions for the mentioned issues. The results from Table 3 and the previous analyses show that, despite the differences, there is a long path to be crossed toward renewable energy in these countries. When the targets of SDG 7 and the negative impacts of non-renewable sources are considered, although these countries are aware of the necessity to increase their proportion of renewable source, their current realities are insufficient (Norouzi & Fani, 2021b; Norouzi et al., 2021b). Additionally, an important target established in SDG 7 is the cooperation among countries to increase the researches and technologies developed for a clean energy (United Nations, 2019). However, as it is shown in Table 3, developed countries such as Germany, France and Netherlands still have a little percentage of renewable energy sources inside their territories. In this sense, there is much to be done in these countries. Therefore, the cooperation among countries should be conducted to simultaneously increase the clean energy within their territories and in developing countries (Norouzi & Kalantari, 2020;

Norouzi & Ataei, 2021). As per the most recent data from the document which reports progress towards the SDGs, the renewable energy share of total final energy consumption gradually increased in the last years, but faster change is required to meet climate goals. Furthermore, international financial flows to developing countries in support of clean and renewable energy reached \$18.6 billion in 2016, almost doubling from the amount of 2010 (United Nations, 2019; Norouzi, 2021b; Norouzi et al., 2021c).

As presented in the last Sustainable Development Report (Sachs et al., 2019), France, Germany, Iran and Malaysia still have some challenges to overcome when it comes to SDG 7. The worst situation is observed for the Netherlands, with “significant challenges” for this goal, and Brazil presents the best situation, with SDG 7 already achieved. The data suggests that suitable renewable energy policies play an important role in provided a basis upon which renewable energy may flourish. But is also shows that policies alone do not suffice: the right framework needs to be in place so as to cater for the other variables (availability of technologies, public acceptance, economy of scale, etc.) which are part of the process(Norouzi et al, 2020a).

Table 3. Characteristics of the studied countries, including population, GDP, RE policies, Percentage of RE and distribution of sources

State	Population(M)	GDP(T\$)	RE policies	RE Share	Portfolio
Brazil	209.8	1.869	- National Energy Plan 2030 - Science, Technology and Innovation Plan for Renewable Energies and Biofuels - Law n. 10,438 (from April 26, 2002) - Incentive Program for Alternative Sources of Electricity - Proinfa - Law 13,576 (from December 26, 2017) National Biofuels Policy (RenovaBio)	43.79%	Hydraulic: 12% Bleaching and other renewable: 5.9% Coal: 5.7% Oil and oil products: 36.4% Natural gas: 13% Nuclear: 1.4% Firewood and charcoal: 8% Cane derivatives: 17% Others non-renewable: 0.6%
France	66.9	2.778	Modification of administrative process; Increase in the number and quality of thermal renovations in small households (ANAH aid); Plan for the renovation of social housing and public buildings; Energy Saving Certificates; Energy Performance Diagnosis; FAR bonus - Incentive for energy performance; Energy Information Spaces; Accelerated and exceptional depreciation (for Companies –all RE technologies); Reduced rate VAT for district heating networks using more than 50% RE; Classification of district heating networks; Extension of the concession period (public service delegations); Aid for the construction or redevelopment of commercial greenhouses and greenhouses in the ornamental and nursery horticulture sector; Support plan for waste Policies; Tariffs for the purchase of electricity produced from renewable energy sources; Negotiable certificates; Calls for projects for the production of renewable electricity; Hubs of competitiveness; General tax on polluting activities (TGAP); Partial exoneration from the Domestic Consumption Tax (TIC); Renovation of river channels and port facilities; Construction of 2 000 km of railway; Construction of automatic underground train ring route in the Ile de France; Construction of 1500 km of reserved lane public transport outside the Ile de France; Environmental Bonus (for purchase of vehicles that consume less)	13.50%	Nuclear energy: 70% Conventional thermal energy: 13% Hydraulic energy: 10% Wind energy: 5% Photovoltaics: 2%
Germany	82.9	3.997	- Renewable Energy Sources Act (EEG) - National Renewable Energy Action Plan	14.21%	Hydropower 2.6% Biomass 7.0% Wind 17.3% Solar 7.2% Waste 1.0% Nuclear power 11.8% Natural gas 12.9% Lignite 22.5% Hard Coal 12.9% Others 4.8%

continues on following page

Table 3. Continued

State	Population(M)	GDP(T\$)	RE policies	RE Share	Portfolio
Iran	82.0	0.414	- National energy strategy' agenda 2041 - National plan for Knowledge based development of renewable energies - Law on Energy Consumption Pattern Reform	0.91%	Natural Gas 67.2% Primary and Secondary Oil 31.1% Nuclear 0.7% Hydro 0.5% Coal 0.3% (Wind, Solar, and Biomass) < 0.2%
Malaysia	32.4	0.314	The National Renewable Energy Policy and Action Plan has been in place since 2011	5.19%	Natural Gas 61.7% Crude Oil 32.2% Hydropower 3.6% Coal & Coke 1.6% Biodiesel 0.7% Biomass 0.2% Solar 0.1%
The Netherlands	17	0.912	- National renewable energy action plans 2020 - Energy Agenda: Towards a low-carbon energy supply - Draft Integrated National Energy and Climate Plan 2021-2030, The Netherlands	5.89%	Natural gas: 83% Nuclear: 2% Renewable energy: 9% (Biomass 4%, Wind 1%, solar, geothermal, other RE <1% each) Oil and oil products: 4% Others: 2%

CONCLUSION

In accordance with the goals set at the Paris Climate Agreement (COP21, Paris, 2015) and the Sustainable Development Goals (also launched in 2015), countries round the world have committed to the a) development and b) deployment of renewable energy in order to meet their energy requirements. This offers a promising prospect as far as future policies with a focus on renewable energy is concerned. But even though much progress has been achieved to date in respect of industrialised nations such as Germany, UK or Sweden which have renewable energy well established in their energy generation systems, there are still many gaps in the developing world, as exemplified on this chapter. This chapter has some limitations. The first one is that the sample comprises 6 countries, and this is not enough to allow broader inferences to be made. The second is that the sampled countries are at different stages of development, and therefore give different levels of emphasis to renewable energy. The sample is nonetheless robust enough to illustrate the different levels of emphasis that developing countries and industrialised nations give to renewable energy, and the influence of specific policies in supporting national efforts. The implications of this chapter are two-fold: it illustrates the fact that Brazil, Germany, Iran, France, Malaysia and the Netherlands have been tackling renewable energy with different depths of policies and with varied levels of success. Also, the different nature of the policies on renewable energy in place suggests that future developments much depend on a change in the current emphasis and level of priority afforded to renewable energy. In order to move forward, a number of measures need to be implemented by developing countries, so as to put them in a better position to bring them closer towards meeting the targets set at SDG 7: a) to provide a greater emphasis to renewable energy in governmental policy and planning b) to put in place specific monitoring instruments, which may help them to ascertain how much progress is being achieved in respect of renewable energy generation, which can be cross-checked again the set targets. These, in turn, need to be realistic and commensurate with the levels of financing and support available in each country. A better understanding of the gaps between the set goals and their implementation may assist developing countries in defining pathways via which they can better meet the targets they set; c) in order to facilitate the achievements of the targets set for renewable energy (and,

inter alia, for reductions in the emission of greenhouse gases), a continuous exploration of new alternatives for the deployment of renewable energy should be sought. For instance, using renewable energy in the energy grid of public buildings, or combining energy generation with sectors such as agriculture, which usually has vast areas available, and which may be suitable for solar or wind energy collection, parallel to agricultural activities; d) to enhance capacity building both by training a new generation of engineers specialising on renewable energy, and in energy efficiency. In many cases, a “modernisation” of teaching and research programmes at universities may be necessary, so as to offer a solid basis upon which the skills needed to develop renewable energy on its various sectors (e.g. biomass, wind, hydro or geothermal) may be better built. Finally, as a means to combat energy poverty, initiatives such as the “EU Energy Poverty Observatory” (EPOV) could prove useful to developing nationals. An infrastructure which may help to improve the measuring, monitoring and sharing of knowledge and best practice on energy poverty, could be very helpful in supporting a country’s effort to foster renewable energy production and use, supporting efforts in achieving the targets set at SDG 7.

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KEY TERMS AND DEFINITIONS

Circularity: A circular economy (also referred to as “circularity”) is an economic system that tackles global challenges like climate change, biodiversity loss, waste, and pollution. Most linear economy businesses take a natural resource and turn it into a product that is ultimately destined to become waste because it has been designed and made. This process is often summarised by “take, make, waste.” By contrast, a circular economy uses reuse, sharing, repair, refurbishment, remanufacturing, and recycling to create a closed-loop system, minimize resource inputs, and create waste, pollution, and carbon emissions. The circular economy aims to keep products, materials, equipment, and infrastructure in use for longer, thus improving the productivity of these resources. Waste materials and energy should become input for other processes through waste valorization: either as a component or recovered resource for another industrial process or as regenerative resources for nature (e.g., compost). This regenerative approach contrasts with the traditional linear economy, which has a “take, make, dispose of” production model.

Eco Commerce: Eco commerce is a business, investment, and technology-development model that employs market-based solutions to balancing the world’s energy needs and environmental integrity. Through green trading and green finance, eco-commerce promotes the further development of “clean technologies” such as wind power, solar power, biomass, and hydropower.

Eco-Tariffs: An Eco-tariff, also known as an environmental tariff, is a trade barrier erected to reduce pollution and improve the environment. These trade barriers may take the form of import or export taxes on products with a large carbon footprint or imported from countries with lax environmental regulations.

Emissions Trading: Emissions trading (also known as cap and trade, emissions trading scheme, or ETS) is a market-based approach to controlling pollution by providing economic incentives for reducing the emissions of pollutants.

Environmental Enterprise: An environmental enterprise is an environmentally friendly/compatible business. Specifically, an environmental enterprise is a business that produces value in the same manner which an ecosystem does, neither producing waste nor consuming unsustainable resources. In addition, an environmental enterprise rather finds alternative ways to produce one’s products instead of taking advantage of animals for the sake of human profits. To be closer to being an environmentally friendly company, some environmental enterprises invest their money to develop or improve their technologies which are also environmentally friendly. In addition, environmental enterprises usually try to reduce global warming, so some companies use environmentally friendly materials to build their stores. They also set in environmentally friendly place regulations. All these efforts of the environmental enterprises can bring positive effects both for nature and people. The concept is rooted in the well-enumerated theories of natural capital, the eco-economy, and cradle-to-cradle design. Examples of environmental enterprises would be Seventh Generation, Inc., and Whole Foods.

Green Economy: A green economy is an economy that aims at reducing environmental risks and ecological scarcities and that aims for sustainable development without degrading the environment. It is closely related to ecological economics but has a more politically applied focus. The 2011 UNEP Green Economy Report argues “that to be green, and an economy must be not only efficient but also fair. Fairness implies recognizing global and country-level equity dimensions, particularly in assuring a Just Transition to an economy that is low-carbon, resource-efficient, and socially inclusive.”

Green Politics: Green politics, or ecopolitics, is a political ideology that aims to foster an ecologically sustainable society often, but not always, rooted in environmentalism, nonviolence, social justice, and grassroots democracy. It began taking shape in the western world in the 1970s; since then, Green

parties have developed and established themselves in many countries around the globe and have achieved some electoral success.

Low-Carbon Economy: A low-carbon economy (LCE) or decarbonized economy is based on low-carbon power sources with minimal greenhouse gas (GHG) emissions into the atmosphere, specifically carbon dioxide. GHG emissions due to anthropogenic (human) activity are the dominant cause of observed climate change since the mid-20th century. Continued emission of greenhouse gases may cause long-lasting changes worldwide, increasing the likelihood of severe, pervasive, and irreversible effects for people and ecosystems.

Natural Resource Economics: Natural resource economics deals with the supply, demand, and allocation of the earth's natural resources. One main objective of natural resource economics is to understand better the role of natural resources in the economy to develop more sustainable methods of managing those resources to ensure their future generations. Resource economists study interactions between economic and natural systems intending to develop a sustainable and efficient economy.

Sustainable Development: Sustainable development is an organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend. The desired result is a state of society where living conditions and resources are used to continue to meet human needs without undermining the integrity and stability of the natural system. Sustainable development can be defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainability goals, such as the current UN-level Sustainable Development Goals, address the global challenges, including poverty, inequality, climate change, environmental degradation, peace, and justice.

Chapter 14

Reinventing Operating Models for Sustainable Organizational Performance: The Case of the Big Search

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ABSTRACT

The main argument elaborated in this chapter is that companies, particularly start-ups, need to continuously work on their business leadership, human capital, and organizational change and persistence in order to survive and keep thriving even in uncertain times, such as the post-COVID-19 period. Additionally, the chapter argues that Pfeffer's seven principles for organizational success are still very relevant today and recommends to start-ups to use this framework. The chapter draws from the literature on human capital and management, organizational structure and perseverance, and responsible business leadership. The drawings from the literature are then applied to a single case study, the recruitment consultancy The Big Search. The findings confirm that Pfeffer's seven principles for organizational success are highly relevant today to companies that do want to invest in their performance and success. Moreover, the findings show the challenges and opportunities that start-ups, such as The Big Search, have gone through.

INTRODUCTION

The Covid-19 pandemic changed everyone's lifestyles—the normal what we knew before the pandemic is gone. We are at a moment of reinventing our societies and creating a new approach to living in them. The business sector, particularly start-ups, is the one that is breaking the ground by introducing new or reinventing old operating models while adopting long-term and sustainable approaches to organizational performance.

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The problem that many companies, including start-ups have faced are high retention rates and lack of employee engagement. Due to the timely occurrence of the problem, the literature is still to explore and offer solutions for the challenges companies face. But new problems can have old solutions. This chapters aims to bridge the gap by reintroducing Pfeffer's seven practices for successful organizations as possible solution.

The chapter's objective is to argue that investment in human capital is the only way for businesses to maintain and improve their organizational performance. Investment in human capital during the Covid-19 pandemic is more crucial than ever. The chapter supports the argument by presenting a novel practice. It studies the case of The Big Search, an international recruitment company, in its quest of affirming its position as a responsible business, which by focusing on human capital, accelerated during the third wave of the Covid-19 pandemic. Studying a company that operates in the recruitment business is a representative sample because it operates and offers services for and with human capital, a resource most affected by the pandemic.

The focus of the chapter falls on start-ups because, as Ries argues, "start-ups exist not just to make money, or even serve customers. They exist to learn how to build a sustainable business. This learning can be validated scientifically by running frequent experiments that allow entrepreneurs to test each element of their vision" (Ries, 2011, p. 18). Start-ups come about first and foremost to solve a social problem or address a gap. Moreover, they are more flexible in adapting to challenges and unexpected events as they use the power of technology and the internet, a space where traditional corporations might struggle.

The paper argues that Pfeffer's seven practices for successful organizations are highly relevant, particularly during the Covid-19 crisis where employment security, for example, is among the primary concern of employees (Pfeffer, 1998). Moreover, from the case study, we observe that Pfeffer's seven practices are a must for businesses that want to adapt and survive through higher force changes, such as the Covid-19 pandemic one. Across the seven practices, though, one key element stands out – human capital. During and after the third wave of the Covid-19 crisis, companies felt the impact of human capital on their business. There is a continuously growing body of evidence that there is a positive link between human capital and organizational performance (e.g., Fitz-Enz, 2002; Dess & Picken, 2000; Arthur, 1994; etc.). Additionally, responsible business leadership and organizational change and persistence, combined with human capital, contribute to start-ups' institutional persistence and continuity.

This literature-based paper combines a practical application to a single case study. The findings are specific to the case study, and generalization of results is avoided. The literature review covers the relevant research on human capital, responsible business leadership, organizational change, and resilience. The case study then uses the timely literature and shares insights into the changing institutional dynamics towards more sustainable approaches. Data gathering was conducted via semi-structured interviews with relevant stakeholders part of the leadership and management team. Moreover, the information is cross-referenced with the company's data-related articles published online on reliable websites.

The findings from the case study confirm that continuous hard work dedicated to human capital, responsible business leadership, organizational change, and resilience are necessary in order for the start-up to continue enduring and thriving on the market. The Big Search survived during the first wave of the Covid-19 pandemic by following those principles. Additionally, the findings of applying Pfeffer's seven principles of organizational success to the case study show that the seven principles are still highly relevant today.

The chapter will first review the literature on sustainable human resource development, responsible business leadership, and organizational change and resilience. Secondly, it will present the case study and its survival strategy, and the company's challenges during the pandemic. Thirdly, it will focus on the "come back" period of economic growth and the company's strategy and practices to strengthen the fostering of their human capital as the pandemic continues to take its toll. The fourth section will draw findings, and the fifth section will go over the conclusions and research shortcomings based on the case study analysis.

BACKGROUND

The 20th century has marked a turn in the global economy towards investment in the 'intangible' services such as research and development, information and communication technology, skills improvements of the private and public sector, and growth of the number of experts working in high technology products (OECD, 1996). From the 1970s onwards, particularly in advanced capitalist societies (mainly in the G7 countries), there is a rapid shift in the workforce from farming or manufacturing services to handling goods and information (Castells & Aoyama, 1994). These are called knowledge-based economies. They increasingly recognize the economic importance of information, technology, and innovation. Landry (2012) argues that creativity is treated as the new currency and method of exploring and managing resources in a knowledge-based economy. Moreover, Castells has observed that the new economy is cultural; its dynamics are dependent upon "the culture of innovation, the culture of risk, the culture of expectations, and ultimately, on the culture of hope in the future" (2001, p.112). The new approach to the economy is characterized by the "new" forms of services which are informational, global, and networked (Castells, 2000).

The global shift from product to service economy where knowledge is the new asset for economic growth and competitiveness is key to organizational success. The rise of the new knowledge-based economy, which relies on culture, creativity, and innovation, has presented solutions for social problems that traditional corporate organizations have created or failed to address (Castells, 2000).

Organizations as societies face an increasing number of significant challenges, adverse events, and disasters (UNISDR, 2015; Van der Vegt, Essens, Wahlström, & George, 2015; Tierney, 2014, p.238). Uncertainty is the only certainty we as a society have, and we create models and processes to diminish those uncertainties. As the current situation with the Covid-19 pandemic, organizations are subject to complex, ever-changing, and diverse environments, which require developing resilience capabilities to manage and recover from disruptions.

Organizational resilience includes capacity, capability, behavior, strategy, outcome, performance, and other concepts. Organizational resilience has a strategic role (Carmeli & Markman, 2011; de Oliveira Teixeira & Werther, 2013; Hamel & Välikangas, 2003) and also a relevant position at the operational-level such as the supply chain to maintain service delivery and functionality (Jüttner & Maklan, 2011; Pettit et al., 2010; Ponomarev & Holcomb, 2009; Sheffi & Rice, 2005; Zsidisin & Wagner, 2010). In other words, organizational resilience is the organizational capacity to alleviate the effects of the disaster and bounce back (Hamel & Välikangas, 2003; Salwan & Gada, 2018). However, the bounce-back is a capacity that includes the organizational culture to change, resource realignment, and short-term, mid-term, and long-term strategic plans to develop (Ates & Bititci, 2011).

Continues market shifts and uncertainties also require a coherent management paradigm that would satisfy the needs of the business that most innovate, such as start-ups. Ries (2011) defines a start-up as “a human institution designed to create a new product or service under conditions of extreme uncertainty” (2011, p.37). Moreover, he argues that the leadership team should foster innovation and creativity who continuously needs to act like entrepreneurs. Without their approach and fostering of innovation, start-ups and even large companies might fall short of growth (Reis, 2011).

Maak argues that responsible leadership contributes to building social capital and ultimately to both a sustainable business and the common good (Maak, 2007; Maak & Pless, 2006). The term ‘responsible leadership’ is coined by Maak to distinguish between the current, more timely leadership traits vs. the traditional leadership that is unable to keep up with the current global pace of change and provide the knowledge and path of leading sustainably and responsibly. In a nutshell, traditional leadership lacks the pro-active engagement of stakeholders and leaders via dialogue, facilitation of legitimizing discourse, and balanced decision-making accounting for diversity (Burke & Ng, 2005). Organizational leaders need to navigate a complex web of relationships to keep the human capital engaged and interested in working with them rather than moving on to a more engaging or professionally challenging environment.

Additionally, competitiveness and sustainability are among the main organizational aspects adopted by the business leadership, alluding to research, development, innovation, and commitment to a better life, higher quality standards, and a cleaner environment (Popescu et al., 2008; Popescu et al., 2015).

Responsibility is reflected in the small but impactful decisions and strategic leadership thinking. As in the case of The Big Search, the company is selective with who they will work with as clients based on the global impact they might have. For instance, working with market-established tobacco corporations whose business negatively affects people’s health habits would not be a client they would be working with.

Maak defines responsible leadership as “the art and ability involved in building, cultivating and sustaining trustful relationships to different stakeholders, both inside and outside the organization, and in coordinating responsible action to achieve a meaningful, commonly shared business vision. Arguably, in a stakeholder society, a unified vision would need to include the aspiration to be(come) an inclusive, responsible, and active business in society; one that aspires to be part of a sustainable future and thus of the solution to and not part of the world’s problems. Responsible leadership is about bringing such vision to life by mobilizing stakeholders inside and outside the organization to contribute to business sustainability and legitimacy.” (2007, p.334).

The most effective way to mobilize the stakeholders in a sustainable way is by investing in human capital. The theory of human capital is rooted in the field of macroeconomic development theory (Schultz, 1993). OECD’s definition of human capital is referred to as “the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” (OECD, 2001, p.18).

Human capital is the core of intellectual capital that drives business performance. Choudhury and Nayak (2011) state: People are the organization’s greatest asset, providing the intellectual capital that drives differentiation and value-added. Westphalen (2009) says that human capital can be defined strictly within an economic context as a production factor, and Koednok (2011) describes human capital as an economic term used to describe the skills and knowledge that individuals draw upon to generate outputs of value, such as innovation and productivity in job performance (Afrah, 2016).

It is no exaggeration in the assertion that the most significant resource of any organization is often said to be its people. Of course, an organization is nothing but inter-related groups of people whose activities are planned and coordinated to meet organizational objectives. An organization that exists to

produce goods and services has a good chance to survive and prosper if it consists of the right people (Afrah, 2016; Ghorbanhosseini, 2014).

Human capital research has mainly covered the topic from networks and access to networks, and hence, resources (e.g., Burt, 1997; Portes, 1998; Uzzi, 1997; Nahapiet & Ghoshal, 1998). Moreover, human capital is the stock of skills that the labor force poses (Goldin, 2016). Becker (1993) adds that investing in human capital through formal and informal education and training is the only way forward for improving the quality of the labor force, but also the financial and organizational benefits that come with that labor improvement. Human capital has a tremendous competitive advantage to enhance higher performance (Hansson, Johanson & Leitner, 2004; Marimuthu, Arokiasamy & Ismail, 2009).

There is a significant relationship between innovativeness and firm performance under the human capital philosophy (Lumpkin & Dess, 2005). Another part of the literature covers and shows the importance of training. Green (1993) shows that the lack of training is related to low competitiveness. Mincer (1997) shows that human capital is positively associated with greater productivity, and higher salaries and training are linked to the longevity of companies (Bates, 1990) and economic growth (Goetz and Hu, 1996). From a more holistic level, Doucouliagos (1997) shows that human capital motivates commitment and paves the way for the generation of new knowledge for the economy and society.

As Stiles and Kulvisaechna argue: “Competitive advantage is dependent not, as traditionally assumed, on such bases as natural resources, technology, or economies of scale, since these are increasingly easy to imitate. Rather, competitive advantage is, according to the RBV, dependent on the valuable, rare, and hard-to-imitate resources that reside within an organization. Human capital, in a real sense, is an ‘invisible asset’ (Itami, 1987). The importance of the human capital pool (the collection of employee capabilities), and how it is managed through HR processes, becomes apparent, then, to the strategic aims of the organization”. (2011, p. 12)

That leads us to Pfeffer’s (1998) seminal work on successful organizations. He argues that attention to human capital and effective human management can contribute to sustainably enhanced economic performance. He identifies seven dimensions that characterize organizational persistence and economic growth via people. Those are: employment security; selective hiring of new personnel; self-managed teams and decentralization of decision making as the basic principles of organizational design; comparatively high compensation contingent on organizational performance; extensive training; reduced status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels; extensive sharing (Pfeffer, 1998, p. 96). He argues that influential firms invest in these key characteristics and treat their people with trust to diminish retention and guarantee successful performance.

From an organizational perspective, investment in human capital training is part of the business’s strategic planning and their creation of competitive advantage (Seleim, Ashour, & Bontis, 2007; Dooley, 2000). Investment in human capital adds to the business value and uniqueness, it improves effectiveness, increases performance, and capitalization upon opportunities (Ibid).

Why does all of this matter? As Popescu (2020) argues, enterprises and corporates need to adopt a model of innovation, knowledge management, and intellectual capital in order to survive, create sustainable organizational performance and bounce back in the market.

Also, as Popescu defines, “entrepreneurship represents the act of implementing a new business – ideally, with a high potential of helping both individuals and the world as well as offering viable solutions to existing problems, while managing all the specific activities concerning such a complex process, in order to gain profit” (2020, p.22). Besides paying more attention to human capital, entrepreneurship

offers more sustainable, inclusive, and conscientious solutions to global problems, ones that traditional corporations are either holding the status quo.

From the brief literature review, we can note that there is a constant cycle between business leadership, organizational change and persistence, and human capital. The three need to constantly reinvent themselves and complement each other in order for enterprises to continue evolving and making an impact on the world.

Figure 1. Constant interdependency among business leadership, organizational change and persistence, and human capital.

Source: Personal elaboration



The Covid-19 crisis taught us what we knew all along but might have been choosing to pause or ignore for a while. That is dedicating specific attention to the growth, development, and happiness of human capital. Organizations are facing a complex, uncertain, and ambiguous environment. Hence, they need to create appropriate programs and training to satisfy their people's growth and development needs. By fostering a safe environment and an environment of development, organizations can change people's behavior on a social level. Suppose the organization values candid feedback or respect towards our environment. In that case, people will start behaving in that particular way in the office and gradually take on their behavior outside and in private spaces (Nonaka & Takeuchi, 1995; Weick, 1995).

From an organizational perspective, it is easy for companies to share their best practices with the aim to be adapted in other companies. Inimitability might be difficult to replicate as there will always be ambiguities, and more importantly, these policies or practices are path-dependent (Becker & Gerhart, 1996). By ambiguity means the difficulty of understanding the exact processes and mechanisms of human resources that generate value. Moreover, practices consist of policies that are developed and improved or adapted over time, and that policy development cannot be re-applied in the market by competitors (Becker & Gerhart, 1996, p. 782). Even if cross-organizational/entrepreneurial knowledge is shared and policies are re-applied, they would still need to be later changed or adapted to the local structure. This process of sharing best practices and success stories paved the way towards commercializing sustainable human resource management, alluding to the long-term approach and activities aimed at socially

responsible and economically appropriate recruitment and selection, development, deployment, and release of employees (Thom & Zaugg, 2004).

It is contradictory, but recruitment companies have a horrible reputation in the market. The sector that offers people new career opportunities and changes their lives is perceived as the least human-oriented approach. The Big Search (TBS) case study has taken a different approach by creating lucrative long-term relationships between them and clients and candidates. Instead of adopting an individualistic culture where growth and compensation are tied to individual performance and bonuses, The Big Search's approach is: we are all human. Clients are human; candidates are human; TBS employees are human. They adopt a collective mindset where success and gain are shared, and the organizational structure pushes down that culture (personal communication, 2021).

The next section of the chapter ties the case study to the literature review and presents the survival strategy and challenges the company went through during the pandemic. It gives a brief background of the company before the pandemic to situate the discussion. The focus falls on Pfeffer's seven dimensions of organizational success and economic gains via investment and development of human capital and responsible business leadership.

MAIN FOCUS OF THE CHAPTER

Right before the pandemic hit Europe, in early February 2020, business was going well, growing from 50 to 100 employees in only a few months. The company had ambitious growth plans and was hiring at rocket speed. One of the distinctive value points of The Big Search is their culture. One can see from reviews on Glassdoor that current and former employees have given high ranks to the company culture and have stated that that is the reason why they have joined the company. Moreover, people wanted to change jobs and work in a more casual environment where employees manage their own time and workload. The company's culture is guided by its values: people, growth, openness, fellowship, and recognition (The Big Search, 2021). The personal approach and the always-do-things-with-others-in-mind attitude have a spill over effect. By treating the employees that way, they treat candidates and clients the same way, and hence a positive spill over effect occurs. That attitude then distinguishes The Big Search from other recruitment firms in the market.

During the pandemic's peak, between March and November 2020, the leadership team needed to act quickly and make substantive changes in the organizational structure (personal communication, 2021). After advising external experts who have had experience with similar situations, they took the impact of the pandemic very seriously early on (ibid). The more recently hired and on probation employees were laid off because it was hard to assess their performance. The Head of People informed that even though it was a difficult moment for everyone, and people got fired, it was rewarding to see how people were grateful for having the opportunity to spend at least some time at The Big Search. This was a sign of how strong the culture was, and the trust people had in the Leadership team. The other batch of employees were on unpaid leave. The rest of the employees that stayed were asked to focus their attention on other parts of the business and had their salaries cut off by 10% or more. As the company's service wasn't in high demand during the first peek of the pandemic, the leadership team identified internal points of improvement such as better tooling, process revisions, data entry, product revision, etc. Even though the cutting cost was the essential goal, people were always put first. A large part of the leadership team abstained from getting their monthly salaries for a few months to cover other costs.

Moreover, a weekly All hands meeting was scheduled where it was used to share transparent information about the plans of the leadership team, next steps and assure the employees that everyone is in this difficult situation together. Moreover, All hands' time was dedicated to drawing collective learnings, celebrating success when they would land on a new client, recognizing and rewarding people for keeping motivated and engaged. Additionally, the People team introduced coaching sessions, meditation classes, and social events online to reduce the stress that everyone was sharing, particularly those under lockdown alone. The efforts were recognized via a high NPS score. However, in June 2020, it dropped, and that is because of the frustrating impact of the pandemic, such as working from home, people not being able to see family and travel.

After the slow comeback in the market, from the beginning of 2021, the company slowly started to grow. The first hiring priority was the people that were laid off. The People team continued introducing new perks and benefits to make The Big Search the best place to work in the industry. Part of those initiatives are:

- Online physical activities, such as fitness and yoga classes online;
- Hybrid office model having the option to work from home and the office. Those who opted to work mainly from home could borrow office equipment to set their workstations.
- Somewhat flexible working hours. The organization trusts its employees to manage their time and as long as everyone delivers on their responsibilities.
- Team activities budget – each team, got a certain amount of money to spend on a fun and interactive activity that they decide on.
- Introduction to private health insurance in the countries that the option is available. Additionally, one covid-19 test and covid-related exams were also covered.
- One well-being day, a quarter was introduced. A well-being day is a day off for everyone working at The Big Search and encourages people to spend it on activities that contribute to their well-being.

They are investing in learning and development and continuous training and upskilling of their employees. Currently, they are working on implementing a learning management system, internship program, and other training and upskilling tailored for the employee's needs. Continuous improvement is tracked via anonymous managers surveys where employees are encouraged to give direct feedback, so managers and the Leadership team can act as quickly as they can on topics they can influence.

The more recent challenges are to maintain traction and keep the human capital. There have been recent increases in compensations and benefits and small things such as welcome onboarding kits to surprise people and show value and a great experience working at The Big Search. Besides those efforts, it is quite a big challenge to keep people as with the global shift to remote work, companies have spotted the talent and are approaching TBS employees. The People team tries to be closer to people but also be very data-driven in their decision-making, on top of financials.

The Head of People shares that the learnings from the past year and a half have been that the Leadership team is much more diligent, and they go over financial and operational updates weekly. They are much more risk-averse, and all the investments so far have been in human capital rather than the product and technology part of the business. In line with the risk aversion thinking, the long-term goal of the company is to create a less reliable service to the knowledge individuals hold. Instead, individual

knowledge would be shared on a platform with a pool of consultants over time. This would be a more sustainable and scalable way of growing and knowledge-sharing (Personal communication, 2021).

The leadership team proved their responsible decision-making during and after the recovery period of the pandemic by straightening previous policies and introducing new ones. The author uses Pfeffer's (1998) seven practices of a successful organization to prove this argument.

Employment security is fundamental to the implementation of most other high-performance management practices. The essential element of employment security is mutual trust. If the company cannot trust that they have made the right hire and that they will stay longer with them, they risk high investment for low returns. Moreover, the delegation of authority, performance, and information require trust. A recent adjustment towards this direction was the shift to long-term contracts for employees longer than one year at the company.

Selective hiring of new personnel refers to the hiring decisions and the critical skills and attributes candidates should have in order to be hired. For instance, to avoid retention or resocialization of new employees due to bad habits that people might have acquired in previous working environments, for some roles, companies prefer to hire junior people or individuals with no prior industry experience so they can train them up. TBS is clear about the critical skills and attributes candidates should have, and those are people with the right attitudes, values, and cultural fit.

Self-managed teams and decentralization of decision-making are the basic principles of organizational design and are critical components of virtually all high-performance management systems. The Big Searches' organizational structure allows small teams to independently take most of the decisions, withholding them the right to make significant financial and structurally very different decisions. Anything else, from search, client, candidate management, self-organization, and available resource allocation, is up for the operating units, also known as pods, to execute. Additionally, innovation, thinking outside the box, and creative thinking are encouraged mainly, and people can constantly test out new ways of work. With the help of the central functions, if the test has proven to be successful and scalable, it can, later on, be adapted as an alternative or primary way of operating.

Comparatively high compensation contingent on organizational performance refers to the company's attitude between what a firm pays and the quality of the workforce it attracts. Pfeffer (1998) argues that there are different ways to do so: stock options, stock ownership, gainsharing, etc. Due to the private nature of compensation information, the author could not assess and back up that assessment with data if The Big Search delivers comparatively high compensation contingent on organizational performance. However, due to its attempt to increase employee cooperation, information sharing, and compassion, they have adopted a gainsharing approach to bonus distribution. This approach also helps to motivate effort because people know they will share in the results of their work.

Extensive training. Virtually all descriptions of high-performance management practices emphasize training, and the amount of training provided by commitment as opposed to control-oriented management systems is substantial (Pfeffer, 1998, p.112). During the period from March to September 2020, there was an emphasis on coaching and upskilling. It was a strategic decision taken by the Leadership team to keep the Head of Learning and Development role, even though the person was hired in the week when many people were laid off. The training and workshops allowed for peoples' upskilling and kept sane and mentally healthy during those hard times. Later on, based on prioritization, people management training was rolled out, and personalized onboardings and tailored training sessions.

Reduced status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels. Organizational innovation and entrepreneurship should not come from the top down but should be encouraged throughout the organization. One effective way of organizing employees in teams and creating an environment where their opinions matter and are valued. For that reason, higher-ranking members should reduce their status distinctions. At The Big Search this is addressed by adopting a casual dress code, informal but professional language, laid-back office arrangements, and flexible work from home. Regarding wage difference, The Big Search has quite a space to catch up on as they outsource most of their human capital in Skopje, hence paying competitive salaries to the local market. However, geographical locations have become less relevant when discussing compensation due to a global shift to remote work.

Extensive sharing is among the essential elements of a successful organization because it is related to the organization's level of trust with its employees. When people don't know what is going on and don't understand the basic principles and theory of the business, they cannot be expected to positively affect performance (Pfeffer, 1998, p.121). The Big Search seems to be doing an excellent job on this point as there is constant transparency and information sharing regarding the business decision-making and changes. At the All hands, financial revenue is shared, such as what is the quarterly target and how far off, they are for reaching it. Additionally, new clients coming in, celebrating successes, and learning from failures. Moreover, there are company-wide Teams channels where people share recognitions, losses, and successes.

The ability to rapidly adopt to the global changes that the Covid-19 crisis brought, allowed The Big Search to attract the best talent in the cities they operate, as well as expand in other regions across Europe (personal communication, 2021). More importantly, the company has attracted high service recognition as it started (and continued) working other companies that embrace the values of sustainability and responsible businesses.

From the case study we have seen that the start-up was on a crossroad and barely survived the Covid-19 pandemic-initiated crisis. However, led by a responsible business leadership which invested in human capital, and whose organization was open to change and persistence, resulted in a smart survival strategy. The interdependence among the three traits was inevitable.

ISSUES, CONTROVERSIES, PROBLEMS

The pandemic has changed the working habits we have known (Merone & Whitehead, 2021). Remote work has been challenging for companies as it is hard to control employee engagement and motivation. However, start-ups have had an easier time adjusting to these changes as they are on the constant track to changes and adaptations of their service or product. Moreover, employee retention has been a challenge as remote work is becoming more and more popular. Companies have a hard time keeping their employees because they either haven't kept up with the fast compensation shifts or they cannot offer career growth plans at the moment.

The post-pandemic literature on organizational changes and organizational challenges towards keeping and investing in human capital is still at its embryonic phase. Significant changes in organizational management and their impact on endogenous and exogenous organizational transformations are still to come.

SOLUTIONS AND RECOMMENDATIONS

Start-ups need to adopt change as a constant to survive in the continued uncertainty. The continuous change in the organizational structure, processes, mechanisms, and approaches to problem-solving are just a part of it. Pfeffer's key principles to organizational success are a good guide a start-up or an enterprise can use to make sure they are on the right track. In addition to that, start-ups should constantly sense-check the loop between responsible business leadership, the development of human capital, and the structure that facilitates organizational change and persistence.

FUTURE RESEARCH DIRECTIONS

This chapter opens research grounds to study the global role of start-ups in changing organizational behavior and structure towards more sustainable practices that are more susceptible to ongoing change and uncertainty. The methodological approach could be adopted to test the conclusions of a more extensive case study.

CONCLUSION

From the case of The Big Search, it can be concluded that the three variables of human capital, responsible business leadership, and organizational change and persistence are interdependent, particularly in risk-averse situations such as the effects of the Covid-19 pandemic. The entire start-up would have suffered without the timely and responsible strategic decisions and the leadership team's organizational changes swiftly. Additionally, the organization would have suffered greater employee dissatisfaction, lack of motivation, and higher retention numbers without continuous re-investment in human capital. Thus, above all, current knowledge sharing, and information is locked in human capital. The case study further shows the contemporary relevance of Pfeffer's seven key principles for successful organizations in times when organizations need to reinvent their structures and adjust to constant changes.

The changing dynamics in responsible and sustainable business in the post-COVID-19 Era is that companies have become much more accountable and sustainable in their management and practices. As in the case with The Big Search, start-ups can choose their clients by their impact on our planet and on people and choose to invest in human capital to deliver excellent service performance while valuing their human capital.

SHORTCOMINGS

By studying only one case, we do get an understanding of those specificities. However, generalizations cannot be drawn from exploring a single case study. A further investigation of the highlighted relevance of Pfeffer's seven principles for successful organizations multiple case studies is needed.

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KEY TERMS AND DEFINITIONS

Business Leadership: Refers to the responsible leadership style of the top key organisational stakeholders (leadership team) to cautiously take decisions considering the wellbeing of the organizational success and the employees.

Employment Security: Refers to the protection of workers' rights at the duration of the contract and as a result of a job loss.

Entrepreneurship: Is the extraction of social value. Entrepreneurism is associated with higher risk than corporate-style organizations, however its impact to the social and capital environments is higher as well.

Human Capital: It is the structural enabling of organizations to invest in the people's skills, knowledge, education, health, and other wellbeing aspects that has positive returns into the business reflected as loyalty for instance.

Organizational Innovation and Entrepreneurism: Is the organizational attitude towards its employees via operational processes and design to foster creativity, innovation, and an open-minded approach to un-conventional solutions with the end goal to solve a social problem.

Organizational Success: Are the plans and actions that organizational leaders and employees take to collectively add to the organizational progress, growth, and persistence.

Post-COVID-19: Refers to the continuous societal adaptation to operate under the circumstances of a worldwide pandemic.

Chapter 15

Raising Awareness of Responsible Consumption Through Fashion Rentals and Frugal intentions

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ABSTRACT

Sustainable consumption practices help to reduce environmental impacts and fosters responsible consumers. Researchers have explored the positive drivers and negative barriers of fashion-conscious consumer (FCC) purchasing intention on fashion clothing. The study also examined the motives and outcomes of the phenomenon, such as rental landscape and frugality. Using the qualitative phenomenological method, researchers conducted 21 in-depth semi-structured interviews in India to tap into FCC's buying intention and experience. From the results of qualitative analysis, researchers identified "emotion" as a new parameter reflecting consumer passion and interpersonal relationships. Different themes emerged, such as selection of the style, attention-seeking, status value, cost factor (uncontrollable), and psychological value, which are the commonly identified motivators. Conceptual framework is developed to understand the perception towards green environment and sustainability. The implications are to improve the sustainable practices in the fashion sector through rental options and frugality.

INTRODUCTION

Fashion evolves day-to-day, where a trend comes in and goes out until a notable trend will reemerge. Despite its counter-intuitive nature, fast fashion encourages to buy inexpensive and trendy items that last for a season or two. Because of poor quality, clothes will fade, tear and remain untouched for a long

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time. Fast fashion can be lucrative for consumers, but workers are at risk and paid low wages. In 2020, a pandemic forced many brands to cancel their orders with factories, while many garment industries failed to pay workers. Fast fashion maximizes its product range in the apparel industry, which leads to more profit. As a result, it affects the apparel supply chain and lead-time (Mehrjoo and Pasek, 2014). The changing trend encourages customers to transform their closet collections frequently and ends up with textile contamination. Trend-seekers and young consumers have unique consumption patterns, so they can use new concepts, such as swapping, discounting, and purchasing used clothes that will minimize fashion waste. As an alternative for fast fashion, Hamari et al. (2016) argued that access to ownership, such as renting and borrowing textile materials accelerated the pace of economic consumption and sustainability. Rental provides a low investment service in both thrift and frugal practices to develop green-conscious consumers on the path to ethical consumption (Evans, 2011).

The literature revealed that only limited studies have mentioned the factors of rental clothing and responsible consumption behavior. There are only limited empirical researches that currently exist. Academic research has focused on rental clothing and not specifically on reshaping the fashion-conscious consumer (FCC) into a responsible consumer. This is identified as a gap to be bridged by the investigators in this research. Initially, the review integrated the sustainability concept into secondhand clothing (SHC). Following that, researchers conceptualized the elements that influence FCCs buying intentions. Finally, they tried to identify the solution for fashion demand-seekers through the rental service and frugal behavior. Researchers implemented the “goal twelve targets” concept to reduce waste generation and achieve sustainable development (SD). By incorporating sustainable development goals (SDG) into rental clothing, researchers educate consumers about responsible fashion consumption.

Background

Sustainable fashion integrates product development, manufacturing, distribution, and end-of-life reuse, recycling, or disposal to minimize their negative impact on society and the environment (Zhang and Zhao, 2019). Nowadays, young consumers are more inclined to buy ultra-fast fashion products, resulting in post-consumer waste. The term sustainability triggers a deep sense of resonance within the consumer and reduces their depreciation rate by providing durability. In the last decade, sustainable fashion has grown significantly. Similarly, **Table.1** states the various **definitions for the term “sustainability”**.

Table 1. Definition for the term “sustainability”

Author(s)	Sustainability focused Statement
Gwilt and Rissanen (2012)	● “The word sustainability has a plethora of meanings and is frequently misunderstood; unfortunately it has become synonymous and interchangeable with recycling and the environment, whereas the original rationale from the 1950s was to focus on social change to alleviate global poverty.” (p.23) ● “Proponents of sustainability often encourage the use of less – do more with less – and that to do so is an indicator of good design.” (p.62)
Kozlowski et al. (2018) and Henninger et al. (2020)	Most definitions of sustainable business activity directly build on the definition of sustainable development provided in the Brundtland report (Our Common Future) from 1987: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED,1987, p. 43).
Henninger et al. (2020)	Sustainability is a key driver for innovation that encourages out-of-the-box thinking and avant-garde behavior by finding new solutions and possibilities to produce and create products/services that the current generation may need without exploiting the social, environmental, or economic environment. (p.1)
Rosca et al. (2017)	Sustainability stresses the need for creating resilient systems regarding ecology, the economy as well as a society while respecting the limits of ecological capacity and viability (Arnold, 2015). (p.4)

Consumers who prefer luxury fashion products will seek secondhand clothing as a pro-sustainable consumption method (Han et al. 2017). Retailers of luxury brands sell their products based on emotional, conspicuous, and quality values (Zhang and Zhao, 2019). Lack of knowledge about sustainable fashion can negatively influence the SHC among different consumers. Though young consumers are aware of textile landfills, Diddi et al. (2019) found that new styles and low-cost factors still influence their purchasing intentions. In contrast, several participants claimed that sustainable clothing was too expensive and unaffordable.

Therefore, consumers prefer responsible fashion consumption, such as renting, trading, repairing, reusing, recycling, borrowing, mending, upcycling, eco-friendly, and donating to reduce landfills. Consumers should redesign and transform their existing wardrobe (Morais and Montagna, 2015) rather than buying a new one. However, it requires knowledge of pattern drafting and stitching skills. Among all the sources, researchers concluded that renting can reshape consumer behavior and especially among FCCs, as shown in **Table.2 (Sources of sustainable fashion)**. Researchers focused on using rental services to encourage responsible consumption among FCCs to meet their fashion goals and promote circular fashion. The thought process of people has changed, and they are aware of societal issues, such as the environment and economic issues associated with buying new clothing. In the meantime, rental subscription models are becoming more popular among retailers who provide luxury clothing and casual wear. From the clothing lender perspective, it is necessary to emphasize the consumer mode of choice. In addition, researchers have investigated the different categories of FCCs consumption modes, such as regular, celebration, and occasional users. However, the extant literature is yet to examine the factors influencing FCC's purchasing intention. Consumers are further encouraged to develop their fashion sense by renting and being frugal. The adoption of the service and the shift towards a green environment by FCCs provide new insight.

Table 2. Sources of sustainable fashion

Consumption	Advantages	Disadvantages
Secondhand clothes/thrift store Diddi et al. (2019)	Secondhand clothes are available at a low cost, which can save money. It reduces the frequency of purchasing new clothes. The store will comprise vintage and rare items. Clothing for special occasions such as Halloween is readily available.	New products are low-cost, so they do not represent good value for money. They are out of style and have a limited variety. Sometimes, it can embarrass and reflect on their social status.
Repair/ Mending	● According to Diddi et al. (2019), costly factors, sentimental values, and patchwork / redesigning were economically viable options. ● Mending and repairing garments improve the quality of life, and families can sometimes pass this on to their loved ones (McNeill et al. 2020).	Spending money for repair, lack of availability, and lack of mending skills are notable factors. Consumers are not interested in spending time and money on the used, torn, or ill-fitting clothing (Diddi et al. 2019).
Reuse	Reuse can extend the life cycle of the product or service (Pal and Gander, 2018).	During reuse, the process required technological advancement (Armstrong et al. 2015).
Recycle	Diddi et al. (2019) participants identified that certified organic or recycled materials provide emotional satisfaction to save the environment.	● Armstrong et al. (2015) discussed that apparel industries lack sophistication. ● Han et al. (2017) confirm that recycled is not sustainable. ● The study performed by Pal and Gander (2018) found that technology development for separating blended fiber and trims was lacking. ● Diddi et al. (2019) identified that products would be more expensive and not affordable.

continues on following page

Table 2. Continued

Consumption	Advantages	Disadvantages
Rental	● Lang and Joyner Armstrong (2018) mentioned that rental had entered the retail sector, with an unlimited assortment of designer clothes and without the burden of ownership (Moeller and Wittkowski, 2010; Lang and Joyner Armstrong, 2018). It is possible to satisfy consumer desire and avoid overconsumption when vintage clothing, celebration clothing, and trendy clothing coexist. ● Park and Joyner Armstrong (2019) found that users could avoid repeating a particular style.	● Studies by Lang and Joyner Armstrong (2018) identified that consumers rent only specific garments for a short time. Lack of popularity and infancy is another construct. ● The results of Yuan and Shen (2019) point out that illegal renting sometimes makes the user unwilling to return when the cost of the return is steep, and the rental fee is usually high.
Borrowing Diddi et al. (2019)	While receiving clothing from family and friends, users feel rare, unique, and have strong emotions. In addition, they feel comfortable since it is from a known person (like a hand-me-down).	Sometimes users feel outdated and have less variety. They even have different preferences within their own family and friends.
Swapping	● The authors of Lang and Armstrong (2018) claim that the giving and taking-back policy without monetary exchanges still exists at present, including the transfer of ownership to extend the product life cycle. ● Lang and Zhang (2019) found that frugal behavior emphasizes swapping.	● Sometimes Lang and Joyner Armstrong (2018) found hygiene issues, repair, and relinquishment of maintenance are the main drawbacks. ● Lang and Zhang (2019) confirmed that there exists perceived risk.
Take-back (Armstrong et al. 2015)	The take-back concept provides discounts for product exchanges.	Closing the material loop in retailing does not occur frequently.
Eco-Friendly	Purchasing organic or eco-friendly products will satisfy the consumer mentally.	Several studies have identified a lack of style and high demand for sustainable clothing (Beard, 2008; Connell, 2010; Jägel et al. 2012, Diddi et al. 2019). In contrast, organic products will have a shorter life cycle.
Down-cycling Todeschini et al. (2020)	Manufacturers use mechanical defibration for stuffing mattresses, making toys, thermal insulators, and other products.	It is essential to remove trimmings and sort materials by color, type, and raw material. Mostly these products do not have discounts. Failure in sorting trims would damage machinery.
Redesign Armstrong et al. (2015)	Redesigning increases product longevity.	Sometimes redesign looks like patchwork. While changing the wardrobe user does not like the same shade of color and lacks sophistication.

MAIN FOCUS OF THE CHAPTER

Fashion-Conscious Consumer (FCC)

FCC has an outrageous demand for uncertainty about fashion products (T. M. Choi et al. 2014). Fast fashion (52 phases of “micro seasons per year”) is one of the prevailing trends which has led to an increasingly high level of post-consumer disposal. It also brings inexpensive garment variety from the runway to a retail store and opens up a new consumption line for FCCs. Consumers decide to invest money in fashionable products after considering their familiarity and standards in society. Extant literature reveals various parameters related to FCCs. As several scholars used price (O’Cass and Siahtiri 2013; Sung and Woo 2019; Bockholdt et al. 2020; Wang et al. 2020); status (O’Cass and Siahtiri 2013; Becker-Leifhold 2018; Bockholdt et al. 2020; Mrad et al. 2020; Wang et al. 2020); variety Seeking (Putrevu et al. 2003; Mehrjoo and Pasek 2014; Bockholdt et al. 2020; Mrad et al. 2020; Sebald and Jacob 2018, 2020); signaling (Bockholdt et al. 2020); attitude (Pentecost and Andrews 2010; Tajuddin et al. 2014; Baek and Oh 2021); environmental values, emotion (Djafarova and Bowes 2020; Baek and Oh 2021); green value (Baek and Oh 2021); hedonic value (Putrevu et al. 2003; Pentecost and Andrews 2010; Granot et al. 2010; Shephard et al. 2014; Stathopoulou and Balabanis 2016; Kaushik et al. 2020);

materialism (Putrevu et al. 2003; Becker-Leifhold 2018); pleasure (Putrevu et al. 2003; Djafarova and Bowes 2020); spending (Putrevu et al. 2003; Pentecost and Andrews 2010; Sebald and Jacob 2018; Mrad et al. 2020; Kim et al. 2020); subjective norms (Tajuddin et al. 2014; Sung and Woo 2019); perceived quality (O’Cass and Siahtiri 2013; Tajuddin et al. 2014); belief (Tajuddin et al. 2014), style (O’Cass and Siahtiri 2013; Mrad et al. 2020); desire for change (Sebald and Jacob 2018); and fashion consciousness (Ramkumar and Woo 2018; Sung and Woo 2019) motivates consumers during purchase. The hedonic factor is the main parameter that includes gratification, idea seeking, and role play influence compulsive shopping behavior (Horváth and Adigüzel, 2018). Materialism, social collaboration, and the desire to emulate western fashion are some factors that can drive purchasers to buy a western outfit or high-fashion dress. And these satisfy the psychological values of consumers that enticing rental services (Das and Jebarajakirthy, 2020). Several barriers prevent people from renting and swapping, including shortages of adolescent and outdated clothing, according to Lang and Joyner Armstrong (2018). However, responsible consumption and environmentally conscious behavior by Wagner et al. (2019) confirm that consumers are aware of sustainability and apparel manufacturing processes. The practice of repair and reuse would lead to increase product longevity (McCollough, 2012). Comparatively, renting offers an opportunity to sample many products, discard used ones, reuse textile products, and update the wardrobe frequently. The study finds that the rental market will provide more employment, where sales concepts are different, life cycles are longer with service, and these will meet different strata’s wants and needs. The authors found that the young consumers are fashion savvy who seek new and innovative styles (Sebald and Jacob, 2020). Further, researchers identified that gender also plays a key role during purchases. Thus, the researchers identified and extended the literature search on dominant factors that affect FCC’s purchasing intentions viz., gender, variety seeking, hedonic value, status pursuing, and high spending patterns resulting in landfills.

Gender

Apart from baby boomers, the mainstay of fashion is a female consumer who defines shopping as fun, digging for treasure, connecting with loved ones, and expressing themselves (Pentecost and Andrews, 2010). Similarly, they are more satisfied with social and status values when compared to male shoppers (Atulkar and Kesari, 2017). In contrast, slow fashion significantly influences male consumer behavior, including buying quality products, price sensitivities, habitual behavior, and brand loyalty (Sung and Woo, 2019). Fashion cycle timelines represent the rise and saturation level of a particular trend, according to Robertson (1967). Not all products will have to reach saturation levels. High-income people sometimes gravitate towards fashion subcultures such as gothic, punk, street fashion, bikers, and hippies. Therefore, researchers posit that fashion choice directly depends not only on gender but also on the educational level, which determines the purchasing intention among FCCs.

Variety Seeking

Variety seeking is a primary motivation for FCC (Sebald and Jacob, 2020). As a result, manufacturers create low-quality products quickly (Niu et al. 2019). Variety seeking upturns high consumption, and the disposition of clothing plays a significant role in gifting and sharing. Family members thus exchange their used products among friends and relatives, which strengthens their ties. Gifting and sharing provide not only functional satisfaction but also psychological satisfaction. Similarly, swapping and donating

provides a diverse array of products that will counter fast fashion. In research, FCCs did not encourage swapping, donating, gifting, or sharing options because they think it contradicts their unique personalities (Cruz-Cárdenas and del Val Núñez, 2016). When a retailer's product line does not have enough variety, consumers will turn to their competitors (Desai and Trivedi, 2014).

Hedonic Value

Price strategy determines whether consumers are hedonistic or utilitarian in their shopping behavior (J. Choi et al. 2020). Hedonistic shopping benefits are more prevalent in high-end fashion stores and utility-based shopping benefits than low-end fashion stores. In turn, customer experience is a significant antecedent to brand prestige (Stathopoulou and Balabanis, 2016). Utility-featured products attract the consumer's attention and influence their purchase intentions. To maximize sales and the benefits of online shopping, the marketer focused more on promoting utilitarian products than hedonic ones. Besides, they usually wear a variety of outfits reflecting their fashion-consciousness (Shang et al. 2020).

Status Pursuing

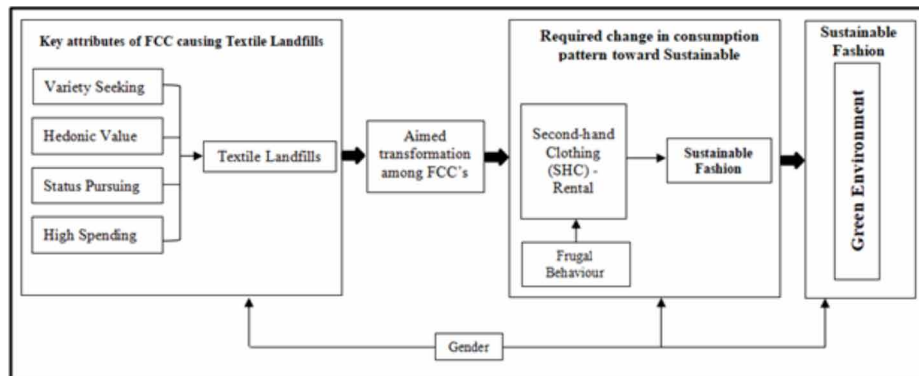
Historically, fashion leaders have emphasized conformity and interdependence. However, clothing can promote consistency by allowing them to adopt trends early. The theory of trickle-up, trickle-down, and trickle-across explains the adoption and movement of fashion goods. According to trickle-up theory, the lower class adopts new trends, and the upper class follows suit and vice-verse in trickle-down. As in trickle-over, adoptions move horizontally among social classes. Consumers identify that owning a product from a top brand values craftsmanship (material possession) and rarity (Becker et al. 2018) (Okonkwo, 2009; Das and Jebarajakirthy, 2020). Consumers seek recognition among reference groups to attain fame and prestige (Clark et al. 2007). Shopping for status symbols makes women happier, more confident, and feels better about being a part of society (Atulkar and Kesari, 2017).

High Spending Pattern

Fast fashion creates a culture of hyper-consumption because consumers are buying more clothing for a shorter period (Henninger et al. 2020). Mainly, early adopters and high strata consumers are notorious for spotting trending products. However, working-class consumers work hard until they consume a trendy product. Because of the cost factor, newly launched products remain out of reach for many low-income consumers (Wagner et al. 2019). Likewise, customer emotions experienced before and after entering a store could vary based on the ambiance and store type (Sooyun Kim et al. 2016).

To reduce post-textile consumption, **Figure.1 (Flow factors that influence sustainable fashion)** provides information about how to achieve a green and sustainable environment through renting. In particular, progress towards offering solutions for sustainability reflects on the consumer's shift to the green environment. By incorporating the FCCs behavioral intention and sustainable consumption factors (such as rental and frugal), researchers illustrated the conceptual framework model as shown in Figure.1.

Figure 1. Flow factors that influence sustainable fashion [Source: By researchers]



METHODOLOGY

To verify the FCCs buying intention, the researchers aimed to conduct a qualitative test. By using a qualitative approach, this research provides richer and deeper insights into consumers' experiences that are otherwise difficult to examine. In this study, interpretative or qualitative research methods were used to collect data, as they permitted a deeper understanding of a phenomenon from the perspective of the participants. Phenomenology examines the world through an interdisciplinary, comparative, and holistic perspective. Typically, the term "phenomenology" defines both the theoretical perspective and research methodology. The assumptions that guide a phenomenological study cause a researcher to view the world differently. The phenomenological study of experience determines meanings associated with one's experiences. According to (Manen, 1971), phenomenology is concerned with how people engage with reality in their everyday lives, and how their world is enriched by knowing as in-being. The goal of qualitative phenomenological research is to discover "what experiences are like". As a result, this approach emphasizes simple descriptions of experiences since these explanations capture what experiences are like (Williams, 2021). Goudling (2005) confirms that qualitative methodologies, such as phenomenology, have gained popularity in the area of consumer behavior. The purpose of phenomenological methods and instruments in academic consumer research is to shed light on the conscious experience of consumers with complex issues. According to the author's basic assumption, a person's life is a social construction whose experiences are interdependent and meaningful. A mixed-mode interviewing strategy, such as telephone interviews and semi-structured email interviews, allows access to reach potential participants who might otherwise be inaccessible. In the midst of a pandemic, email interviews generated high-quality data, especially when time, environment, or geography restricts investigation. Meho (2006) confirms that using emails, researchers can also reach out to multiple participants simultaneously regardless of distance or time zones. In addition, researchers only selected participants who had personal experience with fashion product buying. Researchers have collected data through email interviews, telephone interviews and have employed a purposive sampling approach with a sample size of twenty-one (N=21). Brief **profiles of participants** are provided in **Table.3**. Six males and seventeen females were identified as FCCs and informants for the interview. Over the diverse field of occupation and education level the study obtained different respondent's perspectives. Before the interview, the researchers informed the participants that their valuable experiences and comments will be published.

Table 3. Profile of participants

Interviewees (I)	Gender	Age Group	Occupation	Education Level
(I-1)Narain	Male	46-55	Head of Merchandising & Supply Chain	B.Com
(I-2)Gayathri	Female	36-45	Assistant Professor - Fashion Department	M.Tech - Textile/Fashion
(I-3)Nupur	Female	36-45	Homemaker	Masters of Fashion Management
(I-4)Prema	Female	36-45	Assistant Professor	PhD in Law
(I-5)Srividhya	Female	36-45	Entrepreneur	Post-graduation
(I-6)Gnanaswathika	Female	36-45	Teaching	Post-Doc
(I-7)Georgy	Male	26-35	Assistant Professor - Fashion Department	M.Des
(I-8)Kanchana	Female	26-35	Professor	Ph.D
(I-9)Deepika	Female	26-35	Professor	M.Des
(I-10)Sruthi	Female	18-25	Styling	Undergraduate
(I-11)Saranya	Female	18-25	Proprietor	B Tech Fashion Technology
(I-12)Kajal	Female	18-25	M.Des Student	Post graduation
(I-13)Trisha	Female	18-25	Fashion Designing	Undergraduate
(I-14)Yashika	Female	18-25	College student	B Tech Fashion Technology
(I-15)Anu	Female	18-25	Fashion Designer and Analyst	B Tech Fashion Technology
(I-16)Srijan	Male	18-25	Student	UG
(I-17)Pragya	Female	18-25	Student	Pharmacy
(I-18)Priyanga	Female	18-25	Merchandiser	B Tech Fashion Technology
(I-19)Sourabh	Male	18-25	Student	B Tech Fashion Technology
(I-20)Rahul	Male	18-25	Student	MBA
(I-21)Sourabh	Male	18-25	Retail Businessman	B Tech Fashion Technology

[Note- Out of 21 informants, I-4, I-9, I-14 – were regular users, I-20 was a celebration user and all other 17 informants are occasional users.]

The qualitative research addressed that most of the fashion consumers occasionally purchase the trendy items. Still, regular users are existing with more excitement. FCC as end-users their motivation and barriers have been discussed briefly in the following section.

FINDINGS

Our findings from the qualitative research suggest that there is an identified new element that also influences the FCCs buying intention and this is an outcome of the verification of the theoretical factors discussed in the study. The researchers found the requirement for qualitative interviews to ensure that findings are well represented. To confirm the emerging themes and interpretation, researchers framed confirmatory questions. After the interview process, the participants reviewed their findings to check the authenticity of their viewpoint. Besides the literature finding, the researchers identified key factors

such as gender, variety seeking, hedonic value, status pursuing, high spending, and in the same line emotion as the new parameter. Researchers directed all three consumer groups (regular, occasional, and celebration users) to evaluate the acceptance of renting and frugality. The research elicited drivers of and barriers to identify the factors influencing FCC's purchase and confirm the adoption of the consumption shifts. The study by Sebald and Jacob (2018) has found that specific factors, including adoption, the situation, and innovation-related factors, such as trust and uncertainty to determine a young consumer's attitudes. It is possible to study sustainable fashion by separating "positive drivers" and "negative barriers" that explain the potential facts of sustainable fashion. Table-4 (**Key influencing factors and their consequent themes represented as drivers and barriers**) provides key motivators, positive and negative consequences, and potential facts to the barriers. Researchers emerged with the themes such as selection of the style; attention-seeking, status value, cost factor (uncontrollable), and psychological value are the identified motivators. As for the negative barriers uniqueness, comfortable fit, expression of self, cost factor (controllable), and price consciousness emerged as a common theme for fashion consumer's buying intention.

Table 4. Key influencing factors and their consequent themes represented as drivers and barriers

Key Influencer	Consequences		
	Positive drivers towards sustainable fashion	Negative barriers towards sustainable fashion	Potential facts of barriers
Variety Seeking	Selection of the style: "A mix of style and comfort is what I seek. No fixed time...I purchase on and off." [I-3] "Being fashion conscious I have always opted for more variety which is unusual and unique. I feel if I invest in something it should be very different and not common. For me it doesn't have to be trendy it just has to be a very different style which the millennials are not following." [I-14]	Uniqueness: "I don't seek for more variety, I prefer my own styling." [I-21] "Yes, variety in fashion clothing is very important and it depends. Just a welcoming change. I add new fashion to my wardrobe, I don't update it all together." [I-16]	● Marketers and retailers can learn from Wu and Kao (2011) found that consumer interest in variety-seeking also depended on need. ● More than intrinsic motivation, S. Lee et al. (2020) found that consumers preferred extrinsic motivation to shape their subsequent response. ● From finding researchers found that to portray their uniqueness, the user differentiates themselves from others. For example, instead of approaching fashion brands, they go to customization designer boutiques. Similarly, they approach for variety on the need basis.
Hedonic Value	Attention Seeking: "... It gives a feeling that we are in line with what's happening around us. It helps me to build or create a unique style for Myself." [I-9] "It helps me express myself and be more confident about my approach towards anything. Any clothing can be fashion clothing according to individuals so it's based on individual preference and style. But I think having a good sense of style helps with feeling more confident and socializing better." [I-10] "I pay more attention to fashion clothing because I love to know that how clothing can change your whole appearance. It can totally change your personality by just wearing a piece of it. Fashion clothing is one of the most visible expressions of your social and personal identity. The way we dress can communicate to others how we portray ourselves in different social situations." [I-14]	Comfortable Fit: "I believe in a personal statement more than a fashion statement. The clothing should be comfortable, aesthetic, and well fitted." [I-5]	● Atulkar and Kesari (2017) discussed the different levels of shopping behavior and highlighted how retailers build customer loyalty by connecting emotionally (gratification) by reducing their daily stress levels. ● Researchers also identified the psychological barriers that arise because of consumer's fear of adopting new style variations and peer group opinion.

continues on following page

Table 4. Continued

Key Influencer	Consequences		
	Positive drivers towards sustainable fashion	Negative barriers towards sustainable fashion	Potential facts of barriers
Status Pursuing	Status Value: “It is surely a status symbol. It gives me confidence & there are factors such as how people are treated by their way of dressing. Professional outfits& looks will encourage us in all aspects.” [I-4] “Sometimes it does add to the status symbol. The positive factor is that you are considered to be updated with the current trends. The negative issue is that it doesn’t always suit everyone. And fashion obsession discourages the reuse, recycle concept and are not good for the environment” [I-5] “Clothing broadcasts one’s self-image to others and are an array of brands with different symbolic, including status. It shapes our perception and self-expression and also influences how we are treated by other people which in turn can impact our mental wellbeing.” [I-11] “Definitely, they are both positive and negative in this your clothing speaks who you are and where you are from !” [I-18]	Expression of self-identity: “Not entirely true but lots of fashionable clothing does entail brand value to it, ...” [I-10] “Not really, few brands do give a sense of luxury and comfort, and they do act as a status symbol, but I personally don’t fall for that usually. Fast fashion brands like H&M and Zara are at times used by people as a brand consciousness or status symbol to keep themselves updated with trends, but in the end, they just increase consumption.” [I-13] “... According to me clothes somewhat don’t define the status of a person. It’s just that whatever cloth makes you feel comfortable to wear it.” [I-17]	• Target marketing by brand serves as a motivating factor to attain better social standing through status consumption (Wang et al. 2020). • Similarly, the researchers pinpoint that ‘value for money’ integrates with the entire sector, and even because of overspending user feels guilt. Also, consumer mostly requires good fit and appearance to showcase their confidence.
High Spending	Cost factor (uncontrollable): “True they are expensive. For meetings and while traveling abroad.....” [I-4]	Cost factor (controllable): “Minimum can be the least amount of garment. But maximum can be in limit. For example, a partywear gown can maximum costs 1000-1500 by which everyone can be able to purchase in that much amount.” [I-18]	Lack of trust among fashion brands due to their fake product label, poor quality, and high cost.
Emotion [new factor]	Psychological value: “Unique simple elegant styles I prefer; I feel happy and comfortable when I wear the clothes that I like” [I-2] “.....I feel sometimes because some clothes are more than its price so I prefer to switch less costlier than that particular product.” [I-21]	Price Consciousness: “I feel good and confident but I don’t seek much. I do feel it’s costly” [I-19]	From the interview, the researcher found that user’s limited willingness and low confidence are the main barriers to reshape consumption.

Drivers Towards Sustainable Fashion

Gender

In contrast to their male counterparts, women’s preferences for assortment, social interaction, and enjoyment are unparalleled (Shephard et al. 2014). Based on theoretical underpinnings and literature review the qualitative research has identified that 100% of informants are females. According to the study, 81% of occasional, 14.3% regular, and 4.7% celebration were user’s preferred choices to buy fashion clothing. Interestingly, 95.5% of respondents will purchase and try currently launched apparel.

Variety Seeking – Selection of the Style

The authors H. S. Jung and Yoon (2012) observed that customer’s preference for variety had a significant impact on motivation. According to Bockholdt et al. (2020), fast fashion involves consumers buying trendy products and changing their wardrobes frequently. Researchers confirm that the need for variety,

product assortment, wardrobe updating, desire for change, obsession for new styles are the main factors that promote the variety-seeking behavior. Similarly, to match their current needs participants explained:

“I try to maintain a capsule wardrobe and invest in pieces which are classic and can be reused and styled multiple times. I do enjoy using a few trendy pieces but most of the time I invest in classic pieces. And I add and update garments every 2-3 months.” [I-12]

“Yes, I would like to have more variety of clothing. Whatever I am wearing, when I am confident everything seems fashionable & comfortable. I like to go with what’s trending. So I try to buy update my wardrobe very often.” [I-17]

Evidence from practice indicates that the respondents perceive variety-seeking as an advantage in their quest to find suitable products And thus create value.

Hedonic Value – Attention Seeking

The hedonic value determines the consumer’s attitude and perceptions more than utilitarian. According to Atulkar and Kesari (2017), customers need gratification to overcome negative thinking, negative mood, and negative feelings. In examining consumers’ approaches to pleasure, positive attitudes, and attention-seeking behaviors, findings show consumers are keen to explore content beyond their common search behavior and discover novel things. Such as:

“it’s all about the positive mindset and attitude it provides me.” [I-6]

“... to boost the confidence level and to show myself unique” [I-8]

Fashion shopping implies social embarrassment and a sense of importance (Sebald and Jacob, 2020). A brand’s image can affect customer perception and behavior, which includes loyalty and satisfaction (Sooyun Kim et al. 2016). Researchers found that consumers require intrinsic satisfaction, especially when they seek personal recognition and the interviewees explained:

“Yes, it feels like you on trend and updated, we do again to seek attention among the crowd.” [I-18]

“I pay more attention to make an impression and to express my personality.. Because I basically go for meeting so I prefer formal clothing to make an impression.” [I-21]

The statement implies that consumers derive hedonic value from experiencing a positive attitude and high level of confidence, especially as they strive to attract and impress others based on their personality. Customers with a hedonistic point of view love to shop for entertainment, exploration, and a gratification aspect that gives a sense of status and values. In this way, more than utility, hedonic values play a significant role in satisfying the customer’s needs, making them loyal to a brand for a long period of time, and promoting their return.

Status Pursuing – Status Value

High-profile consumer splurges money on luxury products or services to get pleasure (Stathopoulou and Balabanis, 2016); (Wang et al. 2020). Where brand prominence influences high-fashion, status-seeking people and not by core-product benefit (Amatulli et al. 2015). Likewise, Chan et al. (2015) also described that individual consumers differentiate their motivation according to their social class and income level. Low-strata consumers prefer pennies-on-the-dollar consumption, and high-strata go for conspicuous consumption, both of which manifest by the desire for a specific product or service. Trends of status-seeking have increased in recent years, focusing on interpersonal and intrapersonal influences, socio-psychological factors, and self-related factors. Throughout, emotion is the cause that connects the current state of affairs. The findings reveal that respondents are comparative and specific in revealing their personality and identity through their choice of selection. Informants expressed as:

“I basically feel that Elite society have the money and time to think of fashionable clothing while the others are still figuring out ways to get their basic clothing right.” [I-9]

“... Cleaner and better clothes shows class of life and one’s personality” [I-15]

“.... it’s described who you really are by clothes people can judge you like from which sector or industry you belong to. Whether you were old date or you like to go with the flow.” [I-20]

Researchers found low-status consumers require self-improving, and a high-status consumer seeks confirmation of identity in society. An element of addiction to prestige defines the social identity of the FCC consumer through the status connotation.

High Spending – Cost Factor (Controllable)

According to Henninger et al. (2020), sales will follow high-price tags to ensure that the new collection does not bore high-income consumers. Hence, high-strata consumers will make better purchasing decisions. As Bockholdt et al. (2020) described, prices of high-end products reflect high society, which is associated with urbanization and consumer status. Consumers who are price sensitive will choose products that are low cost, regardless of quality. However, a quality-oriented consumer will wait until the season ends to consume the expensive product, ultimately saving money while ensuring quality. Similarly, informers confirm:

“Rs.500-Rs.25000 will be the budget for Biba, Fab India, Aurelia, Solimo brands. If I like something I pick I and I verify the quality measure. So I rely on those if not I will drop it...” [I-6]

The findings revealed mixed results, and it is not surprising to researchers. To spend high costs, informants asserted to experience high quality and value for money options, but some brands lack their quality. People who are fashion conscious will either spend their substantial monthly salary on fashionable items or use a portion of their savings to purchase them.

Emotion- Psychological Value

Fashion brands update their products based on their customers' needs and to avoid boredom. The study found that emotion has a strong correlation that exists between variety-seeking behavior and interpersonal factors (Tian et al. 2018). Similarly, Sooyun Kim et al. (2016) mentioned that consumer perceptions of service quality and emotions influence their expectations.

"Trendy outfits were powerful. It's an expression, a form to define yourself and the way you feel by wearing trendy outfits. Since I mentioned above I am not more into trendy outfits but I do try them to feel good and to please myself and feel like I'm not behind the current trends. I feel purchasing clothes which make you comfortable, make you happy, and really define you is more important than purchasing fashionable clothing. Earlier when I found my love for fashion I never cared about being comfortable, for me, it was always about being fashionable and looking attractive and different. But as I evolved and understood myself I was never happy while wearing uncomfortable clothes which fit me but never made me happy." [I-14]

The product quality and product uncertainties emotional receptivity and situation signify the consumer's approach, which led to a positive attitude in behavior (Wu et al., 2020). Researchers found that passion connects with motivation, which they have the variables that reflect an individual's positive and negative emotions. A crucial element of making the consumer uncomfortable is that the product does not fit right and not delivering mental satisfaction. It is because of complex style variations and aesthetics.

SOLUTIONS FOR FASHION DEMAND-SEEKERS

Second-Hand Clothing (SHC) – Rental

Rental is the best option that is available through stores, online platforms, and even in mall brands, most of which offer subscription options. There are a few notable collaborative consumption platforms where clothes can rent. Some of them are, Rent the Runway, Gwnnie Bee, Bag Borrow or Steal, Le Tote, Curtsy, and Rent My Wardrobe. Even researchers found that among the benefits of SHC, a rental saves time and money, selection of desirable products, utility, and reduces the burden of ownership. Some users may not be interested in repeating the same style or keeping up with the latest trends (Park and Joyner Armstrong, 2019). Many fashion industries introduce clothing consumption by increasing the rental scheme for apparel products (Jørgensen and Jensen, 2012). To promote rental consumption, Zamani et al. (2017) believe that the availability of secondhand renting should be easily accessible. Surprisingly many respondents welcome the option of the rental by giving the following positive comments:

"It reduces the waste and it encourages/paves way for sustainable practices" [I-2]

"...We usually get bored using the same stuff and we are always in a mood to try out something new. Rental would be a great option in that case. We can try new styles often without wasting money.

Yes there is sustainable factor also associated with it." [I-9]

“Fashion renting helps as people will rent clothes once or twice instead of buying a product that they might never wear again.....because it lessens the amount of unnecessary purchase that one takes part in.” [I-10]

“Reduce consumerism, Cost effective, Reusable, Less wardrobe waste. It can reduce consumerism and can educate people about other alternatives to be in trend in fashion without really contributing to textile waste.” [I-12]

“...Wastage can be saved, cost of spending can be reduced, more trends can be carried on.” [I-13]

“rental fashion leads to responsible consumption. If a person needs to wear clothing for just once, they can rent the clothing they like which can be cost-friendly and at the same time they can wear it and give it back. 1.Cost- friendly; 2.Clothes can be used effectively if you don’t need to keep it forever. 3.Clothes won’t be kept un-used as it will be used by various number of people” [I-14]

“....less resources spent on production of new once. Renting allows you to feel the lavish lifestyle,save environment,experiencing the variety of clothing.” [I-18]

“It is helpful to lower class people. Its helpful to the person who wears cloth for only one time.” [I-20]

Responsible and frugal consumers will avoid spending money on special occasions, as they consume the products by renting. Renting second-hand clothing provides utility as well as hedonic benefits. Where in utility, they can save more and try more products, similarly in hedonic they can access the trendy products.

Recent developments in the rental business are centralization of the retailer, renter, and merger policies which can improve the brand value as well as ensures financial immunity in the fashion retail system. It reduces illegal renting and improves the ethical way of consuming sustainable fashion products (Yuan and Shen, 2019). Research by Lang & Zhang, (2019) identified that online renting maximizes the utilization of fashion goods, saves time, money, and the possibility to reduces clothing wastes. To engage in rental user experience, the brands could provide incentive programs and outreach activities to promote secondhand rental platforms. The current challenge for the renting platform is to encourage more participation of males. A study by Iran et al. (2019) identified that cultural differences also influence the likelihood of SHC purchase intention. Consumers have different strategies for what to rent and what to buy. Because of the environmental factor and the cost, not all consumers can afford it. Similarly, the study by Camacho-Otero et al. (2019) confirms that general factors will affect the rental behavior such as the economy, psychological, social, and cultural values. Discussion by respondents:

“Rental fashion might lead to responsible consumption. However, I feel it will cause more harm than good. Prone to infections and skin disease” [I-5]

“Hygiene is the main concern which leads to negativity. Don’t know how to give reason(hygiene will be a big question mark). I am against this” [I-8]

“Due to covid, there is this fear of infection which will eventually affect renting out.” [I-9]

“Customers may tamper with the clothing and ruin it which is the biggest issue when it comes to fashion renting.” [I-10]

“People might not be okay with the idea of wearing garment worn by other people on special occasions. Ill fitting. And rented pieces has to be taken care coz you have to return then back in good state” [I-12]

“Garments may not look new as compared to newly bought ones, Garments after hired by one should be properly cleaned up. Main factors include the garments’ fit, hygiene, variety and affordability” [I-15]

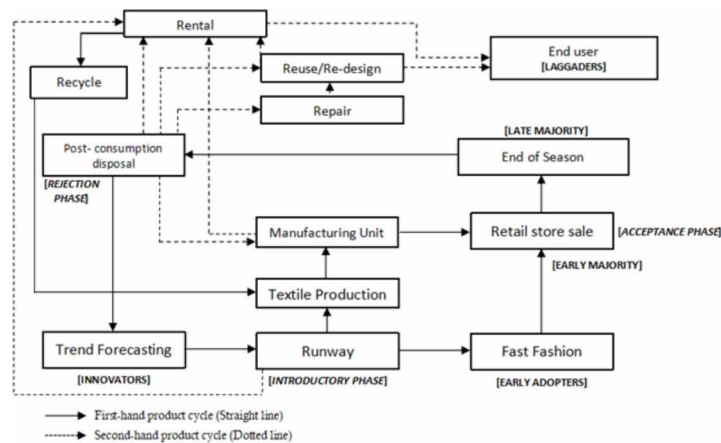
In general, researchers found that rental marketers have encountered skepticism and hygiene issues. The constant transportation and dry cleaning discharges are other environmental concerns. Nevertheless, technological advancement and sustainability concepts provide alternate options to improve the rental business. For example, London based store My wardrobe HQ provides high fashion designer, bridal, and luxury products through their rental platform. Providing sustainability concepts through dry cleaning using eco-friendly methods, packaging with biodegradable material, and storing under a temperature-controlled environment improves the trust among rental consumers. Therefore encouraging rental clothing can be a solution to bring down the fashion wastage through sustainability and balance the fashion urge.

Frugality

Frugality involves decision-making based on practical experience and understanding local institutions, constraints, and resources (Bhaduri et al. 2018). A study by von Janda et al. (2020) defines that product frugality refers to a set of characteristics of a product that appeal only to consumer groups who value low-cost products that are simple and reasonable quality, at the same time as being sustainable. Coping with the current era, Albert (2019) found that frugal innovation promotes sustainable growth. The service aims to reduce raw material resources, services, technologies, management methods, and organizational approaches. The path to creating a frugal innovation can take many forms, including reshaping, re-engineering, redesigning, changing, or shifting the consumption model. A large group of people widely accepted the frugality concept that triggers sustainability. It includes consumers in BOP (Base of the Pyramid), middle class, price-sensitive, and resource-constrained segments.

Compare to weak ties, frugal consumers rely on their strong ties. Using the same strategy, the researchers investigated the fashion industry, where frugal consumers rent the product rather than buy it (Mark Lee, 2016). Contemporary marketing strategy by Asakawa et al. (2019) addressed that the companies stripped out features and reduced the cost of innovation from advanced economies. As a result, it will bring down the price to a point where poor consumers could afford them. However, Hossain et al. (2016) confirm that age and gender also have a significant relationship with frugality. Even based on the location, the study by Tunca and Anselmsson (2019) found that shopping in town center consumers corresponds with higher expenditures and status consumption when compared to malls and online shopping. In addition, Kurt et al. (2018) recognize that people with religiosity have a direct relationship with frugality because of more beliefs and values. According to Pan et al. (2019), personality traits state that “hyperopic consumer requires the motivation to spend, where frugality engages and holds the motivation to save”. Consumers with a low financial budget are late adopters or laggards as shown in Figure.3 (Todd and Lawson, 2003). Informants noted that passion for fashion and unveiled their consistent identity and provided an emotional bond.

Figure 2. Process flow of the sustainable fashion in the closed-loop system [Source: By researchers]



“Yes I will opt rental, when cost and design factors meet my requirement” [I-2]

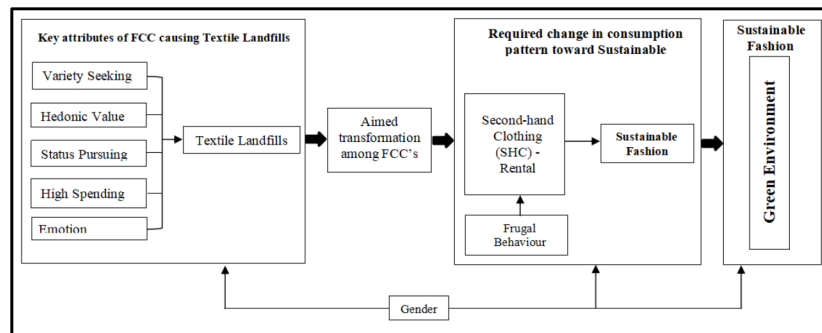
“I don’t feel fashion clothing is costly it depends on an individual’s way of buying clothes. Now-a-days there are various online sites and clothing pages on Instagram(social media platform)which sells rental, thrifted or pre-loved clothes and people are actually buying it which are unique and stylish clothes at a very affordable rate. But some people likes to buy costly clothes because they feel that’ what defines them and make them fashion so it’s really depends on the individual’s way of purchasing.” [I-14]

Innovative products and services with frugal innovation are already available on the market by gaining both sales and profits (Rosca et al. 2017). It is necessary for the responsible consumer and Boucher (2017) communicate that consumers from diverse groups should also adopt and encourage a frugal attitude in society. Researchers found that rental and retailer tied up their services with an exclusive promotion of subscription rental starting from plus-size clothing. First-hand and second-hand flow has been discussed in detail. Researchers identified the maximum utilization way to extend the life cycle of a product through rental and finally end with recycling. To provide deep insight researchers illustrate the maximum utilization way to extend the life cycle of a product through rental and finally end with recycling, as shown in **Figure.2 (Process flow of the sustainable fashion in closed-loop system)**. Todd and Lawson (2003) also figured out that consumers with a low financial budget are late adopters or laggards as showed in **Figure.2**. During the introduction phase, the products will have a fresh look and have a limited supply. The emerged trend might popularize because of fashion leaders, hence during the acceptance phases, high-fashion brands and apparel units will manufacture identical products to control the fashion thrives among middle class/ working people. Finally, in the rejection phase, the product style, pattern, or color will be old-fashioned. So, retailers will push the outdated garments into local stores, factory outlets and thrift stores, where low-income people and the needy can afford them (Robertson, 1967).

Based on the findings, researchers have re-framed the conceptual model **Figure.3 (Flow factors that influence fashion consumer’s consumption into responsible consumption)** as the primary step for the future direction. Here the researchers state the different factors that influence the FCC and results in textile landfills. Secondly, they examined the alternative option through rental service and frugal behavior to reduce the textile landfills. Finally, the study addresses the green environment through

consumer shift to responsible consumption. The purpose of the study is to provide an extended proof of the concept constructed in this study and to encourage other experts to do extensive research in areas like rental and frugality.

Figure 3. Flow factors that influence fashion consumer's consumption into responsible consumption [Source: By researchers]



LIMITATION AND FUTURE RESEARCH DIRECTIONS

Researchers acknowledge that they have focused on one country only, so their conclusions do not apply to another country or context other than India. It is because environmental awareness and responsible consumption are higher in developed countries. However, the study looked at only rental-purchase intention rather than purchasing behavior. To prove the correlation that exists between intention and behavior, researchers aim to focus on rental purchasing behavior. Future research can examine how education affects rental awareness to make more inferences. That creates a better understanding of rental purchasing behavior among FCCs. In addition, different consumption modes, such as regular, occasion, and celebration rental users, can also be studied. The current study used semi-structured interviews to gather consumer buying experiences and to analyze their relevance to the theoretical framework. Researchers will use structural equation modeling to test hypotheses in future studies, which may produce more authentic results.

CONCLUSION

Sustainability is the marketing tactic now, with some brands being ethical and others not. Hence, rental and retailer tied up their services with an exclusive promotion of subscription rental starting from plus-size clothing. The study also creates an urge for frugal behavior in the consumption pattern of FCC and other end-users to achieve a sustainable green environment. Researchers expect that technology innovation will soon help the renting fashion consumer behavior and educate consumers about up-cycling technology imperative toward sustainability. As stated earlier, rental fashion clothing consumption will provide sustainable fashion practices that will reduce textile criticism. Currently, Made-to-Rent is becoming quite famous in developing countries, especially in India. The Made-to-Rent, generally designed and made

especially for rental purposes. There is a target market for special occasion wear such as pre-wedding, wedding, party wear, maternity wear, and kids' clothes with trendy designs. Moreover, in this study, researchers have examined the factors that influence rental buying intention among FCCs. The empirical finding confirms that gender, variety seeking, status pursuing, and high spending influence the FCCs. In addition, qualitative research carried out concludes that emotion also motivates rental purchasing. Researchers emphasize the need for reshaping fashion-conscious consumption into responsible consumption by utilizing rental landscapes and frugal behavior.

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KEY TERMS AND DEFINITIONS

Fashion-Conscious Consumer (FCC): FCC’s are identified as fashion adopters, namely innovators, early adopters, early majorities, late majorities and laggards.

Frugality: The quality of being economical with money (during purchasing fashion goods).

Post-Consumer Textile Disposal: Clothing landfills created by FCC’s generally worn-out for a trend. Sometimes the clothes will be used only for a short duration which spoils the life cycle of the product and generates waste.

Rental Clothing: A strategic partnership with multiple designers and agencies provides the audience with access to the latest outfits and accessories through service with temporary ownership.

Second-Hand Clothing (SHC): An alternate means of consumption such as rental, swapping, repair, reuse, recycle, borrowing, mending, gifting, up-cycling, fair-trade, eco-friendly, and donating.

Sustainability: Development meets the need for future generation and aid by a possible solution.

Technological Innovation: Modes of platform through online, offline or multichannel distribution channels to provide easy access for the manufacturers and to reduce the supply chain risk.

Chapter 16

Organizational Learning Capability for Dynamic Resilience: A Strategic Analysis

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ABSTRACT

The purpose of this study is to analyze the strategic organizational learning approach to dynamic resilient capabilities. A scoping review of the theoretical and empirical literature on organizational dynamic resilience capability reveals gaps to be addressed to improve the conceptualization. Under the assumption of some attributes and properties, it is viable to study the organizational resilience learning process leading to the analysis of the organizational resilience strategies. Resilience is addressed through turnaround and dynamic capabilities. Organizational resilience is critical to possessing dynamic capabilities attracting new resources, design strategies, and learning to overcome rigidity and regain stability.

INTRODUCTION

Organizations are complex and dynamic systems continuously changing (Norris et al., 2008; Tyler & Moench, 2012; Young, 2010). Resilience is the organizational function of the overall awareness, management of vulnerabilities, and adaptive capacity in a complex, uncertain, dynamic, and interconnected environment. Resilience is shaped by an adaptive system based on multilevel dynamics interaction aiming to change (Masten, 2007: 926) which in turn resists increasing vulnerability and enhances resilience (Walker & Salt, 2012: 24).

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Organizational resilience is related to change phenomena such as ecological unexpected and disruptive events and to environmental characteristics such as complexity, uncertainty, turbulence, dynamic, etc. Resilience organizations develop the ability to be dynamic and stable to continue operations after any major mishap (Woods & Hollnagel, 2006).

Organizational resilience is a function of the situation awareness, management of vulnerabilities, adaptive capacity of an organization in a complex, uncertain, dynamic, and interdependent environment. The economic, social, political, and cultural organizational environment are being considered as dynamic trait that may enhance organizational resilience.

A scoping review of the literature on organizational resilience reveals gaps to be addressed to improve the conceptualization, often presented as a normative, and the dynamic adaptation in emergent patterns of the systemic interactions. One school promotes the actions to cope with turbulences and the other fosters the dynamic ability to develop new capabilities to monitor changes and take actions to mitigate environmental challenges.

Organizational resilience frameworks align to build a system adaptation based on dynamic capabilities constructs (Limnios et al., 2014). The contribution of other disciplines to the resilience conceptualization is critical to understand the dynamics or organizational resilience capabilities related to the issues where there are gaps of information, such as in areas of the role of organizational knowledge, culture, structure, determinants of the resilience process, preparation for unexpected events, abilities to deal with threatening events at different levels of analysis.

Research on organizational resilience has been undertaken in high-reliability organizations operating in uncertain, complex, and dynamic environments where errors may lead to catastrophic consequences (Bigley & Roberts, 2001; Weick & Roberts, 1993; Weick & Sutcliffe, 2001; Weick et al., 2005). Resilience offers different thinking to contribute to the theoretical debates based on resource-based and dynamic capabilities. Theory building of organizational development is focusing on heuristic based dynamic capabilities under strategic and resource collapse conditions (McGrath, 1999; Mellahi & Wilkinson, 2004; Probst & Raisch, 2005; Sheppard & Chowdhury, 2005).

Economic theories assert that organizations aim to efficient economy balanced by turnarounds and dynamic capabilities (Barker & Duhaime, 1997; Morrow, Sirmon, Hitt, & Holcomb, 2007; Shein, 2011) and dynamic capabilities (Helfat et al., 2007; Teece, 2007; Zahra, Sapienza, & Davidsson, 2006) and the ability of organizations to endure, recover and adapt from distress.

The concept of resilience is complex and dynamic. Organizational resilience includes several attributes and elements (Gibson & Tarrant, 2010). Organizational resilience is essentially a dynamic capability used to manage unstable organizational systems to develop reliable functions (Weick & Sutcliffe, 2007). Organizational resilience is dynamic and incremental (Alexiou, 2014; Kamalahmadi & Parast, 2016; Ortiz-de-Mandojana & Bansal, 2015).

The study begins with the conceptualization of the dynamic resilient capability leading to consider the attributes and properties that are relevant in the organizational resilience learning process. Finally, it is analyzed the organizational resilience strategy.

CONCEPTUALIZATION OF THE DYNAMIC RESILIENT CAPABILITY

Resilience is a dynamic concept and evolves over time from fragile to antifragile (Taleb, 2012). The notion of organizational resilience is related to the concept of dynamic capabilities. The conceptual and

empirical study of organizational resilience provide evidence of the dual change mechanism of dynamic capabilities construct used as a framework to reconfigure existent routines and resources, creating opportunities through alliances and entrepreneurial actions (Peteraf et al., 2013, Zahra, Sapienza, & Davidsson, 2006, Alvarez & Barney, 2007; Barreto, 2012).

To build a conceptualization of organizational resilience it is necessary to clarify and use some assumptions to underlie different orientations to enable the building and development of dynamic capabilities. The assumptions of resilience can be accommodated in the dynamic capabilities framework as the platform to build the foundations for the conceptualization of organizational resilience.

Organizational resilience is the ability to strengthen firms by harnessing experience to become adaptive, robust, agile, and competitive in increasingly ever-changing, dynamic, and complex environment and embracing opportunities. Organizational resilience is the dynamic capability of exploitative adaptations or engineering resilience, explorative transformation, or ecological resilience to maintain performance and longevity (Eltantawy, 2016). Ecological resilience requires the anticipation of risks, reduction of environmental degradation, and organizational preparedness of ecosystem dynamics dependent upon natural resources (Whiteman and Cooper 2011). The engineering resilience akin to self-restoring equilibrium dynamics in mainstream economics. The conceptualization of capability performance provides insights into the complex dynamics to rebuild opportunities and development.

Organizational resilience is a strategic ability to adapt, integrate and reconfigure internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment resulting from a set of dynamic capabilities (Limnios *et al.* 2014). A dynamic capabilities perspective of organizational resilience provides more understanding of adaptive conditions of adversity with the purpose.

Organizational resilience is the ability to anticipate, cope effectively, learn from these events from trends and potential threats with unexpected events to produce a dynamic capability directed towards organizational change (Duchek, 2014). Organizational resilience is the ability to continually evolve and thrive over time in the face of adverse and hostile circumstances which naturally arise in dynamic environments (Demmer *et al.* 2011).

The impact of resilience on dynamic capabilities of the organization is well known. Organizational resilience encourages recovery and growth from adversity that may involve adopting an entrepreneurial mindset and develops dynamic capabilities that turns adverse experiences into opportunities for strategic renewal. Organizations build dynamic capabilities in resilience to design strategic opportunities out of adversity.

Organizational resilience is the ability to continually evolve and thrive in adverse and hostile circumstances arising in dynamics environments (Demmer *et al.* 2011). Organizational resilience is a trait to thrive in a dynamic and volatile business environment (Chan, 2011). Organizational resilience is concerned with the adaptation process to challenge complex environmental conditions through the capability dynamic alignment aimed to avoid a path dependency approach and rebuild efficient performance (Lengnick-Hall & Beck, 2009; Sydow, Schreyögg & Koch, 2009; Eisenhardt et al., 2010). Organizational resilience is the ability and the dynamic capability of an organization to resist, absorb, cope, recover, and adapt to the altered environment following a disaster (Kahan, Allen, George, & Thompson, 2009; McManus, Seville, Vargo, & Brunson, 2008).

Resilience is conceptualized as a dynamic process of ongoing and reciprocal transactions between the organizations and the environment (Vanderbilt-Adrianne & Shaw, 2008: 31). Organizational resilience is the intrinsic ability of a system to maintain a dynamic stable state and continue operations after a

mishap in the presence of a continuous stress (Woods and Hollnagel, 2006). Organizational resilience is the ability to thrive in a dynamic environment (Cho *et al.* 2006).

Luthar *et al.* (2000) defines resilience as the dynamic processes encompassing positive adaptation in a context of significant adversity (p. 543) and adapting to sudden changes. The resilience process-oriented is a dynamic nature interaction between the organization and the environment (Williams *et al.* 2017, p. 20) responding before, during and after to adverse events (Linnenluecke *et al.* 2012; Alliger *et al.* 2015; Williams *et al.* 2017).

Organizational resilience is the dynamic organizational capability to facilitate organizational change through the development of abilities to anticipate, cope and learn from potential threats, unexpected events, and trends. Resilience is conceptualized as a normative construct the system of capabilities for dynamics adaptive process and outcomes. The sociological resilience of organizational system is more dynamic and determined by the adaptation process undergoing during the adaptive cycle.

Dynamic and operating capabilities and division of routines in the context of organizational resilience contributes to build adaptations through segmented actions at several levels. From this perspective, a reliable action of resilience beyond the evolution and revolution phases addressing sequences of crisis for growth and maturity functioning of the organization (Greiner, 1972). The resilience capability perspective incorporates a hierarchy of activities that yield competitive advantages while reconfiguring responses as dynamic capabilities to environmental changes (Ambrosini *et al.*, 2009; Danneels, 2012; Hine, Parker, Pregelj, & Verreynne, 2014).

PROPERTIES AND ATTRIBUTES

Resilience is conceptualized as a generic quality linked to dynamic capabilities. Organizational resilience as an emergent system is a dynamic property that integrates the processes of adaptation and integration processes in inter-systemic in nature (Clement and Rivera 2017: 30). The dynamic nature of organizational resilience provides the inference of causality in a longitudinal evaluation that contributes to organizational renewal based on employee work-role performance (Gover & Duxbury, 2018). Organizational resilience uses the interactions of assets, attributes and routines that recognize the effects of risk over time and their emerge in unexpected ways (Vanderbilt-Adriance & Shaw, 2008: 30-31). Organizational resilience is a dynamic capacity that develops over time (Wildavsky, 1988)

As a dynamical property, organizational resilience requires new core properties of the system's capacity to be ready to respond by anticipating and synchronizing events and proactively learn (Hollnagel and Woods 2017). Resilience can be desirable and non-desirable depending on the proactive development and adaptation of dynamic capabilities (Limnios *et al.* 2014). The socio-ecological systems have derived in the resilience (Folke, 2006) referring to a dynamic capacity of adaptation and to the system's capacity to absorb the internal and external disruption and perturbations and return to a stable state.

Organizational resilience analysis as a dynamic property requires building inter and transdisciplinary bridges aimed to integrate processes of both organizational adaptation and transformation of the operative ecosystems and dependent networks to build and enhance resilience aligned to more holistic sustainable development goals (Folke *et al.*, 2010).

Organizational resiliency is a relevant attribute when dealing during crisis through preparation, dynamic and flexible planning and proactive behavior built with specific training on psychological capital of personnel. Risk readiness is a concept developed in a dynamic model associated with resil-

ience (Cook and Rasmussen 2005). The concept of resilience links to the change from a static to more dynamic paradigm of safety management. Organizational resilience in safety of complex systems copes with highly risky variability (Bergström et al., 2015), although safety is a dynamic non-event and the ability of dealing with shocks and unexpected events (Weick and Sutcliffe 2001).

It remains unclear how organizations may achieve resilience (Boin and van Eeten, 2013; Duit, 2016) and their antecedents, relationships, interactions and drivers between the different stages in an explicit conceptual framework for a comprehensive conceptual and dynamics understanding (Lynham, 2002, p. 232; Meredith, 1993; Jabareen, 2009; Burnard and Bhamra, 2011). Some principles of organizational resilience are the learning, flexibility, and adaptability.

Organizational resilience is an intrinsic attribute to the ethos of the organization and provides a shared common platform adapted to the dynamic complexity of the organizational environment, providing confidence to take measured risks, and responding appropriately. To ensure organizational resilience is important to develop a dynamic leadership, understanding the needs of all the stakeholders involved and have well-trained staff.

The different nature of organizational resilience capabilities is based on the antecedents either a heuristics-based dynamic capability, or the adoption of routine actions in the absence of survival conditions. An organizational resilience capability loop can be based on heuristic dynamic capabilities. Heuristics in organizational resilience are linked with dynamic capabilities (Bingham & Eisenhardt, 2011). Heuristics-based dynamic capabilities must be pertinent to some contextual circumstances while others may require routine-based capabilities to provide the organizational resilience. Organizations tend to use more heuristic-based resilience dynamic capabilities in scenarios of major resource loss and uncertainty.

Dynamic organizational resilience capabilities resilience focuses on the shift from the capability hierarchy perspective to heuristics-based capabilities (Barreto, 2010; Hine et al., 2014). The heuristics insight provides a decision structure to assess the organizational resilience preserving behavioral flexibility to deal with the collapse in any dynamic nature of a specific context. Organizational resilience can be assessed based on the functions of monitoring, responding, anticipating, and learning (Apneseth *et al.* 2013) and on the ability to respond, monitor, anticipate and learn (Hollnagel 2010).

According to the resilience orientations framework of Teece (2007) the reintegration, homeostasis, and loss have different dynamic capabilities for sensing, seizing, and transforming. Heuristic processes with recovery and growth from adversity can be invoked to build a dynamic resilience building with the support or sensing, seizing, and transforming processes in response to specific threats. A comprehensive heuristic dynamic capability model characterizes threats for the types of strategic, operating and resource disorganization.

Each type of disorganizations requires deployment of different heuristic resilience dynamic capability at different times and across the processes of sensing, seizing, and transforming. The result of these processes differs in resilience outcomes. The heuristics-based dynamic capabilities (Bingham et al., 2007) and the operating capabilities built on routines (Helfat et al., 2007) for organizational resilience under conditions of sustainability and competitive advantage (Peteraf, di Stefano & Verona, 2013).

An elaborate dynamic organizational resilience capability supported by a portfolio of heuristics (Gigerenzer & Brighton, 2009) the organization is challenged to deploy sensing, seizing and transformation. The heuristic-based dynamic organizational resilience capability portfolio is more critical for an unstable organization more than resources and routines. Under stable conditions of resource management and strategy, the heuristic-based dynamic capabilities can configure and re-configure the operating

routing-based and entrepreneurial capabilities (Hine, Parker, Pregelj, & Verreyne, 2014; Teece, 2012; Teece et al., 1997).

Resilience is an emergent property of complex systems related to the capacity of a system to reorganize after internal or external disturbances (Folke, 2006) and adapt to organizational settings through the emergence of new behavioral patterns, learning and changes in the structure of social interactions.

THEORETICAL AND EMPIRICAL LITERATURE REVIEW

A systematic theoretical foundation of organizational research has not been formed and developed until now. The organizational dynamic resilience perspective indicates the growing of resilience to maintain a positive position to face crisis. The microfoundations of the dynamic capabilities are explored by Tabaklar, Sorkun, Yurt, and Yu, (2021) and propose a social innovation framework in highly dynamic settings to build and reconfigure capabilities that may apply in organizational resilience.

Because organizational resilience is an effective means to achieve sustainable growth in crisis situations, Chen, Liu, and Zhou, F. (2021), using the mapping and literature analysis methods, have developed an organizational resilience framework for research. Global health actors can harness the opportunities offered by pathways of change, according to Held, Kickbusch, McNally, Piselli, Told, (2019), one of which is the degree of organizational learning and active feedback loops between organizational epistemic and practice communities aimed to enhance a polycentric system of governance and the political leadership for governance innovation. An organizational dynamic resilience perspective from the capability perspective considers that resilience is a dynamic developmental and progressive process-based of organizations in improvisational response to crisis and involving identity management (Ishak, and Williams, 2018; McCarthy, Collard, and Johnson, 2017).

A theoretical organizational learning frame has been developed by Willems, Busscher, van den Brink, and Arts, (2018) to analyze the anticipation of change in agencies and the empirical research implications into the practice of waterway renewal in practice in which change is pragmatic. The dynamic capability perspective of organizational resilience research is based on evolutionary economics, the resource base view, and capabilities (Davies, and Brady, 2016).

Flexible and changing organizations only can thrive to keep aligned in a volatile environment enhancing the ability to be able to respond to crisis and supported by organizational learning, the organization can develop the dynamic resilient capacities to promote change (Duchek, 2014). Organizational learning theory is incorporated into organizational resilience by Umoh et al. (2014) and developed a measurement scale based on McManus *et al.*, (2008) to include planning capacity, organizational learning capacity, dynamic capacity, and adaptive capacity. Only flexible, changing, and agile organizations can thrive in dynamic and evolving environments (Lengnick-Hall *et al.* 2011)

One of the promised perspectives is the theory of organizational resilience based on the dynamic capability theory considered as the ability of firms to perceive threats and opportunities, make decisions, solve problems, and change their resource bases (Barreto, 2010). Internalized the dynamic capability as the organizational resilience based on the safety audit of resilience engineering by Huber *et al.* (2009), the results of their research show that the organizational dynamic capability determined the safety performance.

Organizational resilience is the function of the ability of adaptation to the dynamic environment of the organization (Wicker, Filo, and Cuskelly, 2013, Mcmanus, Seville, Vargo, and Brunsdon, 2008).

Dynamic capabilities evolve with the changing environment where learning plays an important role (Zollo & Winter, 2002). The organizational dynamic capability was proposed by Teece *et al.* (1997) as the ability of the firm to establish and reconfigure its internal and external resources to gain competitive advantage in the turbulent and changing environment.

ORGANIZATIONAL RESILIENCE LEARNING PROCESS

The resilience is the combination of anticipating, learning, responding, and monitoring sociotechnical systems comply with the variability of activities, the nature of work and the nonlinear activities (Patriarca, Di Gravio, Constantino, Falegnami, Bilotta, 2017). In the broad social sciences, resilience is the anticipated effort to predict and prevent potential dangers and the capacity to cope after the dangers manifest, learning to bounce back (Wildavsky, 1988: 61).

Organizational resilience is the ability to handle and respond threats and hazards to unexpected trouble, using pre-existing and pre-planned capabilities, by learning, changing, and developing new capabilities (Dalgaard-Nielson, 2017). Organizational resilience is the capacity and ability to respond positively, adaptively for adaptation, for learning, withstand in disruptive change and external shocks (Stewart and O'Donnell, 2007). The organization can evaluate its resilience and learn after the event in terms of the resources employed and the capacity to absorb the impact of the climate change and extreme weather event and recover. Organizational learning after these events can develop new resilience and adaptation capacities (March *et al.*, 2003)

Organizational resilience is critical in a volatile environment and adversity where some organizations survive, others thrive, and others perish. Organizations must manage their specific resources, structures, capabilities, etc. Some building blocks affect anticipating, coping with and adapting and learning from adversity, entailing leadership, environmental scanning, initiating change processes and resilience planning in the complexity and uncertainty of the world (Vakilzadeh and Haase, 2020). Leadership enhances organizational resilience in times of change as capacity to respond adaptively to disruptive change, and implies the ability to withstand shocks and the capacity for adaptation and learning (Stewart and O'Donnell 2007)

Organizational Resilience is about learning to bounce back (Wildavsky, 1988) and the ability to bounce forward (Manyena, O'Brien, O'Keefe, and Rose, 2011) to grow and prosper (Reich, 2006) through the mechanisms of performance optimization and adaptive innovation. Organizational resilience is the response to a crisis and learning over time how to face with new challenges (Sutcliffe & Vogus, 2003). Organizational resilience is linked to overcoming the crisis and emerge strengthened successful to growth (Freeman *et al.* 2004, Sutcliffe and Vogus 2003; Teo *et al.* 2017) and learning to develop new capabilities and the ability to thrive despite diversity (Dalgaard-Nielsen 2017; Stewart and O'Donnell 2007; Teo *et al.* 2017; Wildavsky, 1988; Williams *et al.* 2017; Chan 2011; Cho *et al.* 2006).

Organizational resilience comprises adaptation implying long-term learning (Madni & Jackson, 2009). Long-term adaptation of anticipatory adjustments and learning to respond to the impacts on ecological discontinuities from climate vulnerabilities and weather extremes should be considered in the design and implementation of resilience strategies. Resilience is a learning process of protective actions to build resilience against perceived vulnerabilities over time that needs to be explicit for organizations (Hale & Heijer, 2006; Masten, 2001).

The social-ecological perspective of resilience incorporates learning, adaptation and transformation beyond constancy and recovery. The concept of resilience has gradually moved from an assumption of single equilibrium to multiple equilibrium in socio-ecological systems with the increasing recognition of complexity, uncertainty, variation and learning in living systems (Folke 2006). Socioecology systems resilience can be supported by heuristics to build anticipation, recovery, learning and adaptation (Walker et al., 2006; Madni & Jackson, 2009).

Organizational resilience may result of learning from disasters (Roberts, Madsen, & Desai, 2005) and from unexpected events. Resilience must respond to what is happening by the identification, anticipation and learning from the critical problems (Hollnagel, 2009).

Organizational resilience is an iterative practice of learning the dynamic capabilities to reconfigure resources and activities for strategic opportunities by enhancing change and unintended consequences (Teece, 2007: 1343). Unlearning facilitates organizational resilience (Morais-Storz and Nguyen 2017). The transformational perspective of organizational resilience capacity is tied to a dynamic process embedded in the individuals' knowledge, skills, and abilities (King et al., 2016; Kuntz et al., 2017). Organizational resilience relates to the redundancy of humans and equipment (Azadeh et al. 2016) that promotes the robustness of the system and implies learning and adaptive changes.

Resilience capabilities can be state-like open to development through training programs or on-the-job training in dynamic capability to cope and bounce back with significant change from risk and adversities. Also, organizational resilience can be trait-like stable of the individual, team, group, and organization (Luthans 2002; Coutu 2002). In a dialectic process, resilience is influenced by different levels considered as the capability of individuals, groups, and organizations to cope in dynamic context (Cho et al. 2006).

A cultural learning process of organizational resilience enables the abilities and capabilities needed by the organizations to respond properly to deal with incidents and disturbances. Some cultural factors identified include the organizational learning and learning from past experiences. Organizational culture, learning from past experiences and professional servant leadership are some of the factors that affect organizational resilience (Erol *et al.* 2010; and Boin and McConnell 2007).

Organizational learning from incidents experience at facing external environmental, socio ecosystems, spatial, societal, sectoral, etc., crises events, has an influence on the adoption of responses and other resilience activities (Toft and Reynolds, 1997) through isomorphic learning from events of other organizations with improvements and planning (Deverell, 2009; Weick and Sutcliffe, 2003). Cross-sectional learning is implicit in organizational resilience to avoid failure and cope with crisis (Crichton et al. 2009).

Nevertheless, large organizations have organizational resilience rooted in both locations and relationships, rather than resilience formalization and isomorphic learning from other vicinities and neighborhoods characterized by their strategic resilience planning formalization activities, resources, roles, and agreements to recover from disruptive events.

The experience of mild and strong dysfunctional events and disruptions may be used for learning organizational resilience reintegration with cognitive and behavioral solutions and predominant heuristic-based responses (March 1991). Seizing from reintegration resilience is learning from threats and become open to large scale organizational change as part of the organizational growth in response to uncertainty and adversity. The resilience learning capability enable organizational survival and growth to exploit advantages (McGrath, 2013). The resilience reintegration orientation engages in a deep learning process against threats.

Organizational resilience can be increased to achieve robustness by learning from previous failures. Learning from failures facilitates organizational resilience (Crichton et al. 2009). The improvement of organizational resilience learning from multiple past failures in the network and disaster recovery, quickly identify, locate, and assess the grid resilience elements of previous errors for critical missions aimed to correct and improve processes, optimize recovery efforts, and mitigate the impacts (Chen et al., 2014). Personal networks and norms of generalized reciprocity for organizational development can be identified in the context of resilience, social learning, community recovery of disasters (Chamlee-Wright, 2010, p.21)

Group resilience develops the capacity of learning through the imperfections and failures with the combination of accountability and psychological safety as critical ingredients (Edmonson 2007). Communities approach resilience with other associated concepts and terms seeking to improve it by learning from demonstration to achieve robust designs, high-reliability, and complex adaptive systems.

Resilience stages depend on the prior organizational knowledge former crisis, the environment, actions, etc., and influence learning and knowledge base to be used in anticipation as learning for crisis, in coping by learning as crisis and adaptation as learning from crisis (Smith and Elliott 2007). Action priority can build organizational resilience through the access to information and learning. Action learning facilitates organizational learning and change leading to organizational resilience as the ability to recover unexpected exogenous environmental change (O'Hara et al. 2007).

The organizational knowledge base is enhanced by learning for and through rare unexpected events in close relationship between the anticipation and coping phases of organizational resilience (Christianson et al. 2009) and also illustrated by the feedback loop between the anticipation and adaptation. Outcomes of organizational learning at individual level facilitate change and resilience (O'Hara et al. 2007).

Organizational resilience dynamic capabilities are not concreted things or objects and do not have any boundaries, rather is dynamic consisting in a repertoire of knowledge, skills, processes, and heuristics learnt from experiences of adversity events. The dynamic capability of organizational resilience is based on learning integration skills to reduce vulnerability. Organizational resilience as a dynamic capability is a multidisciplinary concept embracing the mechanisms of learning.

The perspective of the systems, the organizational systems is a multifaceted concept used to develop capabilities to implement adaptive responses to disruptions and create organizational learning (Francis & Bekera, 2014; Lee et al., 2013; Maitlis & Christianson, 2014; Thiel et al., 2012). Richardson (2016) applied the metatheory of resilience postulating the qualities inquiring and learning to achieve mastery as the result of change

Organizations may increase resilience by learning from errors and dynamic plans. Organizations develop different resilience capacities subject to their past experiences and leading to different threats, high risks, and disorganizations disturbances, which may require behavioral flexibility and heuristics in dynamic capabilities. Past experiences, learning and creativity are resources that influence facilitates resilience in smaller businesses (Glover 2012; Richtnér and Löfsten 2014).

Organizations develop resilience capability after coping with collapse aligned with the decision dynamic context, constraints in resources, opportunities and heuristics with a decision making. Organizational collapses are source of learning resilience capabilities to build organizational resilience an applied across the operating conditions. Heuristics is an efficient mechanism embedding learning from adversity to become more resilient (Gigerenzer, 2008).

The concept of organizational resilience informs organizational practices to bring more experiential learning and knowledge to prevent challenges of future scenarios, such as demographic, social, and economic changes (Bento and Garotti, 2019) such as in the situation of post-covid-19. The application of Bayesian network models in organizational resilience has implications with business models to open spaces for communication, learning and adaptation to prevent crisis.

Organizational adaptation is a concept in organizational resilience processes (Burnard and Bhamra 2011) that comprises the phases of detection and activation, response and organizational learning. Organizational resilience includes adaptation capabilities to critical events and the ability to make adjustments using change for organizational long term learning and advancement and increasing the knowledge for anticipation (Limnios et al. 2014; Madni and Jackson, 2009).

Adaptation is a key capability that includes reflection, learning and organizational change aimed to avoid and reduce negative effects of unexpected events (Carley, 1991; Carley and Harrald, 1997). The adaptation processes in organizational resilience have implications in operational safety practices and others, becoming relevant for the emergence of learning and knowledge creation as a respond to crisis and unexpected events.

The organizational resilience process model is a framework to build and develop dynamic capabilities as high order process to respond to tensions created by adverse unknown events and disturbances that require reconfiguration of organizational resources and activities and changing environmental negative circumstances (Burnard & Bhamra, 2011: 5595). Organizational resilience building is enabled by dynamics and impact of unexplored events (Burnard & Bhamra, 2011: 5595).

Organizational resilience building covers the management of human resources, cognitive adaptation to environmental situations, reducing vulnerabilities and propensity to disruptive events and desirability of dynamic states (Limnios et al., 2014; Lengnick-Hall, Beck, & Lengnick-Hall, 2011; Watts & Paciga, 2011; Sheffi, 2005). Organizational resilience dynamic capability building proceeds across the decline, collapse, and re-building stages to withstand failure and managing collapse.

The resilience dynamic capability development of the organization requires to learn heuristics and skills emerging from specific events and cases triggered by the different stakeholders in boundary and rebuilding transitions. An organization should learn to develop a dynamic organizational resilience-based view of capability using heuristics instead of routines, enabling strategic change and reducing the threats of collapse. Development of organizational resilience enhances organizational learning enacted through routines oriented toward specific targets (Levitt & March, 1988).

The organizational resilience-based view may develop supported by dynamic capabilities and heuristics to regain stability after adversity. Resilience is a mechanism of learning and change to foster practices for stability (Bingham, Eisenhard and Davis 2007). Resilience as stability and change (Farjoun 2010) provides empirical evidence to facilitate learning and capability development for organizational change (Bingham, Eisenhard and Davis 2007).

The process model of resilience capability integrates the insights to provide resilience dynamic capability by deploying a set of skills and heuristics to bounce back from collapse.

ORGANIZATIONAL RESILIENCE STRATEGIES

Cycles of organizational learning and unlearning achieve strategic organizational resilience (Morais-Storz and Nguyen 2017)

The best organizational resilience response occurs when strategies are designed to specific disturbance although may be cognitively demanding but still manageable (Masten, 2014). Organizational resilience is a strategy aimed to face the challenges of a dynamic, complex, and uncertain and continually changing environment. Organizational resilience is a strategy based on the adoption of best practices to survive, improve, and prosper in a context of dynamic global environment by building capabilities across all the organizational areas. Design and implementation of organizational resilience strategies requires information availability and flexibility and adaptability processes through sharing of information flow and mission resilience awareness and assurance of the dynamic environment.

Organizational resilience strategies aim to mitigate errors and error recovery (Weick & Sutcliffe, 2007), to overcome barriers and incentive adaptation and learning (Howard & Irving, 2013; Li et al., 2012).

The strategic resilience enables the organizations to reinvent dynamic models and strategies as the circumstances and situations change (Hamel and Vaelikangas 2003; Vaelikangas and Romme 2013). This conceptualization is similar to the strategic offense (Limnios et al. 2014). The dynamics of organizational resilience when facing challenges of unknown events, natural disasters, socio-economic trends, etc., requires organizations to respond, to adapt and protect continuing sustainable performance and growth (Stephenson, 2010).

The dynamics of emerging organizational behaviors may arise from environmental changes such as disasters and unknown events (Burnard and Bhamra, 2011). Organizational resilience is an approach to disaster management based on identification of resources and assets that can support adaptive response and dynamic recovery (O'Sullivan, Corneil, Kuziemy, & Toal-Sullivan, 2015).

An approach to organizational resilience in a dynamic environment requires a balance of efficiency and reliability through flexibility and implementing measures of information availability to detect potential disruptions. Resilience are optimization and renewal as lagged indicators, and protective factors as proactive indicators are equal partners leading to the ability to evolve and thrive in the face of adversity which arise in dynamic environments (Demmer et al. 2011). Measures for organizational resilience in the context of specific goal may require moderate implementation of a feedback loop development for building dynamic emergency procedures to integrate the information required for the assessment of possible risks.

The intra and inter-groups dynamics assess the organizational resilience in which the different occupational groups distribute their activities. The notion of resilience qualifies better based on informal arrangements affected by the inter-group dynamics with negotiated and articulated tasks. The resilience of a team group increases in the face of unexpected events managed in a strong community practice. Assessing resilience requires the costs of change representing the involved working groups in their intra- and inter-group dynamics confronted with the crisis. An organizational resilience approach of containing crises regards high reliable organizations as the essence of resilience, the ability to maintain and regain a dynamic stable state in the presence of an uncertainty and vulnerability.

The dynamic capability model development has implications for the organizational resilience when resources dissipate the strategy fails to foster a long-term adversity period. The resilience dynamic capability operates the ability to manage collapse and shift towards stability and re-building. SMEs resilience is tied to strategic planning and its aspirations in terms of development of dynamic capabilities in response to a crisis, such as innovativeness, responsiveness, competition, renewal, uncertainty, etc. (Macpherson, Herbane, and Jones, 2015). The dynamic integration of logistics capabilities facilitates readiness, response, and recovery of the supply chain resilience (Ponomarev and Holcomb 2009)

CONCLUSION

Resilience is addressed through turnaround and dynamic capabilities. Organizational resilience is critical to possessing dynamic capabilities attracting new resources, design strategies and learn to overcome rigidity and regain stability. Organizational resilience is the ability to manage workflow disturbances and regain a dynamic stable state.

A conceptual organizational resilience and adaptation focuses on a dynamic interplay between organizational activities and weather variabilities. Organizational resilience involves more than a strategic imperative and the ability of the organization to survive but enables to harness its experience and flourishes embracing the opportunities in a dynamic, complex, and interconnected environment.

Some of the ex-ante decisions are planning, learning and back-up systems and some of the ex-post adjustments are changing routines, minimizing strains on infrastructure and external support. Resilience differs from continuity management in that this one is returning to business as before, while resilience enables organizations to continue but evolves and growth from a disturbance through the transformation processes by learning, flourish, and progress.

Resilience emphasizes learning from failures and success to become reliable organizations. Organizational resilience cannot be boosted on trial and error due to the high cost but by focusing on learning from failures. Resilience is related to experiential knowledge constructed by learning beyond cumulative logic from the unexpected and open communication across units and agents. Group resilience is promoted by the interactions between individuals developing organizational learning and resilience.

Resilience can integrate findings from other areas and disciplines which can be related to other resilience stages and levels such as the anticipation through high reliability organizations, coping using crisis management adaptation to unexpected events supported by organizational learning. The organizational resilience leverages learning and experience to adjust and forge new organizational development.

The development of the resilience capability occurs when learning is embedded into the conscious mind of individuals in the organization and becomes experiential knowledge to be used in future adversity events. The resilience model becomes a resilience planning and implementing tool for organizational resilience that contributes to learning from mistakes and events underestimated.

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Chapter 17

Fostering Creativity in Business: Empowering Strong Transformational Leaders

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ABSTRACT

Changing dynamics in responsible and sustainable business comes as a must in the post-COVID-19 era, while energetic, influential, and powerful transformational leaders represent the vital solution to ensuring creativity in business and a luminous future for organizations worldwide. On the one hand, the newest challenges faced by companies due to the COVID-19 pandemic are analyzed, while, on the other hand, the dominant traits of leaders are displayed in an attempt to determine the successful mix between creative actions, human resources, innovation, intangible assets, intellectual capital, research, technological advancement, and visionary managerial business processes. The study shows that transformational leaders' general focus should be on the amazing benefits derived from addressing fundamental issues, such as the well-being of individuals, the health of the planet, reaching the Sustainable Development Goals (SDGs), bringing circular economy (CE), artificial intelligence (AI), and smart cities (SC) closer to human beings' vital needs.

INTRODUCTION

These days, shaping a creative and an innovative world, in general, and a creative and an innovative Europe, in particular, seems to represent one of the most desired aims of all (European Commission, 2006). That is the reason why, when intending to acquire such a high and demanding target, the need to create and promote a strategy capable to combine “innovative goods and services, focused resources, new financial structures and mobility of people, money and organizations” becomes, on the one hand, a must for the leaders at a global level and, on the other hand, a challenge for all individuals and all enti-

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ties (European Commission, 2006). Hence, according to the ideas stated in the publication “Creating an Innovative Europe: Report of the Independent Expert Group on R&D and innovation appointed following the Hampton Court Summit Luxembourg” the following key point should be considered: “together these constitute a paradigm shift going well beyond the narrow domain of R&D and innovation policy” (European Commission, 2006).

Nevertheless, competitiveness and sustainability are regarded as the main organizational objectives mentioned in almost all recommendations formulated by policy makers as well as economic and financial strategists, and political decisions adopted or due to be adopted by prominent leaders, with reference to the powerful links between the research, development and innovation (R&D&I) actions, the commitment taken for a better life, the higher life quality standards and a cleaner environment, an innovative-friendly market (Popescu et al., 2008; Popescu et al., 2015).

Nowadays, the immediate challenges and the particular perspectives of the macro environment and the companies’ economic, social and R&D&I potential creates the immediate need to adapt the way of life in order to be opened to creativity, innovation, newness and bright development ideas, while taking large scale actions to accomplish long term excellence, performance, and prosperity (Popescu & Popescu, 2015; Popescu et al., 2016; Popescu et al., 2015).

This scientific book chapter suggestively entitled “Fostering creativity in business: empowering strong transformational leaders” explores the role and the importance of cultivating creativity in the business world, and the impact of empowering strong transformational leaders on today’s continuously changing business environment. What is more, based on the preliminary research assessment on the business field as well as on the business administration domain current status, a gap was identified in terms of potential sources of creativity in business and of methods capable to foster creativity in business, while closely referring to the influence of strong transformational leaders. It follows that the case of Romania – a country which is part of the European Union (EU), required immediate attention while closely addressing this exceptional subject, especially since all the countries worldwide (and Romania makes no exception whatsoever) are confronting themselves with an imminent process of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era. Accordingly, several assumptions could be made here, when addressing the specificities of literature gaps: for instance, one assumption that may be formulated is that creativity will soon play a crucial role in today’s business environment, making the difference between several types of activities and helping their leaders engage in a competitive marketplace; another assumption that could be brought to light is that leaders worldwide should be more focused on accepting inevitable and outstanding transformations in their line of work, if willing to survive in a constantly dominated by change business environment; it follows that, a next assumption might tackle the importance and tremendous value brought by the existence of intellectual capital in each and every organization – especially when admitting to contribution and the role of human resources and human resources management in all entities globally.

The main questions that this first section, represented by the “Introduction”, aims to address are follows: (Q1) “What did this present book chapter study?” (Q2) “Why are the research objectives and research questions chosen to be answered in this current work believed to be important?” (Q3) “What was initially known about this topic (literature review, current state in terms of literature previously published on this subject) before performing this current study?” and (Q4) “How will this study advance the existing knowledge and the research field?” The purpose is to formulate both the problems and the objectives that turn out to be specific to the scientific book chapter entitled “Fostering creativity in business: empowering strong transformational leaders”.

In this context, the following aspects should be taken into consideration in order to have a broad and a clear image of this current work:

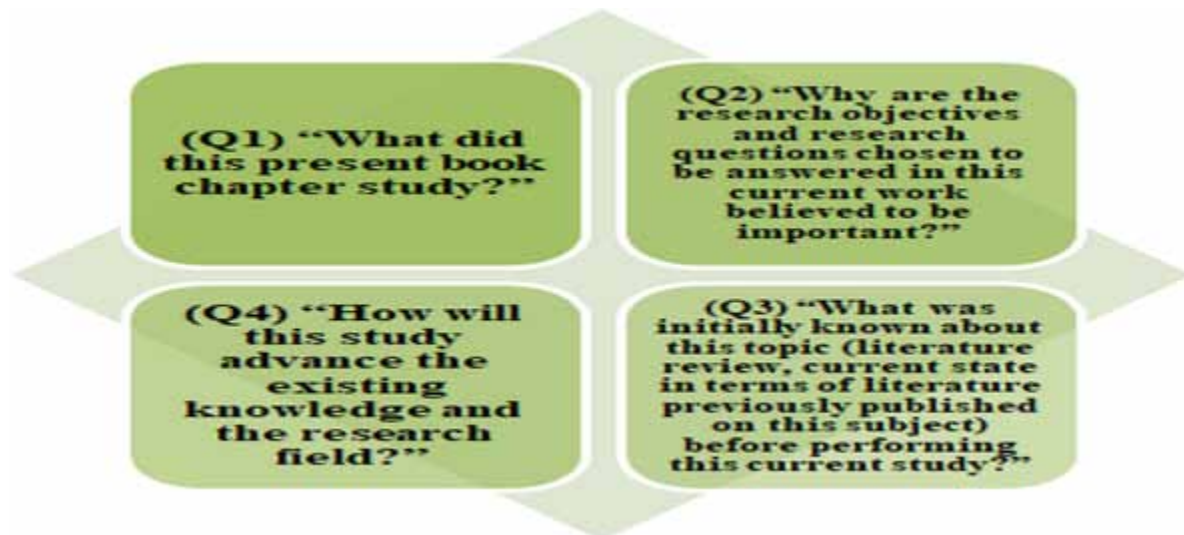
- The first question that was addressed is: (Q1) “What did this present book chapter study?” This scientific book chapter proposes a novel approach on fostering creativity in business, with a keen focus on empowering strong transformational leaders and represents an original research on the up-to-date topic of creativity in business and the influence of strong transformational leaders these days. In addition, this scientific book chapter studies, on the one hand, the role, importance and influence of creativity – as a prominent way of challenging, helping and inspiring individuals acting in the business environment to become more and more aware of their surroundings by constantly motivating them to find new, innovative solutions to the problems that occur, while creating valuable sets of circumstances, occasions and opportunities, and, on the other hand, tackles the manner in which the strong transformational leaders have the power to change nowadays business environment and engage in activities that emphasize the need of individuals to progress, to be part of valuable opportunities, and to profit from golden circumstances.
- The second question that was addressed is: (Q2) “Why are the research objectives and research questions chosen to be answered in this current work believed to be important?” The main research objective (RO) or what the study was expected to achieve, in general lines and terms, is represented by establishing the importance and the role of encouraging and fostering creativity in business, while empowering strong transformational leaders able to promote a constantly challenging, highly competitive, persistently inspiring, perpetually innovative, and exceptionally intellectually stimulating work environment. The main research question is represented by: (RQ) “Which are the advantages of fostering creativity in business and which benefits of empowering strong transformational leaders are?” Besides the general (main, primary) objective stated by this study, there is a consistent number of specific objectives (SO) tackled by this work, that had the purpose of braking down the general objective into smaller, yet logically connected aspects and parts that had the goal of systematically addressing various elements specific to the main problem brought into analysis and discussion. These specific objectives (SO) are, as follows: (SO1) to address what does creativity, in general, and creativity, in business, represent (possible definitions and existing potential according to researchers and practitioners); (SO2) to assess the importance of creativity in business, especially in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era; (SO3) to evaluate the knowledge, attitude and practice of researchers and practitioners in the field towards fostering creativity in business; (SO4) to identify advantages, benefits, barriers, challenges, and concerns related to fostering creativity in business, while addressing the issues that arise from empowering strong transformational leaders in the attempt of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era; (SO5) to assess the awareness and perception of the study community (research population chosen for analysis and study) regarding the usefulness, helpfulness, convenience, advantageousness, profitability, advisability and visibility that occurs from promoting creativity in business, by empowering strong transformational leaders, having in mind the desire to change dynamics in responsible and sustainable business in the Post-COVID-19 Era. This scientific book chapter suggestively entitled “Fostering creativity in business: empowering strong transformational leaders” deeply focuses also on different specific research strategies (RS) as well as research study designs (RD) that were chosen in order to conduct the present small-scale research project. Taking into

serious consideration all these steps, such as formulating the specific research strategies (RS), preparing the research study designs (RD), fixing the main research objective (RO) and nominating a consistent number of specific objectives (SO), the research question model, the objectives development, and the problem statements formulation came to life for the current scientific book chapter named “Fostering creativity in business: empowering strong transformational leaders”.

- The third question that was addressed is: (Q3) “What was initially known about this topic (intensive literature review, current state in terms of literature previously published on this subject – namely state-of-the-art literature review on the proposed subject) before performing this current study?” In this regard, it should be stated that the next section of this paper entitled suggestively “Background” will examine the literature review on the topics of creativity in business and strong transformational leaders with a clear emphasis on stressing ways of changing dynamics in responsible and sustainable business in challenging times, such as the Post-COVID-19 Era.
- In the end, the fourth question that was addressed is: (Q4) “How will this study advance the existing knowledge and the research field?” This study distinguishes itself from other works, consequently bringing novel ideas in comparison to the already existing knowledge and the research field. The study takes into consideration the case of Romania – a country which is part of the European Union, and analysis the situation that exists in today’s Romanian business domain, offering significant details concerning creativity in Romanian businesses as well as outstanding results referring to empowering strong transformational leaders. In the same way, it should be considered that the initially forecasted expected results must be appropriately and thoroughly compared with the actually obtained results based on the gathered data during the process specific to data collection (see Figure 1. Main research question (RQ) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”).

Figure 1. Main research question (RQ) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”

Source: the author



Fostering Creativity in Business

This particular section focuses, in more detail, on analyzing the main research question, represented by (RQ) “Which are the advantages of fostering creativity in business and which benefits of empowering strong transformational leaders are?”, as well as on the specific objectives (SO), aforementioned and, also, as noted below (see Table 1. Main research question (RQ) and specific objectives (SO) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”):

Table 1. Main research question (RQ) and specific objectives (SO) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”

	Research Questions/Objectives and General Characteristics to be considered:	
Main research question (RQ):	• (RQ) “Which are the advantages of fostering creativity in business and which benefits of empowering strong transformational leaders are?” • On the one hand, this general question has the purpose of discovering the benefits of implementing and encouraging creativity in business, based on the fact that it is an action strongly promoted by transformational leaders. • On the other hand, this general question has the aim of addressing the importance and the influence of transformational leaders worldwide, in the attempt to foster a better work environment for the employees: an environment based on strong ethical and moral principles, standards and values, an environment surrounded by positive energies, powerful motivations to help the development of the followers.	
Specific objectives (SO):	• (SO1) The first specific objective is to address what does creativity, in general, and creativity, in business, represent (possible definitions and existing potential according to researchers and practitioners). • The purpose of SO1 is to present the up-to-date image of the literature review on creativity and creativity in business, starting from the importance of establishing: the potential sources of creativity in business and at the place of work; the need and desire of employees to have sparkling ideas in terms of making the companies where they activate more appealing, more profitable and more engaged in in responsible and sustainable business in the Post-COVID-19 Era. • The purpose of SO1 is to stress the paramount importance of creativity and creativity in business in today’s business environment, taking into consideration that having a competitive edge represents the key of success for all organizations worldwide, especially in dynamic times such as the one that entities are living now.	• (SO2) The second specific objective is to assess the importance of creativity in business, especially in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era. • The scope of SO2 is establish potential influences of creativity in daily business activities, transactions and environment, based on aspects closely connected to: encouraging organizations to become more innovative; inspiring entities to invest much more in research, innovation and technology; and motivating companies’ leaders to be more opened, more flexible, more attentive to the customers and clients desires, needs and requests. • The purpose of SO2 is to underline organizations’ potential in changing dynamics in a responsible and sustainable business environment in the Post-COVID-19 Era, taking into account the following ideas: entities brands are highly relevant and must address new design and stand for constant innovation; employees are the key to successful business, thus individuals encouraged to have innovative ideas will bring special inputs in the overall creativity of a feature or service.
	• (SO3) The third specific objective is to evaluate the knowledge, attitude and practice of researchers and practitioners in the field towards fostering creativity in business.	• (SO4) The fourth specific objective is to identify advantages, benefits, barriers, challenges, and concerns related to fostering creativity in business, while addressing the issues that arise from empowering strong transformational leaders in the attempt of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era.
	• (SO5) The fifth specific objective is to assess the awareness and perception of the study community (research population chosen for analysis and study) regarding the usefulness, helpfulness, convenience, advantageousness, profitability, advisability and visibility that occurs from promoting creativity in business, by empowering strong transformational leaders, having in mind the desire to change dynamics in responsible and sustainable business in the Post-COVID-19 Era.	

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Table 1. Continued

	Research Questions/Objectives and General Characteristics to be considered:	
Examples:	• Creativity in business: brining new ideas and projects to life, focusing on end-to-end user experience, constantly trying to acquire a competitive edge for the entities;	• Transformational leaders: the art of persuading employees to work both for their own benefit and for the organization's well-being, the ability to train and develop employees abilities by rewarding creativity, innovation, and strong performance;
	• Mindfulness in business: being present with both body and mind at the place of work, in the attempt to focus and think better, and be more organized and assertive;	• Transformational leadership: specific set of traits developed by a small group of entities' leaders which help employees develop as individuals and seek companies well-being and profitability;
	• Intellectual capital in business: having the capacity and the necessary instruments to value the results of individuals' mental processes that are represented by a set of objects that can be used in daily economic activities, that bring profit to entities and added-value to organizations;	• Strong proposes and valuable aims to create endless possibilities for the employees to develop their abilities and skills at the workplace;
	• Human resources value in business: the art of creating a friendly, flexible and motivating work environment, the capacity of maintaining an organizational culture of high moral, the ability to encourage and stimulate employees to perform at their highest level possible, in order to bring added value to organizations;	• Foresight and vision to determine the dreams and afterwards follow them: with possible actions taken in regard to motivating, engaging, meeting the needs in a timely manner, providing learning solutions, facilitating access to promotions and other forms of rewards, offering competent professional advice;
	• Influencing people all around the world with the aid of positive energy, becoming role models and focus on personal and group development and goals.	• Ambition, drive and enthusiasm to make difficult decisions in order to accomplish the targeted intentions, goals, and plans.

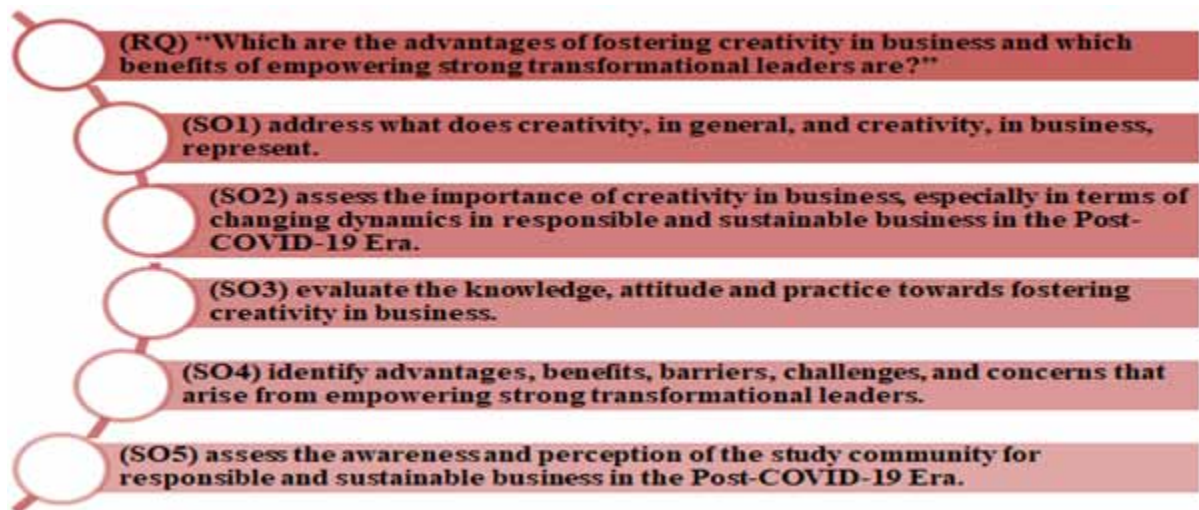
Source: the author

This first section, represented by the “Introduction”, is followed by the following relevant parts: the second section, represented by the “Background”, which will examine the literature review on the topics of creativity in business and strong transformational leaders with a clear emphasis on stressing the ways of changing dynamics in responsible and sustainable business, in challenging times, such as the Post-COVID-19 Era; the third section, represented by the “Research design and methodology”, which will explore the steps necessary to the research design and process development as well as the data collection tool preparation – as specific elements prior to the research, and which will investigate the data collection process, the data collection tool present, starting and overall stages – as specific elements post to the research; the fourth section, represented by the “Data collection analysis and presentation”, which will analyze prior to the research itself relevant elements, such as, data collection, data source entities (organizations, companies, and institutions), population (targeted and relevant) and study area decision (in terms of relevancy for the proposed general work), and sample size determination, and which will look into post to the research itself for data collection instruments and tools adaptation and modifications (if the case), data cleaning and entry into specific informatics, mathematical and statistical programs (such as, for instance, SPSS, Excel, STATA, and so on), and results generation and presentation; the fifth section, represented by the “Discussion and synthesis of results”, which will engage in the complex process of results discussions, interlinking current discoveries with some previous studies, finding the required means of substantiating the findings as well as identifying overall improvement areas, methods and solutions; the sixth section, represented by the “Proposed improvement model and framework development for Romania”, which will research the model and framework development for

Romania based on initial assumptions and current application, determining the priority of the steps that need to be taken as well as ranking the ideas and suggestions obtained; the seventh section, represented by the “Solutions and recommendations”, which will encourage the extraction of the most important and relevant results for further action (in the case of Romania, the European Union and, even, worldwide – based on the background and specificities of each and every region and country), describing individual actions and factors specific to Romania and building a new model and framework capable to ensure fostering creativity in business, while empowering strong transformational leaders; and the eight section, represented by the “Conclusion”, which will review the overall results, highlighting the benefits of the study, will make recommendations and will establish future research areas. It should be highlighted that the current work will also have the “References”, which will embody the most relevant bibliography used for this scientific book chapter (see Figure 2. Key notes on main research question (RQ) and specific objectives (SO) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”).

Figure 2. Key notes on main research question (RQ) and specific objectives (SO) for the scientific book chapter “Fostering creativity in business: empowering strong transformational leaders”

Source: the author



Background

The second section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Background” will bring to light the most representative ideas derived from the literature review process on the topics of creativity in business and strong transformational leaders with a clear emphasis on stressing the ways of changing dynamics in responsible and sustainable business, in challenging times, such as the Post-COVID-19 Era.

What is more, this section is meant to show that creativity is a very complex concept, having multiple definitions, roles and a high degree of importance, depending on the context as well as on the concrete situation taken into consideration. Thus, creativity has multiple facets and should be analyzed and treated with great attention since it represents a tremendously powerful force both for individuals and for society itself. In continuation, creativity in business may tackle different meanings and may stand for different situations, depending on the activities and case studies taken into account. Nevertheless, creativity represents an asset for any individual and any business, either while facing daily challenges or when contemplating more complex situations and even problems that might arise in sectors, such as, economy, industry, finance, and on.

These days, taking creative actions and steps is highly encouraged at a global level. In the European Commission's publication on "Creating an Innovative Europe: Report of the Independent Expert Group on R&D and innovation appointed following the Hampton Court Summit Luxembourg" the following key aspects were clearly and carefully highlighted: "Measures are needed to increase resources for excellent science, industrial R&D and the science-industry nexus. Productivity of R&D must be increased. The proportion of structural funds spent on research and innovation should be trebled" (European Commission, 2006). In continuation, a highly important point of view is stressed, as follows: "Europe and its citizens should realize that their way of life is under threat but also that the path to prosperity through research and innovation is open if large scale action is taken now by their leaders before it is too late" (European Commission, 2006). This statement automatically raises some key questions, such as, for instance: (KQ1) "What is the role of leaders in promoting creativity, R&D&I?" (KQ2) "In what way could leaders promote creativity, R&D&I?" (KQ3) "What do transformational leaders need in their organizations in order to encourage creativity, R&D&I?"

Forecasting organizations' evolution in terms of creating growth and sustainably creative markets in the European Union represents an undeniable challenge for specialists (Popescu et al., 2017a; Popescu et al., 2017b; Popescu et al., 2017c; Popescu et al., 2017d).

The United Nations Conference on Trade and Development (UNCTAD) – targeting the idea of providing "prosperity for all", started promoting with the beginning of the year 2021 (namely, more specifically, on the 13th January 2021) the decision belonging to the United Nations (UN) to dedicate "a whole year to the creative economy and its critical role in promoting sustainable development, especially in a post-coronavirus world" as an immediate consequence to the fact that "in November 2020, the UN adopted resolution A/RES/74/198, declaring 2021 the "International Year of Creative Economy for Sustainable Development"" (UNCTAD, 2021). Based on UN position, a number of important key questions are raised, such as, for example: (KQ1) "What is knowledge-based economy?" (KQ2) "What are the creative economy and the creative industry?" (KQ3) "What does cultural diversity stand for in the Post-COVID-19 Era?" (KQ4) "How can sustainable development be achieved in the Post-COVID-19 Era with the aid of creative economies and industries?" (see Figure 3. Key questions on creativity and transformational leaders)

A few key aspects that characterize a creative economy according to UNCTAD (2021) are displayed below (see Table 2. Main ideas that characterize a creative economy according to UNCTAD (2021)):

Figure 3. Key questions on creativity and transformational leaders

Source: the author

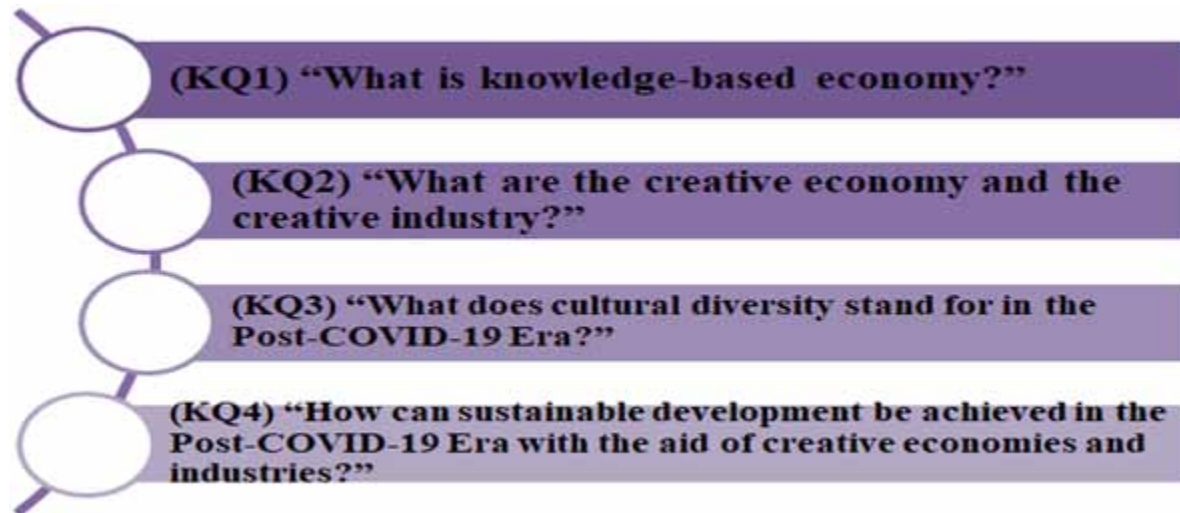


Table 2. Main ideas that characterize a creative economy according to UNCTAD (2021)

Reasons for promoting a creative economy:	UN and UNCTAD arguments (2021):
• The creative economy encourages sustainable development at a general level in critical times, in times of need (the Post-COVID-19 Era):	• The paramount role of a creative economy is critical when it comes to promoting sustainable development, especially in the Post-COVID-19 Era; • A creative economy is based on ingenuity, newness and fosters innovation, diversification and supports entrepreneurship; • Cultural diversity is an important factor for all economy worldwide, thus there is a stringent need to take coherent and coordinated actions in order to have a more creative thinking agenda, more innovative programs and be more active in problem-solving activities.
• The creative economy encourages creative industries sustainable development:	• The creative industries received a “terrible blow” due to COVID-19 pandemic, especially since, according to statistics, in this particular form of industry activate “more than 30 million people globally, mostly young people” (UNCTAD, 2021); • The troubles that occurred in the creative industries as a result of COVID-19 pandemic determined Ms. Marisa Henderson, UNCTAD’s creative economy program head to express a great concern towards meeting certain important goals (such as, for instance, the Sustainable Development Goals (SDGs)), among which were mentioned the following ones: “the economic development, women’s empowerment, and cultural and poverty alleviation” (UNCTAD, 2021).
• The creative economy and the creative industries bring culture value to the society and account for an important part of the Gross Domestic Product (GDP):	• Are based on the role, importance and influence of intellectual capital and its components; • Depend on the process of consuming a creative product or a creative service; • Depend on making profit and receiving major inputs “from original or copyrightable intellectual property (IP)” (UNCTAD, 2021); • Rely on knowledge-based economic activities, such as, for instance, the ones highlighted in the list below: “advertising, architecture, arts and crafts, design, fashion, film, video, photography, music, performing arts, publishing, research and development, software, computer games, electronic publishing and TV/radio” (UNCTAD, 2021).

Source: the author, based on the ideas derived from the agenda of UNCTAD (2021) Conference entitled “Creative economy to have its year in the sun in 2021” (13 January 2021)

In the book chapter “The role of civil society in implementing the SDGs locally: the case of Curitiba, its challenges, and practices” the author focuses on the particular case of Curitiba, which is a UNESCO Creative City of Design since 2014 (Nicha Andrade, 2021). In addition, the work tackles the relationship that exists between the local actors, the municipality of Curitiba, and UNESCO (namely, the UNESCO Creative Cities Network) in order to accomplish thoroughly and successfully the 2030 Sustainable Development Goals (SDGs) at a local level (Nicha Andrade, 2021). An interesting solution presented in the paper that shows the ability to become more creative, in order to become, in turn, more visible and face the arising challenges, is constituted by the municipality of Curitiba which accepted to “change their structures to accommodate the SDG implementation by opening to multi-stakeholder governance” (Nicha Andrade, 2021). In this way, it is also demonstrated that, by empowering strong transformational leaders to make decisions and to act responsibly, the overall results will turn out to be sustainable and concentrated towards development.

It should also be emphasized that creativity in business could bring the entities to a new level of development and of visibility, which could make them more inclined to promote quality, innovation, research, and excellence (Popescu, 2017). Also, business performance might be brought, according to specialists, by actions that encourage investments in human resources and in nurturing organizations’ most highly praised resources represented by intellectual capital (Popescu, 2018; Popescu, 2019a; Popescu, 2019b; Popescu, 2019c). An extremely interesting and, in the same time, relevant research article entitled “Addressing intellectual capital in the context of integrated strategy and performance: emphasizing the role of companies’ unique value creation mechanism, while targeting better organizational reporting in Romania: the case of green marketing and green marketing strategies” demonstrates the importance of positioning intellectual capital in the development strategy process of any type of organization, since, for instance, in the case of Romanian companies managed to bring novel solutions in terms of value creating architecture, green marketing strategies and financial security mechanisms (Popescu, 2019d).

In the scientific article “An overview on the green petroleum production” the authors are also bringing into analysis and discussion a case of creativity in business followed by immediate actions that need to be considered and taken by strong transformational leaders in the context of increasingly worrying level of pollution (the greenhouse gas emissions), the problems derived from the scarcity of resources worldwide, and the need to understand the implications of using and controlling biofuels in the near future (Nima & Saeed, 2020).

In the scientific article “Residential energy consumption trends, main drivers and policies in Lithuania” the author focused on identifying novel and viable solutions in the case of Lithuania in terms of improving the policies targeting to reduce energy consumption in residential buildings, which shows the need to identify creative solutions capable to save energy, become efficient in terms of energy consumption, and improve the living standards on the whole (Štreimikienė, 2014).

In the lines below, key questions were answered and important answers were provided for creativity for individuals and creativity for businesses, in the context described by European Unions’ official according to which “our planet faces important economic, social and environmental challenges”, with emphasis on the Sustainable Development Goals (SDGs) promoted, offering in this manner “an unprecedented opportunity to eliminate extreme poverty and put the world on a sustainable path” (European Union, 2016) (see Table 3. Creativity for individuals and creativity for businesses).

Based on the European Commission (EC) (2018) report on “Environment and Climate Change Mainstreaming in EU Development Cooperation: Briefing note for the OECD DAC peer-learning visit The European Commission Directorate-General for International Cooperation and Development (DG

DEVCO)”, encouraging creativity in the European Union’s countries as well as a creative environment implicates “harmonization and strong coordination” among the EU member states whenever possible and, also, the ability to “promote inclusive growth, job creation and sustainable development” (European Commission, 2018, p. 9). Under these circumstances, it should be noted that a creative process in the business sector might also be represented by diversifying the existing job positions and finding those sectors that require new job openings – and especially “green jobs” (European Commission, 2018, p. 14).

Table 3. Creativity for individuals and creativity for businesses

	Creativity for individuals	Creativity for businesses
What	Creativity for individuals should offer an answer to the question “What”, in terms of possible definitions, possible associations and links between concepts: • Represents a key asset for a person, providing development opportunities in areas of personal development. • Constitutes an important part of a person’s daily activity and is expected to provide added value. • Helps a person in the process of understanding, planning and solving tasks and problems. • Brings to light new opportunities for individuals to become more aware of their living conditions, of their environment and, thus, more responsible for their future and the future of their loved ones (Popescu, Popescu, 2019b).	Creativity for businesses should offer an answer to the question “What”, while referring to definitions, role and importance of key concepts associated with creativity, newness, innovation, novelty, intellect, know-how and knowledge: • Offers business development opportunities (Popescu, 2019e). • May be a direct result of intellectual capital use, human resource management processes, human resources interaction (Popescu, 2019e). • Could be part of a unique value creation mechanism and might be of help in promoting better organizational reporting (such as, for instance, in the case of Romania) (Popescu, 2019e). • Should shed a new on corporate social responsibility, corporate governance and business performance (Popescu, 2019g; Popescu, Banța, 2019).
Why	Creativity for individuals should offer an answer to the question “Why”, while referring to cultures, personality traits, educational level: • The need for a more secure future as well as the idea of promoting a healthier environment – with a more sustainable economy and a more resilient industrial system, represents a reality for all individuals and all nations, which means there is a stringent need to change the typology, the day-to-date routine (Popescu, Dumitrescu, 2016a; Popescu, Dumitrescu, 2016b).	Creativity for businesses should offer an answer to the question “Why”, when tackling the importance of the environment where the businesses are located: • The need to change the business typology, to create new business paradigms, to make new business models and new business frameworks, in order to meet the challenges of the Sustainable Development Goals (SDGs) and to respond to the need of the society, environment and economy (Popescu, Popescu, 2018b; Popescu, Popescu, 2019a).
How	Creativity for individuals should offer an answer to the question “How”: • May implicate taking risks, but all individuals should understand that taking innovative and novel actions represents the usual path in life and demonstrates the ability of survival in any kind of environment. • The role of education (especially of higher education studies) is crucial when it comes to enabling persons to become better and more proficient in everything that they are doing.	Creativity for businesses should offer an answer to the question “How”: • May implicate taking risks, but in any business situation there is a risk that should be acknowledged and accepted in order to be able to move forward and maintain the competitive advantage on the marketplace (Popescu, Popescu, 2018a). • Human societies should find ways of developing, becoming more productive and more efficient, while keeping in mind the importance of leading a sustainable life and bringing value to the organizations in which they work.

Source: the author, based on the ideas derived from the sources highlighted above

Furthermore, taking into consideration the ideas presented in the European Commission (EC) (2018) report on “Environment and Climate Change Mainstreaming in EU Development Cooperation: Briefing note for the OECD DAC peer-learning visit The European Commission Directorate-General for International Cooperation and Development (DG DEVCO)”, the following aspects should be taken under careful consideration, as follows (see Table 4. An overview of EU practice in mainstreaming of environment and climate change and ways of ensuring creativity for organizations):

Table 4. An overview of EU practice in mainstreaming of environment and climate change and ways of ensuring creativity for organizations

Questions	EU practice in mainstreaming of environment and climate change and ways of ensuring creativity for organizations
What	Individuals and organizations need to discover an answer to the question “What”, in terms of pinpointing the major aspects which are of particular interest in regard to the relationship that exists between the environment, climate change and the organizations’ activities and line of work (European Commission, 2018, p. 9): • The European Commission has pointed out, on the one hand, the existence of numerous links and connections “between the different elements of action, such as development and peace and security, humanitarian aid, migration, energy, and environment and climate change” (European Commission, 2018, p. 9). • The European Commission has stressed, on the other hand, that “the new Consensus aims to combine ‘traditional’ development aid with other resources and innovative forms of development financing, leveraging private sector investments and mobilizing additional domestic resources for development, in line with the Addis Ababa Agenda for Action” (European Commission, 2018, p. 9).
How	Individuals and organizations should find an answer to the question “How”, in terms of possible solutions to one of the primary objectives of EU development policy – “the reduction and, in the long term, the eradication of poverty” and “fostering the sustainable economic, social and environmental development of developing countries, with the primary aim of eradicating poverty”, by focusing on the role of creativity and the power and the influence of transformational leaders (European Commission, 2018, p. 4): • By taking creative, coherence and innovative actions, the EU policies could successfully develop a framework capable to guide the organizations in their activities, thus becoming more oriented to promoting and maintaining environmental development. • By creating a common vision in terms of leadership and managerial actions due to be taken in the process of ensuring development cooperation between the Member States of the EU, the EU will be capable to align “the development policy with the 2030 Agenda for Sustainable Development”, and, in the same time, “environment and climate change are prominently integrated across the five pillars of this new policy framework (People, Planet, Prosperity, Peace and Partnership) and are the focus of the “Planet” pillar” (European Commission, 2018, p. 4).
In which manner	The European Commission (2018) offers interesting and creative solutions to the problems highlighted above in the attempt to find an answer to the question “In which manner”, such as, for instance: • Tackling a set of core actions, interests, and principles capable to ensure development, sustainability, resilience and robustness, in a continuously challenging environment. • Focusing “on ‘mainstreaming’ (‘horizontal action’) rather than ‘managing’ environment (‘vertical action’), and encompasses not only climate change but also other environmental concerns, notably biodiversity, soil and water management and pollution” (European Commission, 2018, p. 4). • Looking “at both constraints and opportunities, in a context of the broader growth and development agenda and issues of financial and human capacities for mainstreaming will be included” (European Commission, 2018, p. 4). • Promoting the efficiency of resources as well as sustainable form of consumption and production, by “decoupling economic growth from environmental degradation and enabling the transition to a circular economy” (European Commission, 2018, p. 4). • Creating beneficial and constructive partnerships between regions and countries with the aid of different projects and programs, capable to increase the implementation of EU goals. • Encouraging strong working relationships among EU leaders, in order to bring to light the most ambitious EU targets and accomplish EU strategic interests. • Reaching a general consensus on development actions, plans and programs. These days, the main themes on the EU agenda are: “Environment themes”; “Environmental governance”; “Biodiversity and forestry”; “Climate change”; “Energy”; “Land, water”; “Green Economy”; and “Mainstreaming” (European Commission, 2018, pp. 10-14).

continues on following page

Table 4. Continued

Questions	EU practice in mainstreaming of environment and climate change and ways of ensuring creativity for organizations
Which are the drivers	The European Commission (2018) focuses, in like manner, on possible drivers in order to find solutions the problems highlighted above in the attempt to find an answer to the question “Which are the drivers”. Among the most important drivers taken into consideration by the European Commission (2018) could be mentioned the following ones: • One possible driver of the EU is represented by the “financial commitments on climate change and biodiversity”, since the need to access funds is extremely important when supporting actions related with climate change and biodiversity (European Commission, 2018, p. 14). • Another possible driver of the EU is represented by the relationship that exists between environment and poverty, which will lead to the necessity to consider a more complex link that may be found between key concepts: environment - poverty - health, with a clear emphasis on the devastating effects of pollution on human beings and the planet (European Commission, 2018, p. 14). • In continuation, another possible driver of the EU is represented by “the (investments and job creation) opportunities offered by the green economy”, bringing to light the necessity to promote green jobs, green forms of marketing, green consumption, green production, thus being able to appeal to a more sensitive side of individuals and organizations towards environmental matters and increase the interest of people and entities into becoming more and more environmental friendly (European Commission, 2018, p. 14).
Which are the key concepts	The European Commission (2018) focuses, in the same time, on answering to the question “Which are the key concepts” that require immediate attention. Among the most important key concepts could be mentioned the following ones: • “Environmental mainstreaming in EU cooperation and development” (European Commission, 2018, p. 15). • “Quality of environment and climate change integration” (European Commission, 2018, p. 16). • “Strategic Environmental Assessments and/or Environmental Impact Assessments” (European Commission, 2018, p. 16). • General “communication and awareness” actions (European Commission, 2018, p. 20). • “Develop and reinforce capacities to address environment and climate change” (European Commission, 2018, p. 20). • “Individual sensitivity, interests and expertise” and “a responsibility for mainstreaming” (European Commission, 2018, p. 20).

Source: the author, based on the ideas derived from the European Commission (EC) (2018) report on “Environment and Climate Change Mainstreaming in EU Development Cooperation: Briefing note for the OECD DAC peer-learning visit The European Commission Directorate-General for International Cooperation and Development (DG DEVCO)” (European Commission, 2018)

The next section, represented by the “Research design and methodology” of this paper, has firstly the purpose of exploring and investigation the stages appropriate and required by each scientific paper in order to create and develop the research design pattern/model and, in the same time, the data collection tool preparation. What is more, the next section, represented by the “Research design and methodology” of this paper, has secondly the scope of identifying the specific elements post to the research, the data collection process, the data collection tool present, starting and overall stages.

RESEARCH DESIGN AND METHODOLOGY

The third section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Research design and methodology”, has the purpose of exploring and investigation, in like manner, on the one hand, as specific elements prior to the research, the steps necessary to the research design and process development as well as the data collection tool preparation, and, on the other hand, as specific elements post to the research, the data collection process, the data collection tool present, starting and overall stages.

In terms of research design, the following steps were closely considered:

1. First of all, the main aspect taken into consideration for this research was the aim and the approach, which are reflected by the study's (RQ) "Which are the advantages of fostering creativity in business and which benefits of empowering strong transformational leaders are?" In addition, based on what the study intends to achieve, between the qualitative and the quantitative approach, the preferred approach was the qualitative approach since it offers the advantages of: understanding subjective beliefs, concepts, and experiences; facilitates the exploration of under-researched ideas, facts and problems, enabling the appearance of new ideas and solutions; and also, permits the gain of in-depth knowledge of a specific context or of a particular culture, behavior, country. It should also be acknowledged that, in this present situation, a qualitative research design tends to offer more flexibility and is believed to be more inductive, which means that the research approach can be easily adjusted depending on the results gained throughout the research process.
2. Second of all, the next step taken into account for this research was choosing a type of research design. Since, in this case, the qualitative research design was chosen, the motivation was to operate on a less strict framework, thus being capable to gaining a more detailed, eloquent and precise understanding of a particular context or phenomenon, which will, in turn, ensure a more flexible and a more creative design.
3. Third of all, the next step taken into account for this research was to identify the population as well as the sampling method. The targeted population was represented by Romanian managers (organizations' directors, owners, leaders, group coordinators, team leaders, supervisors) willing to offer their point of view on the role and the importance of creativity in business and their role as leaders, facilitators, advisors, administrators, organizers in helping their entities develop based on innovation, human resources involvement, intellectual capital. Since the topic chosen for analysis and debate is believed to be highly sensible and controversial, the idea of sampling may not be relevant. That is the reason why, the aim was to collect as much data as possible about the context being studied.
4. Fourth of all, the next step taken into account for this research was to choose the data collection methods, thus being able to directly measure variables and gather information, since according to specialists in the research field it is crucial to gain first-hand knowledge and have access to the original insights of the research problem. Although several methods may be used in the same study, and sometimes, in some cases, it is recommendable to use as many methods as possible, or at least two methods (for comparison reasons and data validation reasons), in this case the method chosen was the survey method. What is more, interviews were chosen as survey method for the book chapter entitled "Fostering creativity in business: empowering strong transformational leaders". However, it should be added that secondary data were also used in this current work, for instance from previous studies on this topic and datasheets from renowned European Union organizations or datasheets from government surveys. The scope of using secondary data, in addition to the primary data collected, in order to perform an original analysis and create an original study, enabled the expansion of the scope of the research, thus being able to have a broader perspective on the topic and have the capacity to draw better results, validate the scientific work performed and shed a better light on more qualified, more pertinent conclusions.
5. Fifth of all, the next step taken into account for this research was to plan the data collection procedure, in order to collect accurate, consistent and unbiased data and information. In order to plan the data collection procedure, the following stages were taken into account: (a) reliability and validity – in this case, the reliability and validity of interviews method has already been demonstrated

and proven over time, but in this case a pilot study has allowed to check the interview questions reliability and validity in advance; (b) sampling procedures – in this case, as stated above, the idea of sampling may not be relevant and that is the reason why, the aim was to collect as much data as possible about the context being studied (which will ensure the existence of a representative sample and will manage bias avoidance); (c) data management – in this case, a data management plan was created and followed in order to organize the obtained data and afterwards present and discuss the information gathered as well as the results obtained. At this point, it should be highlighted that, in terms of data management, since the interview method was preferred for this current study, there was the need to transcribe the interviews, to perform data entry for observations, to ensure anonymity and safeguard sensible data (such as the personal data of the participants to the interview sessions). Also, in order to ensure that the data collected was correct and appropriately transcribed, the persons interviewed had the option to reread their ideas, make additional, new comments, thus ensuring the validity of the entire process.

6. Sixth of all, the next step taken into account for this research was to decide on the data analysis strategies and, in this particular case, on the qualitative data analysis. It should be stressed that the data obtained during the interview sessions was very dense, with highly relevant ideas and with important information. That is the reason why the data gathered could not be summed up in numbers (not being a quantitative data analysis), which meant that the data obtained was combed in detail, the meaning of each idea, piece of information and sentence were carefully interpreted, the patterns were identified, while selecting and extracting, in the same time, the parts that turned out to be more relevant for the research question.

When designing the research, the following practical considerations were taken into consideration, as mentioned in the lines below (see the research design questions – RDQ, carefully answered):

- The first question that was addressed in this case is: (RDQ1) “How much time can be allocated to collect the data and afterwards write the research?”
- The second question that was addressed is: (RDQ2) “How will the access to the needed data gained (for instance, in terms of travelling to specific locations, contacting specific individuals, and so on)?”
- The third question that was addressed is: (RDQ3) “Which are the necessary research skills required (for example, in terms of statistical analysis, interview techniques, and so on)?”

The interview method required the use of the following questions during the interview sessions (see Table 5. Qualitative data analysis: set of questions addressed during the interview sessions):

In the next section – the fourth section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Data collection analysis and presentation”, the aim is the one of underlining the steps taken in order to collect the data necessary for this complex research and present and interpret the results obtained.

Table 5. Qualitative data analysis: set of questions addressed during the interview sessions

Specific objectives (SO)	Questions
(SO1) Addressing what creativity, in general, and creativity, in business, represents:	• (IQ1) What does creativity, in general, and creativity, in business, represent?
	• (IQ2) Is creativity a luxury?
	• (IQ3) Why does your business need creativity?
	• (IQ4) Have you noticed any links between problem-solving processes in your own organization and creativity?
	• (IQ5) In what way have you promoted creativity at the place of work?
(SO2) Addressing the importance of creativity in business, especially in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era:	• (IQ6) What opportunities does creativity bring to the business in which you are activating in?
	• (IQ7) In terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, in what way does creativity allow your organization to stand out from competition and succeed on the marketplace?
(SO3) Evaluating the knowledge, attitude and practice of researchers and practitioners in the field towards fostering creativity in business	• (IQ8) Which is your position on encouraging, stimulating creativity in your business? (offer examples in this regard)
	• (IQ9) Does creative thinking help you and the organization you are part of to anticipate, see the future? (offer examples in this regard)
	• (IQ10) What is your position on the common belief that creativity makes an organization flourish, crushes the competition, thus being acknowledged by specialists as the ultimate, most powerful competitive advantage form for entities?
(SO4) Identifying advantages, benefits, barriers, challenges, and concerns related to fostering creativity in business:	• (IQ11) Which are the advantages, benefits related to fostering creativity in business?
	• (IQ12) Which are the barriers related to fostering creativity in business?
	• (IQ13) Which are the challenges and concerns related to fostering creativity in business?
	• (IQ14) Based on your position that you take in the entity where you are activating, do you see yourself as a transformational leader?

Source: the author

DATA COLLECTION ANALYSIS AND PRESENTATION

The fourth section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Data collection analysis and presentation”, has the scope of underlining the steps taken in order to collect the data necessary for this complex research and present and interpret the results obtained.

As stated above (see Table 5. “Qualitative data analysis: set of questions addressed during the interview sessions”) for the interview session there were fourteen questions prepared in total, that is before the short introduction made by each professional (director, manager, leader, supervisor, group coordinator) who has kindly accepted to be part of this research process, in which the general background was presented (in terms of age, current place of work, previous experience in a managerial position, and studies). In addition, as it could be remarked the interview involved asking open-ended questions, thus offering the respondents the possibility to answer, to exemplify the statements made, if necessary, and also to have a conversation in order to obtain elicited data and information about a subject.

Since the targeted aim of this research is to establish some potential and valuable steps necessary to be taken in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, the interview sessions started in March 2020 and ended in April 2020. The types of interviews used

in this research were: e-mail interviews, web interviews, telephonic interviews and personal interviews. The interviews had as targeted population the Romanian populations, thus the people interviewed was from entities activating in Romania.

The total number of respondents was ten, and the data collected was considered satisfactory for the purpose of this study. In general lines, it should be mentioned that 60% of all individuals interviewed graduated at least university studies, while 40% were only high school graduates, but with different training hours and training courses taken in different fields required in the domain where they activated. What is more, out of the 60% of all individuals interviewed who graduated at least university studies, one person had a Ph.D. title, while two persons had master studies. All the persons interviewed had more than 30 years of age, and felt also that their previous experience helped them a lot in their current position. In continuation, it should be emphasized that in four cases out of the total of ten cases, the interviewees where part of family businesses, namely: they started the business together with other family members and relatives and even close friends or former colleagues, where already familiarized with the other employees long before starting their business activity – since it was an activity started with people already known from different types of environment (family, other places where they worked or even studied).

In the following lines, the responses for each of the fourteen questions will be presented and analyzed in-depth in order to create a general idea and framework for this current work.

The first question closely analyzed and discussed is represented by: (IQ1) “What does creativity, in general, and creativity, in business, represent?” The answers obtained to the question (IQ1) where extremely diverse, however in all cases the importance of creativity, in general, and creativity, in business, was clearly acknowledge and undeniably praised by all leaders (see Table 6. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO1)). For instance, creativity was associated with originality, innovation and newness, by 80% of the respondents, while 20% of the ten respondents stated that, to them, creativity, in business, takes a step further and should be linked with concepts such as change management, organizational transformation, ideas’ metamorphosis, which, in the end, is expected to lead to more complex business activities and actions, such as: reorganization, restructuring, remodeling, or at least a shift, alteration and variation of previous mentalities, stages, way of conducting the business process and/or managing the business process management in the entities referred to. In continuation, all the interviewees brought to light their strong believes that without being creative in life and in business, without having an avant-garde vision or, at least, without promoting an open-minded environment filled with ingenious and inventive solutions to the problems that occur almost on a daily basis, there would be no future for their activities and their businesses. What is more, 30% of the total number of the respondents stressed that creativity is even a tool for them, since it holds the power of creating opportunities out of problems. It should also be emphasized that cleverness and intelligence was associated with creativity in business by 90% of the interviewees, when refereeing, for example, to those particular cases in which as managers and leaders, they had to face different crisis situations or they were forced to find hidden patterns in different stages or steps of their work, which made all of them act accordingly and turn new and imaginative ideas, data and information gathered from the marketplace into reality. In terms of creative managerial actions, the examples offered varied substantially from one case to another, from one line of business to another, as such: some managers made reference to their own decision to either start the current business of which they were part of (the process of founding their business) or bring their present businesses to a new stage; other leaders made reference to ingenious ideas taken on the way, for instance, in promoting their own brand or closing a contract with an important buyer; and other managers stated the novelty of their actions in the process

of dealing with their clients, based on the fact that, according to their experience, they are extremely hard to please and desire, in the same time if possible, both old and new characteristics and traits for the products they would like to acquire. Since the interview sessions started in March 2020 and ended in April 2020, all managers made reference to the relationship between their line of work and business and COVID-19 pandemic, showing great concern firstly, for their health, their employees' well-being and secondly, for the (immediate) future of their businesses.

The second question closely analyzed and discussed is represented by: (IQ2) "Is creativity a luxury?" All participants in the study were extremely pleased to receive such a question for analysis and debate, but, in the same time, they perceived the question as highly intriguing (see Table 6. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO1)). For instance, one of the managers participating in the study stated that being innovative and taking intelligent and novel actions was not at all a luxury for him as long as the work environment was pleasant and the colleagues were willing to cooperate and act as team. However, the manager pointed out that in case groundbreaking pressing ideas and solutions were required, especially in an unpleasant, unfulfilling, unfriendly, stressful and even aggressive place of work, creativity could become a luxury, since in order to be creative a special state of mind is need. Thus, in this case, the conclusion pointed out was that nurturing creativity is a luxury, such as, for instance, when facing the need to find immediate solutions to a business in times of COVID-19 pandemic. In continuation, another manager participating in the study made an interesting reference to creativity from the perspective of rare, unique, highly crafted, luxury goods. In this respect, he was practically acknowledged the importance of the goods and services the entity where he was working was promoting and selling, since it was a refined selection of goods and services targeting a particular type of personality and of clients. Likewise, 90% of the interviewees pointed out that, at a general level, creativity must not be considered and treated as a luxury when defined as the natural tendency to recognize ideas with potential, to find alternatives, to acknowledge new possibilities to improve the line of work. Nonetheless, when associating creativity with visionary ideas, technologically advanced inputs, leading-edge solutions, 80% of the participants noted that the actions due to be taken might be extremely expensive and time consuming, thus the exploration and exploitation of such endeavors might put a high pressure and an extensive effort on entities. In times of COVID-19 pandemic, all leaders' part of the interview sessions stated that creativity should be one of the top priorities on all managers' agenda when making the necessary decisions in finding new solutions to promote and sell goods and services.

Table 6. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO1)

Specific objectives (SO)	Questions
(SO1) Addressing what creativity, in general, and creativity, in business, represents:	• (IQ1) What does creativity, in general, and creativity, in business, represent?
	• (IQ2) Is creativity a luxury?
	• (IQ3) Why does your business need creativity?
	• (IQ4) Have you noticed any links between problem-solving processes in your own organization and creativity?
	• (IQ5) In what way have you promoted creativity at the place of work?

continues on following page

Table 6. Continued

Specific objectives (SO)	Responses
(SO1) Addressing what creativity, in general, and creativity, in business, represents:	• Based on the answers obtained to (IQ1) and (IQ2), it can be noted that creativity represents the key element in each decision taken in business, since innovative actions bring a plus in daily lives and transactions. • Transformational leaders base their decisions not only on market research and existing predictions, but also on intuition, creativity, innovative ideas, intellect and so on.
	• The answers to (IQ3) showed that creativity in business is needed in areas such as: finding new financing solutions (a major problem for Romanian organizations); keeping the existing clients close to the organization and attracting new buyers; identifying new partnership solutions (in some cases at an international level, which is almost at all times a real challenge); promoting the products and services; aligning the entities culture and values to the objective belonging to the EU and the European Commission – namely, the Sustainable Development Goals (SDGs); seeking to create green jobs; becoming more sustainable in all processes.
	• The answers to (IQ3) acknowledged the importance of making decisions also in terms of rewarding the most valuable employees. However, 80% of the respondents stated that by solely focusing on the good results of a minor group of employees, the other employees will be demotivated and unwilling to cooperate with their managers/supervisors/coordinators, displaying a reluctant behavior towards them and the entities' development plans and programs. In turn, they stressed that finding alternative ways of rewarding the employees not that successful at an evaluation of their monthly/annual activity and encouraging them to get more involved in the managerial decisions, offered them plenty of motives to act and make progress in the companies.
	• In terms of (IQ4) – the links between problem-solving processes in your own organization and creativity, all the leaders declared that there were cases in which they made use of standard problem-solving steps, stages and processes in some cases, but in other cases they needed to be creative in finding ways to deal and cope with certain requirements or desires. • For instance, they made reference to claims and demands coming from old and valuable clients, who they needed to take into consideration in order to show flexibility and respect to a valuable long-term collaboration. • This may have meant even partnering with another competitor on the marketplace, in order to satisfy the clients' needs and not lose them to the competition. • The managers identified certain specific tools that they use in terms of problem-solving processes in their organizations that require their own and their employees' creativity, such as: brainstorming – which implies separating the “divergent” way of thinking from the “convergent” way of thinking; participatory decision-making – which offered the employees' to be part of the decision-making processes in the companies and to be closely acquainted with the specificities of the main business processes that take place in the organizations.
	• In general lines, the responses gathered for (IQ5) displayed that leaders promoted creativity at the place of work mainly in the following cases: on the top position, financing solutions; on the next position, satisfying customers' needs and offering solutions to employees' questions; immediately after, the next positions were occupied by ways of promoting the companies' image and ways of becoming more visible on the marketplace. Due to COVID-19 pandemic, all leaders stated that they confronted themselves with the need to become more active online, be more visible, more engaged in the discussions on social media, more willing to establish relationships with the clients, offering rewards to clients feedbacks, to the positive posts they made, and so on. • In 20% of the cases, the respondents even presented the cases in which they had to delegate new tasks to the employees or even hire new employees for delivery purposes or online communication with the clients' purposes.

Source: the author

In the table above the results for the questions from (IQ1) to (IQ5) are displayed for the specific objective (SO1) (see Table 6. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO1)):

Based on the results displayed in the table above for the questions from (IQ1) to (IQ5), which address the specific objective (SO1), it should be stated that creative problem solving (CPS) process that takes place in creative environments and that is used by transformational leaders has the purpose of helping the discovery of new solutions to different categories of problems (see Table 6. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO1)). In general terms, the creative problem solving (CPS) process has shown that remarkable results may be obtained when firstly focusing the mind on creating and secondly concentrating the mind on analyzing and evaluating. However, since the creative problem solving (CPS) stages are rather simple, transformational leaders found as additional solutions to correlate the creative problem solving (CPS) activity with analytical problem solving approaches, such as, for example: the cause and effect analysis; the root cause analysis; and the simplex process. The interviewed leaders stated that these methods and tools combined offered remarkable and reliable results when, for instance, being forced to find immediate solutions to cut costs (at the very beginning of the COVID-19 pandemic, due to lockdown decisions), or when, for example, being pressured to be more inventive in the relationship with the clients (due to their continuously changing tastes and desires) and the suppliers (due to the challenges they are facing, in turn, in terms of raising costs, lack of products).

The interview method required the use of the following questions during the interview sessions (see Table 7. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO2)), which in the case presented in the lines below refers to specific objective (SO2) and takes into consideration the presentation and exemplification of the responses for questions (IQ6) and (IQ7):

Table 7. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO2)

Specific objectives (SO)	Questions
(SO2) Addressing the importance of creativity in business, especially in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era:	• (IQ6) What opportunities does creativity bring to the business in which you are activating in?
	• (IQ7) In terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, in what way does creativity allow your organization to stand out from competition and succeed on the marketplace?
Specific objectives (SO)	Responses
(SO2) Addressing the importance of creativity in business, especially in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era:	The answers to (IQ6) displayed that the opportunities brought to the business by creativity were, as follows: • Increase in funding opportunities and financing solutions viable for the entities; • Increase in marketplace visibility, due to intense online activity; • Increase in finding and applying practical solutions for employees' rewards system; • Increase in finding and applying practical solutions for clients' rewards system and claims system.
	The answers to (IQ7) displayed in terms of changing dynamics in responsible and sustainable business in the Post-COVID-19 Era, creativity allowed the organization to stand out from competition and succeed on the marketplace, as follows: • The products offered made a clear difference on the marketplace; • The services offered made a clear difference on the marketplace; • The employees attitude towards clients made a clear difference on the marketplace; • The managerial decisions showed that clients and employees are highly values by the entities.

Source: the author

Fostering Creativity in Business

The interview method required the use of the following questions during the interview sessions (see Table 8. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO3)), which displays specific objective (SO3) and the responses and examples offered to (IQ8), (IQ9) and (IQ10):

Table 8. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO3)

Specific objectives (SO)	Questions
(SO3) Evaluating the knowledge, attitude and practice of researchers and practitioners in the field towards fostering creativity in business	• (IQ8) Which is your position on encouraging, stimulating creativity in your business? (offer examples in this regard)
	• (IQ9) Does creative thinking help you and the organization you are part of to anticipate, see the future? (offer examples in this regard)
	• (IQ10) What is your position on the common belief that creativity makes an organization flourish, crushes the competition, thus being acknowledged by specialists as the ultimate, most powerful competitive advantage form for entities?
Specific objectives (SO)	Responses
(SO3) Evaluating the knowledge, attitude and practice of researchers and practitioners in the field towards fostering creativity in business	• The answers to (IQ8) showed that all managers/directors/supervisors/team coordinators part of the interview process were having an encouraging and stimulating attitude towards creativity in their line of business and they were all able offer relevant examples in this regard. • Good examples provided were the ones referring to new promotional champagnes and creative actions and steps taken in this matter by the employees or team members. • Another relevant example was represented by the cases in which a product needed to be adjusted to the desires and needs of a certain person or group of persons, in this case being able to make reference to personalized demand for products and services. • Also, promising solutions were found when trying to enlarge the clients' database and potential customers needed to be made aware of the companies' line of activity, products and services offered: online campaigns in which former clients were recommending their friends to the companies proved to be a success.
	• The responses to (IQ9) demonstrated that creative thinking was frequently used by leaders in their daily activities, since all tasks due to be taken into consideration required besides the standard steps a number of creative actions that needed to be taken. • It was shown, for instance, that by using creative thinking during marketing campaigns, good and promising solutions were found for the businesses. • It was argued, for example, that new partnerships were materialized by being creative and highlighting numerous benefits and arguments capable to determine a potential entity to accept such a multi-beneficial collaboration.
	• The responses to (IQ10) emphasized the importance of having a competitive advantage, no matter when analyzing the case of smaller or bigger entities, since making profit was one of the targets mentioned by all entities' representatives. • Indeed, creativity and creative attitudes, actions and strategies were thought to be the ones capable to make a difference in leading an entity to success, however all leaders showed a certain degree of cautiousness when being asked whether they highly rely on their intuition, creativity, innovative spirit and adventurous decisions. • Based on the feedback and comments received to this question, it could be acknowledged that creativity and creative actions had the fundament in most cases in the results of internal surveys, the figures obtained during the marketing campaigns, the attitude displayed by other organizations activating in the same activity line, but in another region, or country.

Source: the author

The interview method required the use of the following questions during the interview sessions (see Table 9. Qualitative data analysis: set of questions addressed during the interview sessions), which take into account specific objective (SO4) and the responses and examples gathered from the interviewees for questions from (IQ11) to (IQ14):

Table 9. Qualitative data analysis: set of questions addressed during the interview sessions for the specific objective (SO4)

Specific objectives (SO)	Questions
(SO4) Identifying advantages, benefits, barriers, challenges, and concerns related to fostering creativity in business:	• (IQ11) Which are the advantages, benefits related to fostering creativity in business?
	• (IQ12) Which are the barriers related to fostering creativity in business?
	• (IQ13) Which are the challenges and concerns related to fostering creativity in business?
	• (IQ14) Based on your position that you take in the entity where you are activating, do you see yourself as a transformational leader?
Specific objectives (SO)	Responses
(SO4) Identifying advantages, benefits, barriers, challenges, and concerns related to fostering creativity in business:	The responses to (IQ11) highlighted the following advantages: • 90% of the interviewees stated that by enriching their business activities with creative actions they managed to successfully survive on the marketplace, having longevity and maintaining a steady rate of profitability which is of utmost importance in times of challenge; • 70% of the interviewees brought into discussion the fact that they deeply cherish all creative actions and activities in their organizations, as long as they serve correct and ethical principles and harbor ethical practices; • 70% of the interviewees advanced the idea according to which creativity in their business expended the data base of clients and made them more aware of the potential opportunities of accepting different forms of collaborations with marketing consultants capable to perform market researches for their line of work.
	The responses to (IQ12) highlighted the following barriers related to fostering creativity in business: • all the interviewees mentioned that, at one point or another, felt extremely afraid of their own failure as managers and leaders and/or of their business failure, especially when being confronted with ambiguous situations, uncommon and unfamiliar situations, reluctant clients and ruthless competitors; • 90% of the interviewees acknowledged that, when trying to be creative or to take creative actions and steps, they start evaluating in the same time, which immediately stops their capacity to visualize new ideas and makes them concentrate on whether the ideas are good and useful or whether the ideas are bad or useless; • 80% of the interviewees mentioned that they use to analyze and judge their ideas as well as their employees' ideas during brainstorming sessions, which seems to demoralize all the participants at such a process, since – instead of nurturing a creative environment, the atmosphere became unpleasant and desolating; • 80% of the interviewees mentioned that they sometimes asked for advice in order to expend their businesses and they confronted themselves with negative responses, for example, from experts towards their ideas, which initially made them believe that they were choosing a wrong approach or they were on the verge of making a wrongful decision, when instead, by following their own path, they become very successful and very confident in their own potential; • 60% of the interviewees shared a few cases in which they felt that their thoughts and actions lacked confidence, such as, for instance: while having a discussion with an angry client or unsatisfied employee, which made them believe that there is no constructive solution to those cases; while dealing with recession, when they had to desperately seek for financial solutions in order to survive.
	The responses to (IQ13) highlighted the following challenges and concerns related to fostering creativity in business: • all the interviewees mentioned that, at one point or another, felt overwhelmed with information, which was flowing from all sides: clients, suppliers, employees, family, friends, other interested parties – all willing to be of help, to make a creative contribution to the business, to help the business stay afloat or even become more visible and more successful; • all the interviewees mentioned that, at one point or another, felt extremely discouraged by certain unpredictable situations, unprecedented cases and unfavorable responses, which determined them to hold back and take no constructive actions; • 60% of the interviewees mentioned that, based on their previous experience with other entities, were inclined to change the environment in which they were working in order to be able to continue developing, rather than staying in an unhealthy, lethargic and mainly demotivating working circumstances, even with the risk of changing a well-paid position with a less-paid job, but at least a more rewarding one spiritually.
	The responses to (IQ14) showed the following elements: • 90% of the interviewees stated that they see themselves as transformational leaders, since they nurture and strengthen the creative path of their entities and encourage their colleagues to be more innovative, more receptive to newness, more reflective when it comes to taking actions and more reasonable in accepting new solutions in order to solve problems; • 80% of the interviewees stated that they believe that creativity is an important trait of all of the individuals and it is their duty cultivate creative thoughts and creative actions to the benefit of their organizations, but, in the same time, creativity may be stopped by individuals' fear of unknown or by their fear of failure – which are things that they may not be able to control; • 70% of the interviewees stated that according to their own experience, due to the extremely fragile nature of individuals, some of the people that they get in contact with, when asked to be more creative or more flexible in their way of thinking, mention the fear of being rejected and having their solutions dismissed – this being definitely a key “creative killer” for them.

Source: the author

The next section represented by the “Discussion and synthesis of results” comes as a continuation of this particular section and presents more relevant conclusions for this current study.

DISCUSSION AND SYNTHESIS OF RESULTS

The fifth section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Discussion and synthesis of results”, presents a more in depth analyses of the key findings and makes connections with the current international environment.

In the paper published by the World Economic Forum (WEF) in April 2015, titled “Global Agenda Council on Institutional Governance Systems: Effective Leadership in International Organizations”, numerous arguments were brought in order to support the need to focus more on leadership in the context represented by the global governance trends and requirements specific to the 21st century, in the context in which certain events were considered threatening for the good development and growth of countries and regions (World Economic Forum, 2015). Based on the arguments brought by specialists, humanity is believed to have tremendously suffered from “a global governance deficit”, which was the result of the lack of appropriate mechanisms and instruments capable to ensure “international peace and security”, the avoidance of different forms of global crises and “global economic shock”, while neglecting, in the same time, climate balance and “public health” – acknowledged as “important global goods” (World Economic Forum, 2015, p.6). In addition, the specialists that contributed to the World Economic Forum (WEF) research published in 2015 concluded that a good leader should focus – besides its capacity to lead effectively certain entities based on “knowledge, competence and experience”, on “successful international cooperation” and “effective governance” (World Economic Forum, 2015, p.6). In other words, it seems that leadership performance in different types of entities, should also address key aspects such as: the capacity to deal with multinational and international challenges and find the necessary resources to think and act at a global level, and also, the strength to make decisions by evaluating the interdependencies between elements such as the well-being of the entity and interested parties – the employees – the clients – the responsibility for effective processes, where ethical codes should be respected – the relationship with the environment (in terms of public health, public goods, world’s future, the next generations to come, and so on) (see Table 10. Characteristics for good leaders).

It should also be brought into discussion that this current work also focused on another specific objective, namely: (SO5) The fifth specific objective is to assess the awareness and perception of the study community (research population chosen for analysis and study) regarding the usefulness, helpfulness, convenience, advantageousness, profitability, advisability and visibility that occurs from promoting creativity in business, by empowering strong transformational leaders, having in mind the desire to change dynamics in responsible and sustainable business in the Post-COVID-19 Era.

Based on the results obtained, the following arguments were made, as follows:

- The first aspect noted while analyzing the general results obtained was that the entities’ leaders as well as the organizations themselves (by the actions taken with the aid of their managers and employees) are well aware that a healthy work environment brings numerous advantages in terms of effectiveness, efficiency, profitability, and performance. Also, based on the feedbacks gathered, the managers have shown that they feel responsible for being part of the companies’ leadership structures, trying to align the idea of obtaining profit with the one of supporting a healthy and productive work environment, by showing deep concern to those willing to be more creative and more involved in the entities decisions.

Table 10. Characteristics for good leaders

Characteristics for leaders	Analysis of the characteristics for leaders
• possess specific competences, traits, skills	• be aligned with global governance characteristics of the 21st century; • be capable to adhere to the new environment specific to the Post-COVID-19 Era.
• genuinely interested in humans' well-being, employees' health and state of mind	• be aligned with organizations planes for growth and development; • be focused on environmental actions, public health, climate change mitigation.
• possess a broad culture and an important level of knowledge	• be able to foresee the results of the actions due to be taken, anticipate the steps that should be made, have a visionary, constructive and confident attitude
• be ambitious and take ambitious, bold decisions	• be aware of challenges posed by certain decisions; • be aware of geopolitical circumstances and economic evolution; • be interested in good governance, cooperation among individuals and organizations, and show strong abilities to coordinate.
• be effective in a global environment, be active and successful in international organizations	• make the necessary steps in becoming indispensable for the entities; • be closely connected with powerful players on the marketplace; • find realistic alternatives and feasible solutions to current problems and anticipate future batteries, gaps, limits, problems, and situations for the foreseeable future.
• be able to act in the spirit of "high-performing leadership", rely on good practices and follow the model of good leadership	• be interested in new instruments, methods, solutions and tools that may radically change and overall drastically transform the organizational surroundings, in the spirit of good governance, increased performance and positive practices derived from other leaders' experience as well as other entities' activities.
• be effective by avoiding useless bureaucracy	• be inclined to avoid useless bureaucracy, by trying to align the organizations' activities to the current strategies; • make strategic organizational decisions having in mind the best interest of the organization as well as the well-being of the employees, clients, environment, and establish the most important goals in terms of progress;
• focus constantly on the task for which the mandate was received, yet act in the best interest of the organizations	• be aware of the key aspects of the organizations, such as, the entities' staffing, the sources of financing, the expertise, in order to identify the necessary actions capable to induce organizations' success, by taking coherent actions, monitoring the employees behavior and the vital signs of companies profit.

Source: the author based on the ideas derived from the World Economic Forum (WEF) "Global Agenda Council on Institutional Governance Systems: Effective Leadership in International Organizations (REF 211014)" (April 2015)

- The second aspect noted while analyzing the general results obtained was that the entities' leaders know that their actions should be reflected in the general performance indicators of their organizations. They presented, in general lines, their belief according to which leaders should be chosen and later on should be able to keep their position within the organizations based on merit. However, they also brought into analysis the cases in which the entities were family owned – which were, in fact, particular cases, and here they stressed the fact that since the organizations were family owned, the owner(s) were entitled to decide the person(s) capable to run best their businesses. Besides, they all strengthened the idea according to which good leaders possess certain competences, traits of character and knowledge that make them good and capable candidates for managerial positions.
- The third aspect that was remarked based on the responses gathered was that leaders feel accountable for their activities and actions, thus besides the general organizations' expectations towards profitability and performance, they, in turn, have adhered to their own expectations in terms of profitability and performance in order to establish higher targets and obtain better results in a timely manner. In the same manner, leaders displayed a great will to comply with ethical codes,

disclose any potential conflicts of interest and comply with national and international laws, rules and regulations.

- The fourth aspect that was noted based on the responses gathered was that leaders are at all times willing to support creativity and creative measures and solutions to current problems, thus being always active in bringing and retaining talent in their organizations. In turn, it was also acknowledged that leaders were taking care on a constant basis of their own training and own professional and personal development – which they saw practically intertwined.

It should be pointed out that the abbreviations used in the book chapter were presented below and explained (see Table 11. Abbreviations used in the book chapter):

Table 11. Abbreviations used in the book chapter

List of abbreviations	Meaning of the abbreviations
AI	Artificial Intelligence
CE	Circular Economy
CPS	Creative Problem Solving
GDP	Gross Domestic Product
EC	European Commission
EP	European Parliament
EU	European Union
IC	Intellectual Capital
ICT	Information and Communications Technology
IQ	Interview Question
KQ	Key Question
OECD	Organization for Economic Co-operation and Development
Q	Question
R&D	Research and Development
R&D&I	Research and Development and Innovation
RD	Research Design
RDQ	Research Design Questions
RS	Research Strategy
RQ	Research Question
SC	Smart City
SO	Specific Objective
SDGs	Sustainable Development Goals
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
WEF	World Economic Forum

Source: the author

PROPOSED IMPROVEMENT MODEL AND FRAMEWORK DEVELOPMENT FOR ROMANIA

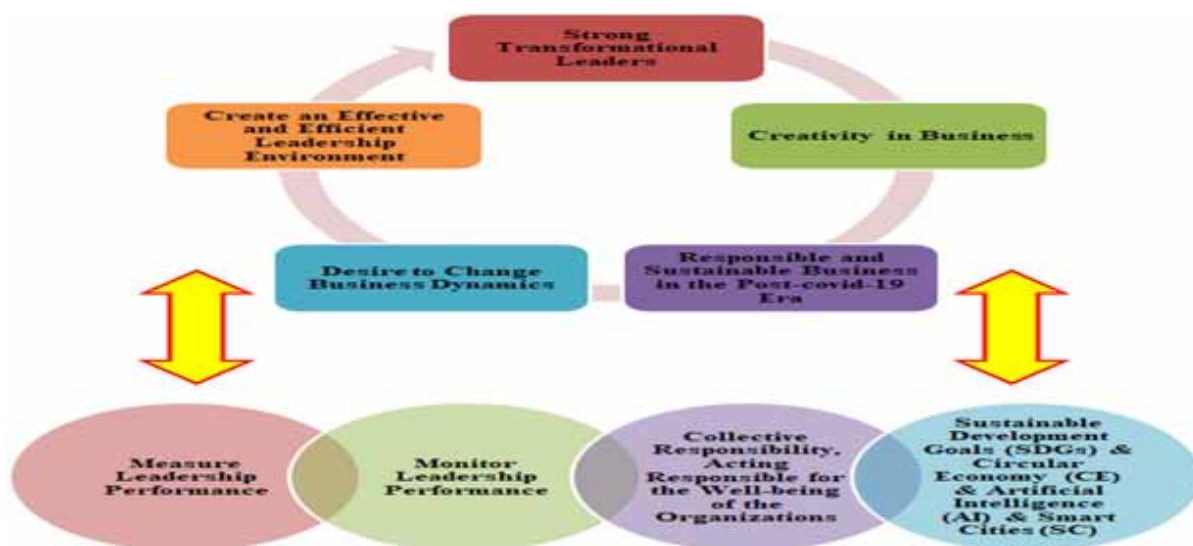
The sixth section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Proposed improvement model and framework development for Romania”, proposes an improvement model and framework development for Romania in terms of the relationship that exists between possible forms of creativity – highlighting the role of creativity in business as well as encouraging creative actions in business, while acknowledging the role of leaders in organizations – putting into a bright light the need of empowering strong transformational leaders to take action in order to ensure a bright future for entities.

Based on the ideas derived from the document entitled “Mapping Smart Cities in the EU (IP/A/ITRE/ST/2013-02, PE 507.480)”, published, in January 2014, by the Directorate General for Internal Policies, the Policy Department A: Economic and Scientific Policy (European Union), belonging to the European Parliament (EP), the focus of European Union’s organizations should also be to create SC: “Information and communications technology (ICT) is a key enabler for cities to address these challenges in a ‘smart’ manner”, by challenges referring to “(...) increase strains on energy, transportation, water, buildings and public spaces, so solutions need to be found which are ‘smart’, i.e. both highly efficient and sustainable on the one hand, as well as generating economic prosperity and social wellbeing on the other. This is best achieved by mobilizing all of a city’s resources and coordinating its actors using new technologies and forward looking joined-up policies” (European Parliament, 2014, p.9).

In the document titled “Smart Cities and Inclusive Growth”, the Organization for Economic Co-operation and Development (OECD) (2020) makes specific notes concerning the implications of smart technologies and the importance of revitalizing business models in SC in the Post-COVID-19 Era (OECD, 2020).

Figure 4. Proposed improvement model and framework development for Romania

Source: the author



This also applies in the case of Romania, where there is an increasing need for SC and in which case the existence of transformational leaders can facilitate the development and growth of SC for the benefit of people, organizations and country.

The proposed improvement model and framework development for Romania is presented below (see Figure 4. Proposed improvement model and framework development for Romania).

Also, in continuation of the proposed improvement model and framework development for Romania presented above, the solutions for fostering a creative business environment for Romania with the aid of good transformational leaders are displayed below (see Figure 5. Solutions for fostering a creative business environment for Romania with the aid of good transformational leaders).

Figure 5. Solutions for fostering a creative business environment for Romania with the aid of good transformational leaders

Source: the author



SOLUTIONS AND RECOMMENDATIONS

The seventh section of this paper entitled suggestively "Fostering creativity in business: empowering strong transformational leaders", represented by the "Solutions and recommendations", is intended to highlight the most important trends specific to organizations' leadership and managerial actions, having in mind the desire to change dynamics in responsible and sustainable business in the Post-COVID-19 Era. Also, this section brings to the attention the aspects that could be represented by barriers and limitations in terms of making creative decisions for the well-being of organizations. In continuation, the work also reflects on future research on essential benefits and changes that leadership actions and behavior could bring to entities worldwide.

Some of the most relevant solutions and recommendations may be found below, with the appropriate comments and explanations highlighted and provided (see Table 12. Solutions and recommendations for empowering strong transformational leaders and building a creative environment):

Table 12. Solutions and recommendations for empowering strong transformational leaders and building a creative environment

Solutions and recommendations	Ways of empowering strong transformational leaders and building a creative environment
• Create an effective and efficient leadership environment	• The targeted environment should be the international environment, with its advantages, challenges and constraints; • The general goal should be represented by good governance, leadership accountability and sustainable actions; • The key is to rely on international cooperation among entities, thus searching for successful arrangements.
• Measure leadership performance	• Willingness to close gaps (governance gaps, leadership gaps); • Desire to promote effective and efficient leadership actions, by taking accountable governance steps; • Capacity to be prepared even for radical transformations, especially when dealing with weak organizational operational business planning, vulnerability to economic, financial, political and social challenges, lack of force to perform effectively, efficiently and successfully; • Ability to broaden the perspectives through the aid of creative actions, new technologies, and extensive restructuring measures.
• Monitor leadership performance	• By relying on previous success stories, past and current practices at a national and global level; • By accepting external help, without the fear of losing cultural and organizational identity, being able to understand the benefits of cooperation and collaboration with experts in the field.
• Accepting the idea of collective responsibility and acting in the spirit of being collectively responsible for the well-being of the organizations	• Focusing on respecting the global sustainable goals, ethical codes, laws, rules and regulations; • Focusing on understanding potential conflicts of interest and setting organizations' strategic plans and priorities accordingly; • Concentrating on identifying the priority areas of business for the organizations and getting all employees involved in a general creative and transformational process.
• Enabling more direct learning, based on previous actions made and decisions taken	• Improving leadership practices with the aid of a personalized organizational process: learning by doing, learning from own experience; • Developing a certain sense for reform and being able to know when significant changes are necessary; • Being constantly in accordance with the most recent international trends, being always part of all business management processes of the organizations; • Making the organizations learning organizations, thus being able to depend on knowledge, intellectual capital, human resources inputs, know-how, and creative actions, activities and methods; • Bringing the leadership practices accessible to all employees, getting all employees involved in the well-being of the companies – more involved in the decision making steps, more aware of the aims of the organizations, more encouraged to be creative, to take creative actions and express creatively their ideas.

Source: the author

CONCLUSION

The eighth section of this paper entitled suggestively “Fostering creativity in business: empowering strong transformational leaders”, represented by the “Conclusion”, brings to the attention the most relevant and the most important ideas that surfaced out of this research process, presenting in what way may strong transformational leaders be empowered, how are they able to create and be part of a creative working environment, and which does the future hold in terms of solutions for fostering creativity in business (see Figure 6. Advantages for fostering a creative business environment for Romania with the aid of good transformational leaders).

Fostering Creativity in Business

Figure 6. Advantages for fostering a creative business environment for Romania with the aid of good transformational leaders

Source: the author

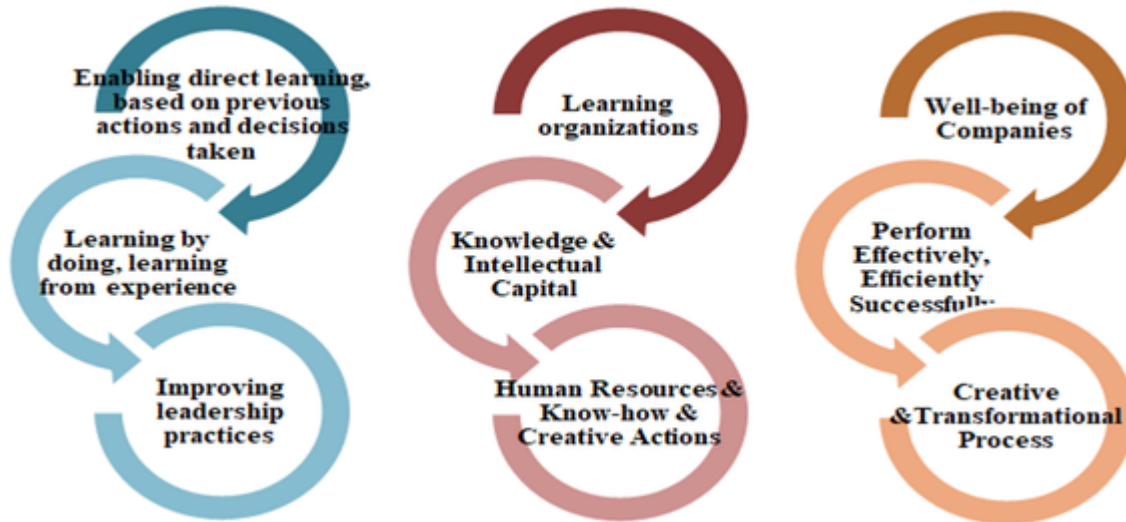


Table 13. General conclusions for empowering strong transformational leaders and building a creative environment

General conclusions	General comments on how to empower strong transformational leaders and build a creative environment
The steps taken by organizations should be more focused on sustainable development and addressing the Sustainable Development Goals (SDGs)	- Good managers and good leaders, willing to be in accordance with the new environmental regulations and trends, should be very careful to the limitation of resources (the resources of their entities, the resources of their countries, the resources of the environment); - Good managers and good leaders with visionary traits should be more observant when it comes to the health and well-being of the planet, the preservation of public goods; - Good managers and good leaders require an increased level of understanding towards sustainable development, being concerned with the development and growth process for the planet and their organizations, in like manner.
The steps taken to act in the spirit of Circular Economy (CE)	- Transformational leaders try to find a sustainable approach towards the use of resources, allowing their proper use in present days and, in the same time, ensuring their renewal for the future activities (and future generations); - In the cases in which some resources are scarce and/or nonrenewable, transformational leaders are entitled, through their actions and decisions, to promote the use of new resources, the creation of new resources, thus offering the chance to nature to regenerate and to the planet to flourish; - For the good of the planet, transformational leaders should encourage the use of recycled materials in their own organizations (such as, for instance, recycling the paper, the plastic bottles and cups, the glass bottles, the cardboard); - In addition, by taking creative measures, transformational leaders might encourage the employees in their organizations to act sustainably and help build sustainable entities which make use of renewable resources.
The steps taken to act in the spirit of encouraging new trends, new technologies, Artificial Intelligence (AI) and Smart Cities (SC)	- Transformational leaders are always seeking for new trends in terms of new technologies, being focused on the latest technologies, instruments and methods specific to digitalization; - Transformational leaders can decide to make use of the facilities brought by AI in the cases in which they see this appropriate, especially when willing to cut costs, not hire more employees; - These days, there seems to be a general trend to focus on creating, developing SC, and the organizations activating in those particular places should be encouraged by their leaders to act in the same spirit and be part of the “revolution in urban living” (European Parliament, 2014).

Source: the author

Some of the most important conclusions derived from this current research are displayed in the lines below (see Table 13. General conclusions for empowering strong transformational leaders and building a creative environment):

What is more, the most important conclusions derived from this current research should be acknowledged together with future research activities and plans, which are displayed in the lines below (see Table 14. General solutions for continuing the research activities on forms of empowering strong transformational leaders and building a creative environment):

Table 14. General solutions for continuing the research activities on forms of empowering strong transformational leaders and building a creative environment

General solutions	General comments on forms of continuing the research activities empowering strong transformational leaders and building a creative environment
• A way to deepen the knowledge on creativity in business and solutions for empowering strong transformational leaders could be represented by performing more interview sessions.	• A possible solution to gain more information on the topic would be to perform more interviews and gather more details directly from the main sources. These interviews may continue to focus on the case of Romania, or they may address leaders from other organizations from other countries, depending on the research questions and abilities of the researchers. • Another possible solution could be represented by interviewing the employees, in order to discover their perspective on the manner in which they are encouraged to be more creative and the traits that they believe their managers possess.
• The results derived from interviews could be strengthened and validated with the results gathered from questionnaires and focus groups.	• The questionnaires might be helpful in order to cover a wider range of population, thus being able to address more complex problems and use appropriately a limited budget. • In addition, focus groups could turn out to be extremely helpful, being a form to deepen the knowledge, gain a better perspective on the topic and be able to explain, in the same time, the elements that might seem unclear during the interviews or surveys.
• Since all forms of research have their limitations, a good way to obtain new knowledge would be to make use of data from reputed data bases and analyze these data.	• For example, data freely available from reputed organisms may turn out to be extremely useful in order to strengthen such a study, being also able to offer a wider perspective on creativity and leadership, in a more general context. • For instance, the results obtained by other specialists in the field might turn out to be extremely useful, being able to make comparisons between cultures, organizational values, regions, and countries.

Source: the author

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KEY TERMS AND DEFINITIONS

Creativity in Business: Is considered a valuable asset for any kind of organization, especially in challenging times (in the Post-COVID-19 Era) and could refer to specific actions taken by the entity in order to promote newness, innovation and knowledge (intellectual capital, know-how), thus promoting diversity, performance and competitiveness.

Transformational Leaders: Are considered those individuals possessing specific competences and skills that enable them to take visionary actions and perform bold activities capable to bring the organizations into a new dimension and empower their employees and colleagues to be creative, flexible, accountable and opened, and more focused on professionally and personally developing themselves in order to ensure the entities’ wealth, growth and global visibility.

Chapter 18

Dynamics of Sustainable Supply Chain Management in the Post-COVID-19 Era: A Bibliometric Literature Review

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ABSTRACT

The fragility of the global economy during the COVID-19 outbreak has shown the importance of supply chain sustainability. Although academic interest in the concept of sustainable supply chain management has risen significantly in the last decades, this concept has lately attracted the attention of policymakers as one of the dynamics of the “new normal” in the post-COVID-19 era. This study was carried out to highlight the dynamics of SSCM in the post-COVID-19 era, based on the recent developments in sustainable supply chain literature. Hence, the bibliometric analysis method was utilized by using various software packages. The data collected for this research consists of the finding of the search results of the “Sustainable Supply Chain Management” phrase from the Web of Science database for the period of 1975 – 2021. In total, 326 articles have been included in the analyses.

INTRODUCTION

With the globalizing economies, the needs of societies, the way businesses work and competition methods are changing rapidly. This globalization process has made it necessary to develop and implement supply chain management (SCM) strategies. One of the applications that will provide the best competitive advantage for businesses is sustainable supply chain management. With the new world order, busi-

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nesses started to see the world as a single market in terms of both supply and sales of the products they produce. Supply chain managers' duties should be focusing on functional relationships between global organizations as well as creating a strong link amongst the supply chain members. In other words, they must ensure a sustainable value chain.

The worldwide spread of the COVID-19 virus could not be prevented and it became a pandemic, deeply affecting almost all countries and regions. The coronavirus pandemic has become one of the most important threats to the world. The COVID-19 outbreak has not only cost the lives and the health of millions of people but also negatively affected the global economy. The pandemic has devastating effects on all supply chains globally by causing a sudden change in the demands for raw materials and intermediates used in production. Moreover, in the pandemic, most of the employees had to work from home. Hence, the COVID-19 pandemic has revealed the fragility of global supply chains sustainability (Ketchen & Craighead, 2020; Tasnim, 2020; Ishida, 2020; Frederico, 2021; Baz & Ruel, 2021; Paul et al., 2021).

Sustainability is critical to the long-term success of businesses besides progressively requiring the correlation of not only financial, economic and administrative but also environmental and social impacts of all activities of the organisation. (Zhang, et al, 2021). For this reason, organizations that want to achieve long-term success in supply chain management must attach great importance to sustainability. Through this, they can experience stable progress in the organization lifetime (Ahmed et al., 2019). Sustainable Supply Chain Management (SSCM) manages the flow of materials, information, labour and capital throughout a supply chain, as well as the cooperation of companies on the chain. In addition, it is to set and realize financial, economic, environmental and social goals regarding three important points. Competitiveness should be strengthened by combining the economic criteria of sustainability with customer expectations (Seuring and Müller, 2008). In other words, in the SCM process, to boost the long-term economic performance of organisations; the economic, social and environmental objectives of the company should be taken into account while ensuring the integration of important inter-organizational business processes (Carter & Rogers, 2008).

Sustainability has gained more importance with the effect of increasing economic activities. One of the important conditions of being sustainable in supply chain management is knowledge and data integration. To achieve a sustainable competitive advantage, organizations must manage data well, successfully respond to, and manage feedback (Xu et al., 2019; Zhang et al. 2021). In this natural progression, SSCM has become a field of study by authors in recent years. This study was carried out to review the recent developments in sustainable supply chain management literature. Furthermore, it aims to overview the effect of the COVID-19 pandemic on SSCM literature. After introducing the background of literature, the methodology is given, the findings from the descriptive and co-citation analyses are discussed in the subsequent sections. Finally, solutions and recommendations, future research directions and conclusion has been presented respectively.

BACKGROUND

There are several SSCM literature review studies conducted at different times in the literature. Seuring & Müller (2008) conducted the most comprehensive literature review in the SSCM field. The authors carried out a content analysis on 191 papers published in leading international journals between 1994 and 2007. They contributed to the literature by creating a concise conceptual framework based on the cases

discussed. Gold et al. (2010) emphasized that the collaborative aspect of the SSCM should be strengthened. In their study, a content analysis of 70 studies from 1994 to 2007 was carried out. Carter & Easton (2011) in their research paper, widely cited top-tier logistics and sustainable supply chain journals were examined. In this research paper, 80 SSCM papers were classified based on topic, industry, theoretical structure, validity, methodology, and analysis. Ahi & Searcy (2013) published a comparative literature analysis, to identify the definition of the concept of a green sustainable supply chain. The used in the research consisted of 180 papers, published in 1992 to 2012 from the Scopus database. Likewise, Ansari and Kant (2017) investigated 286 studies from 2002 to 2016 from the Scopus database. Winter & Kne-meyer (2013) reviewed 458 papers from the period of 1995-2010 from Emerald, Science Direct, Taylor & Francis, EBSCO, Wiley, and Inter-Science databases. Touboullic & Walker (2015) aimed to reveal a theoretical lens in sustainable supply chains. The research contributed to the current state of research in the field and its future development. In this research, the authors conducted a comprehensive literature review to map the use of theories in the SSCM field. Carter & Roger (2008) conducted a large-scale literature review. The authors build the conceptual theory to introduce the concept of sustainability to the field of supply chain management. Additionally, the relationships between sustainability and social, environmental, and economic performance are indicated in detail.

A recent study by Zhang et al. (2021) aims to provide a literature review and bibliometric analysis of SSCM using big data. The authors reviewed the literature on SSCM under big data from 2012 to 2019 and extracted 777 articles. In this paper, quantitative analyses and data network visualization have been performed based on authors, journals, countries, research institutions and citations. Nimsai et al. (2020), aimed to document the scope and development of SSCM research. Following this purpose, the author has highlighted the emerging topics on the frontier of SSCM inquiry by identifying top-tier journals, authors, and documents. Besides that, the intellectual structure of this field was analyzed. Citation analyses of journals, authors, and documents also yielded scholarly content for a literature body. For instance, Lis et al. (2020) mapped the thematic landscape of the SSCM research field and contributed to exploring “relationships among particular constructs” in this specific field. In that research, the authors used bibliometric methodology and focused on the relationship of thematic clusters. As a bibliometric data source for research sampling, 839 studies were obtained during the sampling process by examining the journals in the Scopus database.

MAIN FOCUS OF THE CHAPTER

The main focus of the chapter is to determine the dynamics of sustainable supply chain management in the post-COVID-19 era by conducting a bibliometric literature review which is a popular and rigorous method for exploring and analyzing large volumes of scientific data. The bibliometric literature review of SSCM has enabled unpack of the specific field which is comparing the before the pandemic and COVID-19 pandemic era.

Methodology

In this research article, bibliometric methods are used. Bibliometrics is defined as the implementation of mathematical and statistical methods to reveal the relationship between books, articles and other publications (Pritchard, 1969). Thelwall (2008) defines bibliometric as a research method that includes

methods based on measuring processes and properties related to documents. A bibliometric analysis uses some tools to conduct a comprehensive search of relevant studies from multiple databases. Because researchers' priors do not have limitations to review, such an analysis is different from a typical research review. Software tools can help to categorize research into clusters by extracting information from bibliographic records (Raghuram et al., 2009; Schneider, 2006). Bibliometric analysis is a complementary analysis. Additionally, systematic review and meta-analysis methods are traditionally applied in evidence-based research processes (Gedik et al., 2020). As in every field, studies in the field of social sciences can be realized to the extent that they are supported by statistical and mathematical techniques based on measurement (Bayram, 1998). In recent years, bibliometric analysis has become a widely used research method in the social sciences. In bibliometric analysis methods, many different techniques such as co-asset analysis, co-citation analysis, citation analysis, bibliometric matching and mapping analysis can be used together (Chai & Xiao, 2012). Bibliometric research enables comparisons between countries, institutions or years on various subjects. Co-citation analysis is based on the assumption that two documents are more likely to be related when they refer to the same author, publication or journal together (Popadić & Milohnić, 2016). With these methods, the frequencies and patterns of citations are discovered and contribute to the definition of how a paper has affected over time (McBurney & Novak, 2002). Researchers often resort to collaborative word analysis to analyze words and identify the relationships of ideas related to the topics presented in the texts. Co-word analysis is a type of content analysis, which is also called co-occurrence analysis. Co-occurrence analysis uses to evaluate the strength of the relationship between items. Based on the analysis results, items are clustered into groups and shown in via network maps (He, 1999).

The systematic literature review has been conducted on the papers, published before and during the first 15 months of the COVID-19 outbreak. The data, collected for this research consists of the finding of the search results of the "sustainable supply chain management" phrase from the Web of Science (WoS) database. To search for an exact phrase, quotation marks were used. The search was limited by the titles of the publications indexed in WoS. The search had been filtered as follows:

TITLE: (("Sustainable Supply Chain Management" OR (Sustainable and Supply Chain and Management)) AND YEAR PUBLISHED: (1975-2021) AND DOCUMENT TYPES: (Article)

In search, 'AND' and 'OR' were used to prescribe a relationship between terms such as equivalence, exclusion or proximity. As a result of the search process, 326 publications were retrieved. Although the majority of the retrieved papers are written in English, there are also some papers in Portuguese, Russian, Turkish and Spanish. The bibliometric description of the research sample is shown in Table 1.

Table 1. The bibliometric description of the research sample

Category	Items
Search Strategy	Title: ("Sustainable Supply Chain Management" or (Sustainable and Supply Chain and Management)) Years Published: (1975-2021) Document Types: (Article) Timespan: 1975-2021. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI.
Languages	English (318), Portuguese (5), Turkish (1), Russian (1), and Spanish (1)

“Web of Science is the world’s most trusted publisher-independent global citation database. The platform allows researchers to track ideas across disciplines and time from almost 1.9 billion cited references from over 171 million records”(https://clarivate.com/, 2021). On WOS, more than 50 years of indexing have created data structures (Evangelista, 2018).

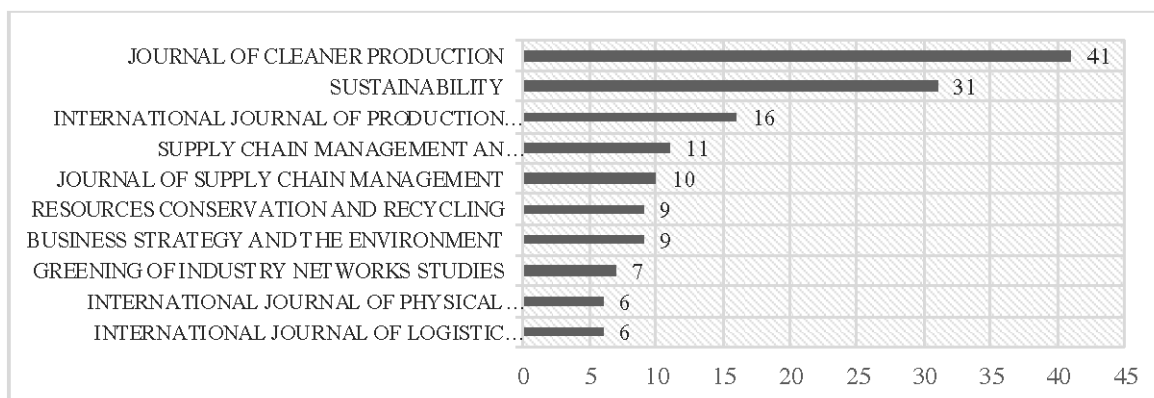
After gathering the descriptive statistics, co-authorship, co-occurrence, co-citation, and co-authorship analyses were conducted over the countries, and bibliographic-coupling analysis was carried out to reveal the networks between the studies and to understand the trends over the years by drawing thematic maps using the VOSviewer software. Eck and Waltman at the Center developed the VOSviewer software, used in structuring bibliometric networks for Science and Technology Research at Leiden University. With the VOSviewer software; networks of journals, researchers or publications can be structured according to co-citation, bibliographic matching or co-author relationships, as well as the words used in the document, taking into account the co-existence or co-occurrence of the terms (Eck & Waltman, 2020).

Findings

The Most Popular Journals

The most popular journals in terms of “sustainable supply chain management” titles are shown in Figure 1. The Journal of Cleaner Production has the highest number of publications with 41 papers. Followed by “Sustainability”, consisting of 31 papers. Other succeeding journals among the top ten are “International Journal of Production Economics”, “Supply Chain Management an International Journal”, “Journal of Supply Chain Management”, “Resources Conservation and Recycling”, “Business Strategy and the Environment”, “Greening of Industry Networks Studies”, “International Journal of Physical Distribution Logistics Management” and “International Journal of Logistic Research and Applications”, respectively.

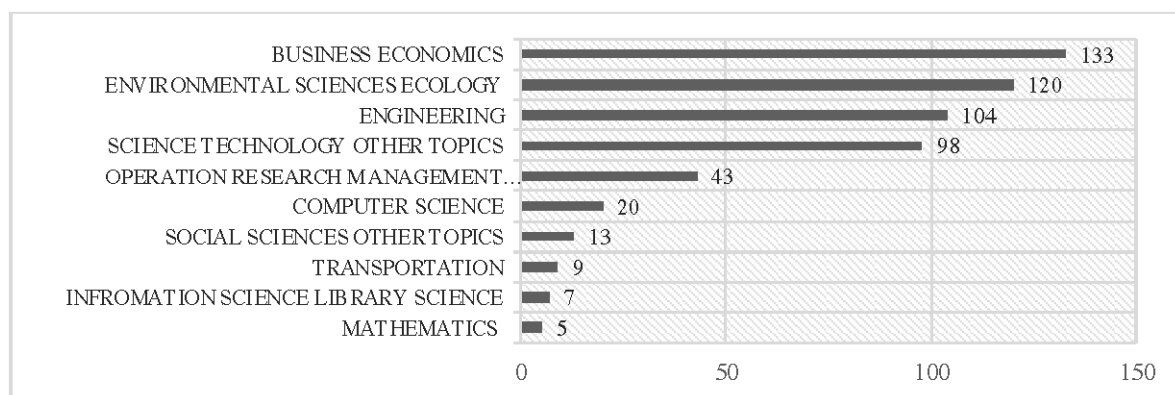
Figure 1. The most popular journals



Research Areas

The findings highlight that the papers with the title “sustainable supply chain management” come from different disciplines. The top ten research areas are indicated in Figure 2. The field of research with the highest number of publications in business economics with 133 papers. The environmental sciences ecology is the second popular area with 120 publications. Engineering and other science and technology-related fields are also highly interested in the topic, followed by the others, seen in Figure 2.

Figure 2. Research areas of sustainable supply chain management articles

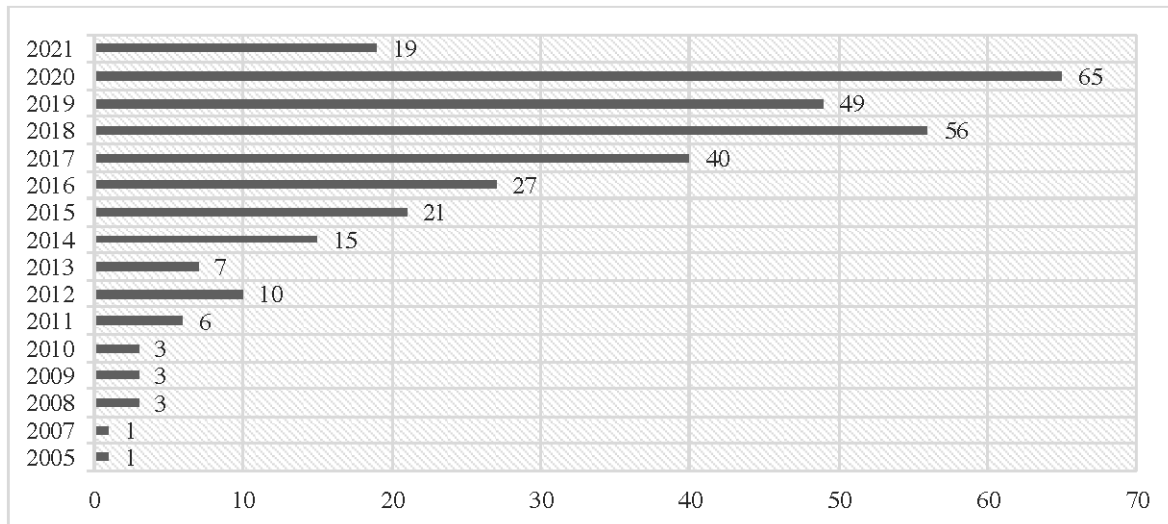


Publication Year

As seen in Figure 3, the first paper with the title of “sustainable supply chain management” was published in the Web of Science (WoS) database was in 2005. The increasing importance of SSCM is indicated in Figure 3. World Health Organization declared the novel Coronavirus (2019-nCoV) outbreak as a pandemic on 30 January 2020 (WHO, 2020). According to the findings, the total number of papers, published before the COVID-19 outbreak is 242. While the number of papers, published in the database increase every year, the highest number of papers reached 65 in 2020. As the number of papers in the first quarter of 2021 was 19, it is possible to predict that the number of the paper would increase to 80 by the end of the year.

Organizations, policymakers or investors are facing soo many problems in formulating supply chain improvement strategies. Since the early days of 2020, the popular challenge of the enterprises is the pandemic outbreak. The vast majority of academic research on the COVID-19 pandemic identify the impacts or challenges of major outbreaks on SCM (Paul et al., 2021). The increasing interest in SSCM has become more evident in 2020.

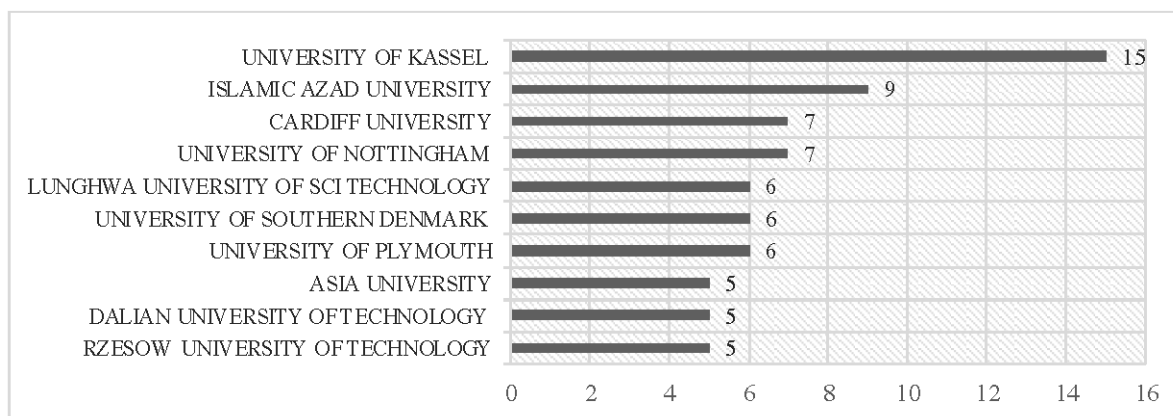
Figure 3. The number of SSCM papers by years



Research Articles by Universities

It is determined that researchers from the top ten universities have published 71 of the 326 studies conducted with the “sustainability supply chain management” title. It is seen in Figure 4 that 15 of the 326 studies have been written by the authors from the University of Kassel. Islamic Azad University is the second institution with nine papers.

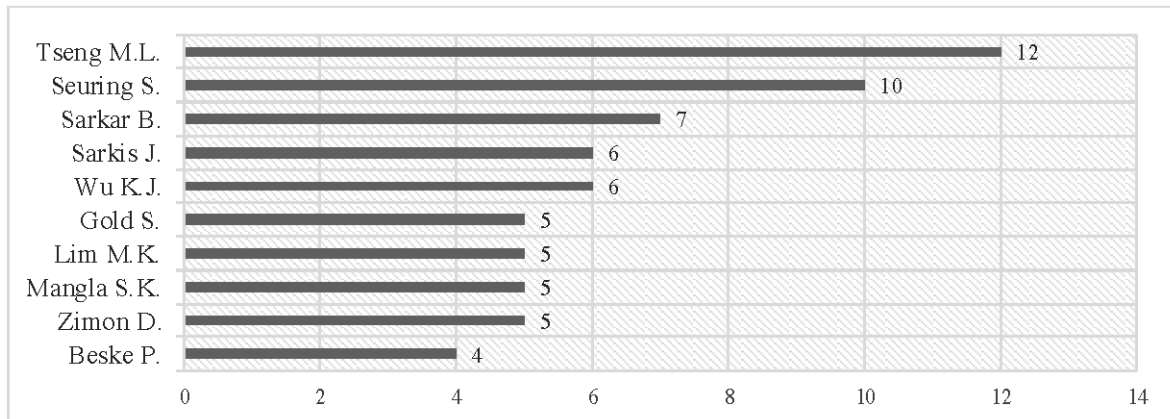
Figure 4. Top 10 universities



The Authors

The most productive authors on the subject are presented in Figure 5. Tseng, M.L. has the most studies in the area with 12 publications. Seuring S. is the second author Published 10 papers.

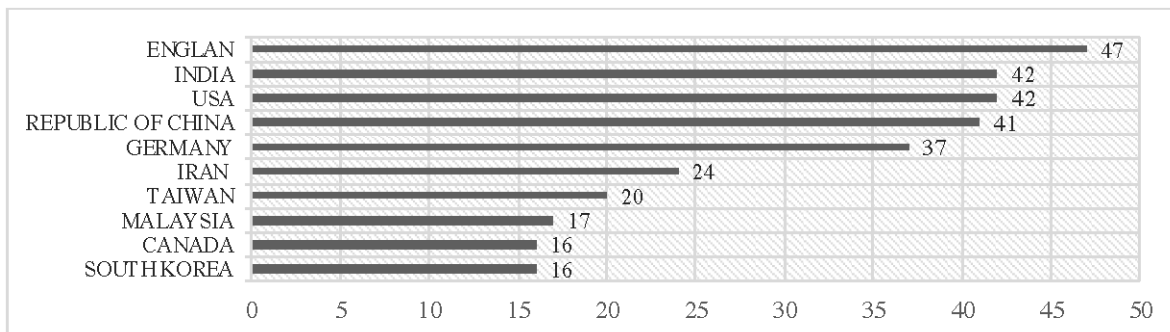
Figure 5. The most productive authors



Countries

The most productive countries are shown in Figure 6. As seen in Figure 6, England is the most productive country with 47 papers. India and the USA share the second rank both with 42 papers. The third country with the most studies on the subject is China with 41 papers. It is seen from Figure 6 that most of the publications have been conducted in Asian countries.

Figure 6. The most productive countries



Network Analysis

Scholars are constantly using mapping and clustering techniques for network analysis. To understand the structure of the fields; networks of links between papers (co-occurrence, co-authorship, citations etc.) or other information items are preferred for science mapping (Börner et al., 2003). In this study, the methods of network mapping include co-citation, co-authorship and co-occurrence analysis. For a clear understanding of the visualization maps, the analysis results are also shown in the tables.

Co-Authorship Analysis Among Authors

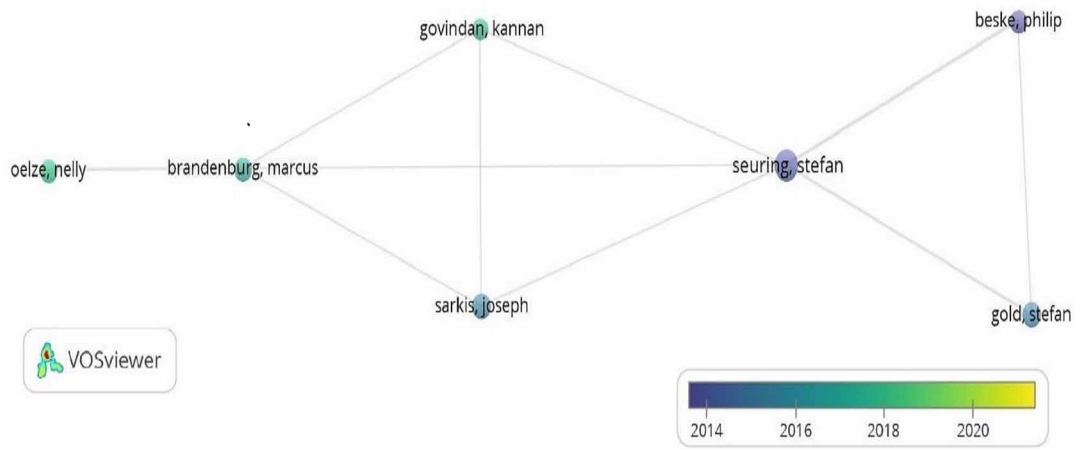
One of the common ways of interdisciplinary knowledge transfer is co-authoring by researchers from different disciplines (Pierce, 1999). According to Hudson (1996), scholars have been widely using the co-authorship analysis for understanding the intellectual collaboration in scientific research long since. The co-authorship analysis involves the participation of a minimum of two authors in the process of creating a publication. In this study, the co-authorship analysis of the studies was filtered by the title of “sustainable supply chain management”. The maximum number of authors per document was chosen as 25; while a minimum, the number of the document of an author was chosen as three.

Table 2. Co-authors list

Authors	Cluster	Link	Total Link Strength	Documents	Citations	Avg. Pub. Year
Seuring, S.	1	5	8	10	1,570	2014
Brandenburg, M.	2	4	5	4	664	2017
Govindan, K.	3	3	3	3	633	2018
Sarkis, J.	3	3	3	5	1,146	2015
Beske, P.	1	2	4	4	891	2013
Gold, S.	1	2	3	5	573	2015
Oelze, N.	2	1	2	4	85	2018

The Network Visualization of selected seven authors with the highest link strength is shown in Figure 7 that was drawn by the VOSviewer program depict that the authors had 10 links, of which strength was 14. The authors are divided into three clusters. The first cluster consists of Seuring, S., Gold, S. In addition to Beske, P., the second cluster also consists of Brandenburg, M. and Oelze, N., while the third cluster consists of only Govindan, K. and Sarkis, J. It is seen that the author with the most links in the first cluster is Seuring, S. with five connections. According to co-authorship overlay visualization in Table 2, the articles with the most co-authors were published before the COVID-19 outbreak.

Figure 7. Network visualization of the co-authorship analysis



Co-Occurrence Analysis

Buzydlowski (2015) underlined that co-occurrence analysis is a basic counting of matched data within a collection unit in the simplest terms. The co-occurrence analysis by keywords is also known as co-word occurrence maps. The co-word occurrence maps drawn at different terms show the changes of research keywords in the SSCM field. In addition to that, the map shows the evolutions and constancies in the concepts, related to the research field. The co-occurrence analysis enables researchers to follow actors objectively and to determine the dynamics of the field in all aspects (Callon et al., 1986; Sedighi, 2016). In Sedighi (2016) paper, keywords co-occurrence analysis had been applied for mapping research topics in the field of informatics and pursuing the progress of the research field.

Table 3. Co-occurrences list of keywords

Authors Keywords	Cluster	Links	Total Link Str.	Occurrences	Avg. Pub. Year
Sustainability	2	38	151	101	2017
Sustainable Supply Chain Management	5	38	110	101	2017
Supply Chain Management	6	31	98	60	2016
Sustainable Development	1	19	37	23	2017
Supply Chain	3	15	29	20	2018
Green Supply Chain Management	4	13	16	15	2018
Sustainable Supply Chain	1	10	10	15	2018
Social Responsibility	6	14	28	13	2015
Triple Bottom Line	5	9	21	11	2017
Corporate Social Responsibility	5	7	19	10	2016
Sustainable Supply Chain Management (SCM)	2	5	9	10	2017
Barriers	4	12	20	8	2018
Literature Review	5	10	19	8	2015

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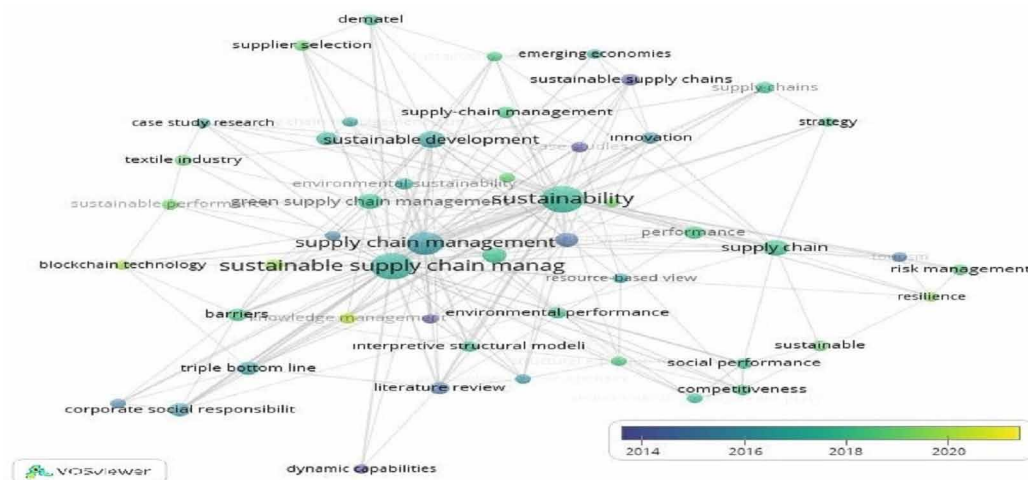
Table 3. Continued

Authors Keywords	Cluster	Links	Total Link Str.	Occurrences	Avg. Pub. Year
Performance	1	8	9	8	2018
Environmental Performance	3	8	13	7	2018
Sustainable Supply Chains	1	7	9	7	2014
Drivers	1	7	12	6	2020
Environmental Sustainability	2	9	10	6	2017
Supply Chains	8	6	11	6	2018
Supply-Chain Management	2	5	9	6	2018
Innovation	1	8	11	6	2016
Case Studies	1	8	14	5	2013
Competitiveness	3	7	15	5	2018
Dematel	2	6	8	5	2018
Knowledge Management	4	6	7	5	2020
Risk Management	7	4	5	5	2018
Social Performance	3	7	14	5	2018
Supplier Selection	2	5	8	5	2019
Sustainable	3	2	2	5	2019
Sustainable Performance	4	5	7	5	2019
Textile Industry	4	5	6	5	2019
Interpretive Structural Modeling	6	8	12	5	2018
Blockchain Technology	4	6	8	4	2020
Case Study Research	4	6	8	4	2017
Circular Economy	2	5	8	4	2019
Dynamic Capabilities	5	3	6	4	2014
Economic Sustainability	6	7	11	4	2009
Emerging Economies	1	4	6	4	2017
Environment	1	5	5	4	2019
Environmental Management	6	8	10	4	2016
Environmental Management Practices	3	5	13	4	2018
Practices	1	6	6	4	2016
Resilience	7	6	8	4	2019
Resource-Based View	1	6	9	4	2017
Stakeholder Theory	5	5	9	4	2015
Strategy	8	5	8	4	2018
Structural Equation Modeling	3	9	9	4	2018
Supply Chain Management (SCM)	2	4	4	4	2017
Sustainable Operations	1	8	10	4	2018
Tourism	7	6	9	4	2015

In network analysis, given in Table 3, the minimum number of occurrences of a keyword was set as four. It was found that 50 meet the threshold of 892 keywords and 50 keywords are divided into eight clusters. The overlay visualization map obtained by the analysis of 50 keywords is presented in Figure 8. The total strength of occurrence, links with other keywords were calculated for each of the 50 keywords. As a result of the analysis, 50 nodes in the network visualization have 223 connections and 448 total connection power.

Keywords such as “sustainability”, “sustainable supply chain management”, and “supply chain management” in the main concept are not included in the review. The most co-occurred top ten keywords were “green supply chain management”, followed by “social responsibility”, “triple bottom line”, “corporate social responsibility”, “barriers”, “literature review”, “performance”, “environmental performance”, “drivers”, and “environmental sustainability” respectively. The overlay visualization map displays that 49 keywords mostly co-occurred in the period of the pre-pandemic but “Knowledge management”, “Blockchain Technology” and “Drivers” were mostly co-occurred in the COVID-19 Era. These three technology-related keywords have become more widely used in the period of the COVID-19 as a part of the key concept of the pandemic, “new normal”.

Figure 8. Co-occurrence overlay visualization of authors



The 21st century is dominated by information and knowledge management is at the centre of the new era, also known as the “knowledge age”. While disinformation has been an emerging issue during the COVID-19 outbreak, true and timely information has been crucially important for both individuals and organizations. According to the co-occurrence analysis result, “knowledge management” is a key concept during the pandemic era. When companies seek success in sustainable supply chain management practices, they need to avoid potential risks. Knowledge management is a sensitive tool in the information-intensive environment for supply chain management (Samuel et al., 2011). In this conscious process, organizations develop sustainable approaches to quality improvement in their supply chains.

During the period of COVID-19, e-commerce has significantly increased all over the world (UNCTAD, 2020). It is also believed that e-commerce will proceed to dominate the traditional commercial activities

and that the final delivery will gain momentum in the post-COVID-19 era (Sharma et al., 2020). The basis of e-commerce activities is the e-business infrastructure to link the companies with other members of their supply chains. Blockchain technology (BT) is widely used in supply chain networks to ensure sustainability. BT plays a vital role in the sustainability of supply chain management in e-commerce (Kouhizadeh, et al., 2018). It is understood that the studies on SCM, which is changing and developing with the effect of increasing information technologies, are compatible with the academic framework. The findings of the analysis also highlight that during the COVID-19 era, the “drivers” of the SSCM is highly important to cope with supply chain disruptions in the pandemic era.

Co-Citation Analysis

Using the co-citation analysis in academic research contributes to scholars, organizations or investors for a better understanding of the structure of the intellectual base underpinning the virtual work of scholars from different disciplines. Furthermore, it makes it possible to the identification of connections across a large number of publications based on their references (Raghuram et al., 2009). In addition, the co-citation analysis appears as one of the most common tools for detecting a structure of literature (Zitt & Bassecoulard, 1994). Additionally, co-citation analysis for the papers of all clusters helps understand the evolution of SSCM research over time (Fahimnia et al., 2015).

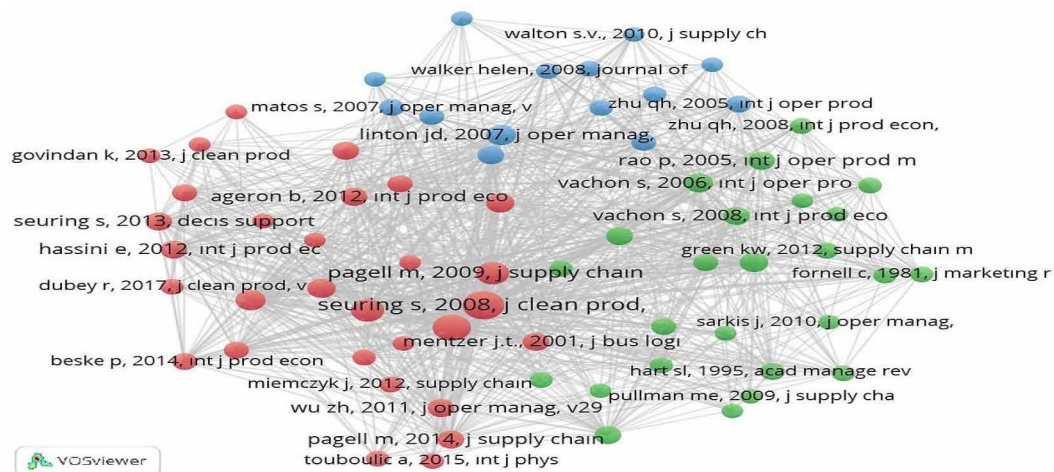
Table 4. List of first 20 authors of co-citation of sample paper references

Label	Pub. Year	Journal Abbreviation	Cluster	Links	Tot. Link Strenght	Citation
Seuring S.	2008	J. Clean. Prod.	1	68	1,624	167
Carter C.	2008	Int. J. Phys. Distr. Log.	1	68	1,442	126
Pagell M.	2009	J. Supply. Chain. Manag.	1	68	1,077	87
Carter C.	2011	Int. J. Phys. Distr. Log.	1	68	1,016	78
Ahi P.	2013	J. Clean. Prod.	1	68	749	64
Linton J.	2007	J. Oper. Manag.	3	68	696	57
Gold S.	2010	Corp. Soc. Resp. Env. Ma.	1	68	666	51
Vachon S.	2006	Int. J. Oper. Prod. Man.	2	68	686	50
Zhu Q.	2004	J. Oper. Manag.	2	68	662	50
Srivastava S.	2007	Int. J. Manag. Rev.	1	68	567	46
Hassini E.	2012	Int. J. Prod. Econ.	1	67	504	44
Pagell M.	2014	J. Supply Chain Manag.	1	67	532	44
Rao P.	2005	Int. J. Oper. Prod. Man.	2	68	591	44
Vachon S.	2008	Int. J. Prod. Econ.	2	68	591	44
Ageron B.	2012	Int. J. Prod. Econ.	1	67	484	42
Kleindorfer P.	2005	Prod. Oper. Manag.	3	68	509	42
Sarkis J.	2011	Int. J. Prod. Econ.	2	68	535	42
Golicic S. I.	2013	J. Supply Chain Manag.	2	67	474	39
Mentzer J.T.	2001	J. Bus. Logist.	1	68	453	39
Seuring S.	2013	Decis. Support Syst.	1	67	455	39

In the co-citation analysis, studies cited as a common reference by articles written on sustainable supply chain management were examined. As seen in Table 4, the minimum number of citations of a cited reference was chosen 20. Of the 14971 cited references, 69 has been met the threshold. As a result of the co-citation network visualization of sample articles' references analysis of 4,971 cited references, it was observed that three clusters, 2,271 links and 15,226 total link strengths were formed.

The number of citations of the relevant study has been understood from the size of the circles in Figure 9. In addition to that, the thickness of the links shows the excess of the use of the two studies as a common reference. As a result of the analysis, articles with more than 20 citations are shown in the co-citation map in Figure 9. When the studies have been shown as common references are examined, it is seen that the most cited study belongs to Seuring (2008) with 167 citations. The second most cited work belongs to Carter (2008) with 126 citations, while the third most cited study belongs to Pagell (2009). According to this ranking, the most cited study published in the "Social Embeddedness of Industrial Ecology", the second one is published in the "International Journal of Physical Distribution & Logistics Management" and the third one is published in the "Journal of Supply Chain Management". The given 69 studies have 2,271 links. As a result of the co-citation analysis, it was observed that 69 studies were divided into three clusters. The first cluster is shown in red and has 30 links. The part with green coloured nodes and connections is the second cluster and consists of 25 studies. The third cluster consists of blue coloured nodes and has 14 links. According to co-citation network visualization of sample articles' references, the prominent studies belong to the pre-pandemic.

Figure 9. Co-citation network visualization of sample articles' references



Co-Authorship Analysis Among Countries

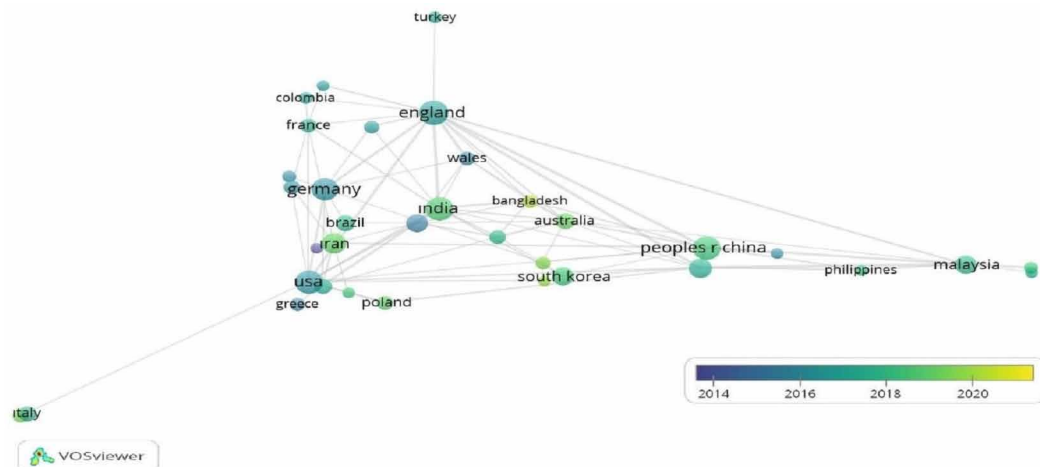
Countries' collaborations help the mutual exchange of experience and knowledge, which is the basis for developing scientific dynamics (Mourao & Martinho, 2020). As seen in Table 5, the minimum number of documents of a country was selected as three.

Table 5. List of co-authorship relations among 35 countries

Countries	Cluster	Links	Total link strength	Citations	Avg. Pub. Year
England	3	14	41	2282	2016.8
USA	7	12	25	5496	2016.2
India	2	12	30	880	2018.6
China	8	11	28	742	2018.4
Australia	2	10	17	167	2019
Germany	5	9	17	2713	2016.1
Taiwan	4	9	26	785	2017.3
Canada	2	8	13	2407	2015.5
Iran	1	8	10	462	2018.9
Denmark	1	7	13	857	2017.4
Malaysia	4	7	20	619	2017.7
France	3	7	9	373	2017.4
Bangladesh	2	7	11	71	2020
Wales	2	6	10	600	2015.7
Arab Emirates	2	6	10	241	2017.6
Pakistan	6	6	6	25	2019.3
South Korea	6	5	7	133	2018.3
Switzerland	5	4	6	407	2016.1
Poland	1	3	6	187	2018.8
New Zealand	5	3	4	180	2016.5
Philippines	4	3	7	124	2018
Brazil	1	3	3	105	2017.6
Portugal	1	3	3	47	2018.3
Saudi Arabia	6	3	4	3	2019.7
Italy	7	2	2	215	2017.3
Colombia	3	2	2	150	2017
Scotland	3	2	3	23	2016.7
Norway	1	1	1	381	2010.7
Greece	1	1	1	163	2015.6
Turkey	3	1	1	151	2017.3
Finland	5	1	1	84	2016
Japan	8	1	2	81	2016
Netherlands	4	1	1	66	2017.3
Spain	7	1	1	33	2019.3
Indonesia	4	1	3	6	2018.3

The countries were chosen with the best total link strength by the VOSviewer software. The largest set of connected items was consist of 35 items. The analysis was carried out in 35 countries. The bibliometric overlay visualization map based on the network of co-authorship relations among 35 countries are presented in Figure 10. As a result of the analysis, it was seen that the overlay visualization map had 90 links and 172 total link strengths. 5,496 citations were made to 42 documents conducted in the USA. In Germany, which has the second-highest number of citations with 1,469, the citations were conducted in 37 documents. According to the analysis, which includes 35 countries, the analysis program formed eight clusters. The country with the highest links in the first cluster was Iran with 8 links, followed by India with 12 links, England with 14 links, Taiwan with 9 links, Germany with 9 links, South Korea with 5 links, the USA with 12 links, and China with 11 links. As seen in Table 5, according to the analysis of co-authorship relations among countries, the average of the publication years belongs to pre-pandemic periods. However, Bangladesh has made more publications in the pandemic period.

Figure 10. Bibliometric overlay visualization map based on the network of co-authorship relations among 35 countries



Bibliographic-Coupling Analysis

The Bibliographic-coupling has been employed in several fields to explore research frontiers, discover field intellectual body and retrieve information. The bibliographic-coupling network shows a considerable advantage in explanatory discipline structure with the highest accuracy and delicacy in structure analysis (Qui et al., 2014). Briefly, the bibliographic-coupling means that citing the same publication in two different sources (Garfield, 1988). In Stao & Strotmann (2008)' study, the bibliographic-coupling analysis was presented as a method that maps the research activities of active authors themselves to a more practical outlook of the current state of research in a field.

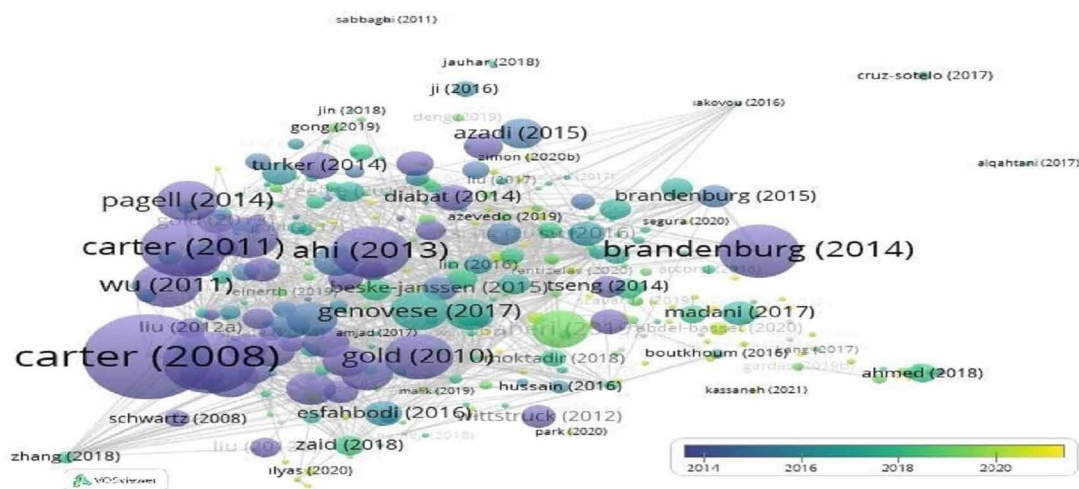
The minimum number of citations of a document was chosen as zero. For each of the 326 documents, the total strength of the bibliographic-coupling links with other documents has been calculated. Some of the 326 documents in the network were not connected therefore the largest set of connected items

consisted of 319 items. The bibliographic-coupling of articles overlay visualization is presented in Figure 11. As a result of the bibliographic-coupling analysis of 239 articles, it was observed that 11 clusters and 28,492 links were formed. The total link strength was found as 87,206. The top high-frequency coupling of articles in the research field, ranked by the average date of publication, in lately 2013 – 2020. According to Table 6, the most linked bibliographic-coupling of clusters belonged to pre-pandemic.

Table 6. The most cited bibliographic-coupling of clusters

Authors	Source	Cluster	Links	Total link strength	Citations	Pub. Year
Saberi (2019)	International Journal Production Research	1	247	622	277	2019
Ahi (2013)	Journal of Cleaner Production	2	256	1,097	507	2013
Golicic (2013)	Journal of Supply Chain Management	3	223	762	299	2013
Carter (2008)	International Journal of Physical Distribution & Logistic Management	4	171	556	1,400	2008
Pagel (2014)	Journal of Supply Chain Management	5	233	855	327	2014
Azadi (2015)	Computer& Operations Research	6	219	455	178	2015
Silvestre (2015)	International Journal of Production Economic	7	247	938	171	2015
Brandenburg (2014)	European Journal of Operational Research	8	255	947	550	2014
Nagurney (2012)	International Journal of Production Economics	9	208	344	126	2012
Zhang (2018)	Resources Conservation and Recycling	10	258	1,253	28	2018
Crenna (2018)	Journal of Cleaner Production	11	1	1	22	2018

Figure 11. Bibliographic coupling of articles overlay visualization



SOLUTIONS AND RECOMMENDATIONS

This paper presented a structured review of SSCM literature. There have been hundreds of papers published in this area, many of them in the 2020. Although a few literature reviews on sustainable supply chain management have been published, it was very important to contribute to this field by both a thorough bibliometric and network analysis. Furthermore, for the global village struggling with an epidemic such as the COVID-19, it was extremely valuable to reveal the trends of academic research in this field and identify analytically and objectively influential works and authors.

From the findings obtained, it seems that; journals, countries and universities contributing to this field are not evenly distributed. It is understood that it is very important to contribute to this field academically for a more balanced distribution of prominent journals, countries and universities. In addition, increasing interdisciplinary studies is one of the biggest contributions to this field. According to findings see that there is a relative concentration of the more influential publishes amongst particular scholars. A similar study Fahimnia et al. (2015) pointed out as to mature the SSCM literature additional authors should join this sub-discipline of supply chain management expanding the work in a variety of areas.

According to the keyword co-occurrence analysis result (Table 3), “knowledge management”, “drivers” and “blockchain technology” are key concepts during the pandemic era. Therefore, it is recommended that organizations and scholars focus on drivers of SSCM according to their importance. Thus to determine drivers with the highest importance would help to overcome barriers of SSCM in the system. Besides, knowledge management is also very important in this process. With the increase in the use of information technologies, the best management of information bombardments is carried out with the knowledge management strategy. Business proceeds through information. A better business would be done if faster and more accurate information is received. E-commerce intensively transformed in the COVID-19 era; it has changed the nature of business. The great majority of consumers avoiding to go brick and mortar shopping and crowded areas. With the increase in e-commerce during the Covid-19 period (Bhatti, et al., 2020), supply chain management was also condemned to be renewed. For a successful SCM, using blockchain technology is very important to track orders, payments, accounts, production and much more. It can be recommended researchers, investors and organisations focus on the keywords to understand the dynamic of SSCM literature in the COVID-19 era.

FUTURE RESEARCH DIRECTIONS

Future research should address the following aspects: (1) In this paper, the search was made from the Web of Science database using some limitations. One limitation concerns the number of papers included in this study. Future research may examine the publications of the SSCM field by using the Web of Science and Scopus database thus the limitations can be reduced. (2) In this research, the SSCM literature that belongs to before the COVID-19 era and post-COVID-19 pandemic era was examined. Future researches can focus on the comparative bibliometric analysis of SSCM literature by examining the publications that belong to the COVID-19 era and after the end of the epidemic. (3) With the aim of revealing the sectors affected by the Covid-19 epidemic, it is recommended to future researchers perform a bibliometric literature review on a sectoral basis.

CONCLUSION

Worldwide supply chain networks are facing their most tough times accordingly sustainable supply chain management needs to be re-planned in terms of its strategic approaches on seeking a better strength against unpredictable risks (Frederico, 2021). Supply chain management in the COVID-19 era is a novel challenge for decision-makers, and also ensuring sustainability in the supply chain is a demanding global concern in the post-COVID-19 era. The outbreak forces organizations to act creatively to generate smarter supply chain solutions. To provide this creativity, the SSCM literature should be a compass to enable organizations to find their directions.

Scholars must construct the knowledge about how to coordinate sustainable supply chain management to better understand organizational success and failure and to better guide managers, especially in the COVID-19 era (Ketchen & Craighead, 2020). In this study, the SSCM literature was examined by bibliometric methodology. The present structures of papers mostly with SSCM titles have important implications for understanding the uncertainties and filling the gaps caused by the COVID-19 era. Creating a supply chain road map that can deal with the pandemic is of great importance for businesses in the post-COVID-19 era.

Unlike the previous studies, the SSCM studies have been filtered by their titles to eliminate the irrelevant or indirectly papers. The 326 articles with SSCM titles published from 2005 to 2021 were analyzed. Almost all of the publications were written in English in the most prestigious journals. The most productive journal is found as the Journal of Cleaner Production with 41 publications on the subject. Sustainability is the second most productive journal, publishing 31 papers.

The business economic research area had the highest number of publications with 133 articles while the environmental sciences ecology was the second popular area with 120 publications. The year with the highest number of articles published with the sustainable supply chain title was 2020. Hence, a significant increase in the number of studies on SSCM during the outbreak has been observed. According to the analyses, the University of Kassel is the most productive research institution in this research area, while the most productive country was the UK. Tseng M.L. was the most productive author with 12 papers in SSCM.

In order to examine the dynamics of the SSCM literature, network, co-citation, co-authorship, and co-occurrence analyses have been conducted. According to co-authors' analysis of authors, it is discovered that Seuring S. had the highest number of links with other authors. It found out that articles in the field with SSCM title focus on "sustainability, supply chain, green supply chain, sustainable supply chain management, supply chain management, risk management, and supply chain" keywords. It is understood from the co-citation analysis, the most cited study belongs to Seuring (2008) with 167 citations, while the USA has the highest number of citations. It is also seen that the studies generally belong to the pre-pandemic period. As a result of the network analysis "knowledge management" was mostly co-occurred during the first 15 months of the pandemic.

As the global COVID-19 pandemic is relatively unprecedented, it is very valuable to determine the framework and trends of academic studies on SSCM. Awareness of these frames and trends can be helpful to businesses, organisations and applicators to develop appropriate strategies and rebuild their supply chains networks in the post-COVID-19 era. This study provides various contributions to both literature and the industry. Unlike the previous studies, in this research, examined SSCM studies have been filtered by their titles to bypass irrelevant, indirectly or partially related papers from the analyses in this research. In addition, the results of the analysis were evaluated as pre-pandemic and the first 15 months

of the outbreak. Furthermore, this paper provides a useful approach for new researchers, as they can identify the main contributions made to the SSCM literature structure. It also highlights the importance of digital technology and knowledge management related practices in the industry during the pandemic.

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KEY TERMS AND DEFINITIONS

Blockchain Technology: Blockchain is a shared, digital ledger that facilitates the process of recording transactions and tracking assets in a business network.

Disinformation: Intentionally or unintentionally disseminating false or fabricated information that is inaccurate.

Green Supply Chain Management: It is the completion of the supply chain by managing all business processes in a way that supports environmental performance, covering all functions of the business (customer relationship management, financial management, marketing, operations, product management, supply chain management, etc.).

Innovation: Innovation is a process of development and renovation ideas that improve the way things are done or introducing new techniques, or establish successful ideas to create new value in every movement of organisations.

Knowledge Management: Knowledge management is a sensitive process of obtaining, structuring, retaining, and distributing the knowledge and using the final form effectively.

Literature Review: A literature review is a process of analytically and critically examining all the available literature on a determined topic to find an answer to a specific research question, from a methodological and theoretical perspective.

New Normal: New normal is a situation, which is different from what has been experienced or done before but is expected to become usual or typical.

Risk Management: Risk management is the systematic identification and evaluation of risks at every level with a certain method to achieve the objectives of the organisations, monitoring this process in a way that ensures effective operation.

Social Responsibility: In a way that will benefit the existing system; it is an effort to carry out all its activities within this understanding by adopting the principle of being sensitive and ethical in social, cultural, economic, and environmental issues.

Sustainability: It is the ability to allow the continuous development of living systems in the natural flow of life by living in harmony with the physical, economic, and social environment uninterruptedly.

Chapter 19

Paradigm Change in Tourist Preferences Towards Evolving New Normal Tourism and Travel Trends

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ABSTRACT

Tourism has been recognized as a delight for attraction, accommodation, culture, recreation, and more. The tourism industry has become a major source of revenue for many businesses and for nations as a whole as part of the service sector. The unusual outbreak of the COVID-19 pandemic is the sole disruptive circumstance for the last several months. Due to the unprecedented situation, there is a chance for new travel trends to emerge in the nation. This chapter describes the emerging new normal tourism and travel trends like a staycation, wellness and spa tourism, virtual tourism, sustainable travel, eco-tourism, vaccine tourism, and also aims at finding tourist preferences of destinations from the new travel trends post pandemic. Travellers today would like to visit destinations consisting of nature protected regions, which are termed sustainable travel, to satisfy their ecotravel, money value, private space, social distance, security, accessibility, and cleanliness needs.

INTRODUCTION

A worldwide disease COVID-19 that crosses international borders has overcome several deaths in India's second wave. COVID-19 has just suffered a historic setback against India as of today (May 2021). In the future, the travel sector tends to change massively. Sometimes, as before 2020, individuals want to travel despite despair and worry because of the epidemic. Just as the tourism sector is affected more

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than others by the current COVID-19 pandemic, vulnerable groups within the sector are among the hardest hit says (UNWTO, 2020). This period is an ideal moment for the development of specialized tourist trends, as it will be difficult to traverse borders. Travel plans were dramatically modified. The sector is changing different techniques. The partial opening of destinations and experiences merely shows that the human race can adapt to change. However, the epidemic cannot be said to have halted, as Europe, as well as sections of the world, are very concerned about the new strain of the virus. António Guterres, UN Secretary-General says “Tourism is one of the world’s most important economic sectors. It employs one in every ten people on Earth and provides livelihoods to hundreds of millions more.” A new set of recommendations given by UNWTO outlines how the global tourism sector can continue in its fight against plastic pollution while effectively facing the public health and hygiene challenges of the COVID-19 pandemic. Virtual meetings and online courses make it easy for individuals to work without hassles from any corner of the globe. People desire to pave the road for new travel trends within India. People avoid a long itinerary, from now on travellers wish to focus on immersive trip experiences. In 2021, several travel experts say that travellers will be spurred on to spice up their trips in the areas of nature, local cuisine, architecture, good stay, handicrafts, heritage, art and culture. The primary objective of the study is to discuss emerging new travel trends due to travel restrictions. The secondary is to identify the tourist’s preferences among the new travel trends post-pandemic.

NEED OF THE STUDY

In a pandemic situation, it is essential to consider the health and safety of the travellers. Hence most of the companies have changed their packages, destination choices due to the current pandemic situation evolving. There is a need to understand peoples choice of a destination in these uncertain situations. This paper tries to understand the mindset of travellers and the new travel trends.

SCOPE FOR FUTURE STUDY

It will be interesting to understand whether there is any change in new travel trends and travellers decision-making process. In addition, there is a scope to understand people choice’s of destination due to their financial stability which is very essential to find out the most preferred destinations according to the facilities, accessibility, health & safety.

BACKGROUND

Coronavirus disease (COVID-19) is an emergency that has almost brought the globe to a halt, with industries that help the economy to thrive, and tourism is one of the world’s most impacted industries. Governments worldwide have also put rigorous travelling restrictions and social limitations in place to combat disease transmission. In some major countries such as China and Russia, domestic tourism is still increasing and domestic demand for air travel has mainly reverted to pre-COVID levels. Asian and Pacific respondents were most enthusiastic about domestic tourism’s contribution to the rehabilitation of locations, reports (UNWTO, 2020). In destinations, hygiene and health conditions might be key

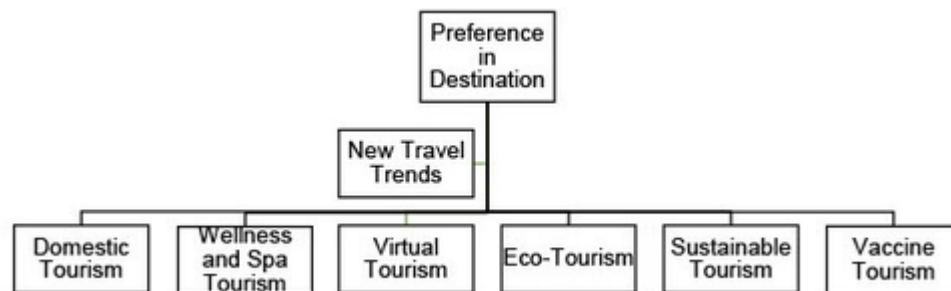
determinants for visitors' travel selections. In this challenging scenario that provides the tourism sector with a chance to improve, sustainable segments (rural, natural, and health) need to be given importance. The first objective of the study is to discuss emerging new travel trends due to travel restrictions. The second is to identify the tourist's preferences among the new travel trends post-pandemic.

Tourists Preferences Towards Travel and Tourism Post Covid 19

Tourism is one of the industries that have been most affected by COVID-19 (UNWTO, 2020). In the tourism sector, the pathway to new normal is to prepare various aspects Yuni (2020). The COVID-19 crisis has meant a significant change in the lifestyle of millions of people worldwide (Awad-Núñez). The destruction caused by the pandemic at the economic, social, and psychological levels on the international scale has brought up the question of how the trends will be shaped at the point of demand level and expectations of the demands post COVID-19. Some studies already measured the impact on tourism providers and tourist conduct of global crises whether in connection with terrorist events (September 11, hotel attack in Mumbai), health crises (like epidemics of H1N1/SARS), geopolitical conflicts (war and the Arab Spring) or social unrest (strikes in France or Asia) (Cahyanto, 2016). Tourists' decision-making is the product of several (uncertain) factors including, for instance, feelings of psychological safety and security, the role of age and familial conditions in decision-making; - how the "New Normal" feature of social distancing (McKinsey, 2020) is experienced, and so on (Nientied, 2020). (Randhave, 2021) in his study stated that the individuals' tendencies towards travels are more customized and self-appealing will be higher during post-COVID-19, which indicates that demand from general interest tours to special interest tourism will accelerate. Researchers have worked on the domestic tourism choice in India's tourism choice and how tourist agencies can be instrumental in enhancing the experience of tourism. There are many tourism destinations tourists do not know about, and therefore the lack of knowledge is an obstacle to deciding on the journey (Randhave, 2021). There are various tourist destinations available, but tourists will probably select the destinations of the stereotype (Randhave, 2021). According to the (WTTC) in 2020, standardization is expected to begin with local tourism and subsequently to expand the number of visits to neighbouring areas and intercontinental long-distance travel will start. (AYDIN, 2021) argues in his article that the preferences of travellers in pre-COVID-19 focus on the seashore and that they focus on natural sites after COVID-19. The research shows that a substantial number of the participants are not planning to travel after COVID-19. (Awad-Núñez, 2021) in his work discusses that transport is a well-established activity in Spain, and its adaptation to the new needs imposed by the pandemic seems to be taken for granted by the users, who do not consider that the value of the service adaptations requires a higher payment than in the pre-COVID-19 period. Based on the research of Greece tourism author (Politis, 2021) reported that the number of trips completed was significantly reduced, while the choice of transport mode was also influenced by the spread of the coronavirus, with tourists choosing to avoid public transport in favour of more private means of transport, such as their car. (Corbisiero, 2021) finds in his study that visitors who responded to the poll are aware of the fact that physical distancing restrictions are likely to be in force for a long period. That is not, however, the short-term abandonment of tourism by tourists. The results from the research demonstrate tourism's resilience by changing it but never ceasing to exist. Author (Li, 2021) discuss in his paper about the inclination for the intention to move and frequency of travel tended to be reduced as the risk perception of the responder grew. So, the tourist sector might take some time to revive, because the people need time to develop the confidence to travel again. (CREȚU, 2020) in his report Ecotourism draws "the visitors that wish to engage and broaden their

knowledge, understanding and admiration with the natural environment.” The focus is not only on less crowded locations, the safe location and the beauty of the destination but also signals a move towards a more sustainable consumer attitude when it comes to the purchasing of T&T products (Orîndaru, 2021). Based on the research from the Romania market, (Volkman, 2021) conclude that hygiene, uncrowded regions, quality and ecotourism are the main reasons when picking a vacationing location.

Figure 1. Preference in Destination, Consumer preferences from a wide range of existing service goods are indicated by (Kotler, 2000). Preference is a desire for something



Preference in Destination

The customer preferences may include a variety of features, e.g., quality, new travel trends, easily accessible destinations, nature lovers, sustainable products, wellness, virtual tour, safety & hygiene.

Research Method

The objectives of this research are to find out which new travel trends are preferred based upon the travel components by the customer and to travel post-COVID-19. This study consisted of a quantitative method. Primary information was obtained through the method of survey. The questionnaire consists of three sections with demographic profile, about travel plan and preferences in the destination. Random sampling was applied. People from India were selected as respondents. In the online survey, altogether 64 replied. The data analysis applied was quantitative descriptive analysis.

RESULTS AND DISCUSSION

New Normal Travel Trends- 2021

Staycation

Domestic travel with a preference for a staycation: Due to international travel limitations and quarantine requirements, domestic travel will increase, with an added push for luxurious staycation choices. They now prefer villas over hotels and restaurants because they have more space, such as groomed gardens, villas

with a backyard, a pool with a deck, and so on. As travellers recover from the pandemic and look for safe and sanitary choices for staycations or a change of scenery, preferring larger rooms that are better fitted for longer leisure stays and social isolation, suburban locations, resorts, and the Vacation Rental (VR) business continue to experience high demand, outperforming hotels in the front of pandemic recovery.

Wellness and Spa Tourism

Preventive healthcare at these wellness retreats is an effective strategy to battle disease. Yoga and health retreats have never been more popular. As a result of the pandemic's newfound emphasis on holistic well-being, nutrition, and rejuvenation, an increasing number of individuals are planning short getaways and vacations around these alternatives that offer to boost their immunity. Hotels and resorts have launched retreats, an in-house spa, and an immunity building in 2020. According to a survey by the Global Wellness Institute, wellness tourism is expected to rise at a 7.5% yearly pace by 2022. "Human health has never been so far removed from nature as it is today. Our body today is exposed to more than 4,000 chemicals in a day resulting in rising sicknesses," says (Sachdeva, 2021) Founder & CEO, Daivam Wellness. Niraamaya Wellness Retreats in Kerala has collaborated with Daivam Wellness to launch programmes for Diabetes, Immunity Booster, Mindfulness, Stress Management and Metabolic Obesity.

Virtual Tourism

Virtual reality means interactive pictures or films that allow the spectator to explore the whole 360° scene. Unlike a normal image, the VR production records every component of the film from a fixed viewpoint. Instead of computer-generated graphics, 360 VR focuses on the real environment. VR technology comprises films on VR, photographs of VR tourism or headsets on VR. There are continuously increasing numbers of travel agencies and tourist organizations using this technology, promising an excellent future for the business. In an environment in which individuals might have second thoughts and may want more motivation to pursue their commitments, VR is very effective. A two-part VR experience meant to highlight attractions in Northern Ireland was unveiled in November 2019 by Tourism Ireland. Among Germany's most notable, various immersive initiatives have been revealed to highlight the tourism potential of the country. Whereas VR will undoubtedly help enhance tourism, the direct links may be difficult to measure, (Mohamed, 2020) Managing Director of the Maldives Marketing and Public Relations Corporation said. Amongst them are Flecha (2021) a travel specialist from Madrid for Accenture, which is a worldwide advisor. He believes that VR will serve to familiarize travellers with a new environment and aid to regain customer confidence since restrictions will easily be implemented in the upcoming months.

Virtual Tourism has a Handful of Other Benefits

1. The immersive experience allows the viewer to imagine themselves at a travel destination.
2. The spectator may control what they see of a place, experiencing 360 degrees of a location.
3. All features of a place may be shown in high resolution.
4. Hotels, Convention and Visitors Bureaus (CVBs), and travel companies can stand out from the throng.
5. The impact of tourism on vulnerable destinations is lessened.

Ecotourism

Ecotourism works towards nature and biodiversity protection. It also encourages ethical travel that may start with little devastation, environmental growth, adventure and preaching of sustainable livelihoods on the world. Eco travel is just one of several examples of tourism trends that demonstrate an increasing focus on ethical and ecological tourism alternatives among today's travellers in difficult conditions such as pandemics. The constant threat of global warming and natural degradation and the recent pandemic crisis have spotlighted the idea of ecotourism. Equally emphasized are the reduction of the carbon footprint in ecotourism. Today, amid the country's most popular tourist sites, various farms, resorts, homestays and environmentally responsible hotels provide a natural resting place.

Ecotourism in India

1. **Himachal Pradesh:** Himachal government have initiated Community-Based Ecotourism (CBET), which is a collaborative effort towards the conservation of natural and cultural resources in the region. In the promotion of ecotourism, farm stays also play an important role.
2. **Karnataka:** it is a renowned ecotourist destination in the country, including jungle lodges, heritage and recreational areas.
3. **Kerala:** one of the notable developments in south India is Thenmala Ecotourism project which works towards the development Shendurney Wildlife Sanctuary Reservoir and Deer Rehabilitation Centre.
4. **Sikkim:** Directorate of Ecotourism in association with the Forest Department. have tied up to save the beautiful environment of the north-eastern part of India by encouraging eco-friendly measures for sustainable tourism.
5. **Arunachal Pradesh:** Green Pastures and Future generations Arunachal are two important organisations working towards imparting awareness on ecotourism. The focus of such organisations is to encourage homestays in regions with green pastures and a natural environment.

Sustainable Tourism

The Travel trends have always given a positive business outlook to the local region ensuring the positive impact of tourism on allied businesses in the local region. The climatic problem and the preservation of the environment, but also ecosystems and species must be protected, and local populations should benefit directly from tourism's economic benefit. A joint effort involving individuals, NGOs, corporations, local and national governments and, of course, visitors are working towards full sustainability. A green destination emphasizes the importance of protecting nature, animals, culture and local people's economic welfare.

GREEN DESTINATIONS

Palau, Oceania

- Before entering the nation, tourists must sign an obligatory eco-pledge—the first of its type in the world.

- Plastics for single uses are prohibited and Palau moves towards zero waste as well.

Rwanda, Africa

- In Rwanda the local population is advised to take up jobs in the tourism industry as tour guides, and as service personnel in hospitality units. The government also takes initiatives to encourage the local community to invest in gardening, farming, handicraft production and production of heritage products.
- Outbound leadership training activities are also conducted in community-based hospitality units. For example – tracking mountain gorillas in Volcanoes national park.

Costa Rica, Central America

- In order to reverse reforestation and their mission towards net 0 emission of carbon dioxide by 2050 Costa Rica is employing renewable energy to meet out 90% of countries power requirements.
- They also support eco-friendly practices in their small villages in the south of Tortuguero National Park. One of the famous small villages that carry out eco-practices is Parismina.

The Azores, Portugal

- The Azores region of Portugal is recognised for its purpose on water management practices, usage of renewable energy sources, protection of existing habitats and wildlife in the landscapes.

Helsinki, Finland

- Finland which has a high literacy rate, a country with a good position in the global happiness index has taken more eco-initiatives such as reducing greenhouse emissions by 60%, installation of electric charging stations for electric vehicles, developing public transportation services using electric vehicles and creating awareness about cycling and walking among the population to reduce pollution.
- The **Think Sustainably** program helps residents and visitors identify service providers that operate sustainably and meet specific criteria.

India, Asia

- In India, campaign on social awareness under ‘Atithi Devo Bhavah’ is initiated.
- Involving educational establishments, non-governmental organisations, industrial groups, etc. in continuous cleaning efforts in major tourist sites. All the companies and people participating in this project will get appropriate incentives and prizes.
- Sustainable Tourism Criteria for India (STCI) and indicators for hotels, tour operators have been carried out.

Vaccine Tourism

As the vaccination drives are on the go, a new type of tourism has developed in the country and many other countries. There is a growing demand in India for vaccination tourism abroad and Russia looks to be the destination of choice now. A 24-day package journey from Delhi to Moscow has been begun via a Dubai-based tour firm. They will bring voyageurs to Russia, provide two shots with the certifications of the Sputnik V vaccinations. A 20-day tour package for passengers to spend the interim between injections is also provided. The program costs Rs 1.29 lakh and covers all the expenditures of receiving the immunizations. The package also covers tours throughout Moscow and St. Petersburg and rural tours. Two doses of Vaccine, Delhi-Moscow-Delhi tickets, a 4-day stay in 3-star hotels in St. Petersburg, twenty

days' holidays at Moscow 3-star hotel, a ticket return for Moscow St. Petersburg-Moscow and a 24-day breakfast and dinner package. During the day, you will have the following services. According to Make My Trip, the international flights from India to Russia "Indian holders of passports may now go to Russia. As of today, there is no limitation." However, visa requirements and flying status are not established given the present pandemic scenario. Currently, before boarding a foreign tour, it is advisable to verify.

Current Travel Trends Among Travellers

The number of travellers ready to spend on vacations varies depending on the personalized value they place in travel. In many situations, a traveller can trigger a new post-pandemic journey significantly. When travellers analyse where to go and frequently sets a chosen location apart from others, the value proposition of a destination is a major consideration. Money value was high for both new and repeat destinations. In all markets with several target alternatives, the main reason why travellers landed in their end destination was superior value for money. As of October 1, 2021 Thailand is reopening its border for travellers properly immunized. Thailand's tourist authority announced that visitors will not have to spend 2 weeks without a hotel quarantine in Bangkok or four other regions. In Thailand, the sandbox model will be followed by provinces such as Chiang Mai, Chon Buri, Phetchaburi and Prachuap Khiri Khan. This tourist stays 7 days after arrival in a specific region and is tested by Covid. More places will be added to the list from 21 October in Thailand.

RESULTS

Findings of Socio-Demographic Characteristics of Tourists

The characteristics of domestic tourists who became respondents were observed from their age, gender, occupation, place to which they belong. Table 1: Socio-Demographic Characteristics of Tourists, describes the socio-demographic profile of respondents. The majority of the age group of respondents were 21-30 with 75.5%. In terms of gender female (60.9%) respondents were higher than male (39.1%) respondents. Based upon the city where respondents belong to were Chennai (56.25%), other districts of Tamil Nadu (26.64%), other states (17.18%).

Table 1. Socio-Demographic Characteristics of Tourists

No	Respondent Profile	Category	Frequency	Percentage
1	Age	21-30	48	75%
		31-40	9	14.1%
		41-50	5	7.8%
		Above 50	2	3.1%
2	Gender	Female	39	60.9%
		Male	25	39.1%
3	City	Chennai	36	56.25%
		Other Districts (Tamil Nadu)	17	26.64%
		Other States	11	17.18%

Findings of Tourist Travel Plan Post COVID-19

Table 2: Tourist Travel Plan Post COVID-19, shows the travel plan of tourists post-COVID 19. Around 60.3% of respondents have planned to travel, whereas 39.7% have not. The reason is purely based upon the evolving pandemic, health and hygiene. Respondents when asked about their desire to travel with given choices, around 40.4% wish to travel once in a year, 34.6% once in 6 months, 23.1% once in 3 months, and only 1.9% said that they want to travel every month which is very less due to the pandemic. The tourist's desire for a domestic tour because of their economic status maybe if all works resume, travelling patterns will change in future. Planning a trip by themselves was 81.3% and through a travel agent was 18.8% because they choose a planned budget tour with their family members and friends. When respondents were asked about their preference towards which new travel trends post COVID-19, Domestic tourism is preferred by 46.9%, Wellness and spa tourism by 14.1%, Virtual tourism by 1.6%, Ecotourism by 28.1%, Sustainable tourism by 1.6% and Vaccine tourism by 7.8%. when they were given the choice to travel, they choose to travel domestically, in eco-friendly places, and for vaccination purposes which they considered to be more important.

Table 2. Tourist Travel Plan Post COVID-19

No	Respondent Profile	Category	Frequency	Percentage
1	Have you planned to travel?	Yes	38	60.3%
		No	25	39.7%
2	How often do you desire to travel?	Once in a year	21	40.4%
		Once in 6 months	18	34.6%
		Once in 3 months	12	23.1%
		Every month	1	1.9%
3	How do you plan a trip?	By yourself	52	81.3%
		Through travel agent	12	18.8%
4	Which new travel trends do you prefer post covid 19	Domestic Tourism	30	46.9%
		Wellness and Spa tourism	9	14.1%
		Virtual Tourism	1	1.6%
		Eco-Tourism	18	28.1%
		Sustainable Tourism	1	1.6%
		Vaccine Tourism	5	7.8%

Findings of KMO and Bartlett's Test

Table 3: Results of KMO and Bartlett's Test, represents Kaiser-Meyer-Olkin which is a Measure is an index that defines sampling adequacy. The KMO test value is 0.724 which is more than 0.5, can be considered acceptable and valid to conduct a data reduction technique. Bartlett's test of sphericity significant to a level of significance is <0.001 which shows that there is a high level of correlation between variables, which make it adequate to apply factor analysis.

Table 3. Results of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.724
Bartlett's Test of Sphericity	Approx. Chi-Square	545.164
	Df	190
	Sig.	<.001

Findings of Factor Analysis

The 20 statements in the structured questionnaire, based on the new emerging travel trends, were subjected to a factor analysis to identify the preference of new destinations post-COVID 19 and the items that defined them are mapped and given in Table 4: Findings of Factor Analysis. Seven factors were identified, accounting for 69 per cent of the total variance. All the factors had relatively high-reliability coefficients, ranging from 0.43 to 0.89. Although a reliability coefficient of 0.43 to 0.51 is low, as there are 6 preferences included in this factor, The average inter-item correlation coefficients with values between 0.51 to 0.63 and the other factors were equal to or greater than 0.89. Relatively high factor loadings indicate a reasonably high correlation between the delineated factors and their items.

The results of the factor analysis show the relative importance of the preference of new travel trends post COVID-19 situation as there are huge restrictions. A higher mean value implies higher preferences. Within each factor, the individual items (risks) were ranked in order of the strength of the relationship between the item and the factor, from high to low, utilizing the factor loading. The importance of preferences increases as the value of the factor loading increases. The results shown in Table 4: Results of Factor Analysis reveal that the preferences with the highest loading value are: environmental growth, major contribution, money value, nature protected areas, new travel trends. These are the factors based upon tourists prefer to travel to a destination so that they can experience a good leisure time. Tourists choose places of environmental growth, nature protected areas so they may enjoy healthy air and beauty in India is a vast number of sites. And they also prefer destinations which give a major contribution to the country.

CONCLUSION

Some conclusions on Indian visitor preferences in post-pandemic tourism are made of the data and discussions over the last chapter. Most tourists want to go after the crisis at least once a year. Few people would like to travel through travel agencies as other people by themselves. In comparison with other travel trends, domestic tourism has been given the most priority. The most important emphasis was given to continue research with all the advantages of tourism, ecotourism and sustainable tourism. People like to visit nature-protected regions and green spots. Sustainable tourism, where local people benefit, was the next priority. Tourists choose to tour within the county. In addition, tourists picked destinations like resorts, vacation rentals, suburban regions, conveniently accessible places. To anticipate the arrival of tourists after the pandemic and be a reference to satisfy the tourist's needs following tourists' preferences, in particular, to make the accommodation type, tourist type favoured and the relevant price available,

this research could be suggested for tourism industries. The preferences with the highest loading value are environmental growth, major contribution, money value, nature protected areas, new travel trends. These are the factors based upon tourists prefer to travel to a destination so that they can experience a good leisure time.

Table 4. Results of Factor Analysis

Factors	Components	Item Description	Factor Loading	% Variance	Eigen Value
I	New Travel trends	Major contribution New travel trends More customers Retreat centre Sustainable travel	0.857 0.819 0.797 0.468 0.436	28.685	5.73
II	Healthcare & Virtual reality	Personal security Virtual tourism Vulnerable places Personal healthcare	0.754 0.628 0.614 0.535	10.331	2.06
III	Domestic Travel	Easily accessible destinations Local economy benefit Locations for a longer stay Accommodation purposes Holiday rentals	0.766 0.726 0.706 0.631 0.481	10.026	2.00
IV	Eco-Travel	Environmental growth Nature protected places Growth of culture, local people	0.894 0.824 0.435	7.389	1.47
V	Money Value	Money Value	0.846	7.197	1.43
VI	Time Consuming	Time consuming	0.510	5.643	1.12

Tourists choose places of environmental growth, nature protected areas so they may enjoy healthy air and beauty in India is a vast number of sites. During decision-making processes, travellers carefully examine numerous destination features. If collecting information on available activities, accommodation alternatives, costs, weather, culture, customs and more, visitors consider a variety of components when they examine whether a site is aligned to their own needs. The majority of travellers in all markets have devoted considerable time, typically over weeks, in researching and getting to know each other on travels to separately selected places. Hill locations such as Kurseong in the west of Bengal have immense natural resources and a variety of flora and fauna, but commercial tourism is on the right ankle. Researchers from the University of Jadavpur are now working in this field to create eco-tourism as a strategy for managing natural resources. Furthermore, they choose places that contribute greatly to the country. The goal of ecotourism is to maintain the integrity of the location. Tourists like to travel following the preservation of the local environment and historic legacy while urging them to take care of natural resources that draw them to this region. Travellers desire to organise sustainable travel. Booking.com says that Eco-friendly places are chosen mainly to reduce environmental impact, pollution, sustainable travel, local experience and feel good about an accommodation choice. The strength of this paper lies in evaluation of new travel trends, and finding the results of travellers for choosing, new destinations,

new technologies and means of transport have caused major shifts in the industry due to COVID-19 pandemic. Early adoption of new trends is vital.

RECOMMENDATIONS

As of now, people sprung to travel. The second wave of COVID-19 (May 2021) will surely bring individuals into recreation at the point of the decline in the pandemic spread rate. Travel should be devoid of difficulty by taking some sustainable steps to guarantee a fantastic trip. As a traveller, you may take little and far larger measures to ensure that your journey is as small as feasible. This chapter gives recommendations for the organisations and travellers to travel sustainably:

1. Create an awareness among the tourists to avoid plastics in one-use using reusable bags, water bottles and food containers.
2. Choose local touring organisations that hire local people and engage in environmentally friendly methods.
3. Set up electrical charging facilities for electric vehicles, provide public transport services utilizing electric vehicles and raise awareness and pollution reduction among the community.

Expected Trends in 2021 and Beyond – Green Travel

Work together to build a tourism sector that works for everyone, where sustainability and innovation are part of everything we do (Zurab Pololikashvili, 2021). Travel is an essential element of humanity. We would want to explore, see the globe, interact and rest. That will be true constantly. It is necessary to go to new locations and not just to be happy, but to be different and travel differently. Depending on their condition and motives, consumers can select their destination. Tourists prefer three in the list: Eco-friendly hotels, different transports, a plastic-free world. New styles of tourism have been created by Pandemic and are blooming for future generations. Some kinds that can be profoundly benefited and utilized currently include vaccine tourism, wellness tourism, and ecotourism. The new trends in the tourist industry that support people, the world and wealth need to bring many vulnerable sites to light. But when you travel, the decisions you make have a deep influence on the climate and the local population and its surroundings. Travel must thus alter and we must all do what is needed to allow communities and ecosystems to survive during the next years. In doing so, future generations will be able to enjoy and explore our magnificent globe.

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Chapter 20

COVID–19 Pandemic and Its Implications on Storekeeping Practices: Perspectives of Health Workers

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ABSTRACT

Unprecedented outbreaks of disease have challenged the contemporary world with substantial adverse consequences on the effectiveness of business models in operations and supply chain management (OSCM). The advent of COVID-19 put a lot of pressure on staff and resources. However, the focus of contributors has been on the pressure on staff managing the various hospital facilities and ignoring inventory, which is one of the key areas where resources required to take care of patients are managed. Using the resource dependency theory, this chapter analyses how COVID-19 affected the inventory practices of hospitals operating in the Western Region of Ghana. It further makes suggestions on how the inventory of hospitals should be managed in order to avert possible shortages and interruptions in healthcare delivery and further relieve hospital staff of the pressure they have to sustain when there is a shortage. The chapter offers suggestions on areas of inventory management practices that management of hospital facilities should pay attention to.

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INTRODUCTION

This chapter discusses how the advent of COVID-19 affected the inventory management practices of hospitals in Western Region of Ghana. The chapter indicates how the advent of COVID-19 put pressure on health facilities and resources, specifically inventory management. the chapter Describe the general perspective of the chapter. The chapter relies on the resource dependency theory and makes a case for why inventory management remain key to the operations of hospitals. At the end of this chapter, readers should be able to examine how the advent of COVID-19 affected inventory shrinkage, inventory turnover, inventory records accuracy and inventory investment. The chapter further makes recommendation on how such activities should be managed in order to avoid disruptions in health care delivery.

Background

In recent times, the world has experienced a lot of outbreaks. Ebola and now COVID-19 have all brought enormous challenges to society. A. number of business models in operations and supply chain management have also been affected (Chew, Wei, Vasoo, Chua & Sim, 2020; Nigmatulina & Larson 2009). The outbreak of COVID19 has brought to bear a number of challenges to economies and the health care systems throughout the world (Boccaletti et al. 2020). The pandemic has also brought a number of disparaging effects on the way of life of people, the *new normal*. Since the report of a first case of COVID-19 in China, the number of reported cases has continuously risen to over 5.69 million cases with over 355, 575 deaths as at May, 2020 (John Hopkins University & Medicine). The surge in cases brought about a lot of considerable consequences on the health care systems of nations. Overcrowding of hospitals, shortages of medical supplies were key among the issues reported during the surge in COVID-19. Contingency measures rather took centre stage while effective planning was relegated to the backdoor. The world needed to react more than being proactive. This therefore, affected operations and supply chain activities as reported in the study of Lin et al. (2020).

In Ghana, the government of Ghana reported that the first two cases of COVID-19 were recorded at the Kotoko International Airport in March, 2020 (Banor, 2020). Since then, there was a steady rise of cases in COVID-19 which resulted in the government of Ghana imposing lockdown on the two major cities of the country, Kuamsi and Accra. Hospitals in the country recorded high number of admissions during the same period. There were shortages in the supply of personal protective equipment (GMA, 2020). These disruptions affected the quality of healthcare delivery during the same period. Inventory in all these cases were key but with reported shortages in the delivery of these essential items during the peak of the pandemic, it calls for rethinking of the inventory management practices of hospitals.

Judging from how crucial and important the store keeping department is, it is therefore imperative to investigate the effect of the Covid 19 on the various activities in the store keeping department especially from the perspective of health workers. Specifically, the study looked at the impact of Covid 19 on inventory shrinkage, inventory turnover, inventory records accuracy and inventory investment. The findings of the current study will inform inventory management practitioners in the healthcare industry on the inventory management practices to use or rely on during pandemics so as to avoid disruptions in healthcare delivery.

LITERATURE REVIEW

Theoretical Review

This section of the chapter relies on the resource dependency theory to make a case for why attention should be paid to inventory management practices. It posits that the materials or resources needed by hospitals cannot be generated by themselves and that they rely heavily on outsiders for such resources. To avoid interruptions in the delivery of health care, it behooves on hospital management to have an inventory system that ensures regular and consistency in the supply of resources required to keep hospital facilities running all the time. According to Pfeffer and Salancik (1978), organizations depend on others to be able to access inputs for their production. This dependency creates could put the organization at a risk when the resources do not flow to the organization as planned. This however, propels organizations to put in measures aimed at reducing the risk associated with this dependency. This overreliance on external actors for firm's inputs could hamper the smooth operations of firms when there are movements in demand and supply. The organization that is able to reach to such situations are able to develop competencies which contributes to defining the organisation's competitive advantage.

For example, hospitals that were able to minimize their dependencies on the global supply chain at the peak of the COVID-19 pandemic could become the favourite choice of patients when seeking medical attention in the future. The shortage of personal protective equipment (PPE) and ventilators leading to loss of lives during the pandemic could have largely been avoided if attention were given to inventory management practices. Inventory management practices therefore, becomes one of the key mitigation strategies to reduce the risk organisations are exposed to when it relies heavily on external firms for its inputs. This therefore explain the rationale behind the study by proposing to examine how inventory management practices of hospitals in the Western region were affected by the advent of COVID-19 as these hospitals largely depended on external organizations for most of their supplies.

Research Question Development

Empirical studies directly related to covid 19 pandemic and store keeping practices are limited in the current literature. There are however a few studies related to the said pandemic and its effects on relevant sectors such as the health and financial and so on. For instance, Abor and Abor, (2020) on how COVID-19 pandemic affected the health financing system explained that the pandemic had both an economic and health crisis. The study found a likely detrimental effect of the plague on healthcare financing such as donor support, support from government out of pocket payment as well as the national health insurance scheme (NHIS) thereby, affecting generally the healthcare delivery in Ghana. There is the likelihood of funds being diverted into the fight against the pandemic as a result of the reduction in tax and as well as other non-tax revenues and commitment to large expenditure.

The study further concludes hospital attendance will be greatly reduced as many are afraid of contracting the disease when they visit the hospitals and this will inturn also affect the rate of renewal of the insurance scheme. This and the reduction in out-of -pocket payments at the hospital are likely to reduce procurement of drugs to feed the hospital stores hence adversely affecting store keeping practices. Another study by Oladele et al., (2020) investigated how the Covid-19 pandemic has affected financing of HIV drugs in Nigeria. It was revealed that as a result of the global reduction in the production lines and flight restrictions as well as logistics services, there is the possibility of shortage of antiretroviral

medicines (ARV). Again, as a result of the fall in revenue and the weakened local currency (the naira), the government may be unable to raise enough funds for the purchase of ARVs, linked to that the restrictions on movements in the country has the possibility of restricting delivering of medicines and commodities to facilities.

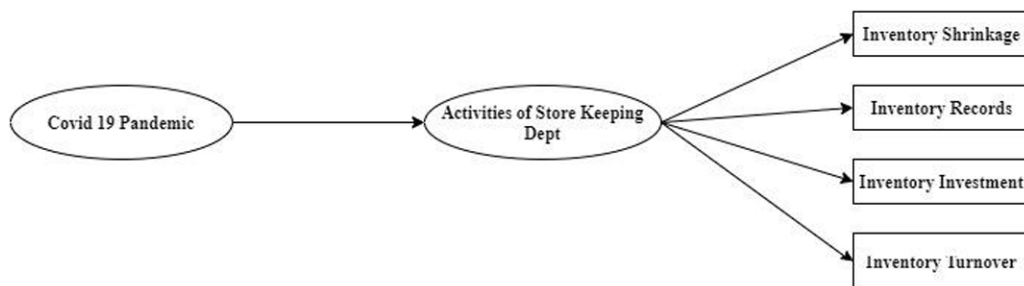
The finding therefore implies that activities of the store at the health services or book keeping activities are distorted and malfunction as a result of the covid-19 pandemic. Further, in a related study, Asante and Mills (2020) analyzed the preventive measures in Ghana for curtailing the covid-19 spread among the population. The associated covid-19 socioeconomic impacts were found in rising prices in both food and non-food items, the lockdown associated economic hardships as well as the compulsory relocation and decongestion exercises in enforcing social distance among traders. These identified impacts (especially on the sale of drugs in the market) have a direct impact on the store and book keeping activities at the health centers. Thus, high prices in drugs all other things being equal, will direct most of people (in need of drugs) to the hospital. Pressure will be mounted on store activities and likely to cause shortages. Hence, the following research questions:

1. What is the impact of Covid-19 on inventory shrinkage?
2. What is the impact of Covid-19 on inventory turnover?
3. What is the impact of Covid-19 on inventory records accuracy?
4. How does Covid-19 impact inventory investment?

Research Model

Fig 1 shows the model of the study. This model comprises of Covid 19 pandemic and activities of store keeping department. The store keeping department was operationalized as inventory shrinkage, inventory records, inventory investment and inventory turnover. The model proposed that, there is an indirect predictive negative impact of covid-19 on the four store keeping practices.

Figure 1. Conceptual Framework
Source: Authors' construct



METHODOLOGY

Research Design

Drawing on the quantitative research approach and the explanatory research design, this chapter sought to explain the nature of the relationship between Covid-19 and activities of store keeping practices.

Participants and Procedures

The population for the current study included stores managers, stock controllers, pharmacist, stores and supplies officers, senior stores assistant, stores assistant and stores clerks making working in the government hospitals that were used as treatment centres for COVID-19 in the Western Region of Ghana. A total of 52 respondents were selected through census due to the limited number of respondents. Questionnaires were utilized as the research instrument. To ascertain the reliability and validity of the questionnaires, the researcher pre-tested the questionnaires to eight (8) respondents. This study employed inferential statistics to analyse the data collected from the field. The data was coded to enable the researcher to identify codes that pertained to possible responses for each item on the questionnaire. The researcher employed SPSS version 20.0 to perform data entry and data transformation, forms of output and analysis. The researcher employed major analysis tools like Principal Component Analysis (PCA) which was used to determine the main components or factors that explained the various constructs and regression analysis (OLS) was adopted for establishing and testing relationships.

Measures

Covid 19 pandemic was measured using four questions; number of patients has increased for the past 2 years, number of hours at work has risen in the past 2 years, staff shift system has been disrupted for the past 2 years and number of overtime hours has increased in the past 2 years. In addition, activities of store keeping department was measured using four constructs namely: inventory shrinkage, inventory record, inventory investment and inventory turnover (Oballah, Waiganjo & Wachiuri, 2015). Five questions were used to measure inventory shrinkage. Questions used included there is high medicine expiration at the hospital, medicine theft has increased greatly, there is high medicine damages at the hospital, there are errors in in-audit inventory count, the frequency of misplaced drugs increased at the hospital. Four items were used to measure inventory records accuracy. Questions included there is regular updating of records at the hospital, the hospital experienced poor proper records management, there are incomplete accounts record at the hospital, the hospital has up to date records at the hospital. With respect to inventory records, four items used to measure included, the goods in store have high value, the hospital has enough PPEs to carry out operations, the hospital distributed all the PPEs obtained to all the staff, all the health workers got their required number of PPEs. Inventory turnover was also measured using three items. These included the hospital used all the PPEs in its activities, the PPEs are available at each working day at the hospital, the number of PPEs supplied by government tallied with the hospital records. All items in the questionnaire were measured with a Likert scale varying from 1 representing (strongly disagree) to 5 representing (strongly agree).

Reliability Test

The reliability test of the 21-question survey measured by Cronbach alpha is 0.71. This result is greater than the acceptable level of 0.70 prescribed by Nunnally (1978) and suggests that the questionnaire is reliable and further increases validity.

Data Analysis

This study employed inferential statistics to analyses the data collected from the field. The data was coded to enable the researcher to identify codes that pertained to possible responses for each item on the questionnaire. The researcher employed SPSS version 20.0 to perform data entry and data transformation, forms of output and analysis. The researcher employed three major analysis tools in the data analysis. Frequency distribution tables and charts were used to explain descriptive results. The Principal Component Analysis (PCA) was used to determine the main components or factors that explained the various constructs. Finally, regression analysis (OLS) was adopted for establishing and testing relationships.

FINDINGS

Covid 19 Pandemic and Activities of Store Keeping Department

The results were presented according to the research questions of the study. To appropriately address the research objectives, regression analysis was performed. However, before the regression analysis was carried out, Pearson's Coefficient of Correlation test was conducted. Table 1 present the Pearson correlation for the variables that were used in the regression model.

Table 1. Correlation Analysis

Variables	Covid-19	Inventory shrinkage	Inventory records accuracy	Inventory investment	Inventory turnover
Covid-19	1				
Inventory shrinkage	0.175	1			
Inventory records accuracy	0.004	0.374	1		
inventory investment	-0.016	-0.098	-0.153	1	
Inventor turnover	-1.99	-0.257	-0.041	0.653	1

Source: Field survey (2021)

Table 1 shows how covid-19 pandemic relates to inventory shrinkage, inventory records accuracy, inventory investment and inventory turnover. Findings as presented in Table 1 indicates a positive relationship between inventory shrinkage and inventory records accuracy. However, it also found a negative relationship between inventory investment and inventory turnover. Table 2-5 present the regression analysis results of the specific objectives of the study.

COVID-19 Pandemic and Its Implications on Storekeeping Practices

Table 2. Impact of Covid-19 on Inventory Shrinkage

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.923	.101		9.163	.000
Covid-19	.205	.100	.246	2.047	.045

Source: Field survey (2021)

Table 3. Impact of Covid-19 on Inventory Turnover

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.909	.328		11.930	.000
Covid-19	-.595	.325	-.221	-1.828	.072

Source: Field survey, Mensah (2021)

Table 4. Impacts of Covid-19 Pandemic on Inventory Records Accuracy

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.452	.044		10.185	.000
Cov-19	-.004	.016	-.035	-.282	.779

Source: Field survey (2021)

Table 5. Impacts of Covid-19 Pandemic on Inventory Investment

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.295	.110		11.764	.000
Covid-19	-.018	.109	-.019	-.161	.873

Source: Field survey (2021)

The result of the regression analysis on the impact of Covid-19 on inventory shrinkage is presented in Table 2. From the result, Covid-19 positively impacted on inventory shrinkage. The estimated coefficient has a β value of 0.100, t- value of 2.047 with a p- value £ 0.045. Table 3 shows the regression result of the impact of Covid-19 on inventory turnover. The result indicated that Covid-19 negatively impacted (-0.595, p £0.072) on inventory turnover. The regression analysis result on the impact of Covid-19 on inventory records accuracy is presented in Table 4. From the result, Covid-19 has an adverse impact on inventory records accuracy. The estimated coefficient has a β value of 0.004, t- value of 0.0282 with a

p-value £ 0.779. Table 5 shows the regression result of the impact of Covid-19 on inventory investment. The result revealed that Covid-19 has a negative impact (-0.018, p £0.873) on inventory investment. The result indicates that 1 percent rise in Covid-19 cases will adversely affect inventory investment by 0.018 percent.

DISCUSSION

The first objective sought to examine the impact of Covid-19 on inventory shrinkage. From the result, Covid-19 positively impacted inventory shrinkage. This means that the higher the Covid-19 cases in hospital, the higher the inventory shrinkage in the various hospital. The coefficient of the Covid-19 indicates that a 1 percent increase in Covid-19 cases will result in 2.05 percent rise in inventory shrinkage and it is significant at 5 percent level. Covid-19 has led to high medicine expiration at the hospital, increases in medicine theft and medicine damages and errors in in-audit inventory count at the hospital. The result agrees with the findings of Abor and Abor (2020) who examined the impact of the COVID-19 pandemic on the Ghanaian health financing system. The result further supports the findings of Asante and Mills (2020). The Authors found that pressure will be mounted on store activities and likely to cause shortages. The identified impacts of covid-19 especially on the sale of drugs in the market have a direct impact on the store and book keeping activities at the health centers. Thus, high prices in drugs, will direct most of people (in need of drugs) to the hospital. Thus, inventory shrinkage in the long run is uneconomical to the hospital and will largely affect performance negatively. Another study by Oladele et al., (2020) investigated how the Covid-19 pandemic has affected financing of HIV drugs in Nigeria. It was revealed that as a result of the global reduction in the production lines and flight restrictions as well as logistics services, there is the possibility of shortage of antiretroviral medicines (ARV).

Inventory shrinkage is becoming a major concern for management of health institutions these misfortunes have a negative effect on the operation of the hospital. Keeping up a low shrinkage rate is imperative to the health industry (Oballah, Waiganjo & Wachiuri, 2015). Whereas measures change by industry, a typical shrinkage rate is around 2 to 6 percent. Generally high shrinkage impacts on the services rendering to clients and may force the hospital management to take certain combative measures. The fight to stay productive in the midst of misfortunes from covid-19 comes back to the clients, who end up paying higher costs to assist stores cover their misplaced inventory. The clients of the hospital moreover end up paying higher charges since for each thing lost through covid-19, no money is collected to cover the lost.

The second objective sought to examine the impact of Covid-19 on inventory turnover. The result shown that Covid-19 has a negative impact on inventory turnover. The result indicates that 1 percent rise in Covid-19 cases will adversely affect inventory turnover by 0.595 percent and it is significant at 10 percent level of significance. This implies that Covid-19 has negatively affected the number of times inventory is used as well as the number of days inventory is available in store room at the hospital. Oladele et al., (2020). The Authors revealed that the Covid-19 pandemic has caused a global reduction in the production lines and flight restrictions as well as logistics services. There is also the possibility of shortage of antiretroviral medicines which will affect the number of days the drug will be available in store room at the hospital.

The finding therefore implies that activities of the store at the health services or book keeping activities are distorted and malfunction as a result of the covid-19 pandemic. The result also concurs with the findings of Abor and Abor (2020) who examined the impact of the COVID-19 pandemic on the Gha-

naian health financing system. They concluded in their study that the NHIS in Ghana will be affected since many of the contributors are likely not to continue with their insurance policies due to the fear of contracting the virus during hospital visits.

The failure to renew the insurance policies and the reduction in out-of-pocket payments at the hospital are likely to reduce procurement of drugs to feed the hospital stores hence adversely affecting store keeping practices (Inventory turnover). Most public health institutions have experienced negative impacts of the coronavirus outbreak in their inventory levels. The higher level of inventory turnover causes the hospital to be quicker in offering drugs to clients so that it will improve the services rendered by the hospital. Therefore, it is essential to store sufficient inventory to meet the needs of hospitals' client.

The third objective of this study sought to examine the impact of Covid-19 pandemic on inventory records accuracy. It was revealed that, Covid-19 has an adverse impact on inventory records accuracy. The coefficient shows that a percent increases in Covid-19 cases will adversely impact inventory records accuracy. This implies that Covid-19 pandemic has adversely affected regular updating of records at the hospital, experienced poor records management, incomplete accounts record at the hospital and has affected up to date records at the hospital. Inventory inaccuracy has been a fundamental issue in managing with physical assets. Management of health industry. The management of any hospital are required to set up strategies under which inventory is physically tallied at least once a year to serve as a premise for the preparation of the financial statements and, if applicable, to find out the unwavering quality of the entity's perpetual stock system. However, Covid-19 outbreak has created a number of potential challenges for management to conduct, and an auditor to go to stock checks.

It is conceivable that the outbreak may make stock count challenging, in some cases, thereby affecting operational plans (Waller, Nachtmann & Hunter, 2006). There's a considerable literature (experimental, expository, and simulation) that recommends that information inaccuracy can lead to stockouts (Fleisch & Tellkamp, 2005). Inaccurate inventory records as a result of covid-19 constitute a huge issue particularly within the health industry. Prior research found that the share of inaccurate stock records may run between 65% and 80% (DeHoratius & Raman, 2008; Kang & Gershwin, 2005). Where wrong stock records may indicate either higher or lower inventory levels than are really accessible in the store. Another issue of inaccurate inventory records may bring about is the need to perform visit 'gap scans', i.e., to send representatives to the store or warehouse to physically check if shelves have been depleted. These activities impose extra cost on the hospital (Kang & Gershwin, 2005).

The final objective of the study sought to determine the impact of covid-19 on inventory investment. It was revealed that, Covid-19 has a negative impact on inventory investment. The result indicates that a percent rise in Covid-19 cases will adversely affect inventory investment. This implies that Covid-19 has negatively affected the value of goods in store and capital invested. Also, it has negatively affected the materials such as PPEs available in store room at the hospital for staff to use in the discharge of their duty. Inventory investment is done with the hope of satisfying future demand, save Storekeepers from the extra cost of going to market again and again thus they stock products and maintain stock when there's less demand within and withdraw it when there's high demand to fulfil the demand.

FUTURE RESEARCH DIRECTIONS

Covid-19 pandemic was only considered in this study, future research can consider the internal factors that influence the inventory management activities of the store-keeping department of the health sec-

tor. Also, similar studies can be conducted on other organizations of the economy other than the health sector on how inventory is managed in those sectors of the economy.

CONCLUSION

The study concludes that covid-19 pandemic has greatly affected the storekeeping practices of hospitals. In that as more cases of covid-19 are reported in the hospitals in the Western Region, damage to medicine administered to patients increases, misplacement of drugs also rises and further, theft of medicine used for the treatment of patients also increases. Further, regular update of records at the hospital are reduced as more time is rather spent on issuance of store items, leading to oversight of records. The study also concludes that the pandemic invariably put pressure on PPEs resulting in hospital staff not getting the required numbers needed, some hospitals are also unable to receive the quantities of PPEs requested for. This finding could be attributed to the global shortage of these items at the peak of the pandemic of which Ghana was part.

SOLUTIONS AND RECOMMENDATIONS

The study makes the following recommendations based on the findings. The recommendations are grouped under both practical and policy:

Practical recommendations: findings of the study indicates that hospital staff pay attention to areas inventory records accuracy and ensure strict compliance to accounting of items kept at the stores of the hospitals. Further, it also calls for hospitals to have contingency measures in place so as not to put undue burden on staff as most of these resources are dependent on external suppliers. Adequate planning by hospitals is likely to give the such hospitals competitive advantage and might become the preferred choice for health treatment based on how the measures put in place to mitigate the risk of overly depending on external supplies. It will help hospitals identify areas where costs can be reduced from the results of the study while ensuring overall hospital efficiencies are maintained even in this era of pandemics.

Policy recommendation: The study can also be used by pharmacists and inventory control staff as basic information to develop friendly drug buying policies and procedures and to control their levels as well. It then calls on management to pay attention to activities of inventory managers considering how important they are in the treatment of patients and eras of pandemics.

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KEY TERMS AND DEFINITIONS

COVID-19: A potentially severe, primarily respiratory illness caused by a coronavirus and characterized by fever, coughing and shortness of breath which in some cases causes damage to major organs of the body.

Inventory: The entire stock of items, materials both finished and unfinished kept by an organization.

Inventory Investment: Change in stock of materials within a given period.

Inventory Records: Is defined as keeping tracks of physical quantities of items sold, issued, or kept in hand.

Inventory Shrinkage: Variations in records of items kept as stock on the books of a firm as against the actual figures recorded from physical counting of the items in stock.

Inventory Turnover: Refers to the rate at which stocks issued or sold out are replaced within a given period.

Operations: Is that function of business that is concerned with transforming inputs in desirable output.

Pandemic: A disease prevalent over a whole country or the world.

Store Keeping: The responsibility of accounting for stock in store.

Supply Chain Management: The function of the organization that is concerned with how external resources of the firm are identified, sourced, and accessed to meet organizational objectives.

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