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(Re)defining Entrepreneurship in a Post-pandemic Context

Edited by

Álvaro Lopes Dias and Mafalda Patuleia

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(Re)defining Entrepreneurship in a Post-pandemic Context

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About the Editors

Álvaro Lopes Dias

Álvaro Dias has been a professor since 1995, teaching mainly in the areas of Strategy, Marketing, and Entrepreneurship. At the same time, he has also worked as a consultant for entities such as the Ministry of Economy, IAPMEI, AIP, AEP, AERLIS, GNR, ACT, CCP, Turismo de Portugal, and dozens of companies. He holds two PhD.s degrees classified as honored (*cum laude*), one in Management with a specialty in Marketing and another in Tourism, as well as an MSc in Strategy, and an MBA and Ba in Management. He also conducted post-graduate studies in E-business. He led the UAL Economic and Business Sciences department. He was the director of the Master's Degree and of the Degree in Marketing and co-director of the Degree in Management at ISG. He also coordinated the Tourism Destination Management at Universidade Lusófona. Currently, he is the director of the Master in Hospitality and Tourism Management at ISCTE-IUL. He is the author of 22 books and dozens of articles in international reference publications. In 2022, he received the distinction GNR D. Nuno Álvares Pereira Medal of Merit and a diploma in Commendation. In 2021, he received a research award from the Chair of Intelligent Tourism of the Junta de Andalucía and the University of Seville. He co-authored an article on the entrepreneurship role on dynamic capabilities, A longitudinal study on Brazilian and Portuguese firms, which was nominated for the Best Paper Prize at the Special Conference of the Strategic Management Society in 2011. He also has international experience as a Visiting Professor in countries such as Angola, Brazil, Bolivia, Mexico, Peru, Colombia, Spain, Poland, Romania, and Finland.

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Preface to “(Re)defining Entrepreneurship in a Post-pandemic Context”

The theme of entrepreneurship in the post-pandemic context is essential for the economic and social revitalization of economies. Despite this importance, this theme has hardly been explored, and therefore one of the central aspects of this reprint is to bring the debate on the competitiveness of micro-, small-, and medium-sized enterprises in various sectors to academic discussion.

More than thirty authors responded to the challenge of this Special Issue, contributing 11 articles that explore various facets of this phenomenon, from very specific experiences to implications for the social economy. We believe that a common denominator is sustainability, as an essential pillar for resilience and competitiveness in the post-pandemic context, in which many business models have been rethought and modified to meet the ‘new’ challenges of the markets.

In this context, we thank all the commitment and collaboration of all these authors, as well as a wide range of reviewers who, in a dedicated way, have contributed constructively to improve the final quality of the articles. We also thank all the participants in the studies included in the various chapters, based on whether they are citizens, companies, or people in charge of companies and organizations. Without their contribution, science would not be able to move forward.

Finally, we would like to acknowledge all the support given by the tireless and extremely professional Social Sciences editorial team.

Álvaro Lopes Dias and Mafalda Patuleia
Editors



(Re)defining Entrepreneurship in a Post-Pandemic Context

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More than three years have passed since the first lockdown, and the world is not the same. The new context that emerged from the pandemic is now influenced by conflicts, inflation, social conflicts, and the omnipresent issue of global warming. All these (and more) led consumers, companies, and governments to rethink their behavior. Several studies have focused on the behavior of these stakeholders in the post-pandemic context; however, studies focused on the development of entrepreneurial skills in a post-pandemic context have been scarce. At the same time, there is a growing number of voices calling for the need to adopt business models based on a circular economy (Dias et al. 2022). Again, at this level, research exploring the link between entrepreneurship and the development of business models for a circular economy is limited.

The study of these areas is particularly relevant since the market patterns are shifting; namely, consumers and tourists are acting and deciding based on different assumptions, a trend demanding adequate and timely responses both from firm decision-makers and government policymakers (Dias et al. 2021). It was in this context that the special issue “(Re)defining Entrepreneurship in a Post-Pandemic Context” was created within the scope of the social sciences in order to promote the research and academic cross-sectorial discussion of the key factors related to entrepreneurial resilience, post-pandemic recovery responses, and the transition to more sustainable business models. Accordingly, they aimed to: (i) study the development of more resilient and sustainable entrepreneurial business models; (ii) identify the strategies to revitalize entrepreneurship and SMEs in a post-pandemic, including firm strategy, local development strategy, and policymaking, among others.

A total of 11 teams of researchers responded to this challenge in a cross-sectionally and multi-country compendium of chapters. From Latin America to Asia, studies as specific as canyoning experiences and policymaking were presented in this Special Issue. The discussion about resilience, sustainability, and entrepreneurship was discussed from several enriching perspectives, as discussed ahead.

In their article, Acevedo et al. (2023) studied a sample of Colombian firms to determine the importance of information and communication technologies, as well as adaptability capabilities, on their survival in the first months of the COVID-19 pandemic. As they found, adaptability is revealed to be an important capability for start-ups to obtain government aid, and firms’ resilience in these crisis moments is associated with important organizational capabilities such as innovation, learning, maturity of the value proposition, and flexibility of the business model.

While Acevedo and colleagues analyzed the critical success factors in several sectors, other chapters of this book focused on specific sectors. For example, Mourato et al. (2023) studied digital nomads and how their sustainable responsibility influenced two types of entrepreneurial self-efficacy (social- and business-related). This study pioneered by analyzing the role of these workers in local communities, showing that social and environmental

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concerns do not influence outcomes equally, since their influence is stronger on social self-efficacy and lower on self-efficacy.

Suminah et al. (2023) also studied a specific sector, more specifically agriculture in Surakarta, Indonesia. Their focus was on the effects of the COVID-19 pandemic on agricultural micro, small, and medium-sized firms. Suminah and colleagues explored the influence of empowerment on several organizational dimensions and found a positive effect on economic capital and on the ability of agricultural business actors. However, the effects of empowerment on human capital, perception, and financial capital were not supported by the results. They found that the ability of business actors was influenced by economic capital and the perceptions of business actors but was not affected by human and financial capital.

The work from Magalhães et al. (2022) analyzed the change in the skills of hospitality workers during the pandemic. During that period, workers worked remotely, which posed several challenges that they were not used to. They found that these workers became more confident in their skills while simultaneously becoming more aware of the need for more training and skill development. Workers recognize the importance of developing soft skills (e.g., teamwork) as well as task-related skills (e.g., linguistics and digital literacy).

The resilience of firms offering canyoning in the Azores was studied by Silva et al. (2022). They found that these firms adapted to new demand characteristics and changed their business model in order to survive during the pandemic. These firms took advantage of Azores' attractiveness during this period to accelerate some of the transitions and undertake changes in their business model. The firms responded to health and safety issues by adapting their procedures to the specificity of canyoning activities, such as reducing group sizes and limiting accommodation-activity location transfers, allowing them to reduce costs and improve managerial processes.

O'Neill et al. (2022) analyzed another water-related activity, in this case, surfing. More specifically, they studied the social and environmental goals pursued by lifestyle entrepreneurs in Ericeira, Portugal. These entrepreneurs, according to the literature, are associated with more sustainable entrepreneurial behavior when compared with larger firms, but little empirical evidence was found. As such, the authors showed that these entrepreneurs combine financial and non-financial goals in running their businesses.

In the same vein as the study by Mourato and colleagues, Broccia et al. (2022) also study the factors influencing social self-efficacy and self-efficacy. Instead of the previous study, Broccia and colleagues' sample was composed of firms from multiple sectors. More specifically, this research studied the direct and indirect effects of innovativeness on social self-efficacy and self-efficacy and showed that self-efficacy was directly influenced by innovativeness. However, the effect of social self-efficacy was only significant through the mediating effect of philanthropic CSR and organizational capabilities.

The strongly negative effect of the pandemic in Can Tho, Vietnam was explored by Huynh et al. (2022). They highlight the importance of the local authorities in terms of developing supportive policies for both firms and workers to become more resilient and competitive. Local authorities must also establish the link between the local context and the central government that leads to effective governance. More specifically, local authorities can establish the framework for policymaking and crisis mitigation procedures such as energy cost reduction, capital support, and tax support, among others.

Albornoz-Arias and Santafé-Rojas (2022) studied a sample of Venezuelan migrant entrepreneurs operating in Colombia, more specifically their degree of self-confidence. They found that the factors associated with high self-confidence are gender, perception of ability to take advantage of opportunities, perception of demanding efficiency and quality, and perception of taking risks. Following the same concerns about policymaking as in the previous chapter, the authors recommend the implementation of policies by the Colombian government related to education and the formalization of the labor market, with a particular concern for gender issues.

The barriers to innovation of Ecuadorian firms were studied by Carvache-Franco et al. (2022). They identified several barriers to product and process innovation, such as a lack of company funds, high costs of innovation, and a lack of qualified personnel. They found it to be a problem both from the firms' and the country's perspectives. Additional barriers to product innovation were also identified by the authors, such as the lack of market information, as well as to process innovation, such as the lack of financing from external sources, the lack of technological information, and market dominance by large firms.

Finally, Cruz et al. (2022) explored drive tourism not only from the economic sustainability and environmental sustainability perspectives but especially from the social sustainability perspective. By adopting a systematic literature review procedure, the authors highlight important elements when developing a drive-to tourism route, such as the implementation of a collective decision-making process by involving local communities and other tourism stakeholders, as well as the promotion of the destination in terms of strategic policies.

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Article

Resilience of Colombian Entrepreneurships during COVID-19 Pandemic Crisis

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Abstract: MSMEs were facing major challenges driven by uncontrollable macro-environmental factors caused by the COVID-19 pandemic. This paper shows the strategies that a sample of Colombian start-ups developed for their survival in the first months of the COVID-19 crisis and the close relationship between these strategies and the aid policies deployed by the Colombian government. This study involved 220 Colombian enterprises from different sectors of the economy (agriculture, commerce, services, and industry) and different stages of the life cycle. Our statistical analysis was based on a deep survey of highly significant rank correlation, the qualitative association between variables, a structural equation model, and mediation analysis. Among our results, we highlight a high dependence on ICT technologies, varied access to economic aid, and strong dependence on negative crisis impacts with the need for aid and deep business changes. Concerning the last conclusion, we found a significant mediating effect of the adaptability of the start-ups in order to explain why older, bigger, and more necessary enterprises were the ones that obtained aid.

Keywords: resilience; SMEs; Latin American entrepreneurship; COVID-19 economic crisis

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1. Introduction

Enterprises face great challenges posed by the environment and society. These challenges are largely driven by processes such as globalization, technological changes, new forms of consumption, consumer tastes and preferences, as well as fortuitous events such as the COVID-19 pandemic. Under these scenarios, enterprises must find models that allow them to face and overcome different forms of crises and seek stability in times of volatility, uncertainty, complexity, and ambiguity.

Growing economic demand based on knowledge and innovation has put different actors at the center of development, among them entrepreneurs. These are characterized by their ability to understand the rapid changes in the market, to see opportunities based on consumer needs, to take advantage of their social capital, and their flexibility and motivation in times of high uncertainty (Alves et al. 2020; Grube and Storr 2018; Liguori and Winkler 2020). These critical events imply an imbalance for any business structure, a phenomenon studied in the literature at different times of financial, environmental, and/or political turmoil (Doern et al. 2018). Social, political, and institutional crises have been common in developing economies; however, in 2020 there was a health, social and economic crisis generated by the COVID-19 pandemic, which generated moments of uncertainty at international, regional, and local levels. Therefore, the COVID-19 pandemic opened an opportunity to understand crisis management not only in terms of the government measures that have been implemented to face the crisis, but also in terms of how organizations respond to these critical situations and thus change their strategies to face the future.

Manolova et al. (2020) rightly state that the current COVID-19 crisis is exceptionally difficult to predict and will have an enormous impact. This crisis can be seen as an example of

a “black swan”, i.e., atypical, unpredictable, and high-impact events (Wind et al. 2020; Winston 2020). In this context, the literature, although growing, is still scarce regarding the impact of this crisis on entrepreneurship and small businesses, especially in developing countries (Alves et al. 2020; Boianovsky 2021; Herbane 2012; Kuckertz et al. 2020). On one hand, the crisis impact will probably be greater in ventures from emerging economies (Hudecheck et al. 2020; Salamzadeh and Dana 2020). On the other hand, research shows that the exploratory strategies of start-ups are features that allow for better crisis management (Archibugi et al. 2013). Furthermore, this capacity depends on internal organizational factors (management and innovation strategies) and a country’s factors such as funds, human capital, intellectual property protection, and competitiveness (Hausman and Johnston 2014).

This study aims to increase the understanding of crisis management in two main directions: the first one is about how ventures managed the crisis during the first wave of COVID-19, and the second one is about the characteristics and strategies implemented by the ventures that allowed them to overcome this wave. Our study is based on empirical data obtained from a questionnaire answered by 220 Colombian entrepreneurs on how they cope with the pandemic crisis and what strategic changes were implemented to keep their businesses afloat. The great majority of these entrepreneurship were small and based in the city of Bogotá.

Our study makes a contribution at the empirical descriptive level by giving a snapshot of the Colombian SMEs environment during the first months of the COVID-19 crisis. Thanks to our statistical association analysis, we have managed to reduce the description of this environment to four main aspects: highly associated features of the start-ups such as maturity and size, the level of shock perceived by the entrepreneur, adaptability indicators such as the number and sort of strategic changes or adopted technologies, and data concerning which economic aids deployed by the Colombian government were effectively obtained. There are several insights into the details of this descriptive simplification. For instance, we have found unexpected associations between the gender of the entrepreneur and features such as the economic sector or the size of the start-up, which opens up further research on gender studies. Additionally, as a methodological contribution, we have been able to interpret data concerning technology adoption and strategic changes (evidence of strategic exploration) as indicators of adaptability.

This work goes beyond a descriptive analysis by proposing a causal model that establishes which of the other three factors (features, shock, or adaptability) better predicts the number of aids obtained by the start-up. By itself, this model is a theoretical contribution backed by empirical data. However, the obtention of economic aids can be regarded as an indicator of how well the entrepreneurship is coping with the crisis since aids can be very important during those events (Spigel 2017). Therefore, our conclusions from the model can be valuable for risk estimation and risk management, which have practical implications.

This article is structured as follows: In Section 2, we establish a literature background on crisis management and the COVID-19 economic context in Colombia. In Section 3, we present our methods and materials, and in Section 4 we present our results. These results are discussed in Section 5. Finally, the conclusions and limitations are presented in Section 6.

2. Theoretical Background

2.1. Crisis as a Research Phenomenon

Crises are defined as sudden and unexpected events that generate a period of uncertainty, perceived as an organizational threat, requiring immediate responses even if there is no adequate preparation (Coombs 2007; Doern et al. 2018; Pearson and Clair 1998; Ratten 2020; Williams et al. 2017). In addition, crises caused by epidemiological outbreaks are a special case characterized by high scalability and unpredictable propagation, as well as a prolonged interruption in the supply and demand of goods and services (Ivanov 2020). Consequently, the impact of crises on organizations should be understood on the basis of the moment of evolution and the magnitude of the crisis (Herbane 2012), and from the

point of view that start-ups are processes rather than events, which means that they should be understood as evolving through stages (Doern et al. 2018; Williams et al. 2017).

According to Salamzadeh and Dana (2020), the main challenges for start-ups in times of crisis are financial, human resources management, support mechanisms, market, and marketing challenges. However, technology is considered one of the aspects that can help to face the crisis, since it contributes to reducing business operating costs during the crisis period (Polas and Raju 2021). In Kuckertz et al. (2020), it was analyzed how the new companies have faced immediate consequences since the appearance of COVID-19, related to the decrease in sales, threats to liquidity due to costs, barriers to access financing mechanisms, adjustments in the organizational infrastructure, and the relationship with the supply chain. In this work, it was highlighted that the less-affected companies by the crisis were the ones that had a relevant-value proposition or were prepared for it.

In general, studies on crises raise two aspects that must be taken into account: on one hand, *Crisis Management*, understood as the ability to minimize the impact; on the other hand, *Resilience*, understood as the organization's ability to use and accumulate existing resources during and after a crisis (Doern et al. 2018; Linnenluecke 2015; Williams et al. 2017). Buchanan and Denyer (2012) propose six stages in which a crisis develops, describing them as incubation, incident, crisis management, investigation, organizational learning, and implementation of lessons learned; which allows us to not only understand the crisis as a process but also to model and understand different characteristics that may vary throughout the crisis. In this sense, crisis management raises different aspects to study: the role and leadership style of the entrepreneurs (Herbane 2012; Williams et al. 2017), local production (Cappelli and Cini 2020), consumer behavior and demographics (Kaytaz and Gul 2014), and government support and funding sources (Brown and Rocha 2020; Kuckertz et al. 2020). All these are highly relevant issues for small businesses and enterprises planning for a crisis (Herbane 2012), and this planning is even more important to understand the vulnerability to crises (Doern et al. 2018).

2.2. Entrepreneurial Resilience in Times of Crisis

Resilience as a broad concept studies the ability of organizations to continue operating in times of crisis and the deployment of resources before, during, and after a crisis (Williams et al. 2017). It also refers to the strategies chosen at each stage and the possible transformations that may occur in the business model (Kuckertz et al. 2020). Resilience can also be analyzed from different perspectives: from the organization's response to threats, the role of employees, organizational characteristics, the flexibility of the business model, and the supply chain (Linnenluecke 2015). One of the characteristics most associated in the literature with start-ups' resilience is innovation capacity (Archibugi et al. 2013; Etemad 2020; Frare and Beuren 2021; Kuckertz et al. 2020). Entrepreneurial resilience in times of crisis should be understood as a construction or learning process. It involves understanding the period of uncertainty caused by the crisis and the opportunities that a resilient entrepreneur can take advantage of (Kuckertz and Brändle 2021; Otrachshenko et al. 2022). Resilient organizations can use internal and external knowledge resources to cope with changing situations (Ciasullo et al. 2022). This requires a high learning capacity that allows the rapid combination of resources and the development of capabilities to convert them into opportunities so that they can respond to moments of uncertainty (Schepers et al. 2021).

In Doern et al. (2018), it was concluded that the tendency towards vulnerability or resilience in small businesses depends on the experience and mentality of the organization's leader and the deployment of resources. Thus, the study of the factors that influence in one direction or the other allows the understanding of not only the phenomenon itself, but also of the capacities that governments and enterprises must deploy to respond to any crisis. Likewise, its importance lies in the fact that it allows the interpretation of changes in the business environment (Cepel et al. 2020), which is particularly relevant in fragile emerging economies. One way to be able to affront VUCA (volatile, uncertain, complex, ambiguous) environments is to rely on all stakeholders, i.e., collaborators, customers,

suppliers, and local and external authorities (Archibugi et al. 2013; Blind et al. 2017); it should be emphasized that flexibility and rapid response capacity are also required, but these features are often considered inherent to new small businesses. Finally, resilience is also linked to *strategic maturity*, i.e., having a clear value proposition and understanding how flexible it can be; a strategically mature venture can validate whether the need it is addressing remains the same in times of crisis and understand how it changes (Alos-Simo et al. 2017).

Uncertainty must be distinguished from risk and ambiguity in terms of the degree of knowledge of the consequences of an event and the probability of its occurrence (Schulman 2021). In this sense, the crisis caused by COVID-19 should be considered a period of high uncertainty that determines the preconditions for resilience, and this brings as a response the ability to find opportunities in the crisis. This is related to the entrepreneurial orientation, i.e., the capacity for innovation (Kuckertz and Brändle 2021; Pedroni 2022; Schepers et al. 2021) and the use of technology that allows the absorption of innovation from different sources (Liu et al. 2022). This capacity for innovation in times of crisis is related to the rapid iterations in the business model that entrepreneurs can make leverage on their social capital (Björklund et al. 2020; Grube and Storr 2018), so the capacity for resilience is closely related to the leadership of the entrepreneur (Kimhi et al. 2021).

2.3. Colombian Business Context during COVID-19 Crisis

During the state of emergency due to the COVID-19 pandemic, several structural problems of the country became visible; for instance, the high rate of informality (Departamento Nacional de Estadística 2020), which prevented access to aid to address the economic crisis. Perhaps paradoxically, Colombia is presented as the fourth country with the highest rate of entrepreneurial activity in the world, according to the report of Bosma et al. (2020). This report also concluded that Colombia improved in aspects such as access to business financing, compared to other countries in the region. Another indication of high entrepreneurial initiative during the crisis is that, in the period from 2020 to 2021, the number of active companies in Colombia had a positive variation of 7%; this contrast with the -6% variation during the period from 2019 to 2020 (Chamber of Commerce of Bogotá 2021).

The effects of the crisis generated the implementation of actions such as partial closures caused by quarantines, total closure of several non-core companies, and the search for capital for investment in changes in their businesses (biosafety, technology, change of business model). Several ventures had to make organizational changes such as the reduction in the number of employees. Other effects of the crisis included an increase in the prices of several of their products or services as a result of the increase in production costs due to shortages of inputs and raw materials, changes in the exchange rate, compensation of losses, etc. To reduce the impact generated by the economic crisis, the Colombian government designed different aids for the business sector, totaling 19 trillion (COP), focused on small and medium-sized enterprises (SMEs) as shown in Table 1. In addition, the national government is presented as a guarantor through the National Guarantee Fund (FNG) to improve the risk profile of companies.

Table 1. Aids designed by the Colombian government to mitigate the impact of the COVID-19 crisis on the business sector. Source: Departamento Nacional de Planeación (2021).

Financial Benefits	Credit for micro-enterprises. Relief and grace periods. Longer terms and preferential conditions in re-discount loans. Expansion of the working capital line. Refinancing of liabilities. Expansion of debt quotas and guarantees to enterprises. Strengthening of guarantees for SMEs and large enterprises. Line of guarantees for bond issuance. The line for debt funds. Guarantee for invoice financing (confirming). Payroll loans.
Tax benefits	Tariff reduction for imports of inputs and raw materials. VAT (value-added tax) free day. National and regional tax benefits. Reduction of trade tariffs.
Subsidies	Subsidized payment of social benefits. Payroll subsidy.
Platforms and digitalization of services	Development of platforms for access to working capital. Virtual business roundtables.

3. Methods and Materials

3.1. Sample and Population

In this work, we analyze data gathered from a self-administered questionnaire answered by 220 entrepreneurship leaders. All these people were obtained from a database of approximately 300 entrepreneurs connected to Colegio de Estudios Superiores de Administración (CESA), either as students, alumni, or consultants/partners. The questionnaires were sent via e-mail at the end of May 2020 and were answered in June 2020. This convenient sampling needs some profiling of the entrepreneurs that answered the survey in order to better characterize the population they represent. The sample predominantly has ventures based in the city of Bogotá, for 186 (84.5%) of these entrepreneurship are based exclusively in Bogotá, 15 (6.8%) are based in Bogotá and other cities in Colombia, and only 19 (8.6%) are based outside Bogotá. Additionally, most ventures were small enterprises, since 176 (80%) have less than ten collaborators, 32 (14.5%) have between ten and fifty collaborators, and only 12 (5.5%) have more than fifty collaborators. The leader's gender was relatively balanced: with 94 females (42.7%) and 126 males (57.3%). Finally, the business sectors of the data were distributed as follows: 14 in Agriculture (6.5%), 60 in Commerce (27.3%), 127 in Services (57.7%), and 19 in Industry (8.6%).

3.2. Variables

Besides location information, size (as the number of collaborators), leader's gender, and business sector, respondents indicated the maturity stage of their entrepreneurship (four-point scale) and the venture's age (six-point scale). Respondents also indicated whether their business demand was negatively impacted by the COVID-19 crisis (4-point scale) and how the economic reactivation of their business will be in the next three months (3-point scale). The questionnaire also asked how many and which financial aids were obtained from the Colombian government (see Table 1) and how hard it was to obtain them (4-point scale). Finally, questions about strategic changes, adaptations, and adoption of Information and Communication Technology (ICT) were issued. More details will be presented in the results section.

3.3. Measurements of Association

Our statistical analysis will be restricted to studying the univariate distribution of variables and the bivariate level of association between each pair of variables, i.e. we identified which pairs of variables are significantly linked and to what extent. For any pair of variables that are either ordinal, discrete with few possible values, or dichotomous, we have chosen Kendall's τ_b rank correlation to measure and test the level of association of the pair. This is a very standard non-parametric measurement of association that has very few assumptions; though it seldom reaches its extreme values of -1 and 1 (Berry 2018). Despite some differences in the scale of the correlation coefficients, we obtained essentially the same conclusions by analyzing other possible measures of association such as Spearman's rank and polychoric correlations. We excluded the venture's location as a variable because it was almost a constant in our sample, and the other remaining pair of variables not suitable for τ_b are the ones involving the business sector. In this latter case, we used an exact Fisher's test on contingency tables to assess the statistical significance of the association between the variables (Agresti 2018). Our conclusions are mainly focused on results whose p -values are under the 1% significance level (strong correlation), though we mention occasional results under the 5% level. All calculations were made with the *R* open source software (version 4.0.4), with the *Kendall* package (version 2.2) for τ_b computations.

3.4. Structural Equation Model and Mediation Analysis

We searched for the variables that best explained which start-ups obtained the economic aids deployed by the Colombian government. By considering the measures of association results, we condensed the explanatory observed variables into three reflective latent factors: *features*, *shock*, and *adaptability* by means of a Structural Equations Model (SEM). In this SEM, the three latent factors were seen as the input variables, and the output variable was the number of aids obtained. In the SEM results, we found a strong indication of a mediating effect of the *adaptability* latent factor on the other two. In order to confirm this mediating effect, we performed a mediating analysis Imai et al. (2010). The SEM was obtained in the *R* language, using the *lavaan* package version 0.6.11, and the mediation analysis was performed via the *mediation* package version 4.5.0 (Sales 2016). More details are given in Section 4.

4. Results

4.1. Descriptive Analysis

We found only three variables significantly associated (with 0.05 significance) with the business sector, and they are shown in Figure 1. These variables are the leader's gender, venture size, and difficulty in obtaining economic aids. Remarkably, so many other variables showed no major distinction among the economic sectors, including the negative impact of the crisis and expected recovery. All sectors but Commerce were predominantly masculine, and all sectors, except for industry, have a very large majority of small-size businesses, with Agriculture being the only other sector with a sizable proportion of large businesses. Access to aid was, in general, not easy, since most of the respondents (55%) found it difficult to obtain economic aid. Additionally, 37.7% found that this difficulty was normal, 5.5% found it easy, and 2.27% found it very easy. In addition, the struggle to access aid was not equally difficult for all sectors, since the Agriculture sector and, to a lesser extent, the Service sector perceived significantly more difficulties.

With respect to venture's maturity, most surveyed ventures are relatively mature, for the distribution is as follows: 4.1% are at the seed and development stage, 21.8% are at the start-up stage, 55.9% are at the growth stage, and 18.2% are at the expansion stage. The venture's age had a similar pattern: 10.9% are 0 to 3 months old, 7.3% are 3 to 6 months old, 12.3% are 6 to 12 months old, 17.3% are 1 to 2 years old, 17.7% are 2 to 5 years old, and 34.5% are more than 5 years old. In Table 2, we present the τ_b bivariate analysis of most pairs of ordinal and/or dichotomous variables of our study. We found a strong correlation among age, maturity, size, and gender. The latter means that the

bigger/older/more mature a venture is, the more likely that it is managed by a male leader; which is somewhat unexpected. On the contrary, the size-maturity-age correlation is relatively easy to understand, as it is part of a typical business cycle to grow through time. These internal correlations among size, maturity, and gender do not imply that these variables correlate in the same way to other variables. For instance, bigger, older, and more mature ventures have a strong tendency to obtain more aids and a milder tendency to have easier access to them; this association with economic aids is not present with the gender variable. Additionally, bigger and more mature ventures have a significantly gloomier appreciation of the present decrease in demand and the near-future development of the crisis; while this strong correlation is absent with gender and venture size.

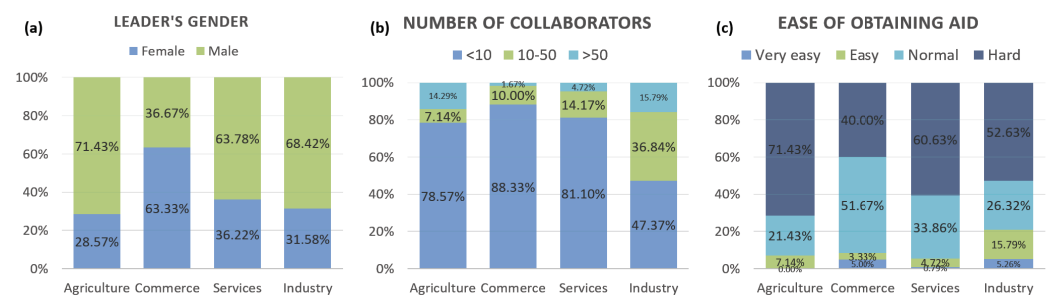


Figure 1. Association between venture’s business sector and (a) leader’s gender, (b) venture’s size, or (c) ease of obtaining aids. Fisher’s test *p*-value are, respectively: 0.0021, 0.0057, and 0.0211.

Among all the respondents, 25% state that the demand has been so slow that they have suspended operations, while 13.6% had essentially no change in demand, and 44.5% say they had a mild decrease in demand; in contrast, 16.8% of respondents claimed an increase in the demand, i.e., this crisis has been a growth opportunity and/or a new business idea for some of the ventures. About the reactivation of their business in the next three months: 29.5% answered that they expected to come back to normality very soon, 65.9% expected a gradual reactivation, while only 4.5% expected to stay closed. There is a strong and reasonable correlation between the past and expected affectations, as can be deduced from the lower-left part of Table 2. However, as in previous cases, this association does not imply that past and future affectations correlate the same with other variables. On one side, as more strategic changes are deployed, the past demand is more negatively affected, perhaps because the entrepreneur was more desperate; but this correlation is not so strong regarding the expected future, which means that these changes represent different hopes for different ventures. On the other side, the number of accessed aids does strongly correlate with both present and expected affectations.

As it is shown in Figure 2, the majority of respondents (70%) did not have access to economic aids, and ICT adoption has played a decisive role for entrepreneurs in this stage of the crisis, since only 17.7% say that they have not resorted to them. There is a strong and plausible negative correlation between the number of accessed aids and the perceived difficulty to obtain them; probably related to a lack of information or bureaucratic obstacles. Additionally, the greater the number of accessed aids, the likelier it is for the venture to have adopted technological improvements or to have deployed strategic changes in business operations. As a matter of fact, the number of accessed aids strongly correlates with all other variables of Table 2 except gender. Among the economic aids, it was established by further correlation analysis that it is payroll support that explains all these associations, while financial aid was only strongly correlated to the number of strategic changes, and all the others did not have very significant associations.

Table 2. Lower left: Kendall’s rank τ_b correlation matrix of all ordinal and nominal-binary variables of the survey. Upper right: p -values of two-sided τ_b Kendall’s test of rank correlation, where the null hypothesis value is zero correlation.

τ_b Correlation/ p -Value	Venture’s Size	Venture’s Age	Venture’s Maturity	Leader’s Gender	Number of Aids	Obstacles for Aids	Strategic Changes	ICT Embrace-ment	Present Impact	Expected Impact
Venture’s size		0.000	0.0000	0.0008	0.0006	0.2657	0.0522	0.2088	0.0076	0.0080
Venture’s age	0.3491 ²		0.0000	0.0000	0.0000	0.0113	0.0089	0.5405	0.0001	0.0004
Venture’s maturity	0.3455 ²	0.5086 ²		0.0095	0.0007	0.6737	0.0346	0.5273	0.2774	0.9853
Leader’s Gender	0.2218 ²	0.2453 ²	0.1655 ²		0.0641	0.9768	0.1157	0.6354	0.0227	0.9085
Number of aids	0.2242 ²	0.3323 ²	0.2117 ²	0.1228		0.0017	0.0003	0.0083	0.0028	0.0003
Obstacles for aids	−0.0716	−0.1483 ¹	−0.0261	0.0020	−0.2012 ²		0.9143	0.3539	0.2390	0.7889
Strategic changes	0.1250	0.1534 ¹	0.1309 ¹	0.1033	0.2304 ²	−0.0069		0.0590	0.0033	0.0152
ICT Embrace-ment	0.0834	0.0371	0.0404	0.0322	0.1750 ²	0.0608	0.1239		0.0988	0.3206
Present impact	0.1637 ²	0.2133 ²	0.0642	0.1425	0.1836 ²	0.0714	0.1781 ²	0.1033		0.0000
Expected impact	0.1726 ²	0.2083 ²	0.0012	0.0077	0.2334 ²	−0.0173	0.1564 ¹	0.0660	0.4965 ²	

¹ Test p -value is below 0.05 threshold. ² Test p -value is below 0.01 threshold.

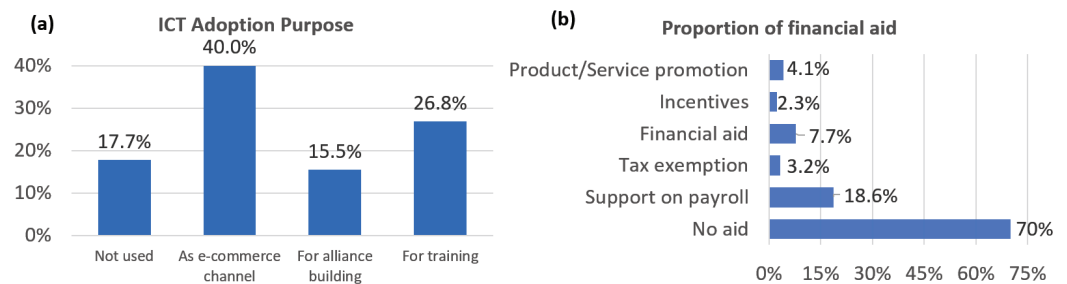


Figure 2. Sample distribution of (a) ICT adoption, and (b) proportion of received aids.

In Figure 3, we present the different decisions that entrepreneurs have had to make for the survival of their ventures. The strategic changes of the right part of Figure 3 are the ones that are counted in the discrete variable of Table 2. We see that this number of strategic changes is strongly correlated to the number of aids obtained and to the present negative impact, which reinforces the relationship between a negative impact and the need for more extreme measures and external assistance. We did a more detailed correlation analysis of each of these strategic changes and we found the following patterns. Change of product was not particularly associated with any other variables, which probably means that this was an all-encompassing need of different kinds of ventures. Change of commercialization channel was strongly correlated to ICT adoption since this was the most prevalent purpose, as can be seen in Figure 2a. The ventures that marked none of the strategic changes were naturally related to a low need for aid, and low past and future affectation. Similarly, a total shutdown was related to less mature ventures and more past affectation. Staff and salaries reduction behaved in a very similar manner, being strongly related to higher venture size/age/maturity and demand reduction (present impact). Finally, cancellation of orders was strongly related to the number of obtained aids, present negative impact, and higher venture age. The right part of Figure 3 shows the strategic adaptations made by the respondent entrepreneurs. These decisions are dominated by the implementation of home office, new sales channels, and new services and products. The first two decisions could be positively related to ICT adoption, but, instead, an almost insignificant negative correlation is found for new sales channels while a more significant negative correlation is found for home office. The former is easily explainable because ICT adoption has several

other purposes, so a direct correlation between these variables may well be absent; in fact, a very strong correlation is found between strategic sales channel change and ICT adoption for this very purpose. The second result is more interesting since it shows that home office is not synonymous with ICT embracement. Once more, the adoption of new services and products was not correlated significantly to any other variable.

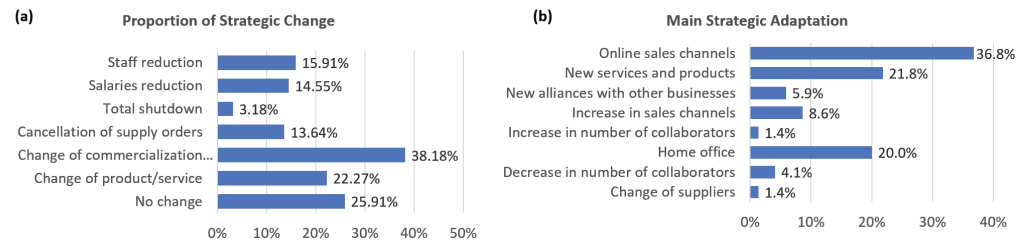


Figure 3. Sample proportion of (a) strategic changes, and (b) strategic adaptations.

4.2. Causal Analysis of Number of Aids Obtained

Besides the main descriptive analysis, where we highlighted the strongest associations between variables, we also performed a more detailed causal analysis to understand which entrepreneurs obtained the economic aids issued by the Colombian government. In Table 2, we found that several other variables were associated with the number of aids obtained; however, we also see that these variables have strong correlations between them so that we could reduce the number of explanatory factors. We performed this reduction by devising a SEM as presented in Figure 4a, where we grouped several variables in just three explanatory factors: *features*, *adaptability*, and *shock*. These factors were suggested by the association analysis of Table 2 and a theoretical reflection about the variables, while also considering the fitting measures of the SEM. The factor *features* is just attributes of start-ups (gender, number of collaborators, maturity, and age) that we found to be highly associated. The factor *shock* groups the present affectation and the future expected impact. Finally, the factor *adaptability* groups the number of strategic changes and the number of ICT adopted by the respondent managers. This last factor deserves its name because these variables are strong indicators that the enterprise can adopt several changes to cope with the crisis.

The SEM was estimated by minimizing unweighted least squares with mean and variance adjusted (ULSMV). All the observed variables were treated as ordinal; therefore, the main object of adjustment was the polychoric correlation matrix between the observed variables. The main fit indices of the SEM model are: χ^2 equal to 36.451, 22 degrees of freedom, GFI of 0.998 (>0.95), AGFI of 0.993 (>0.95), RMSEA of 0.055 (<0.08), SRMR of 0.061 (<0.08), and CFI of 0.983 (>0.9). All these indexes are well inside the standard acceptance values as indicated by the reference numbers in brackets (Kline 2016; Xia and Yang 2018). The direct arrows from the three latent factors to the dependent observed variable (*aidn*) in Figure 4a have standardized weights that can vary from -1 to 1 , where the extremes mean a perfect linear (or anti-linear) relation, while zero means no relation. The double-edged arrows between latent factors denote the linear correlation of each pair of them with a similar numerical interpretation.

The weights of the arrows in Figure 4a have three peculiar circumstances. First, the *shock* factor has a very light weight of 0.06 directed to the dependent variable; which contrasts with the fact that, standing alone, its associated observed variables have a good explanatory power of the dependent variable. Second, the weight of the *features* factor is appreciably lower than that of the factor *adaptability*. Finally, all three factors are relatively highly correlated. These peculiarities of the combined multivariate model are suggestive of mediation of the *adaptability* latent factor. Mediation means that the effect of the other two factors on the number of aids obtained by the enterprise is better understood as a two-step process: first from the input factor to the mediating factor, and then from the mediating factor to the output variable. In more concrete words, while it is true that the most affected

enterprises and the older ones were the ones that got the aids, it was specifically the ones among them that were more prone to adapt and make changes.

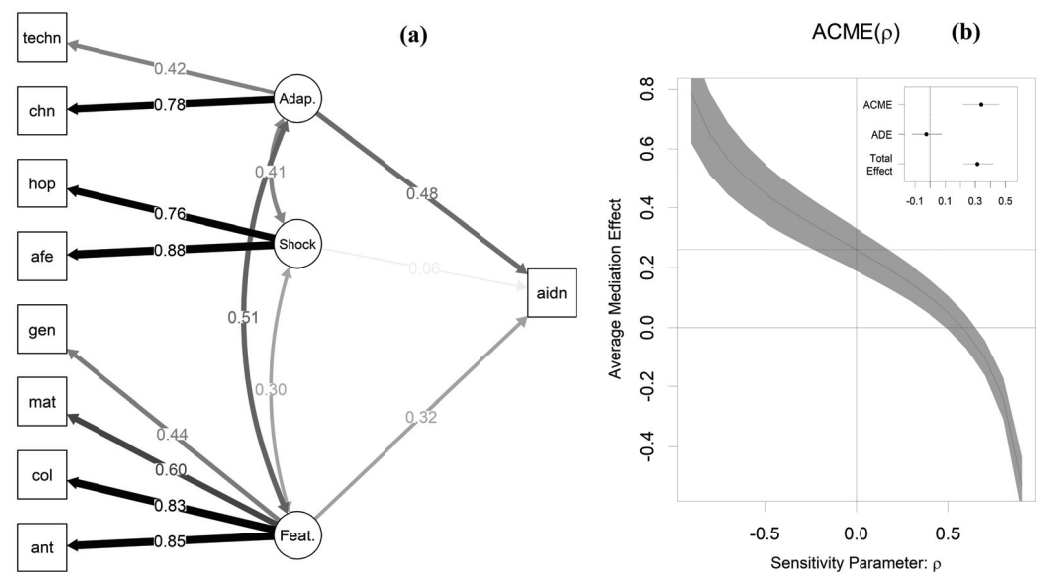


Figure 4. Causal analysis answering the question: which start-ups obtained the economic aids issued by the Colombian government? (a) SEM model that expresses the main contribution of three latent factors: start-up features, shock, and adaptability. (b) Mediation analysis that confirms that the predictive ability of start-up features upon having obtained aids is mediated by adaptability. *Main figure:* Sensitivity analysis figure. *Inset:* 95% confidence intervals that express how the total predictive power is splitted in mediated effect (ACME) and direct effect (ADE).

To validate our mediation conclusion, we performed a mediation analysis with the predicted values of the latent variables of the SEM and a slightly different binary dependent variable (just 0 if the enterprise did not receive aids, and 1 otherwise). This binary variable is very highly correlated to the number of aids, since only 10 out of 66 enterprises obtained more than one aid. This change of variable was necessary in order to make a mediation analysis as explained by Imai et al. (2010) using linear logistic regression, which is mathematically much less cumbersome than the equivalent analysis with an ordinal multivalued variable (Sales 2016). In the inset of Figure 4b, we have the main result of the effects of *features* on having obtained aids as mediated by *adaptability*. We found an average causal mediated effect (ACME) of 0.339, an average direct effect (ADE) of -0.026 , and a total effect of 0.313. The proportion mediated is 1.082. The p -values of ACME and total effect (with a null hypothesis of no effect) are computationally indistinguishable from zero, which means a very strong statistical significance of our conclusion (MacKinnon and MacKinnon 2008). On the other hand, there is no good statistical significance of the direct effect ($p = 0.62$).

The mediation results are remarkable since they mean that if we suppressed the mediating effect of *adaptability*, we would find no appreciable effect of start-up *features* on having obtained aids. In other words, older, bigger, and more mature enterprises would have not obtained aids if they had not wanted to adapt. Since mediation analysis has strong assumptions that are very hard to address directly, a sensibility analysis is recommended in order to reassure the plausibility of the conclusion (Imai et al. 2010). A graph as in the main plot of Figure 4b is among the recommended sensibility analyses. The sensitivity parameter ρ is the possible correlation between the error factors of the input and mediating variables. The key aspect to interpret is that the curve intercepts the horizontal axis far away from zero, which means that an unobserved variable that we have not considered in the model is unlikely to cancel the observed mediation effect (Imai et al. 2010).

5. Discussion

This study examined the impact that COVID-19 has had on Colombian start-ups during the first wave of the crisis (March–May 2020). The results show the differences in the levels of impact of the crisis, as well as the challenges that these types of organizations have had to face and the strategies deployed to cope with them. Colombian start-ups have managed to cope with the crisis by adopting different measures: reduction in the number of employees, change in marketing channels, cancellation of orders to suppliers, change of product or service, and reduction of salaries, up to total closure. These are the same challenges faced by start-ups in other countries (Kuckertz et al. 2020; Salamzadeh and Dana 2020).

In this research, it could be evidenced that changes in marketing channels are strongly related to the adoption of new technologies, this agrees with the literature since technology allows for reducing operating costs in a crisis according to Polas and Raju (2021). This is especially true in the stage of confinement and restriction in the first wave. However, the adoption of these new technologies will have a long-term effect (Liguori and Winkler 2020) and have been used by entrepreneurs not only to transform their marketing channels, but also for training and partnership development. It is worth mentioning that the imposition of a home office due to mandatory isolation does not necessarily result in technology adoption. In our data, it was not evident that start-ups that have explored a new product or service or new marketing channels have coped better with this period of crisis. In this sense, the start-ups' exploratory stage or innovative preparedness would imply better crisis management, i.e., it is associated with the flexibility of their business model (Archibugi et al. 2013).

On the other hand, it was also identified that start-ups strongly impacted by the crisis tend to have larger sizes and ages, but this is not related to the degree of maturity of the business. This impact may be associated with downsizing strategies and changes in the supply chain since, in general, start-ups have opted for cost reductions in order to survive. Likewise, the start-ups that made the greatest changes and those that sought to adopt technologies tended to be the larger, more mature companies. Other research evidences how companies little-affected in times of crisis possess a relevant value proposition to overcome it or because they are prepared (Williams et al. 2017).

The start-ups that did not manifest changes in their business manifested greater negative effects in the present. This is evidence that the value proposition and marketing channels are not responding to the market, and it is necessary to delve deeper into the characteristics of the entrepreneur that do not allow these adjustments to the environment (Herbane 2012; Williams et al. 2017). The misalignment between the value proposition and the market may outlive the crisis period if the necessary adjustments to the business model are not made (Lim et al. 2020). The results around ecosystem support show the relevance of government and funding aids to weather the crisis. However, they highlight the barriers these organizations have encountered to access them. Government aid was used for tax exemption, financing, payment of public service, payroll support, incentives, and promotion of their services or products through different platforms. Spigel (2017) suggests that in times of crisis, start-ups depend largely on government support and the ecosystem, so it is important to understand how these organizations have accessed these grants and how they are relying on the ecosystem to survive.

We found that the start-ups with more time in the market sought more support and felt less difficulty in obtaining it. These results can be associated with resilience to crisis, most likely developed from experience and coordination capacity (Boin and Hart 2010; Kuckertz et al. 2020; Williams et al. 2017). We also found a strong association with the degree of maturity of the start-up. Early-stage start-ups experienced greater restrictions and vulnerability to funding, as this is likely linked to sources such as close friends and family. Investment capital funding is contracted at risk since COVID-19 threatens the continuity of the business at this stage (Salamzadeh and Dana 2020). On the other hand, the sectors that expressed the greatest difficulty in accessing support are agriculture and commerce. Regarding the agrarian sector, this result is not surprising, nor is it a result

attributable solely to the pandemic. Colombia presents great lags in the implementation of public policies to strengthen the sector, a consequence of a weak institutional framework, and high levels of poverty (Departamento Nacional de Planeación 2021).

It should be noted that the Colombian ecosystem has been adapting to channel its services digitally and, at the same time, it has learned that many activities can be carried on virtually without affecting the result. It has also been identified that relationships and trust are built with social interaction, and that is why many entrepreneurs are eagerly waiting to have relationship spaces, as a complement to digital tools, which have allowed them to react quickly to the situation. Thus, both government and private actors have managed to join efforts to deliver digital knowledge for free, with tools to address the crisis, training spaces to understand government guidelines for SMEs, spaces for co-creation and development, as well as conducting rounds of capital raising.

On the other hand, there have been special spaces to support the tourism industry, spaces for health solutions, and crowdfunding initiatives for small entrepreneurs. In conclusion, the same ecosystem has seen how the solidarity evidenced in social networks, with support initiatives among individuals, has been replicated with entities and institutions that have coordinated initiatives that support small entrepreneurs and SMEs. There is a strong relationship between the characteristics of each region's ecosystem and how companies obtain resources from their environment. The importance of the relationships between different attributes demonstrates that new material attributes, such as organizations supporting entrepreneurs, state funding for start-ups, and human resource management systems, are a key factor in the success of ecosystems (Spigel 2017).

An interesting result of this research is the differences found in some aspects related to gender. We observed that, although the impact of COVID-19 does not present significant differences between male and female start-ups, the size and age of the same do. This difference is explained in the literature from different points of view. On one hand, lack of networks (Klyver and Grant 2010), barriers to access to sources of financing (Villaseca et al. 2020; Zhang et al. 2020), and the internal barrier to self-employment in women. On the other hand, entrepreneurship is deemed the new "glass ceiling", as women entrepreneurs compete in unprofitable and low-tech sectors (Villaseca et al. 2020). This conclusion coincides with the results of this study, which found greater participation of women in start-ups dedicated to commerce and trade.

Finally, we found that adaptability played a central role in explaining which start-ups obtained government financial aids, which we used as an indicator of better crisis management. For example, Doern et al. (2018) suggest two strategies for dealing with crises; the first, called crisis management, is understood as the ability to minimize the impact and companies to use and accumulate resources (such as public aid) during and after these adverse situations. The results evidence that the degree of adaptability and features of the start-ups allowed access to aid and crisis management. This coincides with other studies such as Hausman and Johnston (2014) and Cucculelli and Bettinelli (2016), which concluded that the best-adapted companies and the changes they make in times of crisis depend on internal factors of the company. Likewise, Archibugi et al. (2013) describe how companies that experience "exploratory strategies" aimed at new products and market developments are better equipped to face the crisis. Grube and Storr (2018) argue that entrepreneurs can leverage their social capital, business model flexibility, and intrinsic motivation to overcome crises; these changes associate with innovativeness and the ability to adapt to the market.

6. Conclusions

The results show the strategies that the start-ups in Colombia developed for their survival in the first months of the pandemic caused by COVID-19, which may not be different from the strategies implemented by start-ups in other countries. However, it highlights the close relationship between these strategies, the obtention of aid policies deployed by the government, the level of shock perceived, and the major features of

the start-ups. In particular, our results provide empirical evidence that contributes to understand the pivotal role that adaptability plays in crisis management, at least concerning which start-ups obtained aids. There is no single answer as to how the crisis should be faced and overcome, but the main practical lesson from our work is that innovative capacity is crucial for the successful revival of start-ups in the face of a crisis. More generally, our model highlights that organizational learning, maturity of the value proposition, and flexibility of the business model are key factors for success.

Despite the significant results and contributions of this research, several limitations can be found. The most egregious is the sample size, which is likely biased. Our data is limited to a short period, to a selected set of variables, and to a convenient sample of respondents. However, we consider that the data are representative and significant at the micro-level and can be interpreted in a general way. Additionally, the methodology was heavily based on statistics with limited qualitative research. Finally, our indicators of adaptability and the use of aids to assess the performance of the start-ups are rather specific; nonetheless, they provided a good approximation to the dynamics of crisis management.

Our study addresses a current and relevant issue of understanding how SMEs act in times of crisis and finding an opportunity for comparative studies with emerging economies to be expanded in future research. The results could be complemented by including micro-narratives and other qualitative data, which would consider the point of view of the entrepreneurs. Further works could address in more detail the types of strategies developed and analyze the business indicators when the process of economic reactivation ends. In addition, although the gender variable was not central to our objective, our results show strong associations that could be studied in depth. Future research could also address questions on how entrepreneurs face and build resilience in times of crisis in terms of the flexibility of their business model, prioritization of market needs, learning after the crisis, and competitive advantage; in other words, it could include other relevant variables in its study. With an expanded set of variables, it is important to carry out more multivariate analysis and to consider the effects of COVID-19 over a longer period.

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Article

Estimating the Impact of Digital Nomads' Sustainable Responsibility on Entrepreneurial Self-Efficacy

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Abstract: Digital nomads live outside of the classical organizational borders and can be seen as 'contemporary entrepreneurs' who bring disruptive business models into different industries, giving value to different working cultures and different types of capital. Because they are operating out of their home country, their social responsibility as entrepreneurs may have different implications. This study aims to explore the outcomes of digital nomads' social responsibility in terms of self-efficacy and innovation. To test the hypothesis model, structural equation modeling (SEM) was used to analyze survey data. The results show that tourism firms should always have in mind their social responsibility levels to attract this target niche and should pay attention to the fact that they are mostly solo travelers, so they value the sense of community of a place and its legal, bureaucratic, and flexible terms of living. Findings also show that social and environmental concerns are more associated to social self-efficacy than to self-efficacy. The results complement existing research by helping tourism businesses and destination managers to understand the implications of the digital nomads' social responsibility.

Keywords: tourism entrepreneurship; digital nomads; self-efficacy; innovation

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1. Introduction

The development of portable technologies and the liberalization of the airspace originated new lifestyles, such as digital nomadism. Companies are aware that workers are able to work from wherever they want to, enabling them to have a more dynamic way of working (Brown and O'Hara 2003). This way of living is facilitated by a combination of improved global access to information and information infrastructures, more flexible work arrangements, and the sense for adventure among the younger generation of knowledge workers (Dal Fiore et al. 2014). Digital nomads live outside of the classical organizational borders (Makimoto and Manners 1997) and can be seen as 'contemporary entrepreneurs' who bring disruptive business models into different industries (Vieira 2016), giving value to different working cultures and different types of capital (e.g., reputation, information, symbolic) (Nash et al. 2018).

There is already literature concerning the digital nomads' motivations and lifestyle. Thompson (2019) suggested that this kind of worker has an identity based on their lifestyle, and that is why they come together to the same conferences and retreats—to meet people alike and reinforce their individuality. The author also provides a critique on the privilege and inequality of this lifestyle, usually overlooked in the entrepreneurial literature. Hannonen (2020) studied the differentiating factors between digital nomadism and other lifestyle-led mobilities and mobile remote work. Additionally, the author tried to define aspects, such as, "the importance of labour productivity in digital nomadism, the state of international (semi) perpetual travel, downshifting, lifestyle-led bonding and communities and nomadicity of work" (Hannonen 2020, p. 17). Reichenberger (2018) illustrated that their professional and spatial freedom contributed to digital nomads' personal freedom by

creating a holistic lifestyle of opportunities for self-development and learning. Nash et al. (2021) focused their studies on the dynamic relationship between space, work, and technology, suggesting that labelling digital nomads as location-independent nomadic workers is a miscategorization. Mancinelli (2020) concluded that this type of traveler has a minimalist attitude toward property and consumption and gives importance to flexibility and entrepreneurialism. Finally, Chevtaeva and Denizci-Guillet (2021) examined the connection between digital nomads' personal lifestyles and perceptions of the value of coworking spaces during travel. This being said, the literature still needs further development, especially as underexplored theme related to the social and environmental responsibility of this type of traveler and their relationship and actions with the local ecosystem.

This study aims to understand the sustainable responsibility of the digital nomads to further conclude how they influence or could influence the local communities and how the tourism businesses can take an important step by understanding their needs and actions. By doing so, this study addresses Green's (2020) request for digital nomads' work sensemaking. It relates sustainable responsibility variables, such as social responsibility and environmental concern, with entrepreneurial variables, such as entrepreneurial self-efficacy and eco-innovation, having only digital nomads as the target population. Therefore, the current study aims to answer the following research question: what are the constraints of the social responsibility of digital nomads?

A quantitative method was used with the help of a snowballing technique, where several questionnaires were delivered (see Appendix A). This study proved to be useful for tourism businesses by allowing them to understand how to deal with digital nomads in a more practical way. Tourism firms should always have in mind their social responsibility levels in order to attract this target niche. On the other hand, by understanding that most of them are entrepreneurs, tourism should facilitate and foster entrepreneurial events, workshops, and activities. Finally, and most importantly, they should pay attention to the fact that they are mostly solo travelers, so they value a lot the sense of community of a place and its legal, bureaucratic, and flexible terms of living.

In line with the research aims, the paper first provides a detailed literature review, which was crucial for the development of the conceptual model and the research hypotheses. In Section 3, the study presents the methodological approach and the data collection process. Subsequently, the paper presents the results and discussion of the sustainable responsibility of digital nomads. Finally, Section 6 presents the theoretical and managerial implications of the results and offers suggestions for future research.

2. Literature Review

2.1. Digital Nomads

The emergence of the digital nomad was predicted by Makimoto and Manners (1997), who portrayed a future life simplified by portable technologies, in which people would be free to travel around the world while remaining connected to his or her job. In fact, the improvement of transportation systems and the unbundling of the tourism sector allowed the consumer to establish his own travel journey through online platforms, therefore facilitating the free movement and new mobile practices (Mancinelli 2020).

Digital nomadism is a location-independent lifestyle conducted, usually, by young professionals who work in an online basis, which allows them to travel and work simultaneously, blurring the lines between travel, leisure, work, and the boundaries between personal and professional life (Reichenberger 2018; Mancinelli 2020). By taking advantage of their spatial mobility and flexible working hours, and due to the lack of family commitments at earlier stages in life, digital nomads choose to explore the world (Reichenberger 2018; Richter and Richter and Richter 2020; Mancinelli 2020; Nash et al. 2021). Digital nomads are characterized as location-independent entrepreneurs or freelancers that are able to combine work and their personal life within high levels of flexibility (Müller 2016).

2.2. Hypotheses Development

Corporate social responsibility, hereon CSR, is one of the relationship development strategies which has become popular in the service industries around the world (Jeon et al. 2020). Customers are, also, becoming more concerned with company's behaviour and their external influence; therefore, CSR is often taken into consideration when making any purchase decisions (Castro-González et al. 2019). One important tool to fulfill a CSR approach is eco-innovation, consisting of a business strategy that encourages sustainability across a product's whole life cycle while simultaneously enhancing the productivity and competitiveness of an organization (Dias et al. 2021).

Social responsibility is a set of organizational actions, policies, and practices that ethically operate to contribute to an economic improvement along with engagement programs with the local community and its own employees (Jamali et al. 2015). It aims to provide wide social goods (Matten and Moon 2008; Varela and Dias 2015) and raise a just and sustainable society, with the help of its non-corrupt actions (Carroll and Shabana 2010). CSR is a business commitment whose actions should produce some social good beyond the interests of the company (McWilliams and Siegel 2001), and it has become an efficient concept for business strategy to positively impact society. It has recently emerged as a unique marketing tool for companies to create value and stable relationships with the consumers (Khan et al. 2015; Shah and Khan 2020).

Orlitzky (in Branco and Rodrigues (2006)) explains that CSR provides both internal and external benefits. Internally, it allows an efficient use of resources, lower costs, and the improvement of employee productivity. Externally, it enhances the reputation of a company, which is considered the competitive advantage of a firm. Therefore, to reduce negative environmental impacts, firms are changing their work relationships by increasing social and environmental awareness among employees or building a culture of volunteering by investing in local communities and in other stakeholders (Jamali et al. 2015). These ways of management and innovative practices are enabling companies to achieve a sustainable environment through eco-innovation as the primary objective. Eco-innovation is a part of the CSR activity to allow the customers to realize the positive performance (Mol 2003). As such, it is hypothesized:

H1a. *Social responsibility positively relates to entrepreneurial attitude.*

H1b. *Social responsibility positively relates to social entrepreneurial self-efficacy.*

H1c. *Social responsibility positively relates to entrepreneurial self-efficacy.*

H1d. *Social responsibility positively relates to eco-innovation.*

Drawing in the new ecological paradigm associated with the overall relationship between humans and the environment (Ntanos et al. 2019), we posit that environmental concern is described as an emotional reaction towards environmental issues, such as dislikes and compassion, from people that support efforts to solve environmental problems or have the willingness to contribute personally to their answer (Milfont and Gouveia 2006; Hu et al. 2010). This individual interest for environmental problems was treated as a relevant driver of environmentally conscious behavior, differing from energy conservation, waste recycling, and green buying behaviors (Hu et al. 2010; Manaktola and Jauhari 2007). A more social altruistic definition outlined environmental concern as a general mindset that reflects the extent to which the consumer is upset about threats to the environment, its consequences in the harmony of nature and future generations, and the lack of human action to react to these issues (Schultz 2001).

Additionally, Han et al. (2015) suggested that personal values could influence an individual's life for higher environmental concern. Moreover, Stern et al. (1993) opined a three-dimensional value orientation composed of egoistic, altruistic, and biosphere values that are significant when shaping a sustainable behavior. Therefore, the impact of values enhances an individual's environmental concern, norms, and attitudes that affect positively their environmental behavior (Choi et al. 2015). Along in line, it is also noticeable that

environmental concern significantly affects consumer's reactions towards eco-friendly products and services (Hartmann and Apaolaza-Ibáñez 2012), and later their attitudes and behavioral intentions (Kim and Han 2010). Data analysis reports that the basis of sustainability already runs like a continuous thread among digital nomads' lives and that the display of social, environmental, and cultural knowledge becomes the new token of this lifestyle. Therefore, the following hypothesis is proposed:

H2a. *Environmental concern positively relates to entrepreneurial attitude.*

H2b. *Environmental concern positively relates to social entrepreneurial self-efficacy.*

H2c. *Environmental concern positively relates to entrepreneurial self-efficacy.*

H2d. *Environmental concern positively relates to eco-innovation.*

Ajzen (2005) characterizes attitude as the impulse to proceed positively or negatively to an object, people, institution, or a moment. Therefore, entrepreneurial attitude can be described as an impulse to proceed positively or negatively to entrepreneurship. Entrepreneurs are people who have the capacity to manage and develop a new business by efficiently using resources to make profit and be succeed. As said before, CSR is a manifestation of good governance that, together with environmental concern, can affect a person's entrepreneurial attitude, as concluded by Indarti and Efni (2018). The authors indicated that a higher value for CSR funding was positively related with high levels of entrepreneurial attitude.

On the other hand, entrepreneurial attitude encourages the efficient distribution of natural resources and increases green practices, facilitating the integration of eco-innovation principles (Pacheco et al. 2010). At the same time, it affects human behavior through processes, goal setting, and outcome expectations, having, therefore, an impact in entrepreneurial self-efficacy (Bandura 2012). Therefore, it is hypothesized:

H3a. *Entrepreneurial attitude positively relates to social entrepreneurial self-efficacy.*

H3b. *Entrepreneurial attitude positively relates to entrepreneurial self-efficacy.*

H3c. *Entrepreneurial attitude positively relates to eco-innovation.*

Chen et al. (1998) explains entrepreneurial self-efficacy as the person's confidence in his/her capability to successfully accomplish the assignments required. These tasks reinforce business prospects, create original corporate settings, improve partners' relationships, help the company's significant objectives, adapt to outperform ecological troubles, and motivate workforce-gifted skills (Ahmed et al. 2021). People with an entrepreneurial mindset have more confidence in their competences and are less self-doubting, which contributes to innovative progress when confronted with difficulties and challenges (Lee et al. 2016), enabling firm performance.

Further, scholars have highlighted the role of self-efficacy as a variable in influencing individual behavior (Pihie and Bagheri 2010). Bandura (2012) verified that individual behavior is conceived by certain activities, such as the interaction of intrapersonal individuals' involvement and the circumstance. Interaction between these elements can format beliefs and influence behaviors (Pihie and Bagheri 2013). The point is that self-efficacy, by being seen as a social-cognitive process, is able to explain the impact of individuals' knowledge and actions in the form of attitude toward entrepreneurship. Self-efficacy notably influences the selection of human action despite the existence of alternatives, the volume of effort that it is spent to carry out the action, the perseverance in facing obstacles, and opportunities in acting (Pihie and Bagheri 2013; Shane and Delmar 2004). Similarly, Bandura (2012) concluded that self-efficacy is the main factor that affects behavior through the process, goal setting, outcome expectations, and challenges in the circumstances.

Therefore, Dwivedi and Weerawardena (2018) came up with a new but similar concept called social entrepreneurial self-efficacy that describes human behaviors that have influence on an individual's beliefs, efforts, levels of input, and persistence. It is viewed as

a strong predictor of self-confidence when facing uncertainty (Kakoudakis et al. 2017) and can be increased when interacting with external forces and the environment, thus moving towards value co-creation (Altinay et al. 2016). As it is said that most of digital nomads are entrepreneurs, it is hypothesized:

H4a. *Entrepreneurial attitude mediates the relation between social responsibility and social entrepreneurial self-efficacy.*

H4b. *Entrepreneurial attitude mediates the relation between social responsibility and entrepreneurial self-efficacy.*

H5a. *Entrepreneurial attitude mediates the relation between environmental concern and social entrepreneurial self-efficacy.*

H5b. *Entrepreneurial attitude mediates the relation between environmental concern and entrepreneurial self-efficacy.*

Eco-innovation can be described as a business method or production process that is new to the organization, which originates, throughout its life cycle, a decrease in environmental risk, pollution, and other negative impacts of resource use, when compared to other options (Kemp and Pearson 2007). Therefore, it refers to an innovation specifically focused on environmental impact (Bossle et al. 2016; Kiefer et al. 2017; He et al. 2018; Hojnik et al. 2018) whose new products use clean energy, are less polluting, and/or can be recycled, thus contributing positively to sustainability (Peng and Liu 2016; Severo et al. 2017).

Eco-innovation provides both environmental and economic advantages. For society in general, it shrinks the burden on the environment. For corporate businesses, eco-innovation enhances short- and long-term competitiveness and the creation of new markets. On the other hand, it builds or improves company reputation, but also decreases the costs, responds to new market demands, effectively fights intense competition, and complies with regulatory requirements (Sarkar 2013). Eco-innovation is a promising approach that decreases environmental impact and helps firms to increase their business value. As already noted, some digital nomads are entrepreneurs, therefore heavily focused on building or scaling up a business while engaging with the local communities or local projects. As such, it is hypothesized:

H4c. *Entrepreneurial attitude mediates the relation between social responsibility and eco-innovation.*

H5c. *Entrepreneurial attitude mediates the relation between environmental concern and eco-innovation.*

Figure 1 shows the conceptual model and hypotheses.

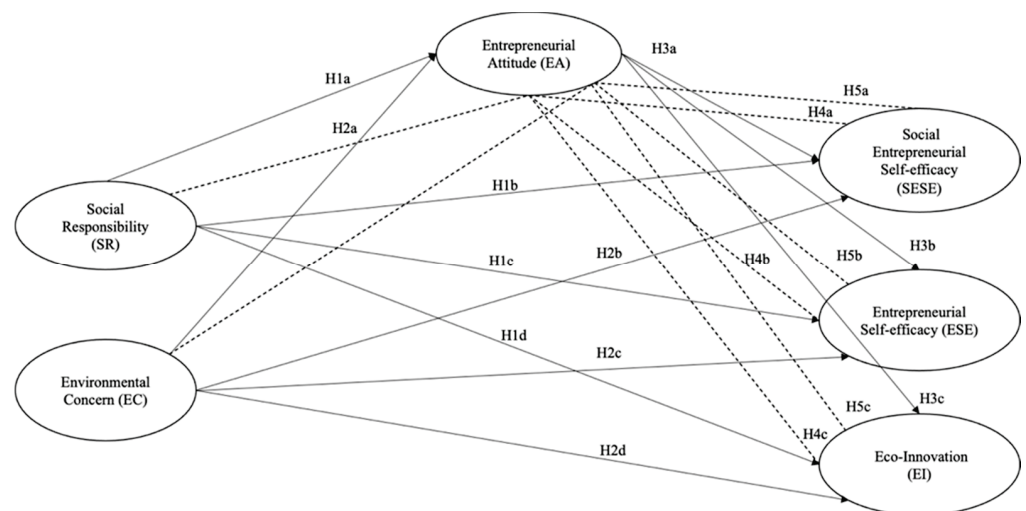


Figure 1. Conceptual model. **Note:** Dashed lines represent the indirect effects.

3. Materials and Methods

To study the sustainable responsibility of digital nomads, a quantitative method was used. The target population sample of digital nomads was recruited both via internet or at coworking and coliving spaces, using a snowballing technique. The questionnaire was delivered through an online platform and developed through a review of the literature. A pilot test was conducted in order to adjust some inaccuracies, and its final version took into consideration the suggestions made. A non-purposive convenient sample was adopted due to the lack of information about the total population sample. In the case of this study, the sample was obtained from digital nomads working from Portugal. The inclusion criteria are linked to the concept of digital nomads according to the Portuguese legislation: (i) working remotely with a labor contract, being a business owner or being a service provider (freelancer); and (ii) using mainly digital tools to perform the work. A total of 80 complete questionnaires were received between September 2021 and February 2022.

Of the respondents, 62.5% were female, and in terms of age, 21.9% were between 21 and 27 years old, 50% were between 28 and 34 years old, 12.5% were between 35 and 41 years old, 6.3% were between 42 and 48 years old, 3.1% were between 49 and 55 years old, and the remaining were older than 63 years old. Regarding the level of education, 43.8% had a bachelor's degree, 37.5% had a master's degree, and 9.4% completed high school. In terms of occupation, 46.9% were freelancers, 21.9% were running their own company, and 18.8% were full-time employees. Regarding the country of origin, 34% came from France, 32% from U.K., 12% from Brazil, 11% from U.S.A., and other small percentages from Canada and other European countries.

This study adopted existing scales to measure all variables. The social responsibility and the eco-innovation were measured using five items each that were adapted from Severo et al. (2018). Random items from the social responsibility variable are, "Whenever possible, before acquiring a product or service, I seek to know if the company has programs of engagement with the local community" and "I consider it fundamental to acquire products or services from companies that have an ethical, honest non-corrupt attitude". The four items used to measure the environmental concern were adapted from Verma et al. (2019), who originally adapted it from Abdul-Muhmin (2007), Cordano et al. (2011), and Kim and Choi (2005), such as, "The balance of nature is very gentle and can be easily upset" and "Human interferences with nature often produce disastrous consequences". The entrepreneurial self-efficacy and the entrepreneurial attitude were measured using a three- and a four-item scale respectively, adapted from Wardana et al. (2020). The social entrepreneurial self-efficacy was measured through a four-item scale adapted from Liu and Huang (2020). Random items from the social entrepreneurial self-efficacy variable are "I seek for new business opportunities for social change" and "I am creating new products/services to solve social problems". All the measures used a five-point Likert-type scale ranging from 1 = totally disagree to 5 = totally agree.

4. Results

To test the hypothesis model, structural equation modelling (SEM) was used. More precisely, a partial least squares (PLS) analysis was conducted, which is a variance-based structural equation modelling technique, by means of SmartPLS 3 software (Ringle et al. 2015). The results were analyzed and interpreted by a two-stage approach: first, an evaluation of the reliability and validity of the measurement model, and then the assessment of the structural model.

To determine the quality of the measurement model, the individual indicators of reliability, convergent validity, internal consistency reliability, and discriminant validity were examined (Hair et al. 2017). The results indicate that the standardized factor loadings of all items were above 0.6 (with a minimum value of 0.62) and were all significant at $p < 0.001$, which provided evidence for the individual indicator reliability (Hair et al. 2017). Internal consistency reliability was confirmed because all the constructs' Cronbach alphas and composite reliability (CR) values exceed the cut-off of 0.7 (see Table 1) (Hair et al. 2017).

Table 1. Composite reliability, average variance extracted, correlations, and discriminant validity checks.

Latent Variables	α	CR	AVE	1	2	3	4	5	6
(1) Entrepreneurial self-efficacy	0.700	0.811	0.590	0.768	0.802	0.343	0.104	0.228	0.645
(2) Eco-Innovatio	0.828	0.879	0.593	0.479	0.770	0.241	0.707	0.608	0.492
(3) Entrepreneurial attitude	0.912	0.938	0.792	0.396	0.136	0.890	0.489	0.533	0.502
(4) Environmental Concern	0.822	0.883	0.655	0.375	0.521	0.034	0.809	0.646	0.712
(5) Social entrepreneurial self-efficacy	0.922	0.945	0.812	0.569	0.485	0.658	0.307	0.901	0.474
(6) Social Responsibility	0.794	0.866	0.619	0.333	0.533	0.429	0.176	0.690	0.787

Note: α —Cronbach Alpha; CR—composite reliability; AVE—average variance extracted. Bolded numbers represent the square roots of AVE. Beneath the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios.

Convergent validity was also verified due to three key criterions. First, as illustrated before, all items loaded positively and significantly on their respective constructs. Second, all constructs had CR values higher than 0.70. Third, as Table 1 shows, the average variance extracted (AVE) for all constructs exceeded the threshold of 0.50 (Bagozzi and Yi 1988). The discriminant validity was evaluated using two procedures. First, the Fornell and Larcker criterion was used, which requires that a construct's square root of AVE (shown on the diagonal with bold values in Table 1) is larger than its biggest correlation with any construct (Fornell and Larcker 1981). Therefore, Table 1 shows that this criterion is satisfied for all constructs. Second, the heterotrait-monotrait ratio (HTMT) criterion was used (Hair et al. 2017; Henseler et al. 2015). As Table 1 shows, all HTMT ratios are below the more conservative threshold value of 0.85 (Hair et al. 2017; Henseler et al. 2015), which provides additional evidence of discriminant validity.

Finally, the structural model was assessed using the sign, magnitude, and significance of the structural path coefficients, the magnitude of the R² value for each endogenous variable as a measure of the model's predictive accuracy, and the Stone Stone-Geisser's Q² values as a measure of the model's predictive relevance (Hair et al. 2017). Nonetheless, the collinearity was tested before evaluating the structural model (Hair et al. 2017). The VIF values ranged from 1.032 to 1.266, which was below the indicative critical value of 5 (Hair et al. 2017), which indicated no collinearity. The coefficient of the determination R² for the four endogenous variables of entrepreneurial attitude, social entrepreneurial self-efficacy, entrepreneurial self-efficacy, and eco-innovation were 18.6%, 68%, 30.2%, and 48%, respectively, therefore surpassing the threshold value of 10% (Falk and Miller 1992). The Q² values for all endogenous variables (0.113, 0.512, 0.098, and 0.204, respectively) were above zero, which pointed out the predictive relevance of the model. We used bootstrapping with 5000 subsamples to evaluate the significance of the parameter estimates (Hair et al. 2017).

The results in Table 2 show that social responsibility has a significantly positive effect on entrepreneurial attitude (H1a), on social entrepreneurial self-efficacy (H1b), and on eco-innovation (H1d) ($\beta = 0.436$; $\beta = 0.457$; $\beta = 0.496$; $p < 0.05$). Additionally, environmental concern has a significantly positive relation with social entrepreneurial self-efficacy and with eco-innovation, providing support to H2b and H2d, respectively ($\beta = 0.211$; $\beta = 0.437$; $p < 0.05$). Entrepreneurial attitude has a significantly positive effect on social entrepreneurial self-efficacy (H3a) ($\beta = 0.455$; $p < 0.05$). Contrarily, all the other direct hypotheses weren't significantly positive because their p values were above 0.05.

To test the mediation hypotheses (H4a–H5c), the propositions of Hair et al. (2017, p. 232) were kept. Therefore, a bootstrapping procedure was conducted to test the significance of the indirect effects via the mediator (Preacher and Hayes 2008), as shown in Table 3. The indirect effect of social responsibility on social entrepreneurial self-efficacy via the mediator of entrepreneurial attitude is significant ($\beta = 0.1986$; $p < 0.05$), therefore supporting H4a. Contrarily, all the other indirect hypotheses were not significant because the $p > 0.05$.

Table 2. Structural Model Assessment.

Path	Path Coefficient	Standard Errors	t Statistics	p Value
Social Responsibility → Entrepreneurial attitude	0.436	0.143	3.060	0.002
Social Responsibility → Social Entrepreneurial self-efficacy	0.457	0.163	2.811	0.005
Social Responsibility → Entrepreneurial self-efficacy	0.132	0.232	0.570	0.569
Social Responsibility → Eco-Innovation	0.496	0.171	2.909	0.004
Environmental Concern → Entrepreneurial attitude	−0.043	0.162	0.263	0.793
Environmental Concern → Social Entrepreneurial self-efficacy	0.211	0.109	1.934	0.049
Environmental Concern → Entrepreneurial self-efficacy	0.341	0.231	1.473	0.141
Environmental Concern → Eco-Innovation	0.437	0.180	2.433	0.015
Entrepreneurial attitude → Social Entrepreneurial self-efficacy	0.455	0.137	3.318	0.001
Entrepreneurial attitude → Entrepreneurial self-efficacy	0.328	0.205	1.1597	0.111
Entrepreneurial attitude → Eco-Innovation	−0.092	0.248	0.373	0.709

Table 3. Bootstrap results for indirect effects.

Indirect Effect	Estimate	Standard Errors	t Statistics	p Value
Social Responsibility → Entrepreneurial attitude → Social Entrepreneurial self-efficacy	0.199	0.097	2.054	0.041
Social Responsibility → Entrepreneurial attitude → Entrepreneurial self-efficacy	0.143	0.113	1.265	0.207
Social Responsibility → Entrepreneurial attitude → Eco-Innovation	−0.040	0.0138	0.292	0.771
Environmental Concern → Entrepreneurial attitude → Social Entrepreneurial self-efficacy	−0.019	0.078	0.249	0.804
Environmental Concern → Entrepreneurial attitude → Entrepreneurial self-efficacy	−0.014	0.069	0.201	0.841
Environmental Concern → Entrepreneurial attitude → Eco-Innovation	0.004	0.043	0.091	0.927

5. Discussion

5.1. Social Responsibility: A Key Strategy

Customers are becoming very aware and interested in companies’ behaviors and the influence they might have on their external environment. Hence, CSR is often taken into consideration when making any purchase decision (Castro-González et al. 2019), but it is also in the minds of entrepreneurs when starting a new business. This investigation validates the relation between social responsibility and entrepreneurial attitude, therefore empirically confirming the study of Indarti and Efni (2018), which indicates that high investments in CSR lead to high levels of entrepreneurial attitude. On the other hand, firms are changing their work environments and the relationships with their workers by increasing awareness about social and environmental issues (Jamali et al. 2015). This change in mentality has a positive influence in social entrepreneurship self-efficacy, as empirically confirmed in this study by the hypothesis H1b, corroborating the research from Altinay et al. (2016), which concludes that social entrepreneurial self-efficacy can increase when people interact with external factors and the environment.

Furthermore, this relationship can also be mediated by an entrepreneurial attitude. In fact, Lee et al. (2016) argued that people with an entrepreneurial mindset enhance firm performance due to their capabilities of easily overcoming challenges, which leads to high levels of self-confidence. This study corroborates the research conducted by Lee et al. (2016) by confirming hypothesis H4a. Additionally, this study confirmed the relationship between social responsibility and eco-innovation. Since this type of business method is characterized by using clean energy products that are less polluting, it contributes to high levels of sustainability (Peng and Liu 2016; Severo et al. 2017), improving the company’s reputation (Pereira et al. 2021). Eco-innovation is the right approach for corporate social responsibility strategies because it helps firms to increase their business value while decreasing their environmental impact. Hence, the present study is empirically confirming the research developed by Sarkar (2013).

5.2. *The Role of Environmental Responsibility*

Environmental concern is a mindset affected and worried by the threats to the harmony of nature and future generations of the human species (Schultz 2001). These specific values, norms, and attitudes influence people's reactions towards eco-friendly products and services (Hartmann and Apaolaza-Ibáñez 2012), and later their attitudes and behavioral intentions (Kim and Han 2010). This study is empirically confirming these statements, since it concluded that there is a positive relation between the environmental concern and both social entrepreneurial self-efficacy and eco-innovation, H2b and H2d respectively. The influence of environmental responsibility has been studied in relation to other types of entrepreneurs, for example, in lifestyle entrepreneurs (O'Neill et al. 2022) or in small tourism firms (Dias et al. 2022), but not specifically to digital nomads, thus constituting a contribution of this study. Then, it is possible to assume that digital nomads, due to their interest in environmental issues and changes, adapt an eco-attitude in their daily lives by considering the products they consume and in having new business ideas that can help in those matters. On the other hand, the fact that this niche is highly composed of freelancers and young entrepreneurs, their entrepreneurial attitude, together with their preoccupation about the environment and social matters, will turn them into people aware of social inequalities with the eagerness to change them—which can be translated into high levels of social entrepreneurial self-efficacy, which corroborates hypothesis H3a.

6. Conclusions

This study contributes to the literature in several ways. First, it examines the relationship between several variables, having only digital nomads as the target niche. This allowed a deeper and different understanding about their lifestyle, the awareness of the best suitable environment for them, and a greater clarity about the relationship between the studied variables and the digital nomads, an underexplored theme until this point. This study was innovative in the context of digital nomads, especially in the identification of the multiple dimensions of social responsibility, which can be transformed into innovation and self-efficacy.

This information is particularly important when it comes to tourism facilities. Tourism businesses should understand that this type of traveler can be of huge importance due to their long-term stays and personal concerns. They are a different type of client, highly worried about the social responsibility of firms and the products they consume. If tourism companies start to truly worry about these matters and change their behavior, they could benefit from a community of travelers interested in the local community that will not harm the local environment and can improve the life conditions of the local community by generating profit in the local businesses and foment the economy. Furthermore, it was discovered that an entrepreneurial attitude could be a mediator between social responsibility and social entrepreneurial self-efficacy, a relationship that was insufficiently covered by the literature.

By conducting this research, the author contributed to the theory developed by Dunlap and van Liere (1978) and Dunlap et al. (2000) about the New Ecological Paradigm, in which broader issues, such as limits to grow and a steady-state economy, are taken into consideration when discussing environmental attitudes—also adapting the measuring scale created by the authors. Additionally, this study contributed to Theory of Planned Behavior developed by Ajzen (1995), considering that a person will successfully perform a behavior if he believes that the advantages of success outweigh the disadvantages of failure, having in mind internal and external factors.

It is possible to conclude that digital nomads are concerned about the social responsibility of the companies they work for, but also of hospitality providers, since it is where they spend much of their time. Policy makers and decision makers from destination management offices should take into consideration the impact they have in local communities and in the environment. Having an active role in those matters will always be a plus, both internally, where operations will be more efficient, but also externally by improving their

reputation and consequently increasing the number of satisfied clients. On the other hand, a big percentage of digital nomads are entrepreneurs, meaning that they own their own businesses. Due to their environmental and social concerns, they tend to create business ideas related to these matters, or at least that do not harm the local communities in any way. Therefore, policy makers and destination managers should pay attention to this fact and promote activities that foment sustainable responsibility and environmental concern, such as events, awareness actions, workshops, and fairs.

On the other hand, the destinations should facilitate the life of digital nomads in not only both legal and bureaucratic terms, but also in the sense of building a community for this specific niche. Most governments already offered a mix of “Nomad Visa” (that most nomads do not need), tax breaks, even though most nomads do not pay taxes in the country of residence, empty tourism pictures as promotion, and empty global promises on how good it is to work from there. However, nomads are looking for community, connection, giving back, and nature. Recently, Portugal approved a law proposal to create a Remote Work visa, seeing remote work with repopulation as a goal. In fact, it is important to help and empower the people that want to lead the change in small communities. It is necessary to give local government support to facilitate and reinforce the need for the leaders in the community to work together, to build dynamic coworking and meeting spaces that support the right activities, to bring people from the outside to inspire change and feed with inspiration, to understand that villages might be the best place to live, that cities are overcrowded and a person does not need to live in one to work in a big corporation, and finally, to understand that community is what humans seek and what brings the power to people. A very good example of what has to be made occurred on Madeira Island, where the most successful and original project focused on digital nomads in the world was conducted, a people-centric approach to a new reality where they provided the best experience by creating connections and the perfect conditions to work, live, and enjoy the islands.

This study contains limitations that indicate different paths for future research. First, the sample is small and limited to digital nomads that came to Portugal, and hence may not be generalized to other realities. Second, there was no consideration about cultural matters, which can influence a lot of the results of the sample. Therefore, it might be interesting to conduct comparative studies between different cultures. Another limitation which points for a future research direction is the need of comparison with other types of professionals and entrepreneurs, or, in other words, non-digital nomads.

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Institutional Review Board Statement: Ethical review and approval were waived for this study since written informed consent was obtained for the in-depth interviews before each session. In the survey, a link to the online survey platform was sent by social media and partners’ social media, and at no times was contact established between researchers and participants. Moreover, the interview script and the personal questionnaire did not include any information and on histories. As such, all data accessible to the researchers were stripped of respondents’ names, addresses, or birth dates and cannot be linked back to them.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data available upon reasonable request to the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. Questionnaire Items

Social Responsibility	Whenever possible, before acquiring a product or service, I seek to know if the company has programs of engagement with the local community.
	I consider it fundamental to acquire products or services from companies that have an ethical, honest non-corrupt attitude.
	Whenever possible, before purchasing a product or service, I seek to know if the company has health safety actions to improve the quality of life of its employees.
	I consider it fundamental to acquire products or services from companies that do not use child labor and unfair remuneration.
Eco Innovation	I value companies that respect equal pay for men and women.
	I value companies that develop new recyclable or reusable products.
	I value companies that develop new products or services with the use of clean energy.
	Whenever possible, I try to buy innovative products that have low power consumption.
	I consider it important to purchase new products that are less polluting.
Environmental concern (EC)	I consider it important that new products reduce the environmental impact.
	The balance of nature is very gentle and can be easily upset.
	Human beings are severely abusing the environment.
	Humans must maintain the balance with nature to survive.
Entrepreneurial Self-Efficacy	Human interferences with nature often produce disastrous consequences.
	I could think creatively.
	I have an ability to commercialize new ideas.
Entrepreneurial Attitude	I have an ability to identify business opportunities.
	Career choice as an entrepreneur is interesting for me.
	Among the numerous choices, I would rather be an entrepreneur.
	Being an entrepreneur will give me extraordinary satisfaction.
Social entrepreneurial self-efficacy	If I have opportunities and resources, I would like to start a business.
	I seek for new business opportunities for social change.
	I am creating new products/services to solve social problems.
	I think creatively to benefit others.
	I think in commercializing an idea for social enterprise.

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Article

The Influence of Empowerment towards Agricultural Business Actors' Ability in Surakarta, Indonesia

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Abstract: The situation of micro, small, and medium enterprises (MSMEs) in agriculture in Surakarta after the pandemic are still worrying; thus, effective empowerment efforts are needed to revive and develop MSMEs in agriculture. Empowerment will be maximally successful if various resources are available for its implementation. This study aimed to directly and indirectly analyze the effect of empowerment, human capital, economic capital, actors' perceptions of their business, and financial capital on the ability of agricultural business actors. This research study used quantitative methods with survey techniques. The sample population of this research study included all agricultural business actors in Surakarta covering five districts, and the sample was taken randomly. The data collection techniques included direct interviews, observations, and focus group discussions. The results showed that empowerment has a significant direct effect on economic capital, increasing it by 21.6 percent, and a very significant positive direct effect on the ability of agricultural business actors, increasing it by 20.9 percent. Empowerment has no significant direct effect on human capital, perception, and financial capital. Economy capital and perceptions of business actors have very significant direct effects on the ability of business actors, at 23.1 percent and 37.2 percent, while human capital and financial capital have no direct effects on the ability of business actors. Indirect empowerment via human capital, economic capital, perception, and financial capital factors has no significant effect on the ability of agricultural business actors.

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Keywords: empowerment; human capital; economic capital; financial capital; level of ability of business actors in the agricultural sector

1. Introduction

In order to increase the return of micro, small, and medium enterprises (MSMEs) in the agricultural sector, a comprehensive social mapping is needed that is able to assess the real needs of MSME actors in the agricultural sector in order for these actors to survive. For this reason, it is necessary to have an empowerment model that can increase the capacity of MSME actors in the agricultural sector. Increasing the capacity of MSME actors in agriculture is very necessary because improvements have been proven, both internationally and nationally. Micro, small, and medium enterprises in Southeast Asia accounted for an average of 97.2 percent of all forms of businesses, 69.4 percent of the total workforce, and 41.1 percent of a country's gross domestic product (GDP) during the period from 2010 to 2019 (developing member countries/DMCs, 2019). In Indonesia during the 2010–2019 period, MSMEs contributed 20.4 percent of the export value, and 53 percent of micro-enterprises were managed by poor households. The number of MSMEs reached 65.5 million with a contribution to the gross domestic product (GDP) of 61.07 percent or IDR 8.573,89 (USD 0.5).

Based on the initial survey, in Surakarta, 70 percent of MSMEs in agriculture are self-employed with respect to their livelihood. Most MSMEs in agriculture in Surakarta are

micro-businesses. The total number of MSMEs in agriculture in Surakarta is 7410 MSMEs. As many as 83 percent of the total MSMEs in Surakarta City comprise micro-enterprises or as many as 6.135 MSMEs. As many as 13 percent or 972 MSMEs are small businesses, and another 4 percent, or 305 MSMEs, are medium enterprises. Micro-enterprises are far more abundant than other business classes.

Micro, small, and medium enterprises in agriculture are alternative sources of income for the community (Pueyo and DeMartino 2018). However, the large and tight number of competitors is also a challenge for MSMEs in the agricultural sector. The majority of MSMEs in agriculture in Surakarta that are managed by women are now members of the Small Business Women's Network (JARPUK). In 2021, there were 492 JARPUK members in the agricultural sector spread across five sub-districts. There are 122 Jebres sub-districts, 72 Serengan, 162 Pasar Kliwon, 54 Laweyan, and 82 agricultural MSMEs in Banjarsari (Suminah et al. 2022). Overall, micro, small, and medium enterprises in Surakarta, which experienced a decline in business during the pandemic, still constitute a concern; thus, efforts are needed to revive and develop MSMEs in the agricultural sector. In an effort to recover and develop MSMEs in agriculture, human resources are the main determining factors for successful development, in addition to other basic capital such as physical capital, social capital, financial capital, economic capital, and natural capital. One of the reasons for the existence of poverty is due to the weak access to the five basic capitals (Octasyilva et al. 2022; Potluri 2022; Prasetyo et al. 2020).

Human capital, according to economics, comprises a stock of abilities (skills) and includes productive knowledge from people in society (Tjahjadi et al. 2022). Likewise, social capital in protecting against food insecurity is diverse, complex, and structurally determined (Prasetyo and Marimin 2015). Human capital is a concept that can contribute to the work of agricultural business actors based on human resources owned by MSMEs in agricultural micro, small, and medium enterprises in the agricultural sector, and are business entities that need to pay attention to business performance, which results in an increase in the capacity of human resources. The performance of a good organization needs to be supported by human capital, which requires administrative understanding (Hargreaves and Cohen 2011; Wuen et al. 2022). Financial capital is the amount of money in circulation that can be accessed by households. This can take the form of savings and access to credit in the form of loans. Neither savings nor loans are direct forms of productive capital, as they play roles in household asset portfolios, because they can be converted into other forms of capital or directly into consumption (Ellis 1994).

Economic capital is the main capital provided by company owners to their companies when starting new businesses. If the physical asset is not successfully executed, the existing value will of course decrease or even have no value at all. The amount of existing capital can determine the availability of consumer demands for the production of a business. With the increase in business capital, business actors can increase their production capacity so that production results will increase and the value of sales will also increase. The existence of internal capital from business actors will determine the amount of income that can be received by a business based on the results of its production. In addition to the support of various resource factors, the perception of running a business is also influenced by the empowerment program (Jalil et al. 2022).

Empowerment will be maximally successful if it involves many relevant stakeholders during its implementation (Suwatno and Kurniawan 2016). The perception of business actors in the agricultural sector towards empowerment policies and programs is the basis for the emergence of the willingness of an individual or community to participate actively, according to their roles in each activity. These perceptions can be a driving force or an obstacle, with respect to taking an active role in their activities (Robbins 2003). In empowering MSME actors in the agricultural sector, it is also necessary to observe how their perceptions of empowerment have been carried out. The urgency in empowering MSME players in agriculture not only requires technical studies. One thing that is also very important is the study of the resources of MSME actors in the agricultural sector with

respect to improving human capital, economic capital, financial capital, social capital, and business actors' perceptions of their business. For this reason, it is necessary to observe its influence on the ability of agricultural business actors to develop their business in Surakarta. The results of the study are expected to be the basis for creating policies with respect to community empowerment in agriculture.

The results of this study are expected to be used by relevant stakeholders, such as the government, non-governmental organizations, universities, the industrial world that implements CSR funds for empowerment programs, as well as communities who are interested and focused in the field of community empowerment. Additionally, it can act as the basis for policy making in conducting empowerment programs in the field of agricultural business. A very important thing that cannot be ignored in empowering the community, is especially post-intervention assistance, in addition to the availability of various resources such as human capital, economic capital, financial capital, and the perception of business actors in their business, so that the results of empowerment in the community are very important, especially for business actors in the agricultural sector.

2. Materials and Methods

This research study was conducted in Surakarta, which includes the districts of Banjarsari, Jebres, Laweyan, Serengan, and Kliwon Market. The research study was conducted quantitatively by using the survey method. The research population includes all business actors in the agricultural sector. The sample was determined randomly, with each sub-district taken as a sample of 42 business actors in the agricultural sector, and the total number of business actors was 210 people. Secondary data were obtained from the UMKM office; the Agriculture Office; the Investment and One-Stop Service Office; the Trade and Cooperative Service; the Community Empowerment Service; and the Surakarta City Bappeda. Data collection techniques are carried out by using the following steps:

- a. Interviews conducted with respondents by using a questionnaire guide, namely direct interviews with MSMEs in the agricultural sector;
- b. Direct observations made directly in the field, which aim to observe the location and business activities carried out by business actors in the agricultural sector;
- c. Focus group discussion (FGD) to directly observe and listen to the problems faced by business actors in the agricultural sector and what has been performed from various parties.

The scoring technique uses a Likert scale model determined by the normal deviation approach by giving a score to each question answer. Then, analyze the validity and reliability of the answers using Cronbach Alpha, with the Cronbach Alpha coefficient criteria if it is greater than 0.60 and 0.70, it is said to be reliable (Ghozali 2011; Nunnally 1994).

In this study, the Alpha Cronbach value uses a standard of 0.70 with the assumption that the list of questions tested can be reliable if the Alpha Cronbach value is ≥ 0.70 . With these criteria, the Alpha Cronbach value which is closer to 1 means that the reliability is higher, while if the value is less than 0.2, it is less reliable or less reliable. Based on the calculation of each variable, the results of the instrument reliability test are as follows: empowering 0.849, human capital 0.918, economic capital 0.883, MSME perception 0.838, financial capital 0.919, MSME Actors Ability 0.788. The reliability test results show that all variables have a Cronbach's Alpha value above 0.70, so it can be said that each variable studied in this study is reliable.

The research hypotheses tested are as follows:

1. Empowerment is directly predicted to have a significant effect on human capital, economic capital, MSME actors' abilities, MSME actors' perception, and financial capital;
2. Empowerment indirectly via human capital, economic capital, MSME actors' perceptions, and financial capital has a significant effect on the ability of agricultural business actors.

Data were analyzed descriptively and using path analyses. The analysis was carried out to observe the relationships between exogenous and endogenous variables. The exogenous variables in this study include empowerment variables, and the endogenous variables include human capital, economic capital, financial capital, perceptions of business actors in the agricultural sector, and the ability of MSMEs actors in agriculture.

3. Results

3.1. Descriptive Analysis

3.1.1. Human Capital for MSMEs in Agriculture

Human capital comprises a combination of knowledge, skills, innovation, and the ability of individuals to run their businesses to be able to create value in order to achieve the desired goals. The existence of human capital in a business shows that the business has the capacity to provide the right solutions based on the knowledge possessed by the MSME business actors in the business that is carried out. In its journey, human capital becomes one of the determining factors in the economic growth of a business entity (Rachmawati and Wulani 2007). The human capital aspect in this study includes: the ability of actors to provide quality and affordable raw materials; the ability of actors to use technology in processing and packaging operations; the ability of actors to participate in training and counseling; and the ability of actors to participate in marketing and promotion. The frequency distribution of business actors based on human capital can be observed in Table 1.

Table 1. Distribution of MSME actors in agriculture based on human capital in Surakarta.

No.	Category	Frequency	Percentage
1.	Low (33–44)	58	27.6
2.	Medium (45–56)	134	63.8
3.	High (57–68)	18	8.6
Total		210	100.0

Source: Primary data analysis (2021).

Based on Table 1, regarding the distribution of MSMEs in agriculture based on human capital in Surakarta, it can be observed that the level of human capital of MSMEs in agriculture is moderate, with 134 businesses in the moderate category (63.8 percent). Human capital in this study includes the ability of actors to carry out the business that they run. The aspects assessed include the production aspects of business actors who already have demonstrated abilities in both the use of quality raw materials that still remain affordable and the use of adequate technology. The training aspect has not received a response from the majority of business actors due to limited information and the lack of further assistance provided towards businesses. In the process of developing a better business, assistance is needed in the form of training with respect to quality production processes (Endri 2010). The pandemic has limited marketing space; thus, many MSME players in the agricultural sector have begun to utilize technology to market their products online because they are able to capture a wider market to keep their businesses running. The pandemic has also required business actors to manage and innovate their businesses, responding to existing changes so that businesses can continue to run smoothly.

3.1.2. Economic Capital for MSMEs in Agriculture

Economic capital is a measure of the capital adequacy needed to absorb unexpected losses within a certain period of time and a certain level of confidence. The working capital itself is capital that is issued periodically to carry out its business; the working capital is usually used for consumables within a short period of time. To be able to run a business, initial capital is required for which its value varies depending on the type of business and the size of the business (Sudaryono 2017). Economic capital in this study includes: investment capital; working capital; the origin of business capital; the percentage of owned

capital and capital obtained from outside sources (loans); loan sources; payment systems; interest in payments; ownership of business entities; ownership of business assets; types of business assets owned and controlled; business turnover before and during the pandemic; percentage change in turnover; non-business income; production costs; packaging costs; and marketing costs. Based on the results of the research studies that has been carried out, it is observed that the highest business investment capital is IDR 20.00.000.000 (USD 1,280,000) and a minimum of IDR 500.000 (USD 32) for initial capital. Investment capital is the capital issued at the beginning of opening a business that is long term. In the working capital issued every month, the MSMEs in the agricultural sector in Surakarta spent the maximum of IDR 500.000.000 (USD 32,000) and at least IDR 150.000 (USD 9.6) per month. There are also business actors who have working capital expenditures of IDR 0 (USD 0) due to stagnation and obstacles when running their business.

In terms of the origin of capital, most MSME business capital in agriculture in Surakarta comes from their own capital, namely from their own business actors and partly from their own capital and loans with different percentages, with businesses possessing business capital that came completely from loans. The comparison between MSME actors with their own capital and those with loans observed in agriculture is 30 percent with 70 percent, 50 percent with 50 percent, 20 percent with 80 percent, 90 percent with 10 percent, 60 percent with 40 percent, and 40 percent with 60 percent. The loan capital obtained by MSME actors in the agricultural sector is used in helping obtain costly, namely cars for the purpose of the distribution of sales, and land or buildings to open a place of business. The sources of loans come from savings, loan cooperatives, and banking institutions. The method of payment comprises installments per month, per week, and some are per year. The highest interest paid reaches 10 percent for each month, and the lowest is 0.50 percent for each month. With respect to business ownership, most MSME actors in agriculture in Surakarta are self-owned; a small part are businesses owned by others; and three MSME actors in agriculture in Surakarta in this study have businesses from profit sharing. The ownership type of business assets in this study is mostly self-owned, and some are still borrowed or leased. Business assets are owned and controlled in the form of tools that support the business activities of MSMEs in the agricultural sector.

Capital is not always in the form of funds or money, but it can be in the form of skills, willingness, loyalty, integrity, intelligence, and a strong determination in running a business (Polandos et al. 2019). The amount of turnover obtained by MSME actors in the field of food processing agriculture in Surakarta tended to decrease substantially during the pandemic. The agribusiness sector, especially ornamental plants, increased, because during the pandemic, people tended to enjoy using ornamental plants as decorations and having better fish pets at home. In food processing businesses, many MSMEs in the agricultural sector have complained that their income decreased because the places that used to sell goods were closed during the pandemic. Before the pandemic, MSME actors in the agricultural sector could make sales in crowded places, namely Car Free Day (CFD) and Ngarsopuro, which can provide higher incomes. The percentage of decline in the business turnover of MSME actors in the agricultural sector reached more than 30 percent. Some business actors have other businesses besides the main one. The majority of MSMEs in agriculture experienced a decline in income during the COVID-19 pandemic (Laura Hardilawati 2020; Ogada et al. 2021). The level of empowerment of MSME actors in Surakarta City during the pandemic is relatively low (Suminah et al. 2022). This is due to the decreasing number of activities carried out outside the home, the difficulty of obtaining raw materials due to transportation constraints, and the decreasing level of public trust in external products, especially in the field of food processing. The distribution of business actors based on economic capital can be observed in Table 2.

Table 2. Distribution of MSME actors in agriculture sector based on economic capital.

No.	Category	Frequency	Percentage
1.	Low (19–27)	85	40.5
2.	Medium (28–36)	115	54.8
3.	High (37–45)	10	4.7
Total		210	100.0

Source: Primary data analysis (2021).

Based on Table 2, regarding the distribution of MSME actors in agriculture based on the economic capital in Surakarta, it can be seen that the economic capital of MSME actors in agriculture is within the medium categories. There are 115 business actors in the medium category (54.8 percent) out of a total of 210 business actors in agricultural businesses. The results show that the majority of MSMEs in agriculture is in the medium category, which tended to be low with respect to the level of economic capital. Some business actors have difficulty in obtaining capital due to declining turnover and uncertain marketing during the pandemic. At the same time, business actors also consider the need for capital from outside parties, such as loan institutions and banks, in order to cover the lack of capital for developing their businesses. Income that is unstable and tends to decrease is now an obstacle and results in the consideration of whether business actors are able to return to their former state within the grace period. Economic capital is a very vital element in trading businesses, because in carrying out a business, one should want to know the amount of income earned when running the business. Income observed in the economy is defined as remuneration for the use of production factors owned by the household sector and the corporate sector, which can be in the form of salaries/wages, rent, interest, and profits.

3.1.3. Financial Capital for MSMEs in Agriculture

Financial capital comprises all financial conditions in a business. The financial aspects in this study include own capital and loans. Based on the results of the research studies that have been conducted, it can be seen that the business capital obtained by MSME actors in the agricultural sector came from personal funds, family, government assistance, and bank and non-bank loans. Most MSMEs in the agricultural sector in Surakarta require additional capital for their businesses. Many MSMEs in the agricultural sector do not have loans or credit. A small number of other MSMEs have or are currently using loans with a frequency of at most four times. Most of these MSMEs borrow in amounts from IDR 5.000.000 (USD 320) to IDR 20.000.000 (USD 1280) as business capital in agriculture. Financial capital can be defined as the ability of the financial resources used by business actors in successfully supporting the start of a business and in helping manage a business. In general, business actors build their businesses using their own capital. However, as the business progresses, business actors usually take steps to take out loans to increase the capital used for business expansion. A study stated that there is a positive influence of financial capital on business performances (Fatoki 2011).

It can be explained that this effect occurs because of the availability of adequate business capital as a source of capital for running a business so that business actors can run their business easily. In addition, financial capital can also help achieve good performance when business activities are carried out; business actors need to clearly understand how to manage finances well, namely by learning financial literacy (Kurniawan and Setiawan 2018). Financial capital refers to the purchasing power of consumers as a means of representing financial wealth that is stored. Then, it is used to invest in developing a business, namely by buying or obtaining physical capital (Marija et al. 2021). Financial capital is something that is used to build or conduct a business, either in the form of money, goods, or energy. The financial capital for MSMEs in agriculture can come from various sectors, for example, from their own capital, loans, or maybe a combination of their own capital and loans. The

distribution of MSME actors in agriculture based on business capital can be observed in Table 3.

Table 3. Distribution of MSME actors in agriculture by financial capital.

No.	Category	Frequency	Percentage
1.	Own	164	78.10
2.	Loan	7	3.33
3.	Own + Loan	39	18.57
Total		210	100.0

Source: Primary data analysis (2021).

Table 3 shows that the distribution of MSME actors in agriculture based on the financial capital of agricultural business actors in Surakarta is very diverse. There are 164 business actors who have their own business capital or with a percentage of 78.10 percent, and only seven people (3.33 percent) have businesses that started from loans. The loans are not from banks but they are loans from savings and loans at the RT (Neighborhood Association) level; loans from business groups; and loans from relatives and close neighbors. The payment system comprises installments: agricultural MSME actors can pay the required interest; loan providers do not apply fines for late payments. Some MSME actors in the agricultural sector experienced an increase in income after taking loans, and some did not experience an increase. Several MSMEs in the agricultural sector in Surakarta stated that the increase in income was not only caused by a substantial amount of capital, but rather by an increase in sales, because sale proceeds can be used as capital again. Financial calculations or bookkeeping have not been carried out to determine the financial flow owned. The benefits of conducting a financial check-up include being able to find out the details of expenses, control expenses, prepare for the future, and be able to calculate money needs in future (Hertina et al. 2021).

The majority of MSMEs in the agricultural sector in Surakarta still use their own business capital. This is because business actors have administrative constraints due to the fact that the management of MSME businesses in the agricultural sector is still managed manually and conventionally. Moreover, they cannot share operational finances for households and for businesses. Business capital is an important component for both a business that is being developed or is already running (Salahudin et al. 2018). The COVID-19 pandemic did not make capital loan services difficult; it even made loan services offer increasing amounts of services. Most lending/credit institutions require that the borrower must have the ability to provide capital in the form of assets or collateral. Guarantees in obtaining capital credit are one of the obstacles relative to the development of MSMEs in Indonesia (Ardiansyah 2019). These MSMEs collided with the guarantees or collateral because many of them are still living in contracts. The bank always provides support and assistance in applying for additional business capital. Access to loan capital is relatively easy, and the response of loan service providers is quite fast. MSMEs in the agricultural sector feel that it is sufficient to obtain information related to loans, and more in-depth information about experiences is obtained from friends and relatives. MSMEs in the agricultural sector in Surakarta make considerations before taking a loan and do not experience limitations in their loan applications. MSMEs in the agricultural sector also do not take more than one loan at a time because it will be burdensome in the installment process. Economic problems are the main reason for MSMEs in agriculture to take loans, and the timeliness of repayment (installments) will affect the next loan payment.

3.1.4. Perceptions of MSMEs in Agriculture in Empowerment Programs

Perception is an individual's action of interpreting and giving meaning to the surrounding environment (Robbins 2001). A business actor should view or perceive that business information and the development of science and technology, production, and marketing have many benefits in the business world. Perception in this study comprises the

awareness of the importance of business information, changes in science and technology and nature, production and processing activities, marketing activities, bookkeeping, health protocols, and social assistance. The frequency distribution of MSME actors in agriculture based on general perception can be observed in Table 4.

Table 4. Distribution of MSME actors in agriculture based on perceptions of their business.

No.	Category	Frequency	Percentage
1.	Low (88–102)	69	32.90
2.	Medium (103–117)	134	63.86
3.	High (118–132)	7	3.33
Total		210	100.0

Source: Primary data analysis (2021).

The distribution of MSME actors in agriculture based on the perception of business actors towards their business is classified as moderate, with 134 MSME actors in the agricultural sector included in the medium category (63.86 percent). This can be explained that in the perception of business actors in the agricultural sector as they sometimes they still have difficulties in marketing due to the pandemic; however, on the other hand, agricultural business actors can help meet family needs. Some business actors switched to online sales during the pandemic. Factors that are assessed based on the perception aspect in this study include: the awareness of the importance of business information; changes in nature for business, production and processing activities; marketing activities; bookkeeping activities; health protocols; and the receipt of social assistance for MSMEs in agriculture.

With respect to the awareness of the importance of business information, most business actors in the agricultural sector require assistance with respect to business information. This is because business actors feel that conducting business during the pandemic has a bad marketing impact, due to the decline in business turnover and related business operations, such as decreased production. Business information comprises information that has similarities with one another, which is intended for business purposes. One piece of business information that needs to be known by MSMEs in the agricultural sector is competitors. A competitor is a business that produces or sells goods or services that are similar to the product being marketed. Based on the results of the study, it is known that many MSMEs in the agricultural sector know the number of their competitors. Competition is still a reasonable condition if it occurs among modern retail businesses, between traditional retail businesses, and between suppliers (Utomo 2010). By knowing the number of business competitors, a person will be able to easily develop a business plan, can observe the business more clearly, and to know the weaknesses of the business being run and understand what actions must be performed to improve it. Access to information for MSME actors in agriculture mostly comes from the networks of friends (relationships), family, and social media. Social media is not only a communication tool for entertainment but also an important part of marketing strategies in the business world (Öztamur and Karakadılar 2014; Yuliarini et al. 2020). The use of social media helps the accessibility of the industry relative to the market. A financing institution is a business entity that carries out financing activities by providing the provision of funds or capital goods. Financial institutions in Indonesia, for example, include leasing, consumer financing, credit card issuance, factoring, infrastructure financing, and venture capital. The results of research in the field indicate that the majority of business actors have relationships with financial institutions. The relationship comprises a capital loan that allows individuals to develop their own MSME business in agriculture. A financial institution provides the funds or capital needed and carries out activities by providing capital to individuals or business sectors in need (Kairupan 2017).

The results of the research studies in the field show that the majority of MSMEs in the agricultural sector in Surakarta have bank accounts. The bank account for MSMEs in the agricultural sector is not only used to borrow capital, but is also used as a means of

collecting payment from consumers and is an account for saving capital. With regard to the changes in the nature of MSMEs in the agricultural sector, this is not an obstacle because the business carried out does not come in large numbers and can still be controlled. This is because the business is located around the location where the MSME lives; as long as there are still water services provided by the PDAM (Municipal Waterworks) that can be used to irrigate the MSME's crops, there is no problem. Similarly, production activities are not as complicated because those cultivated by MSMEs in the agricultural sector come generally only in the form of vegetables such as kale, eggplant, chilies, tomatoes, and ornamental plants. Likewise, those who have food processing businesses say that it is not complicated, the raw materials are easy to obtain, the process is also easy, and only marketing is difficult.

In relation to business management bookkeeping, there are still many individuals who are inactive in carrying out bookkeeping activities. Business bookkeeping also needs to occur in order to expedite the bookkeeping process of a business. Business bookkeeping is a recording process that must be carried out regularly in collecting all types of data and information regarding finance, which consists of liabilities, income, assets, costs, and capital. It is the same as when applying for a loan at a bank, where business financial statements will be reviewed by the bank when MSMEs in the agricultural sector are growing and need capital. This is performed so that financial accounting will be carried out regularly from the beginning by MSME actors in the agricultural sector (Astuti 2015). This means that simple bookkeeping in MSMEs in the agricultural sector must be performed to increase business continuity and sustainability. Financial statements can also be used to assess performances or to measure the company's ability to run its business in the near future (Nuvitasari and Martiana 2019). Financial reports can also be used to predict the business development of a company in future. The practice of implementing health protocol rules in the form of 3M is a common practice, and there are no problems whatsoever. Other aspects include the assistance for MSMEs in the agricultural sector. Many business actors already registered as beneficiaries due to the pandemic.

3.1.5. Empowerment of MSMEs in Agriculture

Empowerment is one of the efforts made to increase individual capacities by mobilizing, motivating, and increasing the awareness of individuals and communities. The concept of abstract empowerment is used in this study as a means of supporting the local economy by strengthening the factors of production, the control of distribution and marketing, and community income; and providing public access to information, knowledge, and skills. In other words, the development of physical capital has an important role in realizing economic growth. In addition, human resource development is also an important factor in economic development, especially when creating inclusive economic growth (Suminah and Anantanyu 2020).

Based on the results of field research studies that have been carried out, it can be observed that the types of empowerment activities that took place during the pandemic in Surakarta came in the form of counseling, webinars, socialization, online competitions, guidance, and talk shows. The implementers of the program include Shopee, Disperindag, Cooperatives and the MSMEs Office in agriculture, BRI, Gojek, and the Diocese. During the pandemic, empowerment programs were rarely carried out due to health protocol policies and limited technological facilities.

With respect to the frequency in days during the pandemic, most MSMEs in the agricultural sector in Surakarta participated in the empowerment program for 40 days. MSMEs in agriculture who participated in the empowerment program explained that they benefited from the empowerment program in terms obtaining the main information, although this came with limitations. Empowerment is focused on increasing organizational capacities or increasing group participation (Luttrell et al. 2009). Empowerment can be focused on improving the economy and providing access to economic resources. Empowerment can also be interpreted as an effort to improve the professionalism and performance of regional coaches, including the apparatus, social institutions, non-governmental organizations

(NGOs), businesses, and community members in order to overcome various problems faced by business actors. Moreover, there is an expectation that aspirations will be realized, and people expect an increase in the quality of life and the welfare of the community (Hafiluddin et al. 2014). The policy of empowering the MSME sector in agriculture in Surakarta is directed towards reducing poverty and inequality, creating job opportunities, and fulfilling household needs. The level of empowerment in this study includes program planning, material suitability, assistance after the program, media or means of delivering material, and the evaluation of empowerment programs. The distribution of the frequency of business actors based on the level of empowerment in general can be observed in Table 5.

Table 5. Distribution of MSME actors in agriculture based on the business actors' ability in the city of Surakarta.

No.	Category	Frequency	Percentage
1.	Low (13–24)	176	83.8
2.	Medium (25–36)	32	15.2
3.	High (37–48)	2	1.0
Total		210	100.0

Source: Primary data analysis (2022).

Based on the analysis's results, the distribution of MSME actors in agriculture based on the ability in Surakarta City during the pandemic is relatively low, with 176 business actors in the low category (83.8 percent). This is because the level of ability with respect to MSME actors in the agricultural sector is low, because there were few business actors who participated in the implementation of empowerment programs during the pandemic due to the decreasing intensity of empowerment programs. There was a limitation of activities and they were enforced online, and some business actors in the agricultural sector have limited online access. Several types of empowerment program activities during the pandemic were carried out, such as training, webinars, counseling, and guidance held by both the government and the private sector. The government services provided are from Agriculture Service, Industry, and Trade Service (Disperindag) and the Surakarta City Small and Medium Business Cooperative Service, while the private sectors that provided services include Bank Rakyat Indonesia (BRI), Bank Jateng, Shopee, and Gojek. Support from the government and the community is the most important factor when developing and empowering business actors during the pandemic (Soehardi 2021).

The level of ability is assessed from aspects such as planning, implementation (materials, facilitators, and methods), post-empowerment programs (assistance), monitoring, and evaluation. The involvement of business actors in planning empowerment programs is still relatively low. In the materials delivered via audio visuals, some business actors received benefits, but there were also those who felt the materials were lacking because they were not in accordance with what was needed by business actors in the agricultural sector during the pandemic. Empowerment programs provided by the service or NGOs for MSME actors include training in making media for plant cultivation, digital marketing, entrepreneurship training, socializing halal labels, and also packaging design training. Some of these activities were carried out during the pandemic. The presenters of the material are well versed in production techniques, but assistance with respect to sustainability is still lacking. The evaluation of empowerment programs is still low because it is usually only performed after training. The point of empowering several business actors in the agricultural sector is to gain new knowledge, but the sustainability of the program is still relatively low so the benefits of the program also do not last long. The empowerment activities carried out after the pandemic and received by MSME actors in Surakarta City included: training in making fertilizers to support businesses; cooking and bread-making training for MSMEs who process flour; cooking utensil assistance; and online marketing training with respect to developing businesses.

3.1.6. Ability Level of MSMEs in Agriculture

The community ability level refers to people who have the ability and want to increase their dignity by escaping poverty and underdevelopment (Anwar and Pd 2007). Empowerment as a process involves less fortunate individuals who become stronger and can participate in various efforts to improve their lives; moreover, they gain sufficient knowledge, skills, and mastery and can influence the lives of themselves and others (Suharto 2009). The ability level in this study was measured by considering several aspects such as the mastery of science and technology, ability to see opportunities, ability to act, and marketing ability. The frequency distribution of business actors based on the level of empowerment in general can be observed in Table 6.

Table 6. Distribution of MSME actors in agriculture by empowerment level in Surakarta.

No.	Category	Frequency	Percentage
1.	Low (30–64)	40	19.0
2.	Medium (65–99)	153	72.9
3.	High (100–134)	17	8.1
Total		210	100.0

Source: Primary data analysis (2022).

The distribution of MSME actors in agriculture based on the ability level in Surakarta City falls in the medium category with respect to the empowerment level, with 153 (72.9 percent).

The results in the field and the description above show that the level of empowerment is at a moderate level for MSMEs in agriculture in Surakarta City. In reality, the majority of agricultural MSMEs can be said to be powerless in terms of limited capital, low mastery of technology and skills, and limited market access (Surya 2007). In this section, many business actors are quite good at the use of science and technology, such as access to information related to business knowledge, business development efforts, innovation, and responding to consumers. The ability to see opportunities and improve their businesses by making changes/implementing innovations is low (Walter et al. 2019), in addition to establishing business partners in terms of marketing and production. The aspect of business actors participating in training activities during the pandemic still measures quite low. Business actors and their participation in production and the use of labor were reduced due to a decrease in turnover resulting in increased energy use within the family. The last aspect involves marketing capabilities where direct sales can only be performed in a limited manner due to activity restrictions. In these cases, business actors begin to switch to online marketing innovations, while also taking advantage of established relationships such as relatives, friends, and fellow business actors.

Surakarta City is a city located in Central Java Province where most of the people live by trading business. According to data from the Central Statistics Agency (BPS) in 2020, with respect to the food processing industry, there are 60.534 people. In order to re-strengthen and empower MSME business actors in the agricultural sector, it is necessary to study the model for empowering MSME actors in the agricultural sector after the COVID-19 pandemic (Takeda et al. 2022). The empowerment that has been carried out by MSME actors during the pandemic and after the pandemic has had an impact on MSME actors in Surakarta. The level of empowerment of MSME actors in Surakarta is moderate, as indicated by actors who show changes or those who are not affected. The impact shown by several business actors includes changes in from an offline to online marketing system in order to market food products and agricultural products. The next change is that SMEs in Surakarta after empowerment observed an increase in the number of orders and were able to use more machine tools for production, because they are supported by adequate production equipment.

3.2. Empirical Results Based on Path Analysis

A distribution is said to be normal if the value of the critical ratio skewness and the critical ratio value of kurtosis is between the value of -2.58 and $+2.58$ at a significance level of 0.001 ; if the value is outside this range, then the data are assumed to be not normally distributed. The assumption of multivariate normality can be observed in the last line of the assessment of normality by looking at the criterion ratio. The results of the analysis with respect to the influence of the variables of empowerment, human capital, economic capital, the perceptions of business actors of their business, and financial capital at the level of empowerment of agricultural business actors in Surakarta, are presented in Table 7.

Table 7. Data distribution normality test results.

Variable	Skewness	Critical Ratio	Kurtosis	Critical Ratio
Empowerment	1.870	10.439	1.807	5.043
Financial capital	-1.673	-9.338	1.911	5.335
Human capital	1.070	5.974	0.748	2.088
Perception	0.290	1.618	0.042	0.117
Economic capital	0.609	3.399	0.145	0.404
Empowerment Level	-0.255	-1.423	-0.493	-1.376
Multivariate			3.018	2.106

In Table 7, it shows that not all variables are normally distributed, because the values of the critical ratio skewness and critical ratio kurtosis still include two variables that are above 2.58 , namely, the empowerment and financial capital variables. However, for the critical multivariate kurtosis ratio of 2.106 , which is below 2.58 , it meets the normal assumption. For this reason, in general, it can be said that the distribution of the data used in the model can be considered to be normally distributed because of the simultaneous nature of path analyses. Thus, the process of testing data outliers does not need to be conducted again.

We tested the theoretical model using path analyses with the AMOS 20 software. A theoretical model is in accordance with empirical data if the empirical data values meet the test criteria. Several types of criteria for testing the suitability of the theoretical model with empirical data (Ghozali 2011) include using chi-square testing instruments; probability values ($p > 0.05$); GFI, AGFI, and TLI values > 0.90 ; and an RMSEA value < 0.08 .

The theoretical model built in this study is based on the empowerment variable, human capital, economic capital, the perceptions of business actors in their business, and financial capital that affects the level of ability of agricultural business actors in Surakarta, indicating that all latent variables fit; the model can be used to use as the test model. The results of the goodness-of-fit model test show that the model is a fit model, and it has a p value of $0.223 > 0.05$ and a chi-square value = $8.218 < 43.77$; moreover, other model suitability criteria also met the criteria required by the model, such as goodness of fit, which can be observed in Table 8.

Table 8. Model fit test results/model fit index.

Goodness of Fit Index Criteria	Cut-Off Value (Critical Value)	Empirical Result	Model Evaluation
Chi-squares	<43.77	8.128	Fit
Probability	>0.05	0.223	Fit
CMIN/DF	<2.0	1.370	Fit
GFI	>0.90	0.986	Fit
AGFI	>0.90	0.951	Fit
CFI	>0.95	0.973	Fit
NFI	>0.90	0.916	Fit
TLI	>0.90	0.933	Fit
RMSEA	<0.08	0.045	Fit

The results (Figure 1) of the standardized effect show that empowerment has a significant direct effect on economic capital at 0.22 (21.6 percent) and a very significant positive direct effect on the level of ability of agricultural business actors at 0.21 (20.9 percent). Direct empowerment has no significant effects on human capital, perceptions, and financial capital. Economic capital and the perceptions of business actors have a very significant direct effect on the level of ability of business actors at 0.23 (23.1 percent) and 0.37 (37.2 percent), respectively, while human capital and financial capital have no direct effects on the level of ability. Indirect empowerment via human capital, economic capital, perception, and financial capital has no significant effects on the level of ability of agricultural business actors, which is presented in Tables 9 and 10 in more detail.

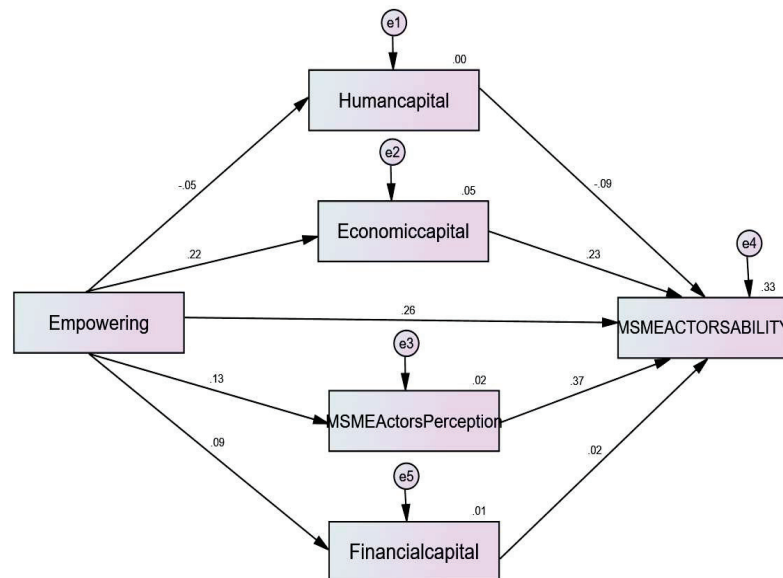


Figure 1. Path analysis result.

Table 9. Direct effect path analysis test results.

Direct Effect	Path Coefficient	Standard Error	p Value
Human capital ← Empowerment	−0.050	0.261	0.493
Economic capital ← Empowerment	0.216	0.063	0.003
Perception ← Empowerment	0.127	0.094	0.082
Financial capital ← Empowerment	0.091	0.011	0.212
MSME Actors' Ability ← Empowerment	0.209	0.239	***
MSME Actors' Ability ← Human capital	−0.094	0.066	0.124
MSME Actors' Ability ← economic capital	0.231	0.269	***
MSME Actors' Ability ← perception	0.372	0.185	***
MSME Actors' Ability ← financial capital	0.026	1.505	0.667

*** Significant with alpha 1 percent means very significant.

Table 10. Indirect effect path analysis test results.

Indirect Effect	Path Coefficient and Standard Error	Path Coefficient	Z-Sobel	R-Square
Ability ← Human capital ← Empowerment	−0.050; 0.261 −0.094; 0.065	0.0047	0.18991183	0.3
Ability ← Economic capital ← Empowerment	0.216; 0.063 0.381; 0.185	0.0823	1.76544543	4.7
Ability ← Perception ← Empowerment	0.127; 0.094 0.246; 0.274	0.0312	0.74776296	1.6
Ability ← Financial capital ← Empowerment	0.091; 0.011 0.026; 1.505	0.0024	0.01727571	0.8

Significant if the Z value of Sobel is greater than −1.96 to 1.96.

4. Discussion

Community empowerment is a process of preparing agricultural business actors by using various resources (human capital, economic capital, perception, and financial capital), opportunities, knowledge, and abilities to increase the capacity of agricultural business actors in determining their future, in addition to improving their participation and affecting their wellbeing. Empowerment efforts are carried out by synergizing various elements, namely empowerment programs, human capital, economic capital, perceptions, and financial capital for MSMEs in Surakarta City. Empowerment affects business abilities, either directly or indirectly.

Based on the results of the analysis, empowerment has no direct significant effects on human capital. Human capital is an asset related to the ability to perform a certain activity. With respect to empowerment, individuals do not make good use of the community's human and social capital. This is because the development method that is used still imitates the new order model by prioritizing physical growth. As a result, the empowerment that is carried out is more similar to that observed in top-down processes, which place the government as the subject and the community as the object so that empowerment does not work as well as it should (Shaleh 2020). The empowerment process is a cycle or process that involves a community that works together in formal and non-formal groups in order to examine various problems and to plan, implement, and evaluate programs. From the research study's results, it can be observed that empowerment has no significant effects on human capital. A study confirmed that empowerment will increase competence with

respect to both knowledge and expertise and can promote the implementation of activities in creating a competitive society (Widjajanti 2011).

Based on the results of the analysis of the empowerment variable, it has a very significant direct effect on economic capital. Economic capital in this study includes: investment capital; working capital; the origin of business capital; percentage of own capital and capital from outside (loans); loan sources; payment systems; interest in payments; ownership of business entities; ownership of business assets; types of business assets owned and controlled; business turnover before and during the pandemic; percentage change in turnover; non-business income; production costs; packaging costs; and marketing costs. Decreased income certainly affects the decrease in the amount of capital issued every day. With the empowerment processes carried out during post-pandemic times, they were able to increase the income of agricultural business actors in the city of Surakarta. This happens because business actors in the agribusiness sector benefit from empowerment in the form of initial capital assistance, which was able to support production, especially for food-processing MSMEs. Sufficient capital in the form of production equipment is able to support production performance so that the resulting product can be produced in large quantities but within a short period of time; it is hoped that it will increase the profits of business actors. According to the theory of economic growth, economic growth can be influenced by the stock of capital, labor, the quality of the workforce, and technological advances or innovations made to improve the economy in a region. In other words, the development of physical capital has an important role in realizing economic growth. In addition, human resource development is also an important factor when developing the economy, especially in growing an inclusive economy (Solow 1988; Todaro and Smith 2012).

From various viewpoints on the concept of empowerment, the concept of abstracted empowerment is used in this study as a means of supporting the local economy by strengthening the factors of production and the control of distribution and marketing, community income, and providing public access to related information, knowledge, and skills. Based on the results of the analysis of the relationship between variables, it can be observed that empowerment has no direct significant effects on perceptions. Perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment. The public perception of empowerment policies and programs provides a basis for the growing willingness to participate and play an active role in every activity, and it will be a motivator or obstacle with respect to playing an active role in the activities they are engaged in (Robbins 2003). In the empowerment activities carried out in this study, the activities showed that empowerment did not affect the perception of business actors in the agricultural sector in Surakarta City. This can occur because business actors in the agricultural sector still consider that empowerment activities are only limited to providing assistance or encouragement that can only be felt when the activity takes place.

Based on the results of the analysis, empowerment has no direct significant effects on financial capital. Business actors in the agricultural sector have a very large role in the national economy, so there are strategies that must be carried out to increase business exchanges. Financial capital is one of the supporters of the sustainability of MSMEs in the agricultural sector (Marija et al. 2021). Financial capital is a capital structure that supports the business continuity of a company. The results showed that financial capital had no effect on a business actors' ability in the agricultural sector. Most business actors in the agricultural sector do not take loans from banks or other financial institutions for fear of not being able to pay in installments and other difficult administrative matters. The reason why business actors continue to use their own capital as a source of capital is that there are administrative requirements that are not easy when borrowing from a financial institution. In addition, the interest and loan repayment periods make business actors more agitated. Therefore, business actors prefer to use their own capital or borrow from their families. There are also business actors who borrow from PKK groups in the RT level or local environment, and they are considered to be safer and easier than financial institutions.

Based on the results of the analysis, empowerment has no direct significant effects on business actors' ability in the agricultural sector. Business actors' ability is categorized in several forms, including the ability to think, act and control what one will do. A community level of empowerment is needed to improve welfare and the level of empowerment (Sholeh 2020). The results showed that empowerment had no effects on the level of empowerment. This is inversely proportional to the results of the research study conducted by Sulistyati et al. (2011), which show that empowerment no has an effect on business actors' ability in the agricultural sector when running their business. The helplessness experienced by a group can be caused by external factors, including the social structure of society and internal factors that include feelings of laziness, being undisciplined, and no investment of effort when dealing with difficult circumstances (Sulistyati et al. 2011). The community's empowerment process needs to pay attention to the involvement of the community who is a target in utilizing the potential of its resources to the fullest so that they can help themselves (independently).

Based on the results of the analysis, human capital does not significantly and directly affect a business actor's ability. MSME actors in Surakarta are well versed in science and technology, particularly the use of social media for daily communication. The implementation of this business is inversely proportional to the statement that high employee work productivity can be attained if employees have a desire to improve their abilities so that company goals will be carried out effectively and efficiently (Purnami and Utama 2019). The implementation of this business is contrary to the statement that high employee work productivity can be attained if employees have the motivation to improve their abilities so that business will be carried out effectively and efficiently. Employee work productivity can be observed from the quantity and quality of work performed by employees by considering the amount of resource costs incurred in realizing the job (Hanaysha 2016). Factors related to science and technology capabilities that are owned are not utilized optimally by business actors for their business, namely marketing. Business actors have the ability to see using social media will expand their product's marketing network, but they prefer to still sell their products manually. Social media is only used for orders by regular customers only. Only some of the business actors changed their business by using machines to speed up the production process and to produce more products.

Based on the results of the analysis, economic capital has a significant direct effect on business actors' abilities. The income received by business actors with the working capital issued has a slight difference such that the production activities conducted by business actors are always adjusted relative to the income they receive. Income as a determining factor can affect the condition of productive capital with respect to economic empowerment (Akbar et al. 2020). By conducting business, we can find out whether we will obtain sufficient income or not and whether will be able to utilize incomes as much as possible, and learn the balance between income and consumption patterns (Gilarso 2005). Various activities are carried out by business actors in order to increase their income or turnover. The activities carried out are conducted by selling their products at various events held by the City of Surakarta in post-pandemic recovery activities such as Sekaten, CFD, and in crowded places.

Based on the results of the analysis, perception has a significant direct effect on business actors' ability. Formally, perception comprises a process of selecting, organizing, and interpreting things into a broader and more meaningful and comprehensive picture (Kusuma 2018). Business actors have various perceptions when carrying out their business activities. The business information received by these business actors provides various views or perceptions on how they run their businesses. The marketing system during the COVID-19 pandemic has undergone a change from what was originally conventional; now, it expanded to digital or online marketing methods using social media platforms. Barriers with respect to the development of business actors include the limitations of business facilities and infrastructure, especially with respect to equipment and technology. Most business actors use technologies that are still simple; thus, it is still difficult for business

actors in the agricultural sector to compete with others with respect to quality and quantity (Budiyanto and Effendy 2020).

Based on the results of the analysis, it can be seen that financial capital has no direct significant effects on the level of empowerment. Business capital comprises the funds used to run a business and the efforts made to keep the business running (Melia 2015). Business actors in Surakarta, in running their businesses, often need additional capital so that production activities can continue to operate. The additional capital needed comes from their own finances, family finances, or loans. During its implementation, on average, business actors use their own capital compared to borrowed capital. Only a small portion of businesses used loan capital. The problems that MSME actors complain about are generally limited capital and difficulties in marketing (Hakim 2019). The results of the study found that the existence of financial capital or additional capital did not directly affect the level of the empowerment of business actors. This is because business actors do not pay attention to the source of funds they receive, but focus on the nominal fees required during the course of conducting the business, which is used to develop the business.

Food processing business actors are given facility in the form of physical capital and human capital. Physical capital is obtained by providing the cooking utensils needed for the production process. Human capital is provided for food processing business actors in the form of training with respect to making bread or managing a bakery, which can improve individual abilities in the field of food processing. The training provided new experiences and knowledge for business actors, which can then be implemented for business development (Figure 2).



Figure 2. (a) Baking training at Ganep bakery; (b) training on making apem Kampung Sewu.

The facility provided for agribusiness MSME actors is in the form of physical capital with support for business capital in the form of the procurement of fertilizer-making equipment and business houses. This procurement aims to support the initial capital of agribusiness entrepreneurs when starting new businesses (Figure 3). The business location was built as a comfortable location for production and as a place to market their products. Fertilizers produced by business actors in the agricultural sector in Surakarta after the empowerment program come in the form of liquid organic fertilizers and solid organic fertilizers. Materials for making fertilizers were obtained from organic waste (vegetables, fruits, and plant leaves) comprising household products obtained from residents around the production house. Solid organic fertilizers produced by agribusiness actors were obtained from animal waste and family waste.



Figure 3. (a) Intervention for making organic fertilizer houses; (b) gazebo-making intervention for selling agricultural products.

The level of ability of business actors in the agricultural sector can be observed from their ability, which allows them to exhibit strength and provides them with the ability to see opportunities, recognize their potential, master science and technology, and have the will and ability to act. However, it is not easy to achieve because achieving community-level empowerment is very dependent on the support of personal resource factors, economic resources, physical capital, social capital, personal perception, and the perception of empowerment.

5. Conclusions

In an effective empowerment effort to revive and develop agricultural business in Surakarta, it is very necessary to provide intensive post-intervention assistance for business actors until their business runs well. In addition, empowerment will be maximally successful if it uses many existing resources in its implementation, such as human capital, economic capital, financial capital, and the perception of business actors in their business. The existence of these resources needs to be improved because they can directly affect the ability of business actors in the agricultural sector. Empowerment has a significant direct effect on economic capital at 21.6 percent and a very significant positive direct effect on the ability of business actors in the agricultural sector by 20.9 percent. Direct empowerment has no significant effects on human capital, perceptions, and financial capital. Economic capital and perceptions of business actors have a very significant direct effect on the ability of business actors at 23.1 percent and 37.2 percent, respectively, while human capital and financial capital have no direct effects on empowerment. Indirect empowerment via human capital, economic capital, perception, and financial capital does not have a significant effect on the empowerment of business actors in the agricultural sector.

6. Findings

The results of this study can be used by relevant stakeholders, such as the government, non-governmental organizations, universities, the industrial world that implements CSR funds for empowerment programs, communities who are interested and focused in the field of community empowerment, as well being the basis for policy making in conducting empowerment programs in the field of agricultural business. A very important thing that cannot be ignored in empowering the community, is especially post-intervention assistance, in addition to the availability of various resources such as human capital, economic capital, financial capital, and the perception of business actors in their business, so that the results of empowerment in the community are very important, especially for business actors in the agricultural sector.

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Article

How Do Hospitality Workers Perceive Their Work Skills before and after the Lockdown Imposed by the COVID-19 Pandemic?

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Abstract: The present research aims to compare hospitality workers' confidence about the perceived need to improve their soft and hard skills during and after the lockdown period. With this purpose, a questionnaire was applied to a sample of workers from four- and five-star hotels located in the historic centre of Porto (Portugal). Data collection took place in two different time periods: April 2020 and April 2022. The findings evidence that workers are more confident of their skills but are also more aware of the need to develop them, particularly their soft skills. This is likely related to the context of remote work, which intensified the need to learn, and evidenced the necessity of skills such as teamwork and adaptation or flexibility, which showed the greatest increase in perceived need to improve. Despite such an increase, the competencies workers feel like they need to improve the most are still hard, i.e., linguistic and digital. Accordingly, those in which workers are the most confident are soft, i.e., teamwork, interpersonal relationships, and adaptation or flexibility, which is likely because those were the most developed during the pandemic. The findings provide useful insights for human resources management in the hospitality sector. The study points to good practices aiming to address the real development needs of hospitality workers.

Keywords: hospitality sector; soft skills; hard skills; human resources; workers' perceptions; COVID-19 pandemic; comparative study

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1. Introduction

The tourism sector was hit particularly hard by the impacts of the COVID-19 pandemic, suffering a sharp decline in 2020 and 2021. However, the international flow of tourists around the world in 2022 shows that despite its great vulnerability, the industry has a strong potential for recovery after periods of crisis. On the other hand, this resumption has been accompanied by a severe lack of skilled workers in the hospitality sector, due to the massive transfer of its labour force to less severely affected activities by the pandemic crisis. In parallel, the hotel sector, especially the four- and five-star hotels, increasingly offer a personalised and experiential service before, during and after the stay. Therefore, it is of utmost importance that people working in the hotel sector have certain skills, such as communication and interpersonal skills, an ability to generate empathy, digital skills, flexibility, and the ability to work in a team and to manage conflicts. In this context, the present study aims to compare hotel workers' perceptions—namely, their confidence of and perceived need to improve each of the aforementioned skills—during lockdown (in 2020) and during the resumption of tourism activity in Portugal (in 2022).

To reach this goal, four- and five-star hotels located in the historic centre of Porto (Portugal) have been adopted as study settings. The area was considered an ideal habitat for this research due to its importance as a tourism product. Porto has been elected Europe's best city destination by the World Travel Awards (WTA 2022) several times. That includes the 2022 edition, and a year in which the Portuguese hospitality industry's performance is already surpassing that of 2019, which had been the greatest so far (Turismo de Portugal

2022). Recognized as a Cultural Heritage of Humanity by UNESCO since 1996, the HCP plays a significant role in this achievement.

The present study's relevance and originality stem from the combination of the addressed subject (soft and hard skills) and the context in which it is addressed (i.e., Portugal's state of emergency due to the COVID-19 pandemic and the following period of tourism resumption). Naturally, previous studies have approached the importance of intellectual capital in hotels (Astuti et al. 2020), and even in the hotel industry in the HCP (Magalhães et al. 2022). However, the recent crisis likely led to a change in the need for qualification. During the pandemic, new needs and perceived benefits arose, demanding specific competencies from hospitality workers. Naturally, some of those changes are structural, and persist after the main crisis. Therefore, new, up to date studies are necessary to understand the role of hard and soft skills in catering to guests' needs and the expected benefits.

2. Literature Review

2.1. *The Hotel Sector in Porto and Northern Portugal*

In 2019, tourism in Porto and Northern Portugal was growing above the national average, which in turn, was already higher than the EU average. The area was achieving record numbers of overnight stays (which had increased 10.6% in comparison to the previous year), revenue (which had increased 14.8%), and RevPAR (revenue generated per available room). In this context, ten new hotels were opened in Porto that year (adding 960 new rooms to its hospitality offer), mostly due to the additional demand generated by the MICE (Meetings, Incentives, Conferences and Exhibitions) segment. This growth increases competitiveness in the hospitality industry, raising the demand for excellent services, and therefore, for qualified professionals. Hotels employed 22,472 people in Porto, in 2018 (a 33% increase in comparison to 2010). Most of this workforce, however, have quite a low level of formal qualification, as by 2019, only 13% had completed university studies, and more than half (53%) had only completed basic studies.

Naturally, the tourism sector was hit particularly hard by the pandemic. In Portugal, guest numbers decreased 61.3% in 2020, in comparison to 2019, and overnight stays decreased 63%, leading to an over 66% decline in the hotels' total income. Accordingly, the Portugal National Bank (2021) revealed that tourist revenues in 2020 were less than half (57.6% less) of those achieved in 2019. Naturally, this recession scenario had an impact on employment in the hospitality industry, which decreased 8.9% (INE 2021). The total number of people formally employed, however, does not tell the whole story, as according to the Portuguese Hotels Association (2021) (AHP), 90.27% of Portuguese hotels laid off part or all of their workers. Therefore, even amongst those still officially employed, most had their income severely reduced. Amongst those still working, the number of employees with only basic education increased 2% (reaching 55% of the total) (INE 2021). This is likely related to the closure of higher end hotels and restaurants, which normally need to hire more qualified professionals.

In 2022, when the confinement had been lifted in most counties, the tourism industry experienced an upturn, and Porto was no stranger to this phenomenon. The numbers of the tourism industry in 2022 are surpassing those of 2019. In the accommodation sector, 3.4 million guests and 9.9 million overnight stays were recorded in August 2022. Compared to August 2019, there were increases of 1.2% and 2.8%, respectively (INE 2021). This is the first time since the start of the pandemic that increases have been recorded compared with the corresponding period before the pandemic. However, despite this growth, the hotel sector is currently going through a labour crisis, as during the lockdown period, workers were forced to look for jobs in other industries. Higher education in Tourism was also affected by the pandemic, registering a general decrease in the demand for Tourism degrees.

In sum, on the one hand, the pandemic created new service standards and the expected values from consumers rose. On the other hand, it led to a human resources crisis, which is aggravated by a decrease in demand for formal education in the area. In this context, it is

important to understand the hard and soft skills required to keep hospitality businesses competitive in this post-COVID-19 era.

2.2. *Hard and Soft Skills before and after Pandemics*

The concept of skill is widely discussed in business management literature (Stevens 2012). In this context, a relevant distinction is that between soft and hard skills, which has been addressed by several authors (Koval et al. 2020; Sopa et al. 2020; Wibowo et al. 2020). Moreover, several studies (Hersey and Blanchard 1977; Katz 1974) point to the importance of a leader having both types of skills (soft and hard), which is reflected on the profile of professionals sought out by organizations (Müller and Turner 2010). In this context, Parry (1996) states that hard skills are the essential competencies for performing a particular task, that is, technical abilities. Soft skills, in turn, are related to emotional competences.

Consequently, hard skills have a mainly cognitive nature and imply the previous acquisition of some type of knowledge (North and Worth 2000; Weber et al. 2009; Windels et al. 2013), which should be applied in each circumstance (DeLong and Elbeck 2018). Soft skills, in turn, are interpersonal and behavioural traits, which help people put their hard skills into practice (Windels et al. 2013). Some authors argue that, with the pandemic, soft skills became the new hard skills (Trudeau-Poskas 2020), increasing not just in terms of valorisation by companies, but also in measurability (Devedzic et al. 2018).

In terms of development, hard skills can be acquired through professional experience, academic training, and lifelong training (Katz 1974; Leroux and Lafleur 1995; Maniscalco 2010; Rao 2012). Examples of hard skills are linguistic competencies, such as English (Suebwongsuwan and Nomnian 2020), and digital competencies (Kolobkova et al. 2021). In fact, the importance of digital skills has become even more evident with the pandemic, especially due to the context of remote work (Ferreira et al. 2022; Zancajo et al. 2022).

Soft skills are transversal, as they are related to personality, behaviour and knowing how to be (Heckman and Kautz 2012). They also help people realize their true potential, and thus, promote the achievement of goals (Muir 2004), being thus essential for leadership functions (Jamison 2010). Several authors also argue that soft skills are not so easily measurable (Maniscalco 2010; Raftopoulos et al. 2009; Rao 2012; Shakir 2009). Some of the most relevant soft skills in the labour market are communication, critical spirit, flexibility and adaptability, ability to work in a team and relate to others, ability to solve problems and negotiate, ability to make decisions, self-confidence, self-management, ethics (Ajzen 1991; Patacsil and Tablatin 2017; Pritchard 2013; Robles 2012; Singh and Singh 2008; Williams 2015), and autonomy (Windels et al. 2013). Additionally, the importance of several soft skills, namely the ability to work in a team, communication skills, an ability to solve problems, and critical spirit, increased with the pandemic (Michel et al. 2022). Regarding communication, the pandemic accelerated its shift to digital platforms (Nguyen et al. 2020). Other soft skills, such as leadership, adaptability and flexibility, empathy, relationship building, openness to new technologies, and openness to change, also gained importance during the pandemic (Pezer 2021).

In sum, if competences were already essential for the success of organizations before the pandemic (Moldoveanu and Narayandas 2019), their importance has become even more evident after this crisis (Ferreira et al. 2022; Ratten 2020). Indeed, recent studies show that the importance of reskilling and upskilling, particularly in digital contexts, has increased in the post-pandemic period (Verma and Gustafsson 2020). In addition, currently, the human resources of companies have greater and faster access to tools that allow them to obtain new skills and retrain others (Jaiswal et al. 2021). At the same time, it is necessary to be aware that not everything is transferable to digital, and consequently, soft skills continue to be a differentiating factor (Black and van Esch 2020).

Most of these trends apply to the hospitality industry. However, due to its vulnerability to crises, as well as to particularities of tourism services—inseparability, intangibility, and high fixed operation costs (Middleton et al. 2009)—the impact of the pandemic was especially hard. This impact is addressed in more detail in the next section.

2.3. Workers Self-Evaluation of Competencies (Comparison during and after)

The investigation of skills in the hospitality sector has been addressed by several authors (Awasthi et al. 2020; Hahang et al. 2022; Hertzman et al. 2015; Kiryakova-Dineva et al. 2019; Magalhães et al. 2022; Mohammad 2020; Spowart 2011; Susaeta et al. 2020; Weber et al. 2013, 2020). However, due to the changes brought about by the pandemic, which severely affected this industry, it is urgent to reflect upon the skills needed in this new context (Hahang et al. 2022).

Regarding soft skills, recent studies point to the importance of leadership and teamwork (Hahang et al. 2022; Jawabreh et al. 2020). More specifically, Hahang et al. (2022) show that positive thinking, the ability to make decisions, flexibility, critical thinking, the ability to build trusting relationships, and the ability to communicate had a beneficial impact on leaders during the pandemic. Additionally, Fang et al. (2017) state that leadership must consider individual characteristics. In terms of flexibility, this was one of the skills that gained the most relevance with the pandemic, having become key for companies to adapt to the new reality and face critical circumstances (Barry et al. 2022).

Regarding hard skills, digital skills were already essential before the pandemic, and became even more important afterwards (António and Rita 2021; Ndou et al. 2022). On the other hand, studies also demonstrate that hospitality companies often have deficiencies in terms of these skills (Parsons et al. 2022). In this context, Carlisle et al. (2021) draw attention to the gap between existing and required digital skills.

The coordination between soft and hard skills is particularly relevant in the tourism sector, namely in a scenario of digital transformation and great instability (Strietska-Ilina and Tessaring 2005). In the past, organisations valued professionals' technical skills almost exclusively. Currently, this is no longer the case, especially in the hospitality industry. Therefore, the search for soft skills increased, particularly in the case of the ability to communicate and work in a team, flexibility, the ability to manage time, emotional intelligence and a sense of empathy, an ability to solve problems, positive attitude (Sonnenschein 2021), and conflict solution skills (Erdly and Kesterson-Townes 2003; Kay and Russette 2000). In fact, studies conducted before the pandemic described the ability to communicate, work in a team and leadership as the most important skills for the hospitality sector. More recent studies, which aimed to determine the most sought-after skills in the post-pandemic hotel industry, indicate that communication skills and the ability to work in a team and to solve problems are the most required skills in this sector (Scarinci et al. 2022).

Studies also indicate that the hotel industry is concerned with hiring people who combine their social skills with techniques (hard skills), as both are critical in delivering excellent services and enabling quality experiences (Marneros et al. 2020). On the other hand, some studies suggest that hotel industry employees are not prepared to deal with critical situations, requiring more training to develop certain social skills (Chalupa and Chadt 2021). Therefore, for understanding whether tourism sector workers have the demanded soft and hard skills, it is essential to provide competitive services in this post-crisis period, so that deficiencies and improvement opportunities can be identified and addressed.

3. Materials and Methods

This investigation's main objective was to compare hospitality workers' confidence of and the perceived need to improve their soft and hard skills during (2020) and after (2022) the lockdown imposed as a safety measure due the COVID-19 pandemic. To pursue this objective, a survey was carried out with workers of four- and five-star hotels in the Historical Centre of Porto (HCP). The selection of this area as study setting is justified by several reasons. Recognised as a Cultural Heritage of Humanity by UNESCO since 1996, the HCP is one of the most visited places in Portugal. In fact, the city of Porto has been elected Europe's best city destination by the World Travel Awards (WTA 2022) several times, including in the 2022 edition.

Like in other major destinations in Portugal, tourism in Porto and northern Portugal was thriving in 2019, presenting record numbers of both occupancy, RevPAR, and overnight

stays. In sum, 2019 had been the best year so far for tourism in Portugal, and 2020 was expected to be even better. For 2022, the data so far leads to expectations that tourism gains will be superior to 2019. In fact, monthly numbers show increases of over 30% in comparison with the same periods of 2019 (Turismo de Portugal 2022). In the HCP, specifically, the total number of hotels increased 68% between 2009 and 2019, according to INE. Therefore, the area has been playing a significant role in this recovery trajectory. Conceding this scenario, the HCP was deemed an adequate setting for the present study.

3.1. Participants

A survey questionnaire was used to collect data from four- and five-star hotel workers in the HCP. Therefore, the total research population consisted of workers of only 19 hotels, the total number of hotels within these categories in the HCP. As the first cross-sectional data collection was carried out in April and May 2020, that is, during the lockdown, all the procedures took place remotely. In this context, the first step consisted of contacting human resources directors via e-mail. The message contained a link to the questionnaire, which they were solicited to forward to workers under their supervision. For the second dataset, for the sake of consistency, a similar procedure was adopted.

The questionnaire employed both during and after the lockdown period included a description that aimed to ensure respondents that the information they provided was anonymous and confidential. This aimed to increase the response rate, as hotel managers are often insecure about sharing information they might view as critical.

Prior to the first data collection phase, aiming to detect potential issues, a pre-test was carried out with a smaller sample of workers. The total sample included 101 valid responses, 48 within the during-lockdown section and 53 within the post-lockdown section. This relatively small sample is a result of the context of the study—namely, the collection of data during the lockdown period, when hotels were closed or with minimum activity. On the other hand, the limitations it could bring about are mitigated by the relatively small total research population (workers from 19 hotels). Although small, the sample includes workers from all different functions and levels, as detailed in Table 1, which summarises the sample characterisation.

3.2. Instrument

The questionnaires applied during and after the lockdown feature the same items of confidence of and perceived need to improve soft and hard skills, to allow for the intended comparisons. The evaluated skills and the wording of the items follow the rationale adopted by Magalhães et al. (2022). In sum, eight questions measured workers' evaluation of their own skills (namely how much they thought their skill level was enough to satisfactorily carry out their job), and another eight measured their perceived need to improve these same skills. The evaluated skills included five soft skills, three hard skills, and "other skills". The items were operationalised on a 5-point Likert scale (1 = Strongly disagree; 5 = Strongly agree). The questionnaire ended with categorical questions on sociodemographic and job-related variables, which allowed for the sample characterization.

Data were collected in two distinct periods separated by two years: 2020 and 2022. Regarding analysis methods; first, the data were subjected to basic descriptive statistics for the sample characterization and general description of workers' evaluation on their skills. Then, reliability tests were performed on the sets of soft and hard skills, as they were later treated as dimensions for the sake of comparison. Finally, independent sample Mann–Whitney U tests (as the variables were not normally distributed) were employed to compare workers' confidence of and the perceived need to improve their soft and hard skills during and after the lockdown period.

Table 1. Sample comparison—during and post lockdown.

	During Lockdown	After Lockdown
N	48	53
Gender		
Male	52.5%	54.7%
Female	47.5%	45.3%
Formal education		
Higher education	45.5%	54.7%
Technical Superior Professional Course	16.8%	17.0%
Secondary school	14.9%	1.9%
Master's degree	14.9%	20.08
Level 5 course	4.0%	1.9%
Basic school	3.0%	1.9%
PhD	1.0%	1.9%
Age		
29 to 39	41.6%	41.5%
18 to 28	33.7%	28.3%
40 to 50	16.8%	20.8%
51 to 61	6.9%	7.5%
62+	1.0%	1.9%
Department		
Reception	25.0%	34.0%
Food and beverages	18.8%	13.2%
Housekeeping	16.7%	0.0%
Maintenance	12.5%	0.0%
Administration	10.4%	26.4
HR	8.3%	11.3%
Marketing	6.3%	13.2%
Management	2.1%	1.9%
Function or position		
Undifferentiated worker	50%	18.9%
Intermediate management	14.6%	32.1%
Technical	10.4%	11.3%
Administrative	8.3%	11.3%
Auxiliary	8.3%	1.9%
Top management	6.3%	20.8%
Intern	2.1%	3.8%
Type of contract		
Fixed term contract	43.8%	43.4%
Uncertain term contract	18.8%	3.8%
Unlimited term contract	18.8%	43.4%
Partial contract	14.6%	1.9%
Internship	2.1%	3.8%
Outsourced	2.1%	3.8%
Time in the company		
1 to 3 years	43.8%	26.4%
Less than 1 year	22.9%	22.6%
3 to 5 years	18.8%	18.9%
More than 5 years	14.6%	32.1%

4. Results

4.1. Sample Characterization

To allow for a comparative study of workers' confidence and perceived need to improve their soft and hard skills during and after the lockdown period, two different samples were collected in April 2020 and April 2022, respectively. Table 1 summarizes the sociodemographic profile and work situation of each sample.

4.2. Workers Self-Evaluation of Competencies (Comparison during and after)

Both during and after the lockdown, most workers feel that they have the necessary skills to satisfactorily carry out their jobs. During the lockdown period, the skill with which workers showed the most confidence was teamwork (4.58), followed by interpersonal relationship competencies (4.46) and adaptation or flexibility (4.33). At the bottom end, workers showed they were least confident about their digital competencies (4.00), followed by other competencies (4.19) and specific competencies of the work area (4.23). After the lockdown period, the competence with which workers are the most confident is once again teamwork (4.81). However, this time it is followed by adaptation and flexibility (4.70) and communication (4.66), which had come in fifth in the during lockdown sample. Interpersonal relationship competencies, second place within the lockdown sample, now came in fourth (4.64). The competencies with which workers are the least confident are the same as during the lockdown period: conflict management (4.25), others (4.3) and specific competencies of the work area (4.40). Both during and after the lockdown period, the three competencies with which workers were the most confident were all soft competencies. Meanwhile, the three competencies with which they were the least confident were all hard skills.

Regarding differences between the two periods, as shown on Table 2, after the lockdown, workers evaluated their digital, communication, and teamwork skills significantly better. That is, workers are particularly more confident of their soft skills, as those include two (communication, teamwork) out of the three that showed significant improvement. Regarding the other competence categories, averages are consistently higher in the after-lockdown sample, but with no statistical significance.

Table 2. Differences in the self-evaluation of competences—during and after lockdown.

		Mean	SD	Mean Difference	<i>p</i>
Linguistic competencies	During lockdown	4.33	0.808	−0.176	0.226
	After lockdown	4.51	0.750		
Digital competencies	During lockdown	4.00	1.011	−0.509	0.005 *
	After lockdown	4.51	0.639		
Communicational competencies	During lockdown	4.29	0.771	−0.369	0.009 *
	After lockdown	4.66	0.517		
Interpersonal relationship competencies	During lockdown	4.46	0.713	−0.183	0.272
	After lockdown	4.64	0.484		
Conflict management competencies	During lockdown	4.25	0.700	0.005	0.890
	After lockdown	4.25	0.757		
Teamwork competencies	During lockdown	4.58	0.613	−0.228	0.046 *
	After lockdown	4.81	0.395		
Flexibility and adaptability competencies	During lockdown	4.44	0.741	−0.261	0.087
	After lockdown	4.70	0.463		
Specific competencies of the work area	During lockdown	4.23	0.751	−0.167	0.166
	After lockdown	4.40	0.793		
Other competencies	During lockdown	4.19	0.532	−0.114	0.250
	After lockdown	4.30	0.668		

* Significant at the 0.05 level.

4.3. Perceived Need to Improve Competencies during and after Lockdown

Regarding workers' perceived need to improve their skills, values are closer to the centre of the scale. During the lockdown period, linguistic competencies (3.38) were those the workers felt they needed to improve the most, followed by digital competencies (3.35) and other competencies (3.31). In accordance with their self-evaluation, teamwork (2.67) was the competency workers least felt that they needed to improve, followed by adaptation and flexibility (2.73) and interpersonal relationship competencies (3.02). After the lockdown, the three competencies that workers felt they needed to improve the most were the same. However, digital competencies (3.79) and linguistic competencies (3.75) switched positions; that is, the former became the workers' priority in terms of skill development. Analogous to workers' evaluation of their own skills, in the post-lockdown period, the skills they felt they needed to improve the least remained the same as before: teamwork (3.34), adaptation and flexibility (3.36) and communicational competencies (3.40). Once again, in accordance with workers' evaluation of their skills, both during and after the lockdown period the three competencies that workers felt they must improve the most included two hard competencies (linguistic and digital) and one generic category (other competencies).

Accordingly, the three competencies that workers felt they need to improve the least are all soft skills. Regarding differences in the perceived need to improve competencies between the during and after lockdown samples, as shown in Table 3, workers' perceived a significantly higher need to improve their interpersonal relationship, conflict management, teamwork, and flexibility or adaptability skills, as well as those specific to the work area, and other competencies. That is, although generally, the workers are more confident and perceived a lower level of need to improve their soft skills, in the after-lockdown period, they are particularly more aware of the need to improve them as well. This is evidenced by the predominance of soft skills within those with a significantly higher level of perceived need to improve within the post-lockdown sample. Regarding the remaining categories, the average is consistently higher in the after-lockdown sample, but with no statistical significance.

Table 3. Perceived need to improve competencies—comparison: during and after lockdown.

		Mean	SD	Mean Difference	<i>p</i>
Linguistic competencies	During lockdown	3.38	1.438	−0.380	0.226
	After lockdown	3.75	1.239		
Digital competencies	During lockdown	3.35	1.263	−0.438	0.081
	After lockdown	3.79	1.063		
Communicational competencies	During lockdown	3.10	1.242	−0.292	0.211
	After lockdown	3.40	1.230		
Interpersonal relationship competencies	During lockdown	3.02	1.263	−0.489	0.044 *
	After lockdown	3.51	1.219		
Conflict management competencies	During lockdown	3.13	1.315	−0.573	0.028 *
	After lockdown	3.70	0.972		
Teamwork competencies	During lockdown	2.67	1.389	−0.673	0.012 *
	After lockdown	3.34	1.239		
Flexibility and adaptability competencies	During lockdown	2.73	1.180	−0.629	0.006 *
	After lockdown	3.36	1.210		
Specific competencies of the work area	During lockdown	3.13	1.231	−0.611	0.010 *
	After lockdown	3.74	1.146		

Table 3. *Cont.*

		Mean	SD	Mean Difference	<i>p</i>
Other competencies	During lockdown	3.31	1.188	−0.442	0.040 *
	After lockdown	3.75	1.090		

* Significant at the 0.05 level.

4.4. Confidence of and the Need to Improve Soft and Hard Skills

To further analyse the improvement in workers' self-evaluation of their competencies, as well as their increased perceived need to further enhance them after the lockdown, comparisons were also made by grouping the skill categories within soft and hard skills. Prior to these comparisons, reliability tests were carried out for both factors, to ensure they could be grouped as reliable scales. Both Cronbach's alpha values are above 0.7 (0.747 for hard skills and 0.810 for soft skills), Nunnally's (1978) threshold for factor reliability, which suggests the scales are indeed reliable. As shown in Table 4, workers are significantly more confident of their hard skills after the lockdown. Soft skills also present a higher average, but with no statistical significance. Nevertheless, the workers also show a higher level of perceived need to improve both their hard and soft skills. In sum, workers are more confident of their skills after the lockdown, and possibly also more eager to enhance them.

Table 4. Comparison of self-evaluation and perceived need to improve soft and hard skills—during and after lockdown.

		Mean	SD	Mean Difference	<i>p</i>
Confidence in soft skills	During lockdown	4.40	0.553	−0.207	0.091
	After lockdown	4.61	0.377		
Confidence in hard skills	During lockdown	4.19	0.701	−0.284	0.028 *
	After lockdown	4.47	0.594		
Need to improve soft skills	During lockdown	2.93	1.146	−0.531	0.012 *
	After lockdown	3.46	1.051		
Need to improve hard skills	During lockdown	3.28	1.161	−0.476	0.038 *
	After lockdown	3.76	0.948		

* Significant at the 0.05 level.

5. Discussion

The goal of this study was to compare hospitality workers' confidence of and perceived need to reinforce their soft and hard skills during and after the lockdown period. To this end, a questionnaire survey was conducted with four- and five-star hotel workers in the Historical Centre of Porto both during (2020) and after (2022) the lockdown period. The questionnaires operationalised workers' confidence of and the perceived need to improve their soft and hard skills through items proposed based on previous contributions on the topic.

Previous studies showed that the most required soft skills before the pandemic were: ethics, ability to communicate and relate to others, critical spirit, ability to make decisions, ability to negotiate and solve problems, self-confidence, self-management (Ajzen 1991; Patacsil and Tablatin 2017; Pritchard 2013; Robles 2012; Singh and Singh 2008; Williams 2015), and autonomy (Windels et al. 2013). After the pandemic, studies point to the importance of teamwork, communication, problem-solving, leadership, interpersonal relationships, adaptability, flexibility, critical thinking (Michel et al. 2022), empathy, openness to new technologies, and openness to change (Pezer 2021).

In the hotel industry, studies point to teamwork and leadership skills as the core competencies (Hahang et al. 2022; Jawabreh et al. 2020). Studies addressing the post-pandemic period, point to a prevalence of soft skills, since positive thinking, the ability to make decisions, flexibility, critical thinking, the ability to build trusting relationships, the ability to communicate (Hahang et al. 2022), positive attitude, empathy and emotional intelligence, time management, problem solving (Sonnenschein 2021), and conflict management skills (Erdly and Kesterson-Townes 2003; Kay and Russette 2000) have also become critical for the industry.

In the context of the present investigation, during the lockdown period, the skills with which workers showed to be the most confident were teamwork, interpersonal relationship competencies, and adaptation and flexibility, in this order. This is a good sign, since, as concluded by Hahang et al. (2022) and Jawabreh et al. (2020), these are some of the most important competencies for the sector. After the lockdown period, the competence with which workers are the most confident is, once again, teamwork. However, this time it was followed by adaptation and flexibility (rather than interpersonal relationships), and communicational skills. This may be related to the context of remote labour relations that arouse during the pandemic. The COVID-19 crisis led to the interruption and reduction in hotel activities, forcing their personnel to adapt to new ways of working in a context of market instability (Barry et al. 2022), in which new forms of communication (Dias et al. 2021), mainly remote (Nguyen et al. 2020), had to be used. The competence with which workers continue to be the least confident is conflict management, which is worrying, since it is a core competence for the hotel industry (Erdly and Kesterson-Townes 2003; Kay and Russette 2000).

Regarding the differences between confidence of skills before and after lockdown, workers showed they were significantly more confident of their teamwork skills. On the other hand, they also perceive a higher need to improve them, as they do with all other soft skills except for communication. This is likely due to the realisation that, as pointed out by Barry et al. (2022), the importance of these skills, particularly flexibility, has also increased because of the pandemic. Regarding hard skills, the workers showed they were least confident with their digital competencies, followed by other competencies and specific competencies of the work area. This finding is also a cause for concern in the hotel industry since digital skills are part of the most currently demanded hard skills by the market (António and Rita 2021). Moreover, studies point to a gap between the desired and the actual level of these skills in this sector (Parsons et al. 2022). In fact, the competencies with which workers were the least confident before the lockdown were hard skills (linguistic competencies and digital competencies).

In the after-lockdown period, workers evaluated their digital skills significantly better. Nevertheless, although these hard skills continue to be those in which workers perceive the greatest need to improve, digital skills now take a more prominent place, becoming workers' priority in terms of improvement. This is in line with recent study (i.e., António and Rita 2021; Ndou et al. 2022) findings, which show that these are the most required skills in the hotel sector, as well as those in which greatest deficiencies are observed (Carlisle et al. 2021; Parsons et al. 2022). In the same vein, as the perceived need to improve all hard skills was already high, they did not present any significant change after the lockdown.

6. Conclusions

Considering the addressed findings, this study contributes to the theory of the field by reinforcing previous conclusions. In sum, the findings show that workers are more confident of their skills, but also more aware of the need to develop them, which is true for both soft and hard skills. However, the competencies that workers feel the least need to improve are soft skills, which is likely because they were the most developed during the pandemic. Therefore, the study corroborates previous contributions that point to a shift in the valorisation of workers' skills in the hospitality sector, namely, an increasing prevalence of soft skills, especially after periods of crisis.

In terms of practical contributions, the findings provide useful insights for human resources management in the hospitality sector. Namely, the study points to good practices aiming to address the real development needs of hospitality workers. For example, hotels should develop training plans that are more in line with the skills workers felt they needed to improve the most, particularly those they felt even more need to improve in the post-pandemic period (i.e., digital, and communicational competencies). Hotel human resources management should also consider those deficiencies in their recruiting programs. Other practices suggested by the present findings are performance evaluation systems that analyse the effectiveness of upskilling and reskilling, and the development of career management programs more suited to the reality of each employee.

With this awareness and action, companies in this sector should be able to improve the qualification of their workforce, contributing to the improvement of motivation levels, the attraction of people with an adequate profile and, consequently, greater market competitiveness. Still in practical terms, this study helps potential jobseekers in the hospitality sector to invest in their training in areas considered more urgent, such as digital skills.

Despite its contributions, the present study also presents shortcomings. The main limitation of this research is clearly the sample size. This is explained, however, by the context in which it took place, when hotels were severely restricted by the pandemic (specially the first data collection). In addition, despite having two distinct data collection sections separated by a two-year period, the study is still of a cross-sectional nature. Therefore, it is still unclear whether this “new reality” of workers’ perceptions about their skills represents a structural change, or whether it can be generalised to other contexts.

To overcome those limitations, future studies should adopt similar methods and variables to address hotel workers’ perceptions of their skills in the future. A new assessment in three years, for example, could help understand such perceptions in a period when companies and workers had enough time to invest in training in the most critical areas, such as digital skills. Accordingly, these variables should also be examined in other geographical contexts, namely in Portugal’s central and southern regions, as well as in other countries.

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Article

The Resilience of Tourism Recreation Companies in a Pandemic Context: The Case of Canyoning in the Azores

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Abstract: The COVID-19 pandemic had an enormous impact on the tourism sector. Economies with a large weight of external tourism were especially affected, as was the case with the Azores region. This paper aims to analyse the level of this crisis and the resilience of tourism recreation companies specializing in canyoning in the Azores region, and whether these reactions led to more sustainable business models. The adopted methodology considered the analysis of recent statistical data on tourism and the available information on COVID-19 pandemic-related impacts. In parallel, questionnaires were applied to all tourism recreation companies in Portugal, and semi-structured interviews were conducted with all the canyoning providers in the Azores region. Results show that all companies survived the crisis, and some have made significant changes to their business models. Furthermore, some degree of success was observed in how services adapted to new demand characteristics, given the small size of most of these businesses and the specialization of their products.

Keywords: Azores; COVID-19; canyoning; entrepreneurship; resilience; tourism

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1. Introduction

The COVID-19 pandemic has created an unprecedented crisis in the tourism sector, with an average 70.1% reduction in international tourism arrivals in 2020, and an economic contraction in Europe estimated at 67.7% (UNWTO 2022). In the European tourism sector, cruises and airlines have taken the most severe blow, reporting a plummet of 90%, followed by tour operators and travel agencies (70%), and hotels and restaurants (50%) (European Parliament 2020). Between late March and early April 2020, 156 world destinations imposed major restrictions on international travel, some of which even closed their borders, which resulted in a dramatic plunge in international tourist arrivals, with an approximate year-on-year reduction of 97% between April and May (UNWTO 2022).

The intensity of this pandemic and its regional distribution showed great variability, with several “waves” of COVID-19. In 2021, some countries managed to significantly reduce restrictions, especially in periods with fewer infection records, which allowed some tourism recovery (Okafor et al. 2022). However, many countries continued to impose limitations on international travel.

With widespread vaccination and the disease’s tendency to transition from pandemic to endemic status, countries were able to lift most restrictions by 2022. Consequently, a quick recovery in travel and tourism began, with some destinations, such as Portugal, exceeding in summer 2022 the pre-pandemic results of 2019 (INE 2022). It is believed that this recent demand was driven by a “burning urge” to travel, showing important “psychological roots, signifying travellers’ need for retribution against COVID-19 and a regained sense of control to return to normalcy” (Miao et al. 2022, p. 2).

Countries where tourism had a great weight in their economies were particularly affected by the pandemic crisis, as is the case with Portugal. Tourism is Portugal’s main

economic export activity (51.1% of service exports) and contributes to 8.0% of national GDP, which is significantly above the average of OECD countries, where the sector contributes directly to 4.4% of GDP and 21.5% of service exports (OECD 2020). Furthermore, Portugal is highly reliant on inbound tourism, representing 69% of total tourism expenditure, while domestic tourism (31%), which has been less affected by this crisis, is significantly lower than the average of OECD countries (75% of the total tourism economy) (OECD 2020). In the national context, there are large regional differences, with the Algarve and Lisbon concentrating more than half of the total overnight stays in the country (55.5% in 2019), compared to the scarce 4.3% of the Azores.

However, tourism has become one of the main development pillars in this archipelago. In 2015, tourism contributed to 14.1% of the GDP in the Azores and was responsible for more than 10% of employment (SREA 2018). Currently, these values are even more expressive, as noted in the increase of 103.3% of nights in tourist accommodation between 2014 and 2019, which corresponded to more than double the national average (Table 1).

Table 1. Tourism activity in the Azores and Portugal in 2019 (INE 2022; SREA 2022).

	Overnight Stays	Guests	SR ¹	AS ²	FG ³	GPI ⁴	GPS ⁵	OV ⁶
Portugal	77,882,700	29,495,400	36.3%	2.6	60.5%	286.6	319.9	44.0%
Azores	3,009,845	971,794	39.9%	3.0	49.6%	400.3	418.5	103.3%

¹ SR—Seasonality rate; ² AS—Average stay; ³ FG—Foreign guests; ⁴ GPI—Guests per inhabitant × 100; ⁵ GPS—Guests per sq. km; ⁶ OV—Overnight variation 2014–2019.

In addition, the number of visitors, when weighted with the surface of the territory (guests per sq. km), the number of inhabitants (guests per inhabitant × 100) and the size of its economy, is significantly higher than the Portuguese average (Table 1).

The importance of tourism for this autonomous region is further accentuated by its geography and economy. This small archipelago, with scarce 2346 km² and approximately 240 thousand inhabitants, is an ultraperipheral territory, with nine islands scattered in the North Atlantic Ocean, and limited accessibilities, which are factors that restrict the competitiveness of its economy (European Commission 2019).

Its natural and cultural resources, its uniqueness, and the association of the islands with exotic and authentic areas, have led to the appreciation of tourism in the region. The destination's brand image is related to nature-based tourism and sustainability, so activities such as whale watching, hiking, and canyoning, arise as strategic tourism products.

However, the COVID-19 pandemic has drastically interrupted the growth cycle of tourism in these islands. The answer of the Azores authorities to the pandemic situation was swift. On 3 March, even before the first detected positive case in the region (15 March), the Regional Government declared a state of contingency. In general, the number of cases in the region was kept at a relatively low level, which led to its inclusion on the list of safer destinations during the summer and, therefore, fewer travel restrictions imposed by several important international tourism markets, namely the United Kingdom and other European countries (Safe Communities Portugal 2020). At the initial stage, the combination of measures adopted by other countries, by the Portuguese government, and by the Regional Government, resulted in the closure of international traffic to the region. Flights only restarted later, with several restrictions for incoming travelers.

In the following months, the Regional Government's strategy to stimulate tourism demand had tight travel restrictions, based on two pillars. The first was to reduce the likelihood of virus transmission from abroad by imposing control measures on inbound travellers, including the obligation to submit a negative COVID-19 test upon arrival, and a second test six days later, for anyone staying in the region for at least seven days. The second was to stimulate inter-island regional tourism by launching the «Viver os Açores» programme, intended to “encourage holiday and leisure trips in the Azores through its islands, as well as to promote the economic recovery of the region through tourism” (Presidência do Governo 2020, p. 1). According to a study conducted by the Tourism

Observatory of the Azores (OTA 2020), this campaign resulted in almost 75% of Azoreans changing their travel plans due to the COVID-19 pandemic, and 84.2% of those who still intended to take a holiday to choose the Azores. Despite these numbers, the global effects of the campaign on tourism were rather limited, and the Azores ended up being the Portuguese region that in 2020 had the biggest reduction in the number of overnight stays (−71.9%) (INE 2022). This reduction was more relevant on islands with greater tourist demand than on smaller islands (SREA 2022). An important recovery was noted in 2021, with the number of overnight stays more than doubling (114.2%) although still significantly lower than in 2019 (45.1% lower). In 2022, and still with some restrictions on travel, tourism demand in the archipelago finally managed to recover its pre-pandemic results.

The Azores are the Portuguese territory where the impact of the COVID-19 pandemic on tourism was most significant. Significant explanatory factors include insularity (dependency on air transport) and domestic market limitations (Castanho et al. 2021; European Commission 2022). However, it is important to understand the impacts on the various tourism clusters and the specific differences within these subsectors. Since nature and active tourism are the core products and the Azores brand image (IPDT 2016), it was decided to analyse the canyoning provider companies, as it is an emerging product with significant development potential. Thus, this study analyses the tourism recreation subsector, seeking to understand the effect of the pandemic on these companies, and which adaptations were made in their business models.

A mixed methodological approach was followed, using questionnaires and interviews as empirical instruments to collect information: the first during the most impactful period of the pandemic, and the second already in a period of tourism recovery. As a niche of companies in a limited territory, it is essential to simultaneously compare them with other recreation products in the Azores and nationwide. The investigation allowed the authors to understand the resilience of these companies and the changes driven by this intense and unexpected crisis.

2. Canyoning in the Azores

Canyoning is both an adventure sport and a leisure activity, consisting of the progressive exploration of mountain streams using a variety of techniques, such as abseiling, scrambling, jumping, and swimming (Silva et al. 2020). The enjoyment of natural beauty and the challenges and fun associated with abseiling down waterfalls and jumping into natural pools are some of the relevant elements of this activity (Hardiman and Burgin 2011).

This activity can either be practised autonomously or provided by business technicians, namely, within the scope of the services offered by tourism recreation companies. Thus, as far as this product is concerned, the market can be divided into two broad groups: (i) canyoning enthusiasts, with the technical knowledge to carry out the activity autonomously and who will travel with the main purpose of practising canyoning; and (ii) a highly diverse range of travellers, with little or no knowledge of the sport, but who want to enjoy engaging experiences with strong discovery, adventure and fun components (Silva et al. 2020). This second group is the main market for tourism recreation companies specializing in canyoning.

The Azores boast the highest supply of canyoning routes in Portugal, with 114 itineraries spread across six of the nine islands in the archipelago: Flores (44); São Jorge (31); São Miguel (21); Santa Maria (8); Faial (8); and Terceira (3). This is a relatively new product in the region, but it has quickly emerged as one of the most important strategic products in some of these islands (IPDT 2016; Silva et al. 2020).

Although the islands of Flores and São Jorge have the best natural resources for the practice of this sport, it is in São Miguel that canyoning supply has greater economic relevance. The reason for this apparent contradiction is justified by the clear concentration of tourists visiting the Azores on the island of São Miguel (64.2% of total guests in hotel accommodations in 2019) (SREA 2022), in addition to the use of several simple and sportive

canyoning routes. Consequently, the number of service providers increased in São Miguel, which currently holds 42% of the total number of canyoning companies in the region.

Presently, there are 12 canyoning companies offering canyoning in the Azores, spread across six islands: five in São Miguel, two on the islands of Flores and São Jorge and one in Santa Maria, Faial, and Terceira. Of these 12 companies, 11 are microenterprises, and canyoning is their main product. According to questionnaires and interview results, the weight of canyoning in these companies' total supply varies between 40% to 59% (three companies); 60% to 79% (three companies), and for five of them, it represents over 79%. Only in one of these companies (medium-sized) canyoning is not the main product; however, it still represents between 20% and 39% of the company's turnover.

Although canyoning is a seasonal product, with a high concentration of services provided between July and September (the weight of over 40% in all these companies and between 60% to 79% in most of them), all of the businesses provide canyoning services throughout the year. In Azores, as in most other regions, canyoning services tend to target visitors who wish to enjoy a one-off activity with a relatively low level of expertise and for a short period. Thus, the predominant service model in the Azores consists of offering a "baptism" or "discovery" activity, with the following characteristics:

- Duration—approximately half a day, 3 to 4 h of activity;
- Level of difficulty—easy routes, with rappel descents of below 20 m;
- Groups: small groups of 1 to 10 persons accompanied by 1 to 2 monitors;
- Requirements—being able to swim, to walk on uneven ground and having a minimum age of 5 to 14 years, which varies according to the company;
- Price—between 50 and 70 euros;
- Includes—wetsuit, footwear, personal protective equipment, insurance, technical framework;
- Complementary or other characteristics—transport, snacks, photos.

Some companies also offer services to experienced customers, namely more technical routes, and hybrid products, combining hiking, gastronomy, and canyoning, or canyoning and coasteering.

3. Methodology

In addition to researching sources with statistical data and information on the evolution of tourist activity in the Azores and on the impact of the COVID-19 Pandemic, an empirical study was carried out, supported by a mixed approach with both quantitative and qualitative data.

In the first phase, questionnaires were applied between October and November 2020 to tourism recreation companies in Portugal, focusing on the impacts of the COVID-19 pandemic on their businesses, their levels of resilience, and answers to this crisis. Despite the focus of this study being specialized canyoning businesses in the Azores region, the option of considering all recreation companies in Portugal as a universe allowed the authors to ensure the representativeness of the sample and to understand if there were regional differences between activities. As the legal registration of these companies is mandatory in Portugal and available in the National Tourism Registry database ($n = 9575$), the email addresses of all registered companies were used to invite business owners to answer this questionnaire, available on an online platform (Turismo de Portugal 2020b).

Across Portugal, these companies sell a huge diversity of activities, which may be divided into three broad groups: (i) cultural tourism and landscape touring; (ii) outdoor/nature tourism and adventure tourism; and (iii) nautical operators. Approximately 99% of these companies are micro or small companies that heavily rely on foreign market customers (65%), providing mainly half-day or one-day services (66% of the offered activities) (Turismo de Portugal 2020a).

The application of the survey aimed to analyse the effects of the COVID-19 pandemic on tourism recreation companies in Portugal, the relevance of the adopted measures to mitigate the effects of this pandemic and the resilience of the sector. It was also intended

that these results could contribute to the construction of the interview script to be applied to canyoning companies in the Azores, and to establish a comparison of these companies with the recreation sector average. The questionnaire considered 32 questions grouped into four dimensions: (i) the characterization of the company (n = 10); (ii) the impact of the pandemic on companies (n = 12); (iii) the analysis and evaluation of measures to support the sector (n = 3); and (iv) transformation, resilience, and trends in these businesses (n = 7).

A total of 419 validated answers was obtained, corresponding to a response rate of 4.5% and a margin of error of 4.67% for a 95% confidence interval. In terms of tourism recreation companies operating in the Azores, 43 responses were considered valid, corresponding to 10.3% of the study's sample.

In the second phase, between February and March 2022, semi-structured interviews were carried out with all the tourism recreation companies specializing in canyoning in the Azores (n = 12). The type of assessment tool chosen and the period in which it was implemented allowed a detailed and qualitative collection of information once companies were returning to pre-pandemic demand levels. These interviews aimed to analyse the impacts of the COVID-19 pandemic on their businesses, the evaluation of support measures made available to companies, how they adapted to the imposed restrictions, what changes there were in their supply chain and in their business model, and what the prospects for the future were.

The main questions in the interviews were organised in five dimensions: (i) the characterization of the respondent and the company; (ii) canyoning product, supply, demand, and markets; (iii) the assessment of support measures during the pandemic period; (iv) impact, resilience, adaptations, and changes resulting from the pandemic; and (v) expectations regarding the future.

The interviews had an average duration of 57 min, ranging from 00:27 to 1:27 min, and were carried out remotely and recorded using the Zoom platform. Eleven respondents were the companies' CEO, and the one left was the CFO responsible for the canyoning product.

4. Results—Impact and Answers to the COVID-19 Pandemic on the Azores' Canyoning Services

Data obtained from the questionnaires confirmed other studies' information. This is a sector in which most companies are very small (59.2% of companies have less than three full-time workers), operate throughout the year (91%), and cover a wide range of activities, highlighting cultural circuits, nature tourism, nautical activities, and events organization.

In the specific case of the 12 canyoning companies in the Azores, three did not have any full-time workers, five had between one and two, and only one had more than 20 full-time workers. The weight of canyoning in their businesses in 2019 was over 75% for seven companies and between 30% and 50% for the rest. Only in two of these companies, canyoning was not their main product, however, it still represents between 20% and 39% of the company's revenue. Although this is a seasonal product, with the highest concentration of services provided between July and September (with a weight of over 40% in all companies and 60% to 79% in most of them), all the companies provide services throughout the year.

The impact of the pandemic on Portuguese tourism recreation companies was very evident in the first year. The reduction in these businesses in the second quarter of 2020 was wide, with most agents having to close their activity. Regarding the third quarter, which corresponds to the sub-sector's peak season, 98% of the companies reported a decline in their activity, and in 35% of them, this decrease was above 79% (n = 43). In the national panorama (n = 383), results were also striking, though slightly less expressive, as 89% of the companies considered a turnover reduction, of which 30% assumed a decrease of over 79%. It should be noted that some companies decided to temporarily close their business in 2020, as was the case of one of the 12 canyoning companies in the Azores region.

Comparatively, the reduction in specialized canyoning companies in the Azores was relatively lower, particularly in those that suffered a reduction of 40% to 59% (four compa-

nies) or above 79% (three companies), but slightly higher than the average for companies with canyoning services in Portugal (Table 2). All companies with a reduction of over 79% operate on São Miguel Island. These figures demonstrate not only the huge negative impact of this pandemic on these businesses but also the great heterogeneity among the companies.

Table 2. Turnover variations in the third quarter of 2020.

Company Group	Increased	Maintained	Reduced	Reduced				
				<20%	20–39%	40–59%	60–79%	>79%
Portuguese recreation companies (n = 419)	4%	7%	89%	26%	12%	17%	16%	30%
Portuguese canyoning companies (n = 38)	3%	5%	92%	23%	11%	29%	17%	20%
Azores recreation companies (n = 43)	2%	0%	98%	28%	14%	12%	12%	35%
Azores canyoning companies (n = 12)	0%	0%	100%	9%	18%	36%	9%	27%

These differences were not statistically significant, according to the Mann-Whitney test. The option for this non-parametric test is justified as the variables are qualitative and do not present a normal distribution (MacFarland and Yates 2016). Results indicate that there are no significant differences between the specialized canyoning companies in the Azores and the total number of tourism recreation companies in Portugal in terms of their turnover reduction during the third quarter of 2020 ($U = 1882.00, p = 0.351$), nor in the comparison between the total number of recreation companies in the Azores and the national ones ($U = 7389.00, p = 0.943$).

Regarding market deviations, three classes of analysis were established: (i) local community; (ii) tourists from other Portuguese regions (national tourists); and (iii) international tourists. Table 3 depicts the variations in these markets during the peak high season quarter. A sharp reduction may be observed in the international market and a less noticeable decrease in the domestic market. This observation also reveals high heterogeneity in the sector and a difference between canyoning companies, compared to the general recreation sub-sector. All canyoning businesses reported an increase in demand from the local market, with more than half reporting an increase from the domestic market, which was not the case for most tourism recreation businesses.

Table 3. Market variation in the third quarter of 2020.

Company Group	Markets	Increased		Maintained	Reduced		
		26–50%	1–25%		1–25%	26–50%	>50%
Azores canyoning companies (n = 11)	Local community	64%	36%	-	-	-	-
	National tourists	-	55%	9%	9%	18%	9%
	International tourists	-	-	-	-	36%	64%
Azores recreation companies (n = 43)	Local community	17%	19%	21%	-	5%	38%
	National tourists	10%	14%	17%	10%	5%	45%
	International tourists	-	-	2%	5%	19%	74%
Portuguese recreation companies (n = 419)	Local community	4%	11%	31%	5%	5%	43%
	National tourists	11%	11%	19%	7%	6%	45%
	International tourists	1%	1%	4%	5%	7%	82%

Azores canyoning companies' managers were unanimous in stating that the main cause of the reduction in their turnover was the sharp fall in the number of overseas visitors. When confronted with the level of safety of their activities in relation to virus transmission, they all claimed to have taken the appropriate measures to ensure the safe practice of the sport.

Regarding the impact of this pandemic on employment, the majority of canyoning companies and recreation services in the Azores stated that they did not intend to dismiss employees or cancel contract renewals (67% and 70%, respectively). These are relatively high figures and point to the possibility of a major negative impact on employment in the region (Table 4). As for the national scenario, the data also revealed some uncertainty with respect to these possibilities, with 19% of companies answering: “I don’t know, perhaps”.

Table 4. Companies that consider dismissing or not renewing contracts.

Azores Canyoning Companies (n = 12)			Azores Recreation Companies (n = 43)			Portuguese Recreation Companies (n = 419)		
Yes	Perhaps	No	Yes	Perhaps	No	Yes	Perhaps	No
25%	8%	67%	23%	7%	70%	24%	19%	57%

According to Azores’ canyoning companies, the main factors that positively influenced the business during this COVID-19 pandemic were: (i) the successful adaptation of their products (73%); (ii) the possibility of maintaining the company’s regular service (73%); (iii) the successful adaptation of the company’s structure to accommodate the demand (64%); and (iv) the availability of public support measures (55%). Regarding the negative factors, the entrepreneurs highlighted: (i) travel limitations among the affected countries (82%); (ii) the applicable rules in terms of social confinement (73%); and (iii) a significant drop in tourism demand (55%).

Within the scope of the governmental measures, one of the most emblematic initiatives was the implementation of the Clean and Safe seal. All canyoning companies in the region have implemented this measure (except the company that closed in 2020), while the proportion of Azores’ recreation companies (n = 43) to implement this measure was 72%, and the total Portuguese recreation companies (n = 338) was 82%. When asked to evaluate national and regional government support measures, the respondents highlighted the suspension of taxes and contributory payments and the implementation of the Clean and Safe seal as the most relevant actions. As far as the “simplified layoff” measure and its extension to managing partners is concerned, around half of the companies considered this to be very important, while the other half considered it unimportant. The least valued measures were the possibility of a moratorium on the payment of interest and capital on existing loans, and access to new loans with subsidized interest or state guarantees.

As for the level of satisfaction with the actions of the sub-sector’s responsible entities, the companies evaluated them mainly with the following answers: “neither satisfied nor dissatisfied” or “no opinion (indifferent)”. The level of dissatisfaction was higher in relation to the national government and public entities when compared to the regional reality. The main difference between the assessment by canyoning companies and the rest of the Azores’ recreation businesses was the level of satisfaction with municipalities’ support measures, with higher dissatisfaction on the part of the recreation companies in general (Table 5).

Table 5. Satisfaction with public entities’ measures.

Company Group	Public Entities	Unsuitable	Indifferent	Adequate
Azores canyoning companies (n = 12)	Government and public entities—mainland Portugal	36%	46%	18%
	Government and public entities—Azores	18%	64%	18%
	Municipalities	9%	64%	27%
Azores recreation companies (n = 43)	Government and public entities—mainland Portugal	33%	42%	26%
	Government and public entities—Azores	21%	47%	33%
	Municipalities	36%	46%	18%

As the interviews were carried out in 2022, restrictions were much lower and expectations were brighter in the short term, thus allowing the authors to have a perspective of what the post-pandemic period would be like. This viewpoint also allowed the investigators to analyse resilience and transformations in the business models of these companies. Of the 12 canyoning companies in the Azores, only one was temporarily closed between 2020 and 2021, and therefore it is not considered in some of the presented data. The strong reduction in businesses in 2020 was confirmed, with an average decrease of 65.3% in the number of canyoning customers, ranging between -18.1% up to -90.6% . However, in 2021, there was a strong recovery with an average growth of 149.0% compared to the previous year, showing a reduction of 13.5% when compared to 2019 values. As can be seen in Table 6, some heterogeneity may be found between companies, due to several factors, namely the markets, business size, corporate structure and business models, geographic location, and the implemented answers.

Table 6. Variation in the number of canyoning customers in the Azores.

	Reduction (%)					Growth (%)			
	Over 75	51–75	26–50	1–25	1–50	51–100	101–200	201–300	Over 300
2019–2020	4	2	3	1	1	0	0	0	0
2020–2021	0	0	0	1	0	3	4	2	1
2019–2021	0	2	2	2	3	1	0	1	0

For five of the 11 companies, demand in 2021 was even higher than in 2019, when the number of customers was around 12,500 and the estimated business value was 750 thousand euros. These values are relatively low, but the product is already considered strategic for the destination (IPDT 2016) and has strong growth potential. Four main factors contribute to this perception: (i) in 2019 only about 1.3% of tourists who visited the region have performed this activity; (ii) this product is capable of providing experiences of great value (Botelho et al. 2022; Hardiman and Burgin 2011); (iii) it has a broad market (families, youth to adults, without the need for technical knowledge); and (iv) the Azores have excellent natural resources for carrying out this activity (Silva et al. 2014).

However, the pandemic brought significant market changes; by 2020, it was almost entirely local and national. These markets remained important in 2021, but there was a strong recovery of the international market, and it is foreseeable that in 2022 this will be the predominant market for all companies.

As most of these companies are microenterprises, and in 2019 four of them did not have any permanent workers, along with canyoning's seasonality, several companies use temporary or occasional guides. This HR structure contributed to greater resilience in the sector, but also limited access to some support measures. Five of the companies did not receive any support during the crisis, either because they did not apply for it or because they were not eligible. For three of the companies, this support was not very expressive, and for the remaining four, it was fundamental, particularly for companies operating in São Miguel and those with a greater number of permanent workers.

Business responses to the crisis were diverse. One of the companies closed its activity until mid-2022, and those that did not have permanent human resources survived, especially because the company's CEO had another professional activity and because operating costs were low. However, most sought to adapt their business model and develop other actions that would mitigate the impacts resulting from the demand reduction. A significant number of companies redirected their supply to other markets and even changed products, focusing on local community customers, and creating holiday camps. Three of the companies extended their business to other activities, such as tree climbing and vertical work.

Regarding the adaptation of canyoning services, these were essentially related to the reinforcement of equipment hygiene, adherence to the national Clean and Safe seal, and implementing measures such as distancing and mask-wearing. However, because the

activity is performed outdoors and includes a significant physical and aquatic component, some of these procedures were not followed. Several companies adopted other measures such as reducing group sizes and five companies stopped transferring customers between the accommodation and the activity locations. This last procedure allowed them to reduce costs and facilitate the management of the activity, which is why they consider it a measure to keep, especially since most customers are tourists who resort to car rentals during their holidays.

The resilience of these companies is immediately evident as they all survived the crisis and did not fire any employees, although they have significantly reduced the hiring of temporary workers. Some entrepreneurs even mentioned that the crisis also had positive impacts, highlighting that they had time to invest in business model planning, promotion and digital marketing, managing equipment, diversifying products and markets, and improving product management.

Regarding incorporated measures that businesses intend to keep, most say that they are not significant, only mentioning suit hygiene and the end of customer transfer. Regarding their business model, there was a positive evolution with four companies that did not have any permanent employees, now having and reinforcing the acquisition of equipment. In terms of structuring changes, the strengthening of the local market (clients of canyoning and holiday camps) should also be highlighted, which helps to reduce the seasonality of the activity and to focus on other business segments. Two companies started tourist accommodation businesses, three added vertical work and tree climbing segments and the other three started other recreation activities such as coasteering, holiday camps, and adventure parks, among others.

Although some companies believe that product diversification is an important strategy for increasing their company's competitiveness and sustainability, the majority prefer to continue focusing primarily on the canyoning product because they believe it is profitable, has strong growth potential, and that their specialization in this product allows them to strengthen their competitiveness.

5. Conclusions

Tourism was one of the main sectors to be affected by the COVID-19 pandemic crisis (OECD 2020; UNWTO 2022). To mitigate the effects of this crisis, efforts were redirected to domestic markets and the adoption of sanitary measures to promote safety and stimulate tourists' confidence to visit destinations. Countries such as Portugal, or the Azores region, heavily dependent on foreign tourism, had greater difficulties mitigating the impact of this crisis, both economically and socially. However, tourism's strong recovery in 2022 contributed significantly to the high performance of Portuguese GDP, which will be around 6.7% in 2022 (Banco de Portugal 2022).

The Azores managed to ensure a relatively low level of COVID-19 risk until early November 2020. Although some domestic tourism-oriented measures were implemented in the region, results still demonstrate severe reductions in 2020, when compared to the average of OECD countries and the Portuguese reality (European Commission 2022; INE 2022). These impacts were more expressive in islands with a higher tourist weight, namely Faial and São Miguel, which may be explained by the region's dependence on external tourism and accessibility limitations, as the aeroplane and cruises are practically the only means to visit the archipelago. The progressive reduction of travel restrictions allowed the recovery of tourism results, which started in 2021 and was accentuated in 2022 (SREA 2022).

As for the impact of the pandemic on the tourism recreation sub-sector in Portugal and the Azores region, 2020 was a dramatic year. However, most companies have survived this crisis and are relatively optimistic about the future. This position may be justified by the fact that most of these companies are microenterprises and have relatively low fixed costs. Therefore, the recreation sub-sector may be considered one of the most resilient in the tourism sector.

Data collected through questionnaires showed that during the period with the greatest impact on business, there were no statistically significant differences between the reduction in tourism recreation companies in Portugal and those in the Azores, including the ones specializing in canyoning in that region.

Regarding the interviews carried out with the Azores canyoning companies in 2022, at a time of strong recovery of their activity, it was confirmed that all these companies survived this pandemic crisis. Answers differed between companies depending on their business model, size, location, and the level of expertise. All these agents highlighted that the crisis had strong negative impacts on their businesses, but also identified advantages such as the “discovery” of the local market and an opportunity to dedicate time to planning their businesses. In general, companies took the opportunity to accelerate some of the transitions already underway or to promote changes in their business model, with a focus on resilience and competitiveness—to answer a demand that they believe will be growing in the coming years.

There are several studies on the impacts of the COVID-19 pandemic on the tourism sector and these businesses’ resilience over adversities caused by this crisis, but few analyse companies specialized in a product and/or a region. In this sense, this study contributes to reinforcing the conclusions of macro-level studies and simultaneously understanding a set of territorial characteristics of canyoning as a specific tourism product.

However, as the interviews were only carried out with canyoning companies in the Azores, the generalization and comparison that was established with the set of tourism recreation companies in Portugal, and even canyoning companies in Portugal, should be considered limited and could be valued in the future with the application of interviews to a broader sample of companies.

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Article

Financial Objectives and Satisfaction with Life: A Mixed-Method Study in Surf Lifestyle Entrepreneurs

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Abstract: Tourism lifestyle entrepreneurs (TLEs) have introduced an innovation in business management based on the region, community, environmental sustainability, and extra financial factors. This type of entrepreneur allows the development of regions by attracting investment and presenting innovative products/services and is an important aid to the local economy. Based on the importance of TLEs, this study aims to explore factors influencing satisfaction with life as a key ingredient to attracting surf TLE. For this purpose, priority was given to obtaining primary data through a sequential approach of mixed methods, first with a quantitative study using survey data of 109 surf TLEs, followed by in-depth interviews. The results show that a good contact network and a strong link to a place influence satisfaction with life in a positive way. As a result, the moderating effect of financial objectives on these relationships alerts destination decision-makers about different entrepreneurial approaches regarding surf businessman attraction. This study makes an important contribution by providing empirical evidence regarding the ongoing discussion about financial vs. non-financial objectives for this type of entrepreneur, showing that both are important for their decision-making process. These results provide valuable insights for several industry stakeholders, namely funders (for grant approval), policymakers (alerting that these entrepreneurs should be addressed considering non-financial objectives), and entrepreneurs (alerting to goal definition patterns).

Keywords: tourism lifestyle entrepreneurs; surf; life satisfaction; networking; financial objectives

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1. Introduction

Over the past few years, after witnessing successive growth in the tourism sector, with relevance in Portugal, we have been confronted with one of the greatest health crises ever—the pandemic caused by COVID-19. In the past few years, the profile of the tourist or visitor has undergone several mutations, assisting in recent times in the search for unique and environmentally sustainable experiences (Ateljevic and Doorne 2000).

That said, this article aims to focus on the understanding and differentiation of a specific type of entrepreneur linked to the tourism sector, the so-called “Lifestyle Tourism Entrepreneurs” (TLE), as well as on their satisfaction with life. This type of individual is completely different from the entrepreneurs we have always been used to observing (Carlsen et al. 2008), first of all because their entrepreneurial motivation derives from issues other than financial (Wang et al. 2019), in particular environmental and social concerns (Stubbs 2017), based on a logic of sustainability (Wang et al. 2019), and based on the location where they develop their business (Shrivastava and Kennelly 2013).

The TLE sees the pursuit of profit as a “small part of a whole” (Boons and Lüdeke-Freund 2013), as its approach is based on the environment and society (Bocken et al. 2014),

these being the cornerstones of its operations (Stubbs 2017). On another point, these managers have also changed the existing business models, namely with the introduction of the so-called “Sustainable Business Models” (SBS), which meet what tourists are increasingly seeking.

The “community thinking” of MNS leaders (Schaltegger et al. 2016) is a distinguishing factor when compared to Traditional Business Models (TBM) (Stubbs and Cocklin 2008), thus surpassing the exclusive pursuit of profit typical of an MNT (Schaltegger et al. 2016).

The current pandemic crisis has also caused an economic crisis that has had a particular impact on this sector, generating a period of uncertainty and influencing the will of entrepreneurs to make investments (Dias et al. 2020b). Despite this situation, in times of crisis, there are always entrepreneurs who make investments to reach innovative products/services (Dias and Silva 2021a).

Knowing that to innovate, the resources must be “valuable, rare, inimitable, not replaceable”, companies, especially in times of crisis, look for new strategies to enhance these resources and offer the product/service with the greatest value perceived by the tourist (Dias et al. 2020a). Finally, the fact that, in the economy linked to tourism, TLE is already considered a very relevant group in the sector (Thomas et al. 2011).

With the emergence of TLE and, consequently, its MNS, studies have not kept pace with this evolution (Kibler et al. 2015). As a result, it is also identified that the studies on “sustainable entrepreneurship” do not focus on the link between TLE and the community in which it operates (Kibler et al. 2015). In this sense, there is a strong case for further research in this area. This research is primarily aimed at identifying the differences between a TLE and a so-called “traditional” entrepreneur. Subsequently, and following the above, it is important to assimilate how these new concepts, introduced by these entrepreneurs in the tourism sector, boost competitive advantages for the MNS in contrast with the MNT. It is also desirable to understand the motivations of TLEs and to understand their rationale of “satisfaction with life”. Finally, the contribution of this research is also intended to reveal the factors affecting satisfaction with the life of a TLE. Thus, from what has been said, they present themselves as the primary objectives of this research: (i) to understand the reasons behind these TLE; (ii) to understand the impact of the variables presented on their satisfaction with life.

2. Literature Review

2.1. TLE and MNS

To understand TLEs, it is first important to realize that they are individuals who support financial logic by superimposing their motivations and that business activity is boosted based on their lives (Marchant and Mottiar 2011). This search for a lifestyle makes them considered agents of sustainable tourism, the result of environmental attention and community spirit (de la Barre 2013), extending to their employees a strong orientation towards these concerns (Pham et al. 2020).

Thus, it is observed that the business vision of these individuals is based on a model in antithesis to the traditional one, where it is known that companies privilege their actions on the financial side (Teece 2010). Being managers for whom their businesses are based on a “lifestyle” (Sun et al. 2020) and a sustainable approach (Bosworth and Farrell 2011; Dominici et al. 2019), they add value to the communities in which they operate (Morrison 2006) and present their work and personal aspects to coexist with each other and not with a barrier between them (Sun et al. 2020). Its actions and care for the “local product” make it possible to capitalize on the region, on the one hand, through the acquisition of goods and services and, on the other, through the protection of traditions, culture, and the environment (Sun et al. 2020).

However, TLEs also obtain an important return for their businesses derived from this posture of integration in the local communities, as they can enjoy an important network of contacts created with local agents, thus enabling the creation of important synergies

(Bredvold and Skálén 2016). This rationale of “community logic” is a decisive factor for the integration of the entrepreneur in the territory (Neumeyer and Santos 2018).

On the other hand, this thinking enables local people to obtain benefits from these entrepreneurs, either by providing services or by obtaining employment, which means that the “main beneficiary” of the business is not only the tourist/visitor who acquires the service but also the members of the community itself (Bocken et al. 2014). Based on this position of TLE, it can be concluded that the MNS bases their business on the connection to the locality (Kibler et al. 2015), allowing a focus on “niche” tourism (Ateljevic and Doorne 2000), giving rise to unique and distinct tourist offers (Schilar and Keskitalo 2018). These distinctive characteristics of the offer—which provide competitive advantages (Stamboulis and Skayannis 2003)—are based on the natural, environmental, and cultural particularities of each territory (Thompson et al. 2018).

It is then understood why integration into the community by TLEs is essential to the success of MNS (Neumeyer and Santos 2018), both through the network of contacts that it can seek (Stubbs and Cocklin 2008)—drawing the “surpluses” mentioned above—and through social and environmental awareness (Stubbs 2017). It is these premises that demonstrate that an MNS is not only aimed at the financial side (Sun et al. 2020).

It is clear then that all the activities of TLE and, consequently, of its MNS are intrinsically connected with the region where they are located, and this situation is also conducive to the acquisition of knowledge (Yachin 2019). This type of knowledge that is acquired locally has in its genesis a distinctive and extremely important characteristic for the business: the fact that it is unique because it is specific to each territory (Dias and Silva 2021b). This makes their imitation quite complicated (Shrivastava and Kennelly 2013), thus ensuring unique services for visitors (Anderson 2012).

2.2. TLEs and Life Satisfaction

After the TLE’s characterization in the global context, we will now focus on an analysis of the reasons that lead to the emergence of surf lifestyle tourism entrepreneurs (TLEs), as well as understanding their profile. Surfing is the “jewel in the crown” of wave sports, generating an extremely relevant volume of business (Fendt and Wilson 2012) and capitalizing on products/services as diverse as, for example, clothing, surf lessons, hostels, and music (Ratten 2018). In this activity, as in the genesis of MNS, economic factors are not the primary motivation for entering the market (Kaplan 2003), also making the link here to the lifestyle of TLEs (Southernden 2005). The localities that have conditions for the practice of this sport are the target of investment in these areas (Kaplan 2003) by entrepreneurs who want to combine the leisure and professional aspects, thus making their hobby their work (Peters et al. 2009), and reaching their own performance standards (Dias et al. 2022).

From what has been said, it is important to point out that sports can be related to “fashion” and culture, and it is understood that the practice of this activity in the region can have an impact on investment by entrepreneurs (Ratten 2018). It is also important to mention that the lifestyle is not only about the location or the intensity of surfing in the region because this activity is also understood as a link between the individual and environmental sustainability (Southernden 2005). On another point, going into the profile description of TLE—and the factors that directly impact their life satisfaction—it is considered that they are educated individuals from various origins and different age states (Marchant and Mottiar 2011).

Their communication and interaction skills with clients are unique characteristics that allow them to enjoy their work, with enormous satisfaction, thus ensuring excellent service (Marchant and Mottiar 2011; Gato et al. 2022). This pleasure that comes from contact with other individuals, is a great motivational factor for TLE to enter the surfing business, making, as an example, in surf schools the classes are restricted to a small group of students so that there can be more contact between all (Marchant and Mottiar 2011).

It is added that the great desire to live in a certain region is also a decisive factor in the decision to open such a business (Marchant and Mottiar 2011). Another feature of TLEs is

that they are travelers, often taking away the idea of becoming entrepreneurs in this area on the same trips (Marchant and Mottiar 2011), showing a tendency for TLEs, as tourists, to show a greater propensity for investment than tourists in general, precisely because they are fascinated with travel (Ratten 2018). The logic of community thinking is also present in this type of entrepreneur thinking about networking, making them privilege the creation of synergies between companies, thus ensuring a sharing/interaction that translates into strong help between the various businesses (Marchant and Mottiar 2011). Finally, a distinctive factor in TLE is the future conduct of their business (Marchant and Mottiar 2011).

There are three types of entrepreneurial postures: (i) TLE that deliberately restrict their MNS to have time to devote to their lifestyle; (ii) TLE that make their business grow and try to maintain compatibility between work and leisure; and (iii) TLE that consider that market opportunities cannot be ignored and develop their business by boosting the external environment (Marchant and Mottiar 2011).

2.3. Contact Network

As we saw earlier in the TLE characterization, networks are very important and intrinsic to their identities/business activities (Bredvold and Skålen 2016). Therefore, it is important first of all to understand that the literature considers that a network of contacts derives from a system of collaboration between entities that is based on trust, commitment, and access to mutual resources to achieve objectives and create value (Romero and Molina 2011). However, this value, which is created by a network of contacts, not only benefits the business success of the TLE MNS but also the planning/implementation of projects for the development of the regions themselves, which obtain valuable inputs from the sharing of information and knowledge (Kallmuenzer et al. 2019).

The need for networking also emanates from the sustainability project for the destination (Kallmuenzer et al. 2019), which will create conditions for investment and, consequently, an increase in the number of TLE (Daly et al. 2020; Koh and Hatten 2002). In this way, it is understood that the type of networks, as well as their stages of evolution, have a direct impact on the creative environment of the region (Kallmuenzer et al. 2019). As far as the tourism sector is concerned, three strands of networks are considered: (i) exchange networks; (ii) trade partners; and (iii) trade, which is more latent in smaller tourism enterprises (Kallmuenzer et al. 2019). On another point, focusing now on the nature of relations between the TLE, these denote an informal nature, which places communication as a cornerstone for trust in cooperation (Kallmuenzer et al. 2019), thus understanding that social relations, in addition to allowing access to information in the possession of other elements, dictate the reliability of shared information (Yachin 2019). The acquisition of this information is essential for the identification of opportunities, as they are not “palpable” but the result of various circumstances (Fadda 2020).

The partnerships make it possible to develop and reach new businesses through the use of both resources and knowledge (Dias et al. 2020a). These situations are exceptionally important for smaller companies, which draw from these synergies the “tools” they need (Dias et al. 2020a). Finally, it should also be noted that these networks are not limited to exclusive information sharing between individuals in the same sector but rather between the entire community (Drake 2003).

2.4. Link to the Place

Knowing that the link to the local is a decisive factor for TLE’s business, as its motivations favor the choice of a region that allows them to enjoy their lifestyle (Shaw and Williams 2009), it becomes imperative to understand what is meant by “local”. The literature associates the sociological concept of “location” with “localization”. This understanding is all-encompassing in that it combines notions such as community, cultural traits (individual and collective), and social networks (Lang et al. 2013) with the “local”.

After the assimilation of the concept of “local”, it is now important to list the important factors that TLE considers when choosing the region in which to invest, ranging from

environmental, political, networking, community integration, seasonality to innovation, among others (Kallmuenzer et al. 2019). Therefore, the surrounding environment covers all the situations described above, since tourist regions are usually characterized by being located in places with natural, environmental, and social components favorable to the requirements of TLE (Wang et al. 2019). In addition, political, social, and economic issues contribute to the creative process, which will lead to the innovation that TLE will present in its MNS (Drake 2003). However, these innovations must be framed within the context of seasonality, climate, and the region's natural characteristics (Schilar and Keskitalo 2018).

To sum up, it is understood that all these premises can act as a decisive motivational force in attracting investment to a given region, as environmental resources enhance the right circumstances (Dias et al. 2020a). Knowing that TLE is the central agent in tourism progress (Power et al. 2017), it is then possible to understand the environmental impacts of its characteristics and, consequently, that it is a business procedure (Fu et al. 2019). After the presentation of the definition of "local" and the reasons why TLEs consider the regions as key factors in their decision-making, it is important to present how TLEs manage their MNS as well as the reasons why the localities themselves benefit from these tourism investments (Carson et al. 2018).

The logic of "connection to the place", present in the genesis of TLE, makes that in the conduct of their business there is special attention to the environment and the contribution they can offer to the community (Marchant and Mottiar 2011). This community thinking means that the place where they are established can benefit from this situation, not only for environmental conservation but also in an economic and social sense by increasing jobs, opportunities for other businesses, and strengthening the cultural matrix of the area (Wang et al. 2019). There is also another very pertinent issue in the link between TLE and their community—the fact that they add more authenticity to the place (Richards and Marques 2012). This is particularly important as it allows for a singularity in the supply of products/services for TLE and the region, and therefore for the visitor (Richards and Marques 2012). It is therefore natural that the tourism sector is increasingly important for the economic progress of a locality, especially in areas that are not so developed (Solvoll et al. 2015). Finally, it is perceptible that MNS linked to tourism are all the more successful the better the choice of location, the reach of the desired lifestyle, and the link with the region and its environment/culture (Schilar and Keskitalo 2018).

2.5. Financial Objectives

As has been mentioned throughout this article concerning financial objectives as the primary reason for pushing for business implementation, there is a clear line separating entrepreneurs in general from TLEs (Fu et al. 2019). TLEs seek the possibility to live in a region that they like, to integrate deeply into the community, to enhance synergies derived from networking (Fu et al. 2019), to be the "owners of themselves", i.e., not employees (Marchant and Mottiar 2011), and to improve their quality of life (Fu et al. 2019).

In addition to the above, there is the fact that these types of entrepreneurs do not show ambition with great economic gains but only aim to obtain profits that will allow them to sustain their lifestyle (Marchant and Mottiar 2011), which allows us to understand that the way they live their lives is considered by them a far more significant gain than the money itself (Richards and Wilson 2006). This is precisely where the distinctive barrier between entrepreneurs and TLEs is drawn, since, contrary to what has just been mentioned in the financial objectives of TLEs, entrepreneurs, in general, seek to foster competitive and constantly growing organizations with the ultimate aim of maximizing financial results—this being objectively their major concern (Fu et al. 2019).

After the motivational distinction, it is understood that an MNS has, in its genesis, the balance between financial and non-financial objectives, the latter prevailing over the former, leveraged precisely by the logic of the TLE lifestyle (Wang et al. 2019), which aims at personal and work happiness, together with their families and clients (Schilar and Keskitalo 2018). The best metric that can be used to evaluate the success of this type of business

is based on the preservation of the lifestyle the TLEs are intended to lead (Ateljevic and Doorne 2000). It is easy to see that the introduction of this rationale into the world of business fosters a revolution since financial objectives are seconded to social aspects, i.e., in these cases, the financial aspect is important only to guarantee the financing of their lifestyles (Ateljevic and Doorne 2000).

TLE is showing a reduced willingness to grow (Marchant and Mottiar 2011), which allows us to highlight how they deliberately restrict the expansion of their MNS, not only so that they can maintain their lifestyle (a situation that led them to open the business), but also as a segmentation strategy, offering a target of customers a greater connection in the same way that they present distinctive and innovative products/services (Ateljevic and Doorne 2000). It should also be noted that the situation described above has an enabling effect on the development of the region in which they are based (Fu et al. 2019). It is concluded that the motivation for a TLE to continue their economic activity is based on the satisfaction of the life it leads, concretely on the harmony between work and personal life, as well as on the feeling of belonging to the community (Wang et al. 2019). When these assumptions of life are met, more entrepreneurs can be led to invest in the locality, replicating these opportunities (Mottiar 2007).

3. Materials and Methods

This model is considered to be the correct one for the data collection of this research and also for the description of the methodological details used. To be able to acquire clear and reliable data that would make it possible to obtain answers to the objectives of this research, it was considered important to give priority to obtaining primary data through a sequential approach of mixed methods. Based on the literature review, the following hypotheses can be considered:

Hypothesis 1 (H1). *Contact Networks have a direct impact on TLE Life Satisfaction.*

Hypothesis 2 (H2). *Linking to the Place has a direct impact on TLE' Life Satisfaction.*

Hypothesis 3 (H3). *The Financial Objectives moderate the relationship between the Contact Network and the Connection to the Place, with the Life Satisfaction of TLE.*

By considering the previous described relationships, the following conceptual model has been designed (Figure 1).

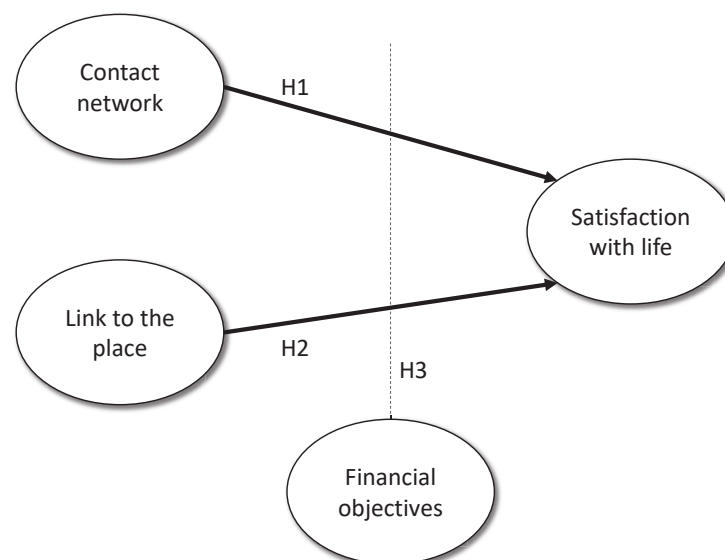


Figure 1. Conceptual model.

3.1. Quantitative Methodology

The target population is made up of Portuguese lifestyle entrepreneurs, and the population to be surveyed is made up of residents in the parish of Ericeira. TLEs were selected through a non-probabilistic sampling for convenience based on the following criteria (Bosworth and Farrell 2011): (i) own a surf-related business; and (ii) manage the business independently (i.e., not belonging to franchising groups or networks).

As a result, data were first collected using a face-to-face questionnaire, that was based on the existing literature and subsequently revised twice. To this end, two academics who specialized in tourism were consulted to ensure that the scales used were those indicated. Then, there was the possibility to test the structure of the questionnaire in person using semi-structured interviews, three TLEs, namely: a surf school, a surf shop, and a surf hostel. At the end of this elaboration/validation process, data was collected from October to December 2019, with a total of 109 TLE residents in Ericeira, Portugal.

As far as gender is concerned, this resulted in a percentage of 88% male and 12% female individuals. The percentage of TLEs born in the parish of Ericeira was 74%. The structure of the questionnaire was based primarily on an identification of the variables to be included in the study, for the TLE characterization, such as the description of the activity, if it is a local inhabitant, and the number of workers, among others. A question regarding the number of customers was then included to understand from how many the loss of quality of life is considered. That said, it is indicated that to measure the variables, the scales existing in the literature were used, with the following being highlighted:

To assess life satisfaction, a Likert scale was used, consisting of seven points (1 = I totally disagree; 7 = I totally agree), adapted from Pavot and Diener (2009).

On the other hand, to evaluate the network, first of all concerning networking and community involvement, the use of a Likert scale was favored, incorporating seven points (1 = Not very important; 7 = Very important). Then, to understand the connection to the community, a Likert scale of five points (1 = None; 5 = Many) was made, both scales being adjusted from Besser and Miller (2001). Concerning the link to the place, the first assessment, specifically about the association to the place and willingness to stay, uses a Likert scale of seven points (with the following correspondence: 1 = Not very important; and 7 = Very important). To understand what attracts/leads TLE from the place, a Likert scale was structured, with seven entrances (presenting itself): −3 = Too far away; 0 = Does not draw back nor attract, and 3 = Attracts a lot). The two scales were centered on Snieska and Zykiene (2015). Finally, to fit the financial objectives, particularly the reason that led to the start of the activity, we based ourselves on Fu et al. (2019), and a Likert scale was used, with a score of seven entries (1 = I disagree; 7 = I totally agree).

3.2. Qualitative Methodology

As previously mentioned, a second study was carried out in the qualitative case, where seven face-to-face interviews were possible, listening to seven TLEs responsible for MNS, namely: five surf schools, one surf hostel, and one surf shop.

The interviews were carried out in an alternating logic between directed and semi-directed, privileging a rationale of “interviewer—facilitator” (Bosworth and Farrell 2011), so that the interviewees could have some freedom in approaching the topics, but at the same time, guaranteeing total scrutiny of the themes. Throughout the interviews—on average, about one hour—it has been possible to record data that are quite relevant for this study. It should also be noted that it was decided not to conduct more than seven interviews because of the homogenization that was being seen in the results. Finally, it is also noted that all these meetings took place on the premises of the respective TLEs, they have been guaranteed the confidentiality and anonymity of their responses.

4. Results

Following the above, the quantitative results will be presented first, specifically the technique used for this purpose and, quality and structure of the model, with the subsequent moment reserved for the presentation of qualitative results.

4.1. Quantitative Results

To test the Conceptual Model, the use of Partial Least Squares (PLS)—based on Structural Equation Modeling (SEM)—using SmartPLS 3 software (Ringle et al. 2015)—was preferred. The choice for this software is that it is considered the right program to analyze statistical data on the Management and Marketing side (Richter et al. 2015). To analyze the quality of the conceptual model under study, to validate it, individual markers of convergent validity, reliability analysis, analysis of the internal consistency of the model, and discriminant validity (Hair et al. 2017) were checked. Considering the above, please refer to Table 1 below:

Table 1. Composite reliability, average variance extracted, correlations, and discriminant validity checks.

Latent Variables	α	CR	AVE	1	2	3
Contact Network (1)	0.801	0.910	0.834	0.913	0.128	0.249
Connection to the place (2)	0.768	0.863	0.680	0.087	0.824	0.362
Satisfaction with Life (3)	0.867	0.904	0.654	0.208	0.325	0.809

Note: α —Cronbach Alpha; CR—composite reliability; AVE—average variance extracted. Bolded numbers represent the square roots of AVE. Beneath the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios.

On another point, the criteria of HTMT (Henseler et al. 2015) are lower than 0.85, this being the maximum limit that allows discriminating reliability to be validated (Hair et al. 2017). The maximum value obtained was only 0.362, thus giving rise to discriminatory validity. To study the structural model, the magnitude of the R² value was investigated, which is the coefficient of determination for analyzing endogenous variables (Falk and Miller 1992). This coefficient is quite useful in the statistical analysis of the model and is very popular since it makes it possible to quantify the proportion of the sum of squares that is explained by the model, i.e., how the model can explain the data collected from the surveys conducted in this study (Piepho 2019). There was a value of R² equal to 0.257, which is a positive value since the minimum threshold to be considered validated is 10% (Falk and Miller 1992).

The significance of the coefficients was made through the value of Q², as a measure of the predictive importance of the conceptual model (Hair et al. 2017). In this verification, Q² was found to be positive (0.155), as the minimum result to prove the predictive relevance of the study was 0. The existence of the collinearity problem was also studied, with the indicator that evaluates it (VIF) with values between 1 and 2.884, thus being within the maximum limit of 5 (Hair et al. 2017), and this negative result leads us to believe that it does not exist. The presence of collinearity would mean that there was some linear correlation between two or more independent variables, which would nullify their validation (Gómez et al. 2016).

To carry out the structural analysis of the conceptual model, it is elaborated in Table 2, which allows us to verify the direct impact of the variables:

Table 2. Structural Model Assessment.

Path	Path Coefficient (β)	Standard Error	t Statistics	p Values
Contact Network \rightarrow Life Satisfaction (H1)	0.208	0.065	3.137	0.002
Link to Place \rightarrow Life Satisfaction (H2)	0.299	0.067	4.324	0.000
Financial Objectives moderate the relationship between H1 and H2 \rightarrow Life Satisfaction (H3)	0.264	0.059	4.512	0.000

After observing Table 2 and Figure 2, it is possible to conclude that the three hypotheses under analysis have a positive and significant influence on life satisfaction since the values of the coefficient measuring the level of relation and/or influence (β) are positive, while the results of the indicator that makes it possible to reject, or not, the hypothesis (p value) are less than 0.05.

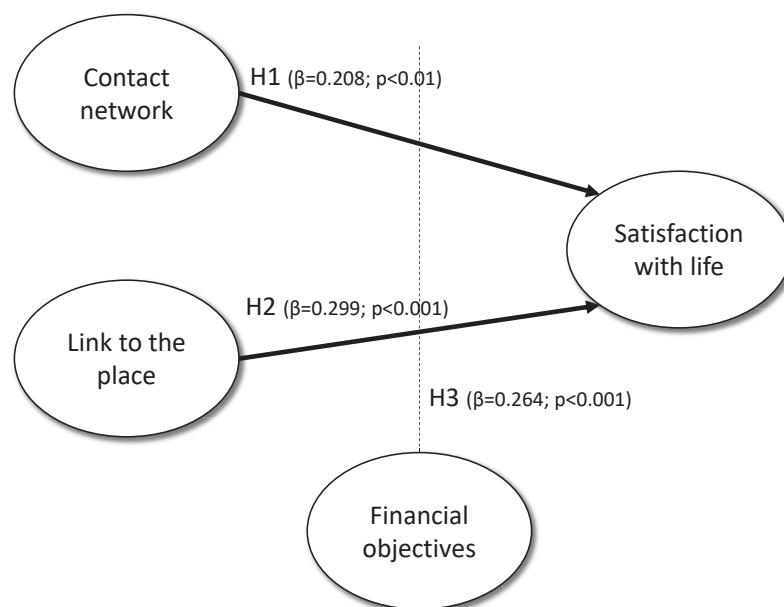


Figure 2. Conceptual model with the results.

4.2. Qualitative Results

To analyze the qualitative results, some answers have been transcribed, which will be reproduced below. Regarding the first hypothesis under study—H1: contact networks have a direct impact on the satisfaction with the life of a TLE—was the subject, among others, of the following notes:

“Despite the strong competition that exists in the sector, the truth is that we know each other, we support each other, we manage to coexist and have a market for everyone. I think that Ericeira benefits from many hostels and surf schools to affirm us as the mecca of surf”.

“We help each other whenever it is necessary. We always know that a colleague has a problem, we try to help. We must be for each other”.

“We all wear the same shirt. We are friends, we discuss problems, and we look for solutions together. We are “jagozes” and together we always manage to overcome the problems”.

“In my business, we partner with other colleagues, be it restaurants or other businesses. We always look for mutual help and the best service for the customer”.

“The people in Ericeira are wonderful. I like to go to the market to buy my fish, I like to participate in the events that take place, I like to contribute with ideas”.

As can be seen, the interviewees reveal that they have a clear and defined network of contacts, showing community thinking and showing satisfaction with this situation. This is very important, as this factor enables TLE to develop its capacities, generate unique competitive advantages, and take advantage of times of greater crisis to outline different strategies (Dias et al. 2020a). With these interviews, it was possible to validate the results collected through the questionnaire. Regarding the first hypothesis under study—H1: networks of contacts have a direct impact on the satisfaction with the life of a TLE—the results confirm the existence of networks of contacts and their impact on the satisfaction with life. This situation is very important, especially in Ericeira, as most of the companies are smaller, thus creating very important synergies for their dynamism and knowledge development, which allows generating advantages for the business (Dias et al. 2021).

To be able to perceive the second variable in the study—H2: the connection to the place has a direct impact on the life satisfaction of the TLE—pay attention to the following:

“There is nothing like living in a place that allows me to wake up, catch some waves, not having to take the car to go to work, not having traffic, being in a quiet village without the madness of the cities and, at the same time, being twenty minutes away from Lisbon”.

“Ericeira is, no doubt, the Capital of Europe. The World Surf Reserve has given the deserved recognition to this fantastic town, which provides magnificent experiences”.

“It is undoubtedly a unique and special place. The beaches, the gastronomy, the wave sports, the people, and the unique landscapes, make this village the best place to live”.

“Whoever takes Ericeira from me, takes everything from me. The tranquillity, the security, the infrastructures, the environment . . . I could be here all day talking about this paradise, but just visiting it is enough to be understood”.

“We don’t always appreciate things but living in Ericeira is a blessing. For those who seek a quality of life, this is where they find it. People sometimes look for a lot and here they can have everything with little”.

“I set up my business and came to live here. Every day I give thanks for this decision I made. I’m happy at work, where I can make contact with several people, I have the possibility to work with my wife, we have time to take our walks on the “pavement”, we can go surfing, and our children are happy (. . .)”

“I was born and raised in Ericeira and so I consider myself a privileged person. Every day I race by the sea, walk my dog, watch the sunset, catch some waves, enjoy the view and breathe fresh air”.

From the above, we can conclude that the qualitative study reinforces the data collected for the H2 variable, showing a full connection between the TLE and the place, perceiving the existing balance between professional and personal life, and revealing a great satisfaction with life as described by Shaw and Williams (2009). Regarding the second variable under study—H2: the connection to the place has a direct impact on the life satisfaction of TLE—there was a perfect connection between TLE and the place, revealing a great satisfaction with life. Knowing that TLEs manifest the intention to give continuity to the business through their satisfaction with life, their connection with the region where they live is vital for its maintenance (Yachin 2019).

Finally, the third hypothesis (moderating)—H3 has been evaluated: the financial objectives moderate the relationship between the contact network and the connection to the place with the life satisfaction of TLEs, read the following:

“I am by nature a person who seeks challenges and growth. I’m satisfied with my life, my family is satisfied, we have our business, our family and everything else, but I have ideas to expand our business”.

“I left my office job and used to say, “take off my suit and put on my slippers” and invested everything in this business. Right now, I can do what I like, have time for myself, billing is what I need and I don’t plan to expand or open new business”.

“I’m fine as I am. I have the life I’ve always wanted, my family has quality time with me and I don’t live obsessed with money”.

“Right now I have more than one business and I intend to have more. Tourism in Ericeira has been growing from year to year and I intend to take advantage of those opportunities that arise”.

“To be honest, I think the surfing business is already starting here. I don’t know if opening a new business would be the best solution, because it would force me to spend personal time that I don’t want to give up”.

“I don’t want to expand or open any more businesses. I have the life I have always dreamed of, I have fought hard to have it and I will not risk everything. What I have is enough”.

That said, we have not seen a homogeneous result, which shows us that TLE is divided into two distinct groups: those that aim at obtaining greater financial gains and those that intend to maintain their activity in the current situation, a situation that validates the one indicated by Ateljevic and Doorne (2000). Regarding the third hypothesis (moderating)—H3: the financial objectives moderate the relationship between the contact network and the connection to the place with the life satisfaction of the TLE—it is found that the financial objectives measure this connection; there are two “currents”, one that seeks to obtain greater financial gains and the other that is only concerned with ensuring enough for their subsistence Ateljevic and Doorne (2000).

5. Discussion and Conclusions

The results that are presented reflect the motivation of this research for the validation of motivational components essential to the business performance of Ericeira’s TLEs. Having said that, regarding contact networks, knowing that the establishment and strengthening of networks impact the intrinsic characteristics of TLE, will consequently have an impact on the tourist evolution of the region (Romero and Molina 2011), through the implementation of synergies between businesses, it is also perceived that this optimization of resources impacts the quality of life of TLE (Mottiar 2007), situations that originated the first hypothesis of this study—H1: contact networks have a direct impact on TLE life satisfaction.

With this research, it was possible to validate (H1: $\beta = 0.208$; $p < 0.01$) the above, since it was clear that an optimized network of contacts translates into learning, commitment to the community, and trust, which leads to greater satisfaction with life. On the other hand, it is understood that the connection with the place enhances business success (Schilar and Keskitalo 2018), and that this success is directly influenced by the logic of community thinking (Fu et al. 2019). In addition to the above, one of the reasons for the establishment of a TLE in a given area is considered to be influenced by the environment of that place (Kallmuenzer et al. 2019). These goals led to the emergence of the second hypothesis of the present research—H2: the connection to the place has a direct impact on the life satisfaction of TLEs.

This position has also been ratified by the data attained (H2: $\beta = 0.299$; $p < 0.01$), and it is possible to see that a full connection to the place, which feeds the desired lifestyle, allows the much-desired link of equity between the labor and personal aspects, leads to greater satisfaction with the life of a TLE. Finally, we come to the third hypothesis, which works as a moderating effect between contact network/link to the place, with life satisfaction—H3: the financial objectives moderate the relationship between the contact network and the link to the place, with the life satisfaction of TLE. This question is of greater interest, as it is the greatest contribution that this study incorporates, as there are no evaluations in this sense.

It has been proven (H3: $\beta = 0.264$; $p < 0.01$) that the financial goals measure the relationship between H1 and H2 and life satisfaction, otherwise read:

H1—within TLEs, there are two groups with different views on financial aspects:

- (i) A TLE that considers that the financial objectives, together with the contact network, are a motivational element and, consequently, impact on their satisfaction with life; and
- (ii) A TLE that considers that the financial objectives are not a motivational element and, consequently, impact their satisfaction with life, as they value community integration.

H2—Within TLE, there are two groups with different views on financial aspects:

- (i) A TLE who considers that the financial objectives, together with the connection to Ericeira, are a motivational element and, consequently, impact on their satisfaction with life; and
- (ii) A TLE that considers that the financial objectives are not a motivational element and, consequently, impact their satisfaction with life, as they privilege their sense of identification with Ericeira and the pleasure of living there.

With the interviews, it was possible to confirm the quantitative results. It is also important to note that the contact network and the link to the place are extremely important since, for those who wish to invest in new businesses, the partnerships between MNS allow new investments with less investment risk due to the sharing of knowledge and skills (Dias et al. 2020a).

With this research, it was possible to achieve the established objectives, being the first one “to understand the reasons that move the TLE”. It confirms that the central factor in the line of differentiation between traditional entrepreneurs and TLEs is based on financial objectives as the main motivating force. The conclusions showed that ETVs’ quantification of success is made through satisfaction with their lifestyle, connection to the place where they live, and the networks of contacts they create, as opposed to entrepreneurs in general, who seek economic growth. These statements are in line with the literature, which presents a study that indicates that the common entrepreneur strives to achieve the growth of his organization, while a TLE seeks its realization through the creation of local networks, inserting itself into society, and enjoying the lifestyle it wants (Fu et al. 2019).

Another point, with the achievement of the second objective, “perceiving the impact of the variables presented on their life satisfaction”, was that through the hypotheses presented, it was perceived that TLEs are influenced by the external environment (such as the creation of a contact network or a connection to the place) but also by their profile, through their vision for a business, specifically about the financial objectives (which mediate the link between the contact network and the connection to the place, with the satisfaction with life), so that their satisfaction with life is maintained and, consequently, there is continuity of satisfaction with their MNS, which is in line with what Mottiar (2007) and Wang et al. (2019) advocated.

The conclusions point to life satisfaction being directly influenced by the networks of contacts as well as the link to the place, with both being mediated by financial objectives, which enables this work to incorporate contributions to management, both by TLEs and by local policymakers. The importance of the networks of contacts is stressed at the outset, and it is recommended that they be encouraged to achieve major benefits. By creating these synergies between TLEs, an extremely important relationship between the various businesses is strengthened, allowing for various gains, from environmental sustainability to the identity of the region, the local economy, and the growth of the locality (Yachin 2019). Having said that, even in terms of attracting investment, these partnerships that have been established are very relevant, as they allow investment risks to be reduced through access to knowledge and the sharing of resources/skills due to the unique specificities of each MNS (Dias et al. 2020a). In addition, a strong network of contacts provides the feeling of belonging to the place (essential for the motivation of TLEs), allowing for the commitment to optimization and best environmental practices. This logic of identity with the community will allow the local economy to be assisted through the hiring of collaborators residing in the region, as well as the dynamization of the local economic fabric. All these situations that

come from a stimulated contact network will have an impact on the growth of the region since there will be a greater capacity to attract investment and, consequently, the creation of new MNS, which are especially important in a town like Ericeira, both to mitigate the impact of seasonality through environmental awareness and through the quality of tourism (Stubbs 2017).

Throughout this research, it was possible to identify some issues that have a direct impact on the study, incorporating limitations/conditions due to the existing literature. The studies focus on traditional entrepreneurship on a large scale; however, the reality is quite different when it comes to the type of lifestyle entrepreneurship, and what we see is the existence of few articles on this very fashionable subject. On the other hand, at the methodological level, preference was given to non-probabilistic sampling for convenience, which could impact the representation of the population. In addition, the sample was restricted to the Portuguese population, TLE residents in the parish of Ericeira, which makes it impossible to extrapolate the results in a global logic. Therefore, for future research, it is recommended that they should move towards validating the conceptual model used in this study with TLE from other regions of the country/world, giving primacy to methodological methods based on probabilistic sampling.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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Article

Sustainable Entrepreneurship: Comparing the Determinants of Entrepreneurial Self-Efficacy and Social Entrepreneurial Self-Efficacy

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Abstract: Sustainable entrepreneurship creates value beyond profit. Its role is increasingly important in addressing issues related to environmental challenges. Sustainable entrepreneurs represent a tool to attain the Sustainable Development Goals established by the United Nations that address climate change, social inequality, human rights, and economic development. To solve these challenges, there is a need for high-performing sustainable entrepreneurs. The roles of innovativeness, organizational capabilities, and philanthropic corporate social responsibility (CSR) in the performance of sustainable entrepreneurs are still underexplored. Hence, this study proposes an analysis of the indirect and direct effects of innovativeness on entrepreneurial self-efficacy (ESE) and social entrepreneurial self-efficacy (SESE) and of the mediating role of organizational capabilities and philanthropic CSR. Based on structural equation modeling and importance-performance matrix analysis, the findings from a survey of 116 sustainable entrepreneurs identified a positive relationship between innovativeness and ESE, organizational capabilities, and philanthropic CSR. The indirect relationship mediated by organizational capabilities was found to be positive, while for philanthropic CSR, it was positive for SESE but negative for ESE. Interestingly, it was found that SESE is only positively influenced in indirect relations. This study contributes to the literature on how innovativeness can promote ESE and SESE and the role of organizational capabilities and philanthropic CSR in enhancing performance among sustainable entrepreneurs.

Keywords: entrepreneurial self-efficacy; social entrepreneurial self-efficacy; innovativeness; organizational capabilities; philanthropic CSR

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1. Introduction

Sustainable entrepreneurship (SE) represents a bridge between sustainable development and entrepreneurship. It creates economic, social, and ecological value through business activity; therefore, it can answer the most urgent social and ecological challenges (Cohen and Winn 2007; Dean and McMullen 2007; Schaltegger and Wagner 2011). Sustainable entrepreneurs see sustainable development as a unique business opportunity (Crals and Vereeck 2005) that can bring about positive change, turning the current economy into a sustainable one by finding solutions for social and environmental problems (Schaltegger and Wagner 2011). They innovate by focusing on the mass market, aiming to benefit a bigger portion of society and going beyond market success to effect societal change (Schaltegger and Wagner 2011). Nowadays, sustainable entrepreneurs play a key role in creating businesses that have a positive impact on the environment; understanding what can improve their performance is important to creating a more sustainable future.

Scholars have suggested entrepreneurial self-efficacy (ESE) as a distinct characteristic of an entrepreneur (Chen et al. 1998). It is a concept based on self-efficacy that is considered the most effective predictor of performance (Bandura 1977, 1982, 1986; Bandura and Schunk

1981). ESE is defined as the strength of an individual's belief in their capabilities, i.e., that they can successfully perform numerous entrepreneurial roles and tasks (Chen et al. 1998).

On the other hand, social entrepreneurial self-efficacy (SESE) is another predictor of performance, which refers to the strength of an individual's belief that he or she has the skills and ability to succeed in the roles and tasks of a successful social entrepreneur (Zhang et al. 2021). The concept represents human behavior regarding social missions that can impact an individual's beliefs, efforts, levels of input, and tenacity (Dwivedi and Weerawardena 2018). Innovativeness, as an independent variable, is a fundamental concept for the long-term competitiveness of an organization (Noble et al. 2002). Innovation lies the basis of entrepreneurship activity; it is also because of innovation that various entrepreneurs develop their activities (Drucker 1998). Indeed, entrepreneurs hold higher self-efficacy in innovation and risk-taking entrepreneurial roles and tasks than non-business founders (Chen et al. 1998).

The mediators in this study are organizational capabilities and philanthropic CSR. Organizational capabilities are the dynamic skills that represent the ability of a firm to reach new and innovative forms of competitive advantage (Teece et al. 1997). Philanthropic corporate social responsibility (CSR) is defined as addressing a corporation's responsibility to be involved in activities that promote human welfare or goodwill (Carroll 1991). Innovativeness promotes the long-term competitiveness of an organization, and the concept of organizational capabilities reflects the internal strengths of organizations, which can determine how they can get an advantage over other organizations, leading to better performance (Barney 1991; Penrose 1959). There is increasing evidence in the management literature of the positive impacts of CSR on firm performance (Luo and Homburg 2007; Maignan et al. 1999; Qu 2009). Therefore, the potential impact of the independent variable and the mediators on competitiveness and performance led us to consider whether they can positively impact ESE and SESE and motivated us to undertake the current study. To this end, this study investigates the direct and indirect links between innovativeness and ESE and SESE. It also analyses the potential effect of two mediators: organizational capabilities and philanthropic CSR.

This study attempts to address three theoretical gaps. Firstly, over the last two decades, growing importance has been placed on ESE, and a growing body of literature has identified factors that may promote or hinder ESE formation. The systematic review on ESE by Newman et al. (2019) explored ESE antecedents and outcomes; according to it, several factors may promote or inhibit its formation. Among them, factors such as firm characteristics, individual differences, and personality traits have been researched as antecedents of ESE, but research frameworks involving the role of innovativeness in ESE and SESE remain underexplored. Secondly, there is a growing body of research on SESE, including research recognizing its importance as an antecedent in the field of social entrepreneurial intentions and as a mediator between prior experience and social entrepreneurial intent (Hockerts 2017; Liu and Huang 2020; Zhang et al. 2021). However, limited empirical research has established the factors that may foster or inhibit SESE. Thirdly, it has been shown that organizational capabilities and philanthropic CSR are beneficial for the performance of companies (Barney 1991; Penrose 1959; Lindgreen et al. 2009), but their direct roles and their function as a mediator with ESE and SESE in the field of sustainable entrepreneurs remain unclear. Additionally, most research on the impact of CSR on performance has focused on general CSR, whereas this study centers mainly on the specific dimension of philanthropic CSR.

To fill these gaps, the objective of this study is to explore the link between innovativeness and ESE and SESE among entrepreneurs, particularly those whose profiles align with sustainability, as these individuals currently play an important role and are seen as being at the forefront of a shift to a new form of capitalistic development that can help answer fears over global warming, climate change, and the negative environmental impacts of these phenomena. The research question is: regarding sustainable entrepreneurs, is there a difference in the determinants influencing entrepreneurial self-efficacy and social entrepreneurial

self-efficacy? The link is further developed by looking at the direct and mediating role of organizational capabilities and philanthropic CSR. The reason why this study specifically explores the role of innovativeness and the mediating role of organizational capabilities and philanthropic CSR is because they are all related to advancing competitive advantages and increasing performance (Collis 1994; Ionescu 2021; Li et al. 2022; Teece et al. 1997; Waddock and Graves 1997); since the objective of this study is to research what can improve the performance of sustainable entrepreneurs, we assumed that they would have a positive influence.

By analyzing what can impact ESE and SESE, the present research can be helpful and bring clarity to sustainable entrepreneurs that are willing to improve their knowledge on ways to enhance their performance. This is important, because having high levels of ESE and SESE results in achieving a positive mental state involving entrepreneurial passion, resilience, efficient entrepreneurial behavior in planning, opportunity recognition, task effort, goal commitment, persistence, and higher entrepreneurial intentions (Newman et al. 2019). Additionally, by increasing ESE, entrepreneurs are more likely to successfully identify new business opportunities, create new products, think creatively, and commercialize an idea or new development (Zhao et al. 2005), while by enhancing SESE, they will be more likely to identify new business opportunities for social change, create new products/services to solve social problems, think creatively to benefit others, and commercialize ideas for social enterprises (Liu and Huang 2020; Zhao et al. 2005). The above-mentioned capabilities are essential for sustainable entrepreneurs that want to prosper. The study also extends the current literature on ESE and SESE by creating a conceptual model which combines innovativeness, organizational capabilities, and philanthropic CSR. It is also one of the first studies that places SESE as an outcome, thus contributing to extending the literature in this field.

To test the conceptual model, a quantitative study was conducted. The ideas were empirically examined on a sample of 116 sustainable entrepreneurs through a survey with existing measures, structural equation modeling, and importance-performance matrix analyses. Our findings suggest that innovativeness can positively impact ESE, organizational capabilities, and philanthropic CSR. However, innovativeness only positively impacts SESE when the link is mediated. Organizational capabilities relate positively to ESE and SESE, both directly and as a mediator. On the other hand, the direct relationship with philanthropic CSR results in a negative outcome for ESE and a positive one for SESE, while the mediating relationship results in only positive outcomes for SESE.

This article is structured as follows. It first provides a literature review, summarizing the theoretical knowledge that is relevant for the development of a conceptual model and for the research hypothesis. Then, the methodological approach and the data collection process are presented. Next, the paper presents the research results of our empirical study, which are then discussed. The paper concludes with theoretical and managerial contributions and implications, including study limitations and suggestions for future research.

2. Literature Review

The 2030 Agenda for Sustainable Development, embraced by the United Nations in 2015, tackles the most urgent challenges of our time, caused by massive disparities in opportunities, wealth, and power. At its core are the 17 Sustainable Development Goals (SDGs) that attempt to address climate change, social injustice, human rights, and economic growth (Ceptureanu et al. 2022). As the world economy recovers from the COVID-19 crisis, global energy-related carbon dioxide emissions rose by 6% in 2021 to 36.3 billion tons, reaching their highest ever level (Press Release 2022). Additionally, since 2001, 19 of the 20 warmest years globally have been registered, proving a clear trend of global warming (NASA 2022). Sustainable entrepreneurs may represent our best chance to achieve the SDGs, thanks to their skillsets, initiatives, and their innovation that can benefit society and the environment, bringing about transformational change where the focus is placed

on the achievement of commercial success, as well as positive environmental and social impacts (Schaltegger and Wagner 2011; Zahra et al. 2009). Thus, their beliefs in their skills are important to achieve global sustainable development.

Firstly, in this article, we draw on self-efficacy theory by Bandura (1977). The concept of self-efficacy is a central construct in Bandura's social learning theory and social cognitive theory. To be more specific, since the field of research is entrepreneurship, we applied a more defined concept, called entrepreneurial self-efficacy. This concept is also based on the self-efficacy theory by Bandura. We also draw on the social cognitive theory of career and academic interest, choice, and performance (Lent et al. 2022), which highlights, for example, that it is occupation-specific self-efficacy (as opposed to generalized self-efficacy) that exerts effects on career development and performance, and that entrepreneurial self-efficacy is a specific type of occupation-specific self-efficacy.

We also combined social cognitive theory with the theory of planned behavior (Ajzen 1991), which deepens research on the outcomes of ESE to explain the emergence of entrepreneurial intentions and actions such as venture creation and growth. The concept of ESE was further developed by (Chen et al. 1998), who defined it as the strength of a person's belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship. Social entrepreneurial self-efficacy also draws upon social cognitive theory and self-efficacy theories by Bandura. It has been used to specify and express the strength of an individual's belief that he or she has the skills and ability to perform the roles and tasks of a successful social entrepreneur

Concerning innovativeness and organizational capabilities, we adopt a resource-based view (RBV). This managerial framework defines the strategic resources a firm can exploit to attain a sustainable competitive advantage. The resource-based view is based on "Firm Resources and Sustained Competitive Advantage", Barney's (1991) article that is widely quoted as a key work in the emergence of the theory.

Lastly, regarding philanthropic CSR, we applied stakeholder theory (Carroll 1991) to reach the hypothesis that the long-term value of a company is based as much on the knowledge, abilities, and commitment of its employees as on its relationships with investors, customers, and other stakeholders. Carroll (1991) also proposed a framework called "The Pyramid of Corporate Social Responsibility". The philanthropic dimension addresses a corporation's responsibility to engage in activities that promote human welfare or goodwill (Carroll 1991), including the responsibilities of contributing financially and through human resources to the community, thereby helping enhance their quality of life (Carroll 1991).

All variables are connected to a certain type of performance. Therefore, our aim was to see how other variables, such as innovativeness, organizational capabilities, and philanthropic CSR (which are connected to other forms of performance, as already discussed) affect ESE and SESE, which themselves are variables that can promote better performance.

In the following paragraphs, we will present a literature review of the variables of the study, starting with the dependent variables represented by ESE and SESE, the independent variable innovativeness, and the mediators organizational capabilities and philanthropic CSR.

2.1. Entrepreneurial Self-Efficacy and Social Entrepreneurial Self-Efficacy

ESE is a concept based on social cognitive theory (Bandura 1986) which considers self-efficacy beliefs as an important mechanism of self-direction. Self-efficacy impacts people's beliefs, and the way they think, act, and feel. More specifically, it indicates an individual's belief in their ability to achieve a set of tasks (Bandura 1977). Self-efficacy can affect an individual's thought pattern, which can increase or compromise performance (Bandura 1997). It has a great influence on the choices individuals make, their aspirations, how much effort they put into a given task, whether their thought patterns are self-limiting or self-promoting, the amount of stress they experience in terms of coping with challenging environmental demands, and their susceptibility to depression (Bandura 1991). Those that hold higher levels of self-efficacy are more prone to set a high or challenging objective

and persist toward the accomplishment of their goals, even under difficult and stressful circumstances (Bandura 1997). They can recover quickly from failure, even under hostile conditions, which raise the level of motivation and performance achievements (Bandura 1997).

ESE is defined as the self-confidence held by individuals in their ability to succeed in carrying out specific roles in entrepreneurship. It is also described as the strength of an individual's belief that he or she can successfully perform various entrepreneurial roles and tasks (Chen et al. 1998). Chen et al. (1998) proposed the use of the ESE construct to forecast the chances of an individual becoming an entrepreneur. The study found that the total ESE score differentiated entrepreneurship students from students of management and organizational psychology. Additionally, ESE was positively linked to the intention to create one's own business (Chen et al. 1998). There is an increasing emphasis on the role of ESE in the study of entrepreneurship and on how individuals act and think entrepreneurially (Newman et al. 2019). There is also evidence that individuals who have strong confidence in their capabilities will exert more persistence and exercise major effort to master challenges (Wood and Bandura 1989).

Evidence related to the positive relationship between ESE and performance has been confirmed by various research. Forbes (2005) identified a positive relationship between ESE and new venture revenue performance, in line with Baum and Locke (2004), that found that ESE has a positive direct effect on venture growth. Miao et al. (2017), similarly and consistent with social learning theory, found that an entrepreneur's ESE can enhance the financial performance of a firm. When entrepreneurs believe in their abilities to complete tasks in entrepreneurial areas, they engage in challenging objectives, show persistence, and can overcome rapidly from failure. These efforts are then reflected in their positive performance (Miao et al. 2017). To this end, it is not surprising that entrepreneurs, high in ESE, have higher levels of work satisfaction (Bradley and Roberts 2004). According to Engel et al. (2014), participants with higher ESE were more likely to frame uncertainty as an opportunity and to embrace effectual logic when dealing with a high uncertainty venture scenarios. According to Schumpeter and Knight (as cited in Brouwer 2000), uncertainty and innovation are preconditions for entrepreneurship, and therefore, the benefits of ESE and SESE are likely to be advantageous in the entrepreneurship field, which is characterized by excess information, overload uncertainty, and high levels of time pressure (Baron 1998).

Several studies have investigated factors that can impact ESE. Among them, Cooper et al. (2016) analyzed firm-level characteristics, such as strategic orientation and entrepreneurial culture, and found them to be positively related to entrepreneurs' innovation-focused ESE, a sub-dimension of ESE. Forbes (2005) also found that comprehensive decision-making processes that engage a wider group of employees and involve more current information enhance entrepreneurs' ESE. Finally, Snell et al. (2015) found a positive link between a firm's marketing capabilities and the entrepreneur's ESE. Besides research on firm characteristics, the key antecedents of ESE include cultural and institutional environments, education and training, work experience, role models, mentors, and individual differences (Newman et al. 2019). Among individual differences, personality traits such as conscientiousness and a proactive personality have been already analyzed and shown to have strong links with ESE (Newman et al. 2019).

Social entrepreneurial self-efficacy (SESE) indicates the strength and confidence in an individual's belief that he or she has the skills and ability to achieve the roles and tasks of a successful social entrepreneur (Scherer et al. 1989; Zhang et al. 2021). It is the belief in one's ability to make positive social change, and those with high levels of SESE will be more likely to engage, persist, and perform well in terms of creating social value (Smith and Woodworth 2012). The concept was introduced as a new theory to refer to human behavior regarding social missions that affect an individual's beliefs, efforts, levels of input, and persistence (Dwivedi and Weerawardena 2018). Specifically, SESE captures a different kind of entrepreneurial confidence than that considered by traditional ESE. Whereas traditional ESE boosts individual confidence in performing roles and tasks

generally associated with commercial innovation and risk-taking (Chen et al. 1998), SESE boosts confidence in performing entrepreneurial tasks associated with social innovation and benefitting others, such as identifying social problems and creating new products/services to solve these problems (Bacq and Alt 2018). Research on SESE has focused mostly on its role as a moderator in the relationship between proactiveness, market orientation, and value co-creation (Liu and Huang 2020) and as a mediator in the relationship between perseverance and proactive personality (Zhang et al. 2021). Therefore, it can be concluded that it is of tremendous importance that sustainable entrepreneurs possess ESE and SESE, especially in leading and venturing into a new business, if they are to make sure that the company they are running or developing can attain success.

2.2. Innovativeness

Innovativeness is defined as “an overall innovative capability of introducing new products to the market or opening up new markets, through a combination of strategic orientation with innovative behavior and process” (Wang and Pervaiz 2004). It is a domain-specific personality trait (Goldsmith and Foxall 2003) that refers to the constant effort to advance an individual’s work procedures (Utsch and Rauch 2000). It is also defined as goal-oriented and planning behavior, including aspects related to job or venture performance. (Frese 1995; Locke and Latham 1990; Miner et al. 1989; Schwenk and Shrader 1993).

There is evidence from many authors regarding the importance of innovativeness as a strategy in the entrepreneurial process (Frese 1995; Lumpkin and Dess 1996; More 1986; Schumpeter 1934, 1942). Indeed, entrepreneurial activities are considered by Schumpeter (1934) as creative destruction. They destroy everything conventional with their innovativeness, creating and replacing norms with superior environmental social products and services. Innovation can be considered as the source of entrepreneurship, where entrepreneurship favors innovation to attain its economic and social value. Hence, the two come together, creating a continuous and complementary process. (Zhao 2005). Innovation capabilities are considered to be determinants and antecedents of entrepreneurship (Dias et al. 2021). This study sheds light on the importance of innovation in entrepreneurship capabilities, proposing that it has a positive relationship with entrepreneurial capabilities (Dias et al. 2021).

Several studies have found a direct and positive correlation between innovation and superior performance (Calantone et al. 2002; Hult et al. 2004; Keskin 2006; Thornhill 2006). Innovativeness also has a significant effect on profit growth and employee growth (Utsch and Rauch 2000). Indeed, innovation is also linked to the long-term competitiveness of an organization (Noble et al. 2002), because it creates unique intangible resources that are hard to imitate (Rasmussen 2014), and because it satisfies customer needs by creating innovative products that align to market trends (Appiah-Adu et al. 2018).

Business founders possess higher ESE in innovation and risk-taking than non-founders (Chen et al. 1998), and there are more nascent entrepreneurs among innovators than among graduate students of business (Chen et al. 1998). Chen et al. (1998) acknowledged innovation and risk-taking as key primary entrepreneurial capabilities. This fact is related to the proactive personalities of entrepreneurs, making them more likely to innovate (Kickul and Gundry 2002), and to the notion that innovators feel comfortable when dealing with risk (Chen et al. 1998). Further, studies determined that entrepreneurs were more likely to take risks to achieve innovation, often taking measures that resulted in the emergence of new products or services, thereby creating long-term sustainable competitive advantages (Dias and Silva 2021). Innovativeness also refers positively to the personality traits of self-efficacy, higher-order strength, and achievement (Kerr et al. 2018). Innovativeness has been examined together with initiative, as a mediator for achievement orientation, which is also considered a composite of self-efficacy; it was found that innovativeness is a mediator, while initiative is not (Utsch and Rauch 2000). Finally, according to Dias et al. (2021), firms should possess innovation capabilities as essential predictors if they want to reach higher levels of entrepreneurial capabilities. In this regard, it is quite surprising how little attention

has been paid to the innovativeness of entrepreneurs as it relates to their personalities (Kerr et al. 2018).

In social entrepreneurship, innovativeness represents an inclination toward continually developing and promoting novel ideas and solutions to social needs, different ways of marketing, raising funds, and influencing governments using unconventional approaches (Dwivedi and Weerawardena 2018; Dias and Lages 2021). Social entrepreneurial orientation includes six dimensions; among them, innovativeness is the third strongest, suggesting that creative and value-adding approaches responding to social needs are a crucial aspect of socially entrepreneurial behavior (Liu and Huang 2020). Prabhu (1999) and Sullivan Mort et al. (2003) also identified three factors which are central to social entrepreneurship. Among them, innovativeness is key. A social entrepreneur's innovativeness directly and indirectly increases the social performance of social enterprises (Shin 2018). More specifically, openness and innovativeness play mediating roles, not only in social performance but also in economic performance (Shin 2018).

The empirical evidence regarding the relationship between innovativeness and organizational capabilities remains scarce (Bature et al. 2018). However, Acar and Mehtap (2018) suggest that having an innovative strategic attitude helps a business to bear the pressures of external environmental complexities. Additionally, Miller and Friesen (1982) and Tsao and Chen (2012) affirmed that integrating a culture of innovativeness in an organization leads to a higher probability of developing a variety of capabilities to help deal with ever-changing market needs in order to successfully compete in the marketplace. Finally, Bature et al. (2018) found that proactiveness and innovativeness indirectly influenced Small medium enterprise (SME) performance by building organizational capabilities.

Innovation is crucial for companies to advance and keep their competitiveness while meeting their CSR obligations to various stakeholders. When CSR is fully implemented in a business process, it will create innovative practices that will boost competitiveness (Vilanova et al. 2009). Bahta et al. (2020) contributed greatly to our understanding of the CSR–SME relationship and shed light on the importance of CSR as an important driver for businesses to be more innovative and competitive. According to Korra et al. (2018), firms which more broadly apply CSR practices are more likely to be innovators; therefore, the application of CSR may increase innovative performance and provide support for growth.

In summary, scholars have noted the importance of innovativeness for entrepreneurs, as well as its influence on the competitiveness of an organization through organizational capabilities and philanthropic CSR. In light of this discussion, this research hypothesizes the following:

H1a. *Innovativeness positively relates to ESE.*

H1b. *Innovativeness positively relates to SESE.*

H1c. *Innovativeness positively relates to Organizational Capabilities.*

H1d. *Innovativeness positively relates to Philanthropic CSR.*

2.3. Organizational Capabilities

Organizational capabilities refer to a firm's capacity to use its resources, tangible or intangible, to execute a task or an activity. They represent the internal strengths that can explain how an organization gets an advantage over other organizations, leading to improved and increased performance (Amit and Schoemaker 1993; Barney 1991; Penrose 1959; Teece et al. 1997). They are organizational processes including managerial competencies, knowledge, and the skills of employees, along with an efficient organizational structure, organizational culture, coordinative mechanisms, strategic planning, and the ability to engage creative employees (Spanos and Lioukas 2001). Organizational capabilities can improve companies' competitive advantages and strengthen their ability to react to internal and external change (Inan and Bititci 2015). According to the resource-based view of the firm, they are a source of sustainable competitive advantage (Collis 1994).

Wingwon (2012) explains the effect of entrepreneurship, organization capabilities, strategic decision-making, and innovation factors on the competitive advantage of SME businesses. According to that study, the organization capability factor had a direct effect on innovation and, therefore, on the competitive advantage of the organization. Additionally, entrepreneurship has a positive direct effect on organizational capabilities. Innovation can also be considered a significant organizational capability, because the creation of new products can be a tool of growth that can increase sales, profits, and the competitiveness of many organizations (Battor and Battor 2010; Sivadas and Dwyer 2000).

Research concerning firm capabilities and ESE shows evidence regarding a firm's marketing capabilities, identifying a positive relationship between it and the entrepreneur's ESE (Snell et al. 2015). It has been argued that marketing capabilities enhance entrepreneurs' confidence that they will be able to deal with challenges when undertaking entrepreneurial tasks (Newman et al. 2019).

In the search we conducted in this study, we did not encounter any studies which focused on the impact of organizational capabilities on SESE in sustainable entrepreneurs; however, we found some studies which covered aspects that were related to our research. Yu et al. (2022), for instance, showed that two types of organizational capabilities can make positive contributions to the performance of social enterprises. Specifically, stakeholder engagement capabilities and business planning capabilities can make positive contributions to social enterprise performance in the economic and social domains. On the other hand, human resources and management capabilities have positive effects on social performance but not on economic performance. More evidence comes from a study by Kwiotkowska (2022), that showed that by concentrating on a combination of various organizational capabilities, it is possible to promote and encourage social entrepreneurship.

Overall, it has been confirmed by several studies that organizational capabilities are crucial for excellent firm performance (Monteiro et al. 2017; Tzokas et al. 2015; Zacca and Mumin 2018). However, how organizational capabilities affect the performance of entrepreneurs from the point of view of ESE and SESE and their relation to innovativeness has been underexplored. Therefore, we propose that:

H2a. *Organizational capabilities have a direct effect on ESE.*

H2b. *Organizational capabilities have a direct effect on SESE.*

H3a. *Organizational capabilities mediate the relation between innovativeness and ESE.*

H3b. *Organizational capabilities mediates the relation between innovativeness and SESE.*

2.4. Philanthropic CSR

CSR is defined, in a broader sense, as corporate behaviors and commitments which aim to positively affect stakeholder obligations and go beyond mere economic interests (Carroll 1991; Kotler and Lee 2008; Turker 2009). It refers to business decision-making concerning ethical values, the fulfillment of legal requirements, and respect for people, communities, and the environment (Carroll 1979; Maignan et al. 1999). CSR is associated with sustainable development, built on the integration of social, economic, and environmental aspects (Buendía-Martínez and Carrasco Monteagudo 2020). It is increasingly gaining attention, because of the current global focus on sustainability. Corporations which are willing to be good corporate citizens have to adopt four responsibilities: economic, legal, ethical, and philanthropic (Carroll 1991). The philanthropic dimension addresses a corporation's responsibility to engage in activities that promote human welfare or goodwill (Carroll 1991), including the responsibilities of contributing financially and through human resources to the community, thereby helping enhance their quality of life (Carroll 1991).

According to Stoian and Gilman (2017), CSR activities in SMEs can enhance the growth of a firm. This result is in line with previous studies and with management literature that affirms the positive relationship between CSR and firm performance (Luo and Homburg 2007; Maignan et al. 1999; Qu 2009) and the positive association between CSR and SME per-

formance (Ionescu 2021; Li et al. 2022; Tsoutsoura 2004; Waddock and Graves 1997). It has been also shown that the relationship between CSR and sustainable financial performance is positive when moderated by entrepreneurship (Luo et al. 2022). Furthermore, there is a positive link between environmental and philanthropic activities and organizational performance, which strengthens previous research which identified a positive relationship between investment in CSR and organizational performance (Lindgreen et al. 2009). The study of Lee et al. (2013) examined the impact of employee perception of CSR activities on employee attachment and corporate performance. That research found that the more employees feel an alignment between CSR and the culture of the firm, the more positive the employees' perception toward the firm will be. The study showed that CSR capability and perceived cultural fit can encourage positive CSR perception, leading to better performance (Lee et al. 2013). Indeed, employees who recognize that their organization is investing in CSR practices are more engaged, more productive, more likely to be committed to organizational goals. Additionally, they can generate positive attention from both current and future employees (Dutton et al. 1994; Turban and Greening 1996). By investing in CSR and increasing engagement with stakeholders, revenues and profits can grow, leading to higher chances of survival in the long term (Lindgreen et al. 2009). Lastly, CSR activities involving community, philanthropic, and environmental responsibility have a significant positive influence on social performance in social enterprises (Jang 2014).

In summary, CSR is positively correlated to firm performance and to positive employee perception. However, research analyzing the impact of philanthropic CSR on the performance of sustainable entrepreneurs remains scarce. Thus, we propose the following hypotheses:

H4a. *Philanthropic CSR has a direct effect on ESE.*

H4b. *Philanthropic CSR has a direct effect on SESE.*

H5a. *Philanthropic CSR mediates the relation between innovativeness and ESE.*

H5b. *Philanthropic CSR mediates the relation between innovativeness and SESE.*

By considering the previously described relationships, the following conceptual model was devised (Figure 1).

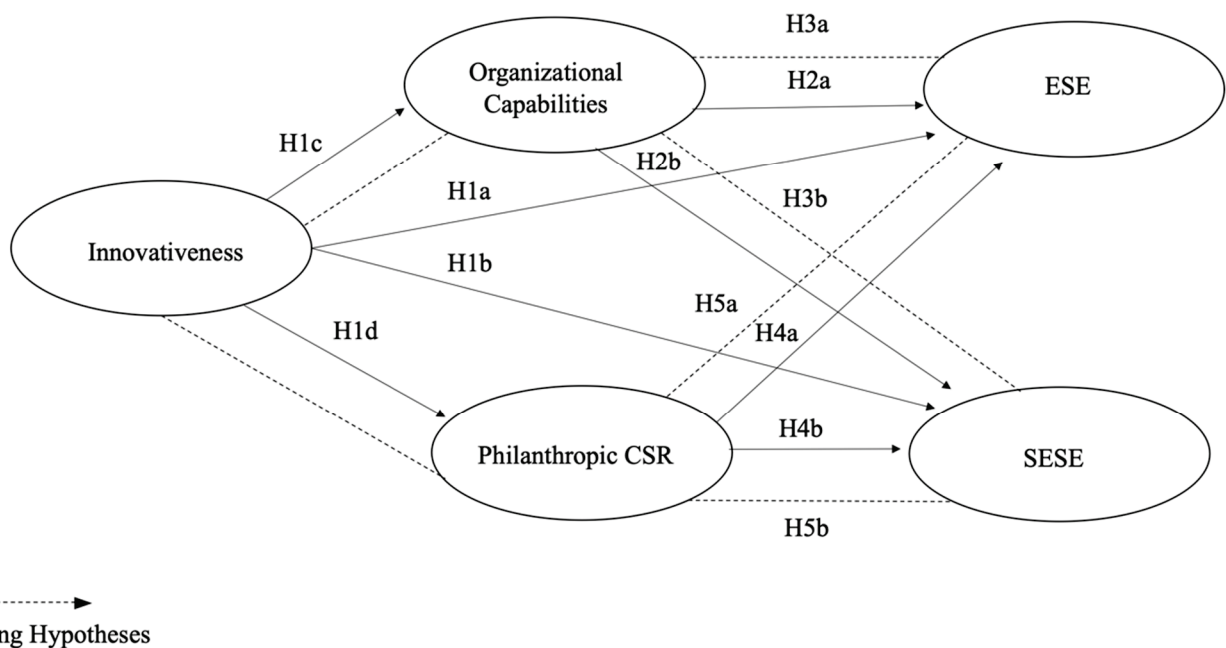


Figure 1. Conceptual model. Note: Connected lines indicate relationships among constructs; Dashed lines indicate indirect relationships among constructs.

3. Materials and Methods

Our analysis employed a quantitative approach by creating a survey for data collection. The sampling frame for the quantitative study was composed of 116 sustainable entrepreneurs, i.e., founders and chief executive officers of their own companies. In choosing the sustainable entrepreneurs to be included, we applied the inclusion criteria used by Zhao et al. (2005) and Montgomery and Stone (2009), i.e.: the company tries to offer environmentally friendly products; the company identifies new business opportunities for social change; the company has created new products/services to solve social problems; and the company has an environmentally sustainable mission.

Our research is based on a non-probabilistic sample. The choice to use a convenience sample was made because of an absence of an official database with which to identify the current business climate. Consequently, a purposive sampling technique was used to guarantee that the respondents were effectively sustainable entrepreneurs and that they followed the inclusion criteria previously introduced.

To obtain the sample, sustainable entrepreneurs were recruited during two events (Web Summit 2021 in Lisbon and the European Innovation Council Summit 2021). The events provided us with access to a database of entrepreneurs. Additionally, the sample was also researched and selected on LinkedIn. After being contacted, the participants were invited to participate in an internet-based questionnaire that was used for data collection.

The questionnaire was prepared using two sections. The first was intended to collect demographic data about the respondents and to validate whether they were sustainable entrepreneurs. The second part was related to the model constructs and was based on existing literature; pre-existing validated scales were used to measure the four constructs used in the structural model. In this way, innovativeness was measured using three items, as proposed by Hughes and Morgan (2007). Entrepreneurial self-efficacy was measured through a four-item scale, as proposed by Zhao et al. (2005), and social entrepreneurial self-efficacy was measured using four items, as also put forward by Zhao et al. (2005) and later adapted by Liu and Huang (2020). The organizational capabilities of the various firms were measured through a seven-item scale adapted from Spanos and Lioukas (2001). Philanthropic CSR activities were measured using a six-item scale proposed by Lee et al. (2013), based on Lichtenstein et al. (2004); Montgomery and Stone (2009). These six scales were measured using seven-point Likert-type scales ranging from one (strongly disagree) to seven (strongly agree). The scales items are presented in the Appendix A (Table A1).

The internet-based questionnaire was sent by email to around 300 sustainable entrepreneurs; 116 completed questionnaires were returned to us. Data collection occurred between November 2021 and February 2022. The respondents comprised 78.4% males and 21.6% females. In terms of age, of the 116 respondents, 115 answered, of which 20.8% were younger than 30 years old, 43.4% were between 30 and 40 years old, 21.7% were between 40 and 50 years old, and 13.9% were over 50. Concerning firm dimension, 57.3% of respondents indicated that their companies had 10 or fewer workers, 32.1% stated they had between 11 and 50 employees, 7.8% had between 51 and 200, and 2.6% indicated that their firms had more than 200 employees. The average years of business were 5.44, with a standard deviation of 5.54 years (minimum: 5 months; maximum: 27 years). Regarding the country of origin, 13.7% were from Portugal, 12% from Italy, 9.1% from the UK, 8.2% from Spain, 8.2% from Germany, 6.4% from Netherlands, 6.4% from France, 4.5% from Denmark, 3.6% from the USA, 3.6% from Sweden, 2.7% from Belgium, 1.8% Austria, 1.8% from Norway, and 1.8% from South Africa. The remaining 14.4% was from Brazil, Uganda, Tunisia, Hong Kong, Malaysia, Singapore, Argentina, Romania, United Arab Emirates, India, Russia, Estonia, Latvia, Croatia, Ireland, or Switzerland. Having an international sample helped to bring a plethora of different views, backgrounds, and contexts, adding value to our research.

4. Results

4.1. Data Analysis

The conceptual model was assessed by means of structural equation modelling (SEM); specifically, we adopted partial least squares (PLS), a variance-based structural equation modelling technique, using the Smart PLS 3 software (Henseler et al. 2015) (Figure 2).

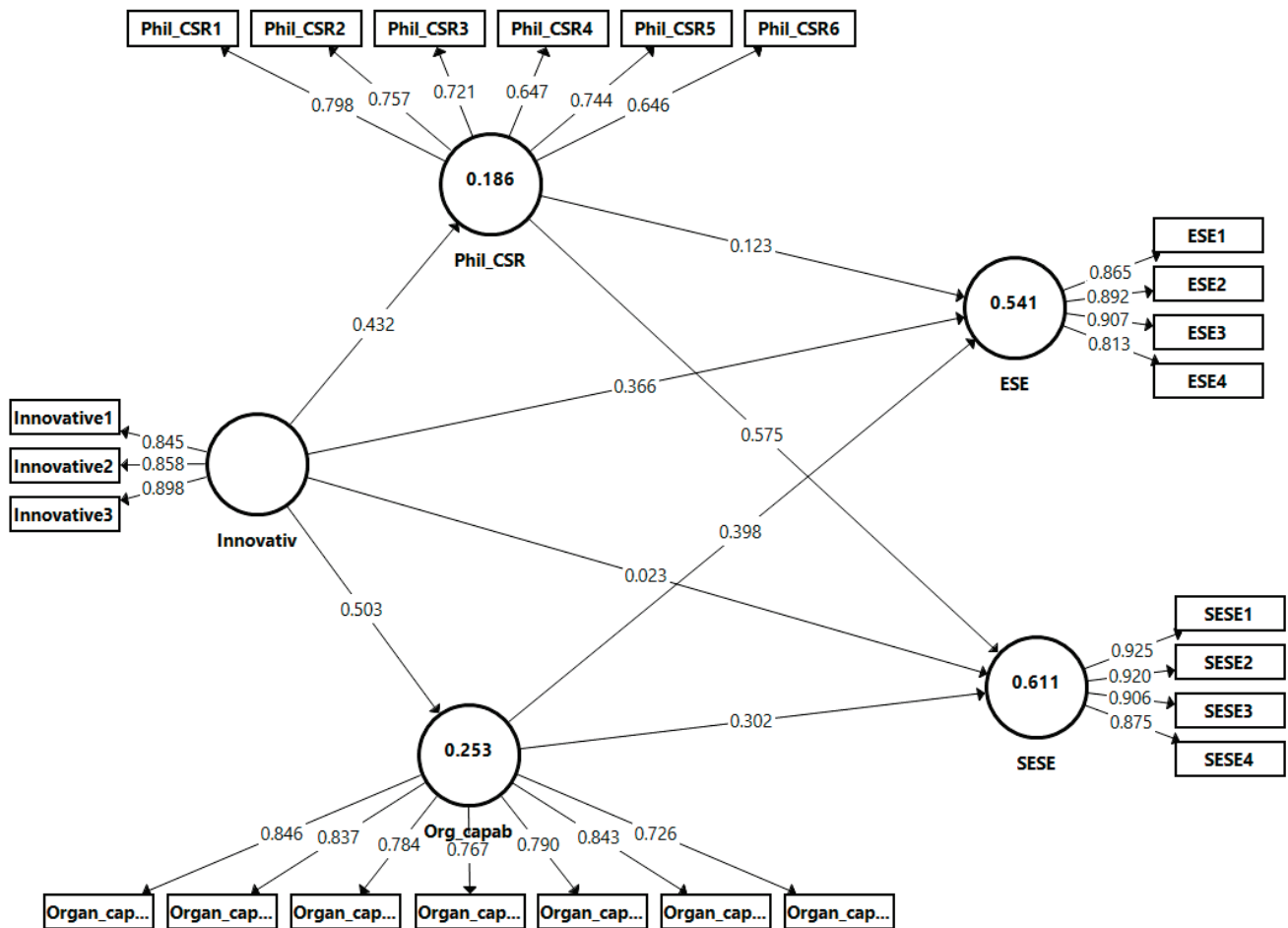


Figure 2. Conceptual model assessment through SEM.

A two-stage approach was implemented to analyze and interpret the results. We firstly assessed the dependability and the strength of the measurement model. Secondly, we verified the structural model. To assess the integrity of the measurement model, we examined the indicators of reliability, convergent validity, internal consistency reliability, and discriminant validity (Hair et al. 2017). It was found that the standardized factor loadings of all items exceeded 0.5 (with a low value of 0.64) and were all significant at $p < 0.001$, which confirmed the individual indicator reliability (Hair et al. 2017). Internal consistency reliability was approved, because the Cronbach alphas and composite reliability (CR) values of all constructs surpassed the cut-off value of 0.7 (Table 1) (Hair et al. 2017). Convergent validity was additionally approved for the three main motives. First, as mentioned previously, all elements loaded favorably and considerably on their constructs. Next, all items had CR values over 0.70. Lastly, as Table 1 demonstrates, the average variance extracted (AVE) for all elements surpassed the threshold of 0.50 (Bagozzi and Youjiae 1988).

Table 1. Composite reliability, average variance extracted, correlations, and discriminant validity checks.

Latent Variables	α	CR	AVE	1	2	3	4	5
ESE	0.893	0.926	0.757	0.870	0.706	0.706	0.531	0.709
Innovativeness	0.835	0.901	0.752	0.619	0.867	0.557	0.478	0.478
Organizational Capabilities	0.906	0.925	0.640	0.642	0.503	0.800	0.552	0.632
Philanthropic CSR	0.818	0.866	0.520	0.477	0.432	0.493	0.721	0.807
SESE	0.928	0.949	0.822	0.646	0.423	0.596	0.733	0.906

Note: α —Cronbach Alpha; CR—Composite reliability; AVE—Average variance extracted. Bold numbers represent the square roots of AVE. The numbers beneath the diagonal elements are the correlations between the constructs. The numbers above the diagonal elements are the HTMT ratios.

Two approaches were applied to evaluate discriminant validity. First, we implemented the Fornell and Larcker criterion (Fornell and Larcker 1981), which requires that a construct's square root of AVE (illustrated on the diagonal with bold in Table 1) is greater than its largest correlation with any item (Fornell and Larcker 1981). Table 1 shows that this criterion was achieved for all elements. Second, we applied the heterotrait-monotrait ratio (HTMT) criterion (Hair et al. 2017; Henseler et al. 2015). As Table 1 illustrates, all HTMT ratios were inferior to the more conservative threshold value of 0.85 (Hair et al. 2017; Henseler et al. 2015). These values provided further evidence of discriminant validity. The structural model was defined using the sign, magnitude, and significance of the structural path coefficients, the magnitude of R^2 value for each endogenous variable as a measure of the model's predictive accuracy, and the Stone-Geisser's Q^2 values as a measure of the model's predictive relevance (Hair et al. 2017). Nevertheless, we assessed collinearity prior to our examination of the structural model (Hair et al. 2017). The variance inflation factor (VIF) values ranged from 1.00 to 1.53, i.e., below the indicative critical value of 5 (Hair et al. 2017). These values showed no collinearity.

The coefficient of R^2 or the four endogenous variables, i.e., organizational capabilities, philanthropic CSR, ESE, and SESE, were 0.25%, 0.18%, 0.54%, and 0.61%, respectively. These values exceeded the limit value of 10% (Falk and Miller 1992). The Q^2 values for all endogenous variables (0.14, 0.08, 0.38, and 0.49 respectively) were superior to zero, which showed the relevance of the model. We applied bootstrapping with 5000 subsamples to assess the significance of the parameter estimations (Hair et al. 2017).

4.2. Quantitative Results

The results displayed in Table 2 show that innovativeness has a considerably positive effect on ESE ($\beta = 0.366$; $p < 0.001$); however, the direct effect of innovativeness on SESE ($\beta = 0.023$; n.s.) is not significant. Innovativeness has a significantly positive relationship with organizational capabilities ($\beta = 0.503$; $p < 0.000$) and with philanthropic CSR ($\beta = 0.432$; $p < 0.000$). These results provide support for H1a, H1c, and H1d, whereas H1b is not supported. Organizational capabilities have a significant positive relationship with ESE ($\beta = 0.398$; $p < 0.000$) and SESE ($\beta = 0.302$; $p < 0.001$), which supports H2a and H2b, respectively. Lastly, philanthropic CSR does not have a positive relation with ESE ($\beta = 0.123$; n.s.), whereas with SESE, there is a positive significantly relationship ($\beta = 0.575$; $p < 0.000$) of TLEs. These results support H4b but not H4a.

To evaluate the mediation hypotheses (H3a–H3b–H5a–H5b), we adopted the recommendations of Hair et al. (2017). Hence, we applied a bootstrapping procedure to examine the importance of the indirect effects via the mediator (Preacher and Hayes 2008). Table 3 introduces the results of the mediation effects. The indirect effects of innovativeness on ESE and SESE via the mediator of organizational capabilities were found to be significant, i.e., $\beta = 0.200$; $p < 0.004$ and $\beta = 0.152$; $p < 0.008$, respectively. The results support mediation hypotheses H3a and H3b. However, the indirect effects of innovativeness on ESE via the mediator of philanthropic CSR were not found to be significant ($\beta = 0.053$, n.s.). Further,

the indirect effects on SESE were shown to be significant ($\beta = 0.248$ $p < 0.000$); thus, H5b was supported whereas H5a was not.

Table 2. Structural Model Assessment.

Path	Original Sample	Standard Deviation	T Statistics	<i>p</i> Values
Innovativeness -> ESE	0.366	0.109	3.370	0.001
Innovativeness -> SESE	0.023	0.076	0.298	0.765
Innovativeness -> Organizational Capabilities	0.503	0.114	4.414	0.000
Innovativeness -> Philanthropic CSR	0.432	0.099	4.376	0.000
Organizational Capabilities -> ESE	0.398	0.110	3.621	0.000
Organizational Capabilities -> SESE	0.302	0.089	3.396	0.001
Philanthropic CSR -> ESE	0.123	0.079	1.556	0.120
Philanthropic CSR -> SESE	0.575	0.072	8.027	0.000

Table 3. Bootstrap results for indirect effects.

Path	Original Sample	Standard Deviation	T Statistics	<i>p</i> Values
Innovativeness -> Organizational Capabilities -> ESE	0.200	0.069	2.885	0.004
Innovativeness -> Organizational Capabilities -> SESE	0.152	0.057	0.645	0.008
Innovativeness -> Philanthropic CSR -> ESE	0.053	0.036	1.492	0.136
Innovativeness -> Philanthropic CSR -> SESE	0.248	0.064	3.855	0.000

4.3. Importance-Performance Map Analysis

Importance performance map analysis (IPMA) is a useful tool that considers the performance and importance of a given construct. It was conducted to extend and enrich the original results of the PLS-SEM analysis. The results can be useful for managerial decisions by providing a greater understanding of where management should concentrate its attention (Ringle et al. 2015). The target construct considered in our study is innovativeness, which is linked to four other variables: organizational capabilities, philanthropic CSR, ESE, and SESE (Figure 3).

Considering the IPMA results for performance (Table 4), all the variables had high-performance values, with a minimum of 71,921 and a maximum of 85,993.

Table 4. Performance: IPMA for innovativeness.

Variables	Performance
Innovativeness	85,993
Organizational Capabilities	73,527
Philanthropic CSR	71,921
ESE	82,792
SESE	74,013

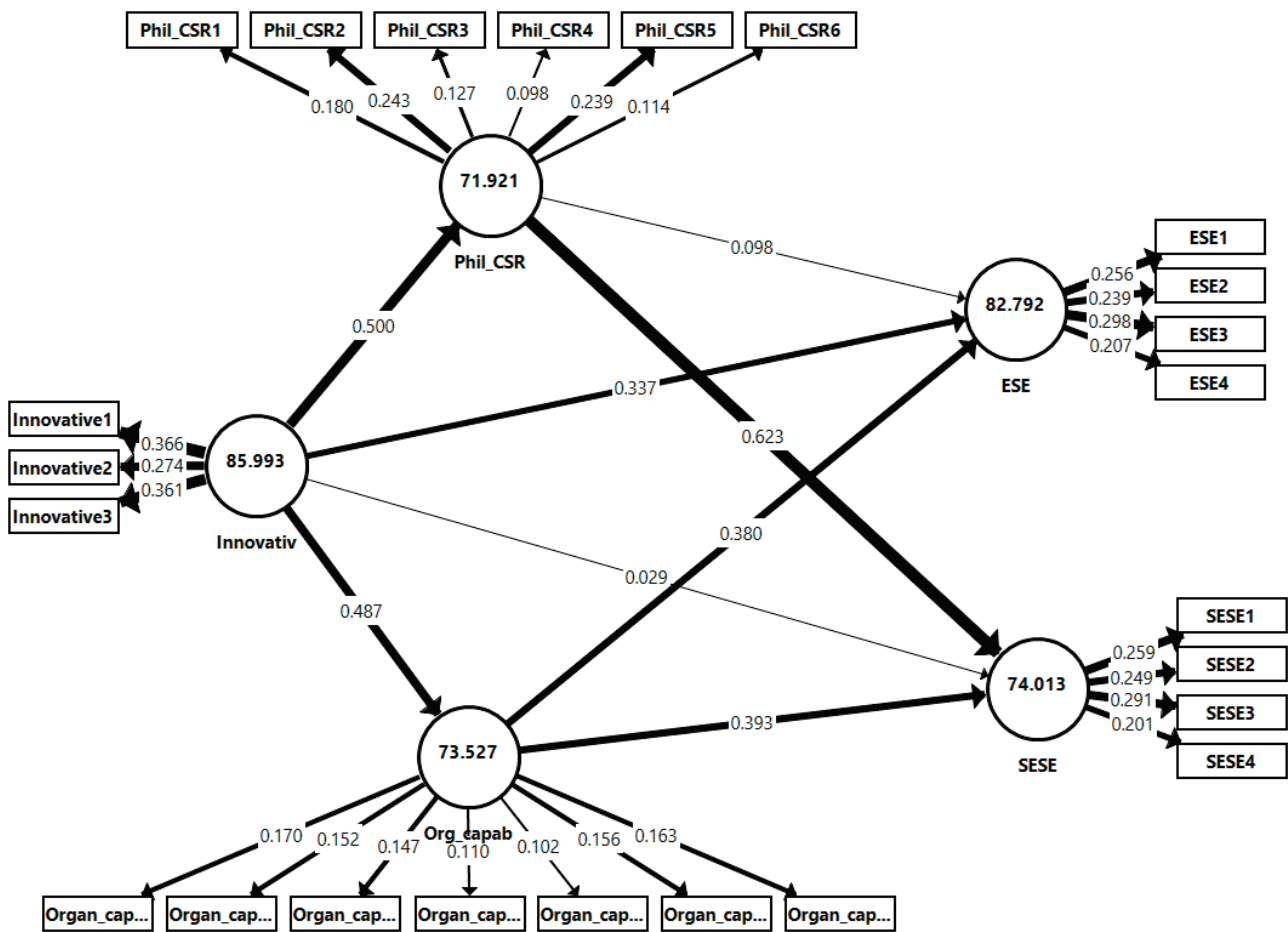


Figure 3. IPMA Model.

Innovativeness positively relates to ESE, organizational capabilities, and philanthropic CSR; the strongest correlation was found for philanthropic CSR (0.500), followed by organizational capabilities (0.487), and ESE (0.337). The lowest level of influence of innovativeness was observed for SESE (0.029); this is in line with previous results showing a non-significant relationship between the two. Organizational capabilities showed significant correlation with ESE (0.380) and SESE (0.393), while philanthropic CSR was the factor most strongly associated with SESE (0.623) but most weakly with ESE (0.098). All the results are found in Table 5. In Figure 4, the importance and performance results are shown together.

Table 5. Importance of innovativeness in the IPMA.

Importance	ESE	Innovativeness	Organizational Capabilities	Philanthropic CSR	SESE
ESE					
Innovativeness	0.337		0.487	0.500	0.029
Organizational Capabilities	0.380				0.393
Philanthropic CSR	0.098				0.623
SESE					

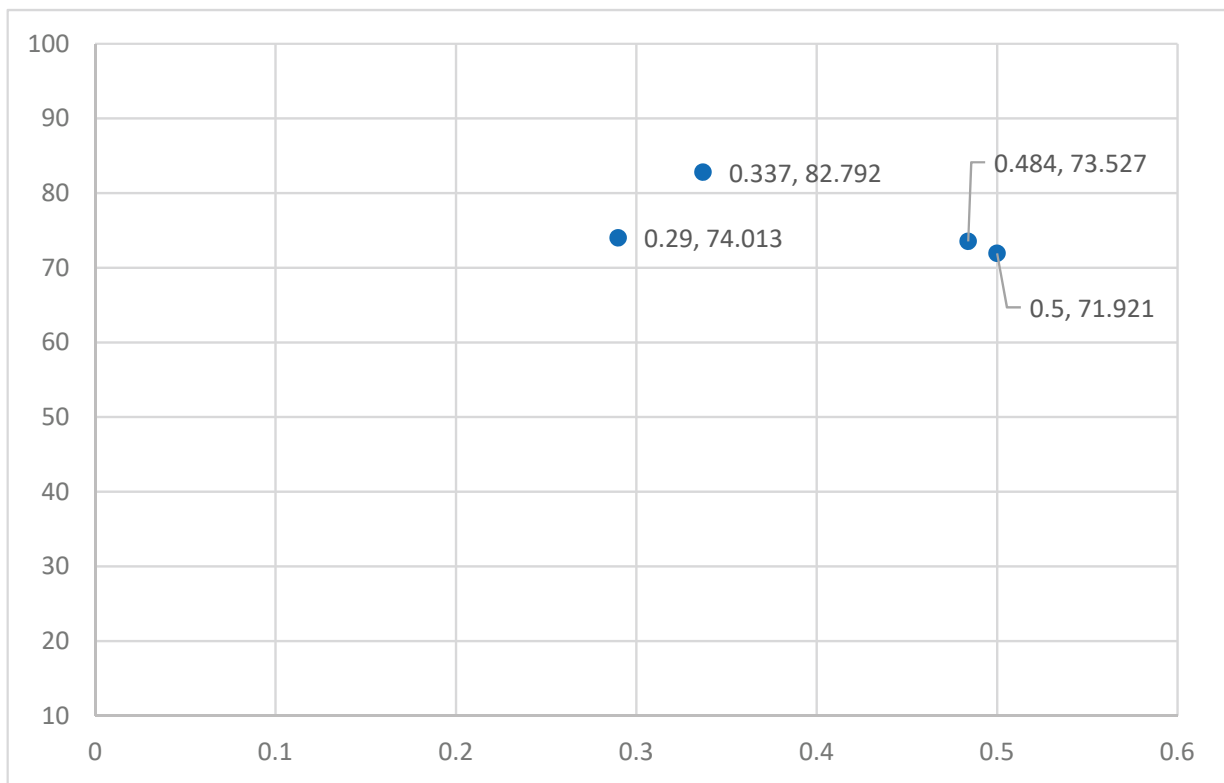


Figure 4. IPMA for innovativeness.

5. Discussion

This research explored the impact of innovativeness on ESE and SESE and analyzed the role of two distinctive mediators: organizational capabilities and philanthropic CSR. We examined and confirmed a positive significant relationship between innovativeness and ESE. This finding confirms evidence provided in studies by Chen et al. (1998) that acknowledge the relationship of innovation with entrepreneurial capabilities, and is in line with the findings of Dias et al. (2021), suggesting that innovation capabilities are predictors of entrepreneurial capabilities. The results are in accordance with previous studies, that affirm innovativeness as a mediator for achievement orientation, which is also a component of self-efficacy (Utsch and Rauch 2000).

Our study, however, extends the literature on the relationship between innovativeness and ESE in sustainable entrepreneurs. We have determined that by developing innovativeness, sustainable entrepreneurs experience higher levels of ESE. Regarding innovativeness and SESE, we found a negative relationship. This is in contrast with the evidence from previous studies, which found that innovativeness can be considered one of the crucial aspects of socially entrepreneurial behavior (Liu and Huang 2020). It is also inconsistent with social entrepreneurial orientation theory, that includes innovativeness as the third strongest dimension (Liu and Huang 2020). According to Shin (2018), innovation has both direct and indirect effects on the performance of social enterprises; however, this is not in line with our results. Our findings expand knowledge on performance, specifically in terms of SESE, showing that innovativeness does not enhance the self-efficacy of sustainable entrepreneurs in successfully performing roles and tasks to make positive social change.

Despite scarce empirical evidence on the relationship between innovativeness and organizational capabilities, we found a significant positive relationship between the two. This relationship supports previous research from Bature et al. (2018) that found that proactiveness and innovativeness indirectly influenced SME performance by building organizational capabilities. It also supports Miller and Friesen (1982) and Tsao and Chen (2012), who suggested that having a culture of innovativeness in an organization increases the

probability of developing a series of skills which are required to compete in the marketplace. We confirm these hypotheses and expand knowledge in the field of SE by showing that the implementation of innovativeness can enhance organizational capabilities. Increasing organizational capabilities can improve a firm's operational climate, managerial competencies, the knowledge and skills of its employees, coordination, and strategic planning, thereby helping to develop competitive advantages, resulting in better performance in SE.

Most of the literature regarding the relationship between innovativeness and philanthropic CSR has focused mainly on the general concept of CSR. Based on our quantitative study, our findings show a positive significant relationship between innovativeness and philanthropic CSR. This is in line with the evidence from Vilanova et al. (2009), stating that when CSR is integrated, it can facilitate the development of innovative practices and, eventually, competitiveness. Bahta et al. (2020) and Korra et al. (2018) stated that firms with a larger application of CSR practices are more likely to be innovators. However, our findings make a further contribution to the literature in the field of SE by identifying the positive impact of innovativeness on the philanthropic dimension of CSR.

The results from this quantitative study show a significant positive relationship between organizational capabilities and ESE. This is in line with the evidence from several studies that stated that organizational capabilities are essential for excellent firm performance (Monteiro et al. 2017; Tzokas et al. 2015; Zacca and Mumin 2018). Our findings also contribute to the literature on the role of organizational capabilities in ESE in SE. The results suggest that organizational capabilities can enhance sustainable entrepreneurs' ESE, thereby increasing their strengths in terms of successfully performing various entrepreneurial roles and tasks, successfully identifying new business opportunities, and improving their belief in their abilities.

The literature on the effects of organizational capabilities on SESE is still underdeveloped. We observed a significant positive relationship between organizational capabilities and SESE. This is consistent with the findings of Yu et al. (2022), who proposed that organizational capabilities can impact the performance of social enterprises. This positive relationship is also consistent with the study from Kwiotkowska (2022), that showed that with a combination of various organizational capabilities, it is possible to promote and encourage social entrepreneurship. However, the previously cited studies did not target sustainable entrepreneurs and they did not research the specific variable of SESE. Thus, our research has attempted to advance knowledge in the field of the organizational capabilities of SE and SESE.

The direct relationship between philanthropic CSR and ESE was found to be negative. Research related to this relationship is scarce, with the only studies slightly related to the topic showing evidence of a positive relationship between CSR and firm performance (Qu 2009; Maignan et al. 1999; Luo and Homburg 2007). Another study showed a positive link between environmental and philanthropic activities and organizational performance (Lindgreen et al. 2009). However, our findings show that CSR does not have a positive relationship with ESE, and consequently, that it is not effective in enhancing the self-efficacy of sustainable entrepreneurs.

On the other hand, the direct relationship between philanthropic CSR and SESE was found to be positive. The relationship was found to be of the highest in importance in our IPMA analysis, showing great strength between the constructs. The results related to philanthropic CSR and SESE are in line with the evidence from Jang (2014), stating that CSR activities involving community responsibility, philanthropic responsibility, and environmental responsibility have a significant positive influence on social performance in social enterprise. The positive result can be related to the similar features of philanthropic CSR and SESE, where the focus is fixed on social aspects. Therefore, by incorporating philanthropic CSR, the SESE of sustainable entrepreneurs enhances, and as result, their social performance improves, and social issues can be solved more successfully.

The relationship between innovativeness and ESE with organizational capabilities as a mediator is underexplored. Studies related to innovativeness and ESE are also limited,

however innovativeness has a positive relationship with job performance and venture performance (Frese 1995; Locke and Latham 1990; Miner et al. 1989; Schwenk and Shrader 1993). We also know that organizational capabilities can help companies get an advantage over others thus helping increase performance (Amit and Schoemaker 1993; Teece et al. 1997; Barney 1991; Penrose 1959). According to Yu et al. (2022), innovativeness plays an important role and is considered a crucial organizational capability for competitive advantage and sustainability in dynamic environments.

The results were positive for innovativeness and ESE showing that organizational capabilities can promote the link between the two variables. This finding aligns with previous evidence from studies that recognize that organizational capabilities are critical for excellent firm performance (Amit and Schoemaker 1993; Teece et al. 1997; Barney 1991; Penrose 1959). Other studies had found a positive relationship between other types of firm capabilities, specifically, marketing capabilities and ESE (Snell et al. 2015). Furthermore, integrating a culture of innovativeness in an organization can increase the probability of developing capabilities to be more competitive (Miller and Friesen 1982; Tsao and Chen 2012) thus, this could most likely increase ESE in sustainable entrepreneurs. Although previous studies show the positive role of organizational capabilities in advancing competitive advantages, its mediating role between innovativeness and ESE was still underexplored and needed further investigation. Therefore, our research enhances the understanding of ESE by showing that innovativeness mediated by organizational capabilities can stimulate the self-efficacy of sustainable entrepreneurs, thus influencing positively their entrepreneurial intentions in achieving business success.

The analysis of the data collected through our study show that the relationship between innovativeness and SESE through the mediating role of organizational capabilities is also positive. This result was quite interesting as the direct relationship between innovativeness and SESE was found negative and in contrast, the indirect relationship was found positive showing that innovativeness can enhance SESE only when mediated by organizational capabilities. The previous studies conform with our previous results that show a positive correlation between innovativeness and organizational capabilities and organizational capabilities with SESE. The results are also in line with previous studies stating that innovativeness can help companies be more competitive and that it can help indirectly in influencing SME performance by building organizational capabilities. Regarding organizational capabilities and SESE, we know that a combination of several organizational capabilities can foster social entrepreneurship Kwiotkowska (2022). Research on factors that can influence SESE is scarce. Studies have focused mostly on innovativeness as a mediator for social performance (Shin 2018) and on the role of innovativeness in indirectly influencing SME performance by building organizational capabilities (Bature et al. 2018). Our results advance the knowledge on SESE, proving that innovativeness does not have a significant direct impact on SESE, but if the relationship is mediated by organizational capabilities the result is positive.

The relationship between innovativeness and ESE through the mediation of philanthropic CSR has been underexplored. Most studies show increasing evidence that CSR can positively impact firm performance (Qu 2009; Maignan et al. 1999; Luo and Homburg 2007) and according to Lindgreen et al. (2009) there is a positive link between environmental and philanthropic CSR and organizational performance. However, there is a lack of focus in research regarding the impact of innovativeness mediated by the specific dimension of philanthropic CSR on the performance of entrepreneurs.

The findings of our study show that the relationship between innovativeness and ESE through the mediation of philanthropic CSR is not significant. Although innovativeness directly positively impacts both ESE and philanthropic CSR, the result is in line with our previous results showing a non-significant relationship between philanthropic CSR and ESE. Previous research had suggested that innovativeness has a significant effect on performance features such as profit growth and employee growth (Utsch and Rauch 2000). And there is increasing positive evidence of the impact of CSR on firm performance (Qu

2009; Maignan et al. 1999; Luo and Homburg 2007). However, our results suggest that combining innovativeness by mediating it with philanthropic CSR does not enhance the ESE of sustainable entrepreneurs.

Lastly the indirect relationship between innovativeness and SESE through philanthropic CSR is positive. This is another interesting finding as innovativeness does not have a positive relationship with SESE and the relationship results positive only when mediated by philanthropic CSR. This is in line with our previous results showing the positive relationship between philanthropic CSR and innovativeness and SESE, where it additionally resulted to have the strongest importance of the constructs through the IPMA. This relationship is also supported by previous evidence that shows that innovativeness positively and directly correlates to superior performance (Calantone et al. 2002; Hult et al. 2004; Keskin 2006; Thornhill 2006) and that investing in CSR can increase performance (Qu 2009; Maignan et al. 1999; Luo and Homburg 2007). However, our study shows that innovativeness can enhance the belief in one's ability to make positive social change, only with the mediation of philanthropic CSR, therefore our findings extend the knowledge on the performance of sustainable entrepreneurs under the specific dimension of SESE.

According to Zhao et al. (2005), entrepreneurship education is inclined to emphasize technical aspects of entrepreneurship, however scarce attention is given to the cognitions of entrepreneurs including their beliefs and intentions (Chen et al. 1998). Most entrepreneurship courses concentrate on common management skills and often neglect the cognitions of the entrepreneurs and their entrepreneurial skills such as innovation and risk-taking (Chen et al. 1998). Thus, training institutions and educators should consider more entrepreneurial attitudes and perceptions when building their courses and should focus more in strengthening student's ESE (Chen et al. 1998).

Therefore, based on the results of our study we can offer practical advice on how to increase ESE and SESE in sustainable entrepreneurs that are aiming to achieve superior performance. The data collected through the questionnaires provide insights on how to increase organizational capabilities and philanthropic CSR activities through innovativeness, which can consequently benefit positively the performance of sustainable entrepreneurs. The relevance of these implications is based on the importance and benefits of ESE and SESE for entrepreneurs, as evidence suggests that ESE positively influences business success and can make entrepreneurs more confident in performing tasks (Baum and Locke 2004; Forbes 2005; Miao et al. 2017; Srimulyani and Hermanto 2021).

Specifically, to enhance ESE, it is important to implement actions that contribute to the development of innovativeness, that provide an environment within the business where innovativeness can thrive and where sustainable entrepreneurs can engage more in actions such as actively introducing improvements and innovations in the business, being creative in the methods of operations, and seeking new ways to do things. Thus, based on the results, by increasing innovativeness, ESE can grow, hence, chances to be more successful in identifying new business opportunities, to be more creative in thinking, in product making, and in commercializing new ideas will increase (Zhao et al. 2005). Research has shown that entrepreneurial self-efficacy (ESE) is positively linked to entrepreneurial intentions and behavior (Chen et al. 1998; Zhao et al. 2005; Smith and Woodworth 2012).

Engaging in the development of organizational capabilities or having a business with great organizational capabilities is another factor that can enhance ESE. The organizational capabilities needed are related to managerial competencies, knowledge, skills of employees, firm climate, efficient organizational structure, coordination, strategic planning, and the ability to attract creative employees. Therefore, by developing these capabilities, sustainable entrepreneurs' ESE will increase. However, based on our results if the objective is to enhance ESE, philanthropic CSR activities are not advised, as the implementation of those activities does not lead to an increase in ESE.

The results from the questionnaire show that innovativeness mediated by organizational capabilities plays a key role in the increase of ESE, therefore implementing the two in a business will not only, lead to an increase in ESE but also to better general performance,

thanks to the engagement in organizational capabilities. However, implementing innovativeness together with philanthropic CSR is not advised, as the combination of the two does not lead to the development of ESE in sustainable entrepreneurs.

Educating and training social entrepreneurs is becoming progressively dominant in business schools all around the world and it is an important aspect for entrepreneurs to gain confidence in their ability to effect positive social change (Smith and Woodworth 2012). The importance of having confidence in creating positive social change applies to sustainable entrepreneurs as well, that can use social change to promote sustainability. Based on the results those interested in developing SESE, should seek to engage and increase mainly philanthropic CSR activities and allow the development of organizational capabilities. With the increase of SESE the chances for the sustainable entrepreneur to be more confident in recognizing new business opportunities for social change, to create new products/services to resolve social problems, to think creatively to benefit others and to commercialize ideas for social enterprises will increase. However, activities that involve innovativeness will not directly enhance SESE, therefore they are not advised.

Our current findings also provide insights on the positive relation between innovativeness and organizational capabilities and philanthropic CSR. To strengthen this relation, and increase performance, more attention should be focused on creating an environment where innovativeness is encouraged together with organizational capabilities. Furthermore, CSR has become a priority for business leaders in every country, as such, innovativeness needs to be integrated and applied by sustainable entrepreneurs to enhance their philanthropic CSR activities, thus increase their competitive edge and increase their confidence.

For far-sighted companies, the environment may prove to be the major opportunity for enterprise and invention, that the industrial world has ever witnessed (Cairncross 1992). Indeed, the environment presents a considerable opportunity, and it may be time that we comprehend the significance of entrepreneurship to sustainability and help educate entrepreneurs to succeed and to be more confident in their vision. We believe that for those entrepreneurs that want to have superior performance and for courses on education or training of entrepreneurs, to focus on developing ESE and SESE by focusing on the role of innovativeness, organizational capabilities, and philanthropic CSR activities. In fact, creating a supportive environment for entrepreneurs is an important aspect to consider as well, because it influences self-efficacy both directly and indirectly through performance (Chen et al. 1998). ESE, for instance, has higher chances to develop and sustain in a supportive environment than in an adverse one (Chen et al. 1998). A supportive environment will higher the chances of creating entrepreneurial success which in turn will enhance ESE. Therefore, based on our results, companies or communities should work toward setting up an efficacy enhancing environment through organizational capabilities and philanthropic CSR, that will in turn help sustainable entrepreneurs to thrive and to be more confident in venturing in new businesses that may help the planet. By providing them with an already stable setting, through the implementation of the two concepts, their beliefs in their ability could improve and lead to better performance.

The following section presents the limitations of the study, with each limitation followed by a suggestion for future investigations. Firstly, our research was based on a quantitative method; further research could deepen and extend knowledge by conducting qualitative research, including interviews, thus providing a more comprehensive perspective, which could later be compared with those of other participants in the study to extend the knowledge on the topic. Secondly, the generalization of the result is limited, due to the non-probabilistic purposive sampling procedure of the survey; further research could apply a probabilistic sample to extend its generalizability. Thirdly, we did not consider the effect of culture. As the data tested were drawn from 29 countries, the different cultures of each sustainable entrepreneur could play a role and influence each result. Future research could analyze the moderating effect of culture on ESE and SESE, for instance, if certain cultures were found to have higher ESE and SESE, it would be interesting to understand their characteristics compared to those of other cultures. Fourthly, our study found no

direct relationship between innovativeness and SESE; the relationship was only found to be positive when mediated; future research could investigate the reasons for this result. Few researchers have examined the potential effect of developing ESE and SESE within groups; thus, future research could try to determine whether working in teams could promote the development of ESE and SESE among sustainable entrepreneurs. Furthermore, other variables associated with sustainability (e.g., Organizational Resilience; Collaborative Networks, or Digital Business Models) could also be used as important constructs to complement the present study.

Lastly, the need for successful sustainable entrepreneurs and for countries to develop sustainability is increasing with time. Great confidence from entrepreneurs is required to venture into new innovative sustainable businesses; this is why it is a necessity to have sustainable entrepreneurs who are willing to take risks, have the right mindset, and who are successful in finding solutions to daily difficulties and global challenges. Previous research studies which are relevant to our specific framework are limited. Therefore, the present study identified a literature gap and suggests that further research be carried out on the factors that can directly and indirectly influence ESE and especially SESE.

6. Conclusions

SE has received increasing attention in the last decade by different actors, including international institutions, firms, and universities. Sustainable entrepreneurs are considered agents of change. They can go overcome global challenges by finding a balance between economic feasibility, social prosperity, and environmental protection (Belz and Binder 2017; Muñoz and Dimov 2015). There is a need for more performant sustainable entrepreneurs, as they may be the solution to, instead of the cause of, environmental degradation and social inequality.

The aim of this study was, through a quantitative method approach, to expand knowledge on the direct and indirect influence of innovativeness on the ESE and SESE of sustainable entrepreneurs, to classify the role of organizational capabilities and philanthropic CSR as mediators, and to understand if these two variables can directly positively impact ESE and SESE.

The independent variable analyzed was innovativeness, which is considered a determinant and antecedent of entrepreneurship (Dias et al. 2021). ESE and SESE are two dependent variables that are dominant predictors for performance (Bandura 1977, 1982, 1986; Bandura and Schunk 1981). In this study, potential mediators were organizational capabilities and philanthropic CSR, as they are both a source of competitive advantage (Collis 1994; Ionescu 2021; Li et al. 2022; Teece et al. 1997; Waddock and Graves 1997), and hence, they could play an important role in influencing the performance of sustainable entrepreneurs.

To test the hypothesis a quantitative study was conducted on a sample of 116 sustainable entrepreneurs from 29 different countries. The results acknowledge the identification of a set of relationships. Firstly, we identified a direct and positive relationships between innovativeness and ESE, organizational capabilities, and philanthropic CSR, however, the direct relationship with SESE was negative. The relationship between organizational capabilities with ESE and SESE was positive, whereas philanthropic CSR had a negative direct relation with ESE but a positive one with SESE. The indirect relationships between innovativeness through organizational capabilities to ESE and SESE were positive, whereas the relationship mediated through philanthropic CSR was found negative for ESE and positive for SESE. Finally, it was interesting to observe that although innovativeness's direct relation with SESE is negative when mediated through organizational capabilities or philanthropic CSR is positive.

7. Conceptual Contributions

This study makes several contributions to the SE literature. Firstly, it extends the literature on ESE and SESE as outcomes focusing specifically on sustainable entrepreneurs.

An increasing number of studies have recognized factors that may promote ESE, including institutional environment, firm characteristics, education, training, work experience, role models and mentors and individual difference (Newman et al. 2019). In our research, we found no studies focusing on extending knowledge on the role of innovativeness as a direct or indirect independent variable. Therefore, this report is also one of the first to uncover the direct effects of organizational capabilities and philanthropic CSR on ESE and SESE

Secondly, studies on the factors that can foster or inhibit SESE remain scarce. Therefore, this study contributes to the literature on SESE by providing evidence of the importance of philanthropic CSR, that was found to have the strongest link with the development of SESE, and of innovativeness and organizational capabilities. Our results make a key contribution to the topic of SESE as an outcome, representing a significant advancement in research on the social performance of sustainable entrepreneurs. Studying SESE is relevant, as it is a key feature for sustainable entrepreneurs to have; by developing their SESE, sustainable entrepreneurs can make positive social change. This fact is likely to make them more likely to commit, persevere, and perform well in order to generate social value. Thus, our research brings value to the topic by showing which factors can influence it.

Thirdly, this study is one of the first to incorporate the effect of two usually separated dimensions, namely, innovativeness with organizational capabilities and philanthropic CSR, as mediators for ESE and SESE. The results provide improved understanding of the role of innovativeness with these two mediators, supporting the idea that innovativeness, together with organizational capabilities, can positively impact ESE and SESE. Our research also extends the knowledge on innovativeness by showing that it can only impact SESE positively when mediated; in contrast, innovativeness in direct relationship to SESE yields negative outcomes. By combining the effect of the three variables, this study provides knowledge on the factors influencing ESE and SESE, thus making a powerful contribution to SE performance and supporting the notion put forward in previous research that innovativeness plays an important role in enhancing performance.

Lastly, we have extended the literature on the positive influence of innovativeness on organizational capabilities and philanthropic CSR. This is also a significant contribution, because combining the three can enhance SE performance, as all the three are positively related to business success. On the basis of these contributions, this study emphasizes the idea that research on ESE and SESE is a field with extensive potential for growth.

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Institutional Review Board Statement: Ethical review and approval were waived for this study, since written informed consent was obtained for the in-depth interviews before each session. In the survey, a link to the online survey platform was sent by social media and partners' social media, and at no times was contact established between researchers and participants. Moreover, the interview script and the personal questionnaire did not include any information on participants' histories. As such, all data accessible to the researchers were stripped of respondents' names, addresses, or birth dates and cannot be linked back to them.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data available upon reasonable request to the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Construct Items.

Innovativeness (1 = strongly disagree; 7 = strongly agree)
We actively introduce improvements and innovations in our business
Our business is creative in its methods of operation
Our business seeks out new ways to do things
Organizational Capabilities (1 = strongly disagree; 7 = strongly agree)
Managerial competencies
Knowledge and skills of employees
Firm Climate
Efficient organizational structure
Coordination
Strategic planning
Ability to attract creative employees
Philanthropic CSR (1 = strongly disagree; 7 = strongly agree)
Our company helps solve social problems
Our company has a strong sense of corporate social responsibility
Our company gives adequate contributions to local communities
Our company allocates some of their resources to philanthropic activities
Our company plays a role in society that goes beyond the mere generation of profits.
Our company encourages its employees to participate in voluntarily activities
Entrepreneurial self-efficacy (1 = strongly disagree; 7 = strongly agree)
Successfully identifying new business opportunities
Creating new products
Thinking creatively,
Commercializing an idea or new development
Social entrepreneurial self-efficacy (1 = strongly disagree; 7 = strongly agree)
Identifying new business opportunities for social change.
Creating new products/services to solve social problems
Thinking creatively to benefit others.
Commercializing an idea for social enterprise

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Article

Tourism Vulnerability Amid the Pandemic Crisis: Impacts and Implications for Rebuilding Resilience of a Local Tourism System in Vietnam

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Abstract: Despite the devastating impact of the COVID-19 crisis on the global tourism industry, a few countries have attempted to foster their local tourism economies' recovery by offering distinctive mechanisms which facilitate their safe tourism destinations to restart domestic tourism operations during the pandemic waves. However, there has been little research investigating how different sectors of a local tourism system, particularly in a developing country, seriously suffer from the pandemic crisis but gain encouraging revitalization from the pandemic shocks. Therefore, this study employed Can Tho city as a case study to examine the holistic impact of COVID-19 on different sectors of the local tourism industry and explore the key factors/players contributing to the resilience empowerment and adaptive recovery of the local tourism system. As such, a semi-structured interview approach was employed in this study to collect both quantitative and qualitative data. The study recruited 40 representatives of tourism-related authorities at different levels and 280 managers of different tourism sectors in the local tourism industry. The findings generally reveal the disastrous impacts of the pandemic on the local tourism industry across all tourism sectors but show an unexpected recovery of tourism businesses during the pandemic crisis. The integrated findings also highlight the pivotal role of local governments in crisis governance and destination recovery support during and after the pandemic waves. Similarly, the proactive engagement of local enterprises was found critical toward rebuilding their organizational resilience, and such adaptive transformations were essential for tourism business recovery in new normal conditions. The economic policy response and effective financial schemes were common expected measures toward the tourism industry's recovery in the post-pandemic crisis.

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1. Introduction

The first case of COVID-19 infection in Vietnam was detected on 23 January 2020 (Giang 2022). The tourism activities in Vietnam had almost fallen into a state of crisis and total paralysis until March 2021. Most of the services and activities associated with tourism and hospitality were paused or interrupted, which led to increasingly devastating consequences, including a huge loss of revenue for the tourism industry and jobs for tourism and hospitality workers. From June 2020, the domestic tourism industry started to recover, but with the impact of the other waves of COVID-19, the situation began to struggle again and was projected to face a much more serious challenge to recover post-pandemic.

According to the International Monetary Fund (IMF), some economic sectors in Vietnam were found to be severely affected, especially tourism, transportation, and accommodation services (Kim Thoa 2020). Before the COVID-19 pandemic, Vietnam's tourism was estimated to welcome 18 million international visitors and serve 85 million domestic visitors, which significantly contributed around USD 32.8 billion (equivalent to 9.2% of the GDP) (Huy 2021). Yet, the number of international visitors to Vietnam in 2020 sharply

decreased by 99% compared to that of the previous year, which revealed an enormous pandemic impact on the national tourism industry (General Statistics of Vietnam 2021).

However, Vietnam has attempted to save the tourism industry by fostering the domestic tourism economy given the adverse standstill of the global tourism industry. Apart from launching multiple stimulus packages for domestic tourism businesses, the central government also allowed potential tourism destinations to restart their activities as long as the epidemic control regulations were highly committed. As such, tourism destinations with limited or no Coronavirus cases were encouraged to tailor their pandemic prevention protocols in a way that could stimulate the tourism recovery of local tourism sectors and tourists' travel demand under the COVID-19 situation. Despite the pressure of the lingering impact of the pandemic, a few tourism destinations resumed up to 60% of their destination capacity over the first and second waves of the epidemic crisis (Huynh et al. 2022). In this regard, the local tourism industry could be used as an effective temporary tool to gain the economic revitalization of the tourism industry; thereby, socio-economic pressures could be alleviated (Ozili 2020).

Despite the encouraging recovery of a few local tourism systems amid COVID-19, there has been a lack of understanding of how a local tourism industry rebuilds its resilience and recovery during the pandemic waves. Therefore, this study aims to investigate how the key sectors of a local tourism system suffer from and adapt well to the pandemic's challenges. To shed light on this research phenomenon, this study examines key questions as follows:

1. To what extent does the COVID-19 crisis affect the key sectors of a local tourism system?
2. What are the key factors influencing the destination's resilience and recovery amid the pandemic crisis?

2. Literature Review

The current global pandemics have generated a huge impact on all aspects of human life. The proliferation of global pandemics might stem from a plethora of causes, including increasing communication and global mobility, urbanization, the high concentration of people, and the growth of the global transportation system (Pongsiri et al. 2009). According to Qiu et al. (2017), there were only three global pandemics during the 20th century but four pandemics within 20 years of the following century. The World Bank warned that the dark prospect of COVID-19 pandemic impacts and other potential disasters might seriously affect people's lives and our global sustainable development goals until 2030 (McKibbin and Fernando 2021). More seriously, developing and under-developed countries might face bigger challenges to recover their tourism economies since the pandemic could be lingering and unprecedented (Peasah et al. 2013).

Academic research regarding the assessment of pandemic impacts on tourism has received the attention of scholars around the world for over 20 years. The world has recorded global epidemics that somewhat affected the supply and demand of the tourism industry. Evidently, despite a far smaller impact than that of COVID-19, such disease outbreaks as SARS in 2003 or H1N1 in 2009 have affected the growth of the tourism industry, but these effects were likely to be short-term impacts (Gössling et al. 2020). Richter (2003) claimed that public health problems influenced tourism activities in both host and guest countries. This also means that countries share both benefits and challenges when experiencing a global health crisis. A typical example of this is the decreasing number of tourist arrivals in Hong Kong during the SARS epidemic in 2003, which has revealed its negative impact on the host tourism industry despite its small-scale influence (Siu and Wong 2004). More seriously, the swine flu epidemic in 2009 hit Mexico's tourism quite heavily with a drop of about 1 million visitors and a loss of USD 2.8 billion in revenue (Rassy and Smith 2013). The UNWTO has assessed the impact of several global events and their impact on the tourism industry (UNWTO 2020). Gössling et al. (2020) also pointed out that the tourism industry is a recoverable sector from external impacts, but he also

claimed that the tourism economies might face a by far devastating impact of the COVID-19 crisis. According to the World Tourism Organization's prediction in April 2020, even if the COVID-19 situation was more positive by mid-2020, the world tourism industry still lost 20–30%, with a decline from USD 290 to 440 billion. In case the COVID-19 situation becomes more complicated in the near future, the world tourism industry might suffer a huge loss of its revenue due to the lingering standstill of the global mobility restrictions (UNWTO 2020). Unfortunately, the situation of the COVID-19 pandemic became worse in 2020, which led to an enormous economic loss of around 80% of its revenues (UNWTO 2021).

In May 2020, the World Tourism Organization released a recommendation to take action by local authorities and governments against the COVID-19 epidemic, proposing how the tourism industry could respond in a more effective and resilient way. Such recommendations from the World Tourism Organization included 23 solutions divided into three categories, involving better controlling diseases and minimizing risks, stimulating and accelerating recovery, and being well-prepared for the future (UNWTO 2020). There are three main fields of academic research regarding the impact of epidemics on tourism, including the impact of disease on tourism demand (Kuo et al. 2008; Page et al. 2012; Solarin 2015), the tourism industry's response to pandemics at a local and national level (Cooper 2006; Maphanga and Henama 2019; Huang and Zeng 2022), and the influence of pandemics on specific aspects of the tourism industry, such as transportation, restaurants-hotels, event tourism, and so on (Henderson and Ng 2004; Le and Phi 2021). Although there have been many studies on the impact of disease on tourism on a regional or national scale, there is a lack of systematic research on the impact of the pandemic crisis on different sectors of the local tourism system.

Despite a short outbreak of the pandemic, the enormous impact of the COVID-19 epidemic on the world tourism industry has gained increasing attention within academia. Initial efforts from the scholars to explore the vulnerability and strategic adaptation for the global tourism industry recovery (Gössling et al. 2020). Scholars pointed out that COVID-19 has had a strong influence across all sectors of the tourism industry (e.g., aviation, accommodation-restaurant, sport and event travel, and yachts) and the world tourism industry might see USD 2.1 trillion in losses in 2020. The aviation industry suffered heavy losses with more than USD 250 billion of decline compared to that in 2019. This study has highlighted the long-term impacts of the COVID-19 pandemic on the world tourism industry and the fundamental change in the global tourism industry, including reducing the dynamics, demand, and scale of the tourism industry and changing tourist habits, which strongly affects the tourism enterprise community.

The United Nations Development Program (UNDP) has released a report titled "A Conceptual Framework for Analyzing the Economic Impact of COVID-19 and its Policy Implications" (Hevia and Neumeyer 2020) in which the evaluation frameworks of COVID-19's direct and indirect effects on the global economy were proposed. In addition, the report by the World Tourism Organization, namely "UNWTO World Tourism Barometer May 2020, special focus on the Impact of COVID-19" (UNWTO 2020), conducted a fairly specific SWOT analysis of strengths and weaknesses to identify the opportunities and challenges of the tourism industry against the COVID-19 pandemic. This report identified the impacts of COVID-19 on the tourism industry, including an increase in unemployment; SME bankruptcy; workers' income reduction; and increased skepticism and fear of tourists when deciding to travel. These key concerns have led to a decline in tourism demand and difficulties for the tourism supply chain. In addition, the studies of (Sigala 2020) and Isaac and Keijzer (2021) also stressed the degree and extent of the impact of the COVID-19 epidemic on the tourism industry.

Other papers investigating the impact of COVID-19 on Chinese tourism by Hoque et al. (2020) and India's tourism industry by Kasare (2020) indicated the huge and long-term pandemic impact on both domestic and international tourism in these countries. Similarly, other studies also highlighted the strong impact of the COVID-19 pandemic on

Malaysia's aviation and restaurant-hotel sector (Karim et al. 2020), tourism in small islands in Indonesia (Dinarto et al. 2020), and online skating tourism in Austria (Correa-Martinez et al. 2020). Such common concerns regarding unemployment, bankruptcy, revenue loss, and budget deficit were serious consequences brought about by the COVID-19 pandemic (Kasare 2020). For tourism-dependent countries, the economic impact might be much more serious since all tourism sectors might suffer from the lingering crisis (Centeno and Marquez 2020). A study by Bakar and Rosbi (2020) also predicted that world tourism might collapse under the impact of COVID-19 if there were no proper measures to rebound tourism businesses. Recently, there have been several publications dealing with world tourism prospects in the post-COVID-19 period. Chang et al. mentioned the perspective of the sustainable development of the world tourism industry in the post-COVID-19 period through an analysis of advantages and disadvantages. The authors suggested that there should be an alternative approach to tourism recovery in short term.

In Vietnam, most of the research results on the impact of COVID-19 mainly refer to the health sector, border protection, and the economy and society in general. Some earlier publications in Vietnam in specialized journals and reports mentioning the impact of and solutions to recovering from the COVID-19 epidemic typically include research by Phạm et al. (2020a, 2020b) exploring the impact of the COVID-19 epidemic on tourism at local levels. The following studies (Quang et al. 2022; Van Nguyen et al. 2020) assessed the short- and long-term challenges of COVID-19 to the tourism business and its response policies, as well as recommendations for firm support to accelerate recovery. The study outlined the scenarios of COVID-19 impact on Vietnam's tourism industry in the future. The study also proposed specific strategies and solutions to restore Vietnam's tourism after the COVID-19 pandemic's impact.

In April 2020, the Vietnam Tourism Advisory Council surveyed 394 tourism and tourism businesses to assess the impact of the pre-COVID-19 "freezing" of the tourism industry and proposed several recovery solutions based on the synthesis of suggestions from businesses and experts. Thereby, Vietnamese government policies have been implemented based on the suggestions of the World Tourism Organization and tourism experts. Accordingly, the financial policies have been adjusted in a way that could generate positive impacts on the tourism industry revitalization. More specifically, several financial measures have been implemented to ease the financial crisis facing the tourism industry (e.g., prioritizing tax exemption or lowering bank interest rates). These policy-related innovations not only contribute to stimulating the tourism sector's recovery during the pandemic crisis but also support the vast majority of unemployed workers dealing with their temporary financial pressure. Moreover, the local governments were empowered by providing them with special mechanisms to save their local tourism systems. As a result, several tourism destinations that could ensure the epidemic control regulations were facilitated to restart domestic tourism activities and gain encouraging recovery in the post-pandemic crisis. Last but not least, local tourism systems have actively adapted to the pandemic impact by taking innovative transformations at the organizational levels, which strengthens their resilience against the lingering crisis.

Despite the encouraging recovery of a few tourism destinations during the pandemic, there is still a lack of research investigating the holistic vulnerability of local tourism systems and how different sectors of a local tourism industry rebuild their resilience amid the pandemic shocks. Therefore, this study aims to provide insight into the vulnerability of a local tourism system across key sectors and its strategic implications for tourism destination resilience and recovery in the post-pandemic crisis.

3. Research Methodology

This study used a semi-structured interview approach to examine the vulnerability of a local tourism system against the pandemic impact and how different sectors rebuild their resilience and recovery strategies in the post-pandemic crisis.

Regarding the case study selection, this study employed Can Tho city to shed light on the research phenomenon for some critical reasons. First of all, this tourism destination has been hit hard during the initial waves of the pandemic. Despite the enormous impact of COVID-19 waves on the local tourism system, Can Tho was one of the few typical destinations reviving around 60% of its tourism capacity (Huynh et al. 2022). Importantly, this tourism destination was offered special mechanisms and policy initiatives by the local government, which fosters the local tourism system to resume tourism activities during the pandemic outbreaks. Noticeably, the encouraging recovery of different tourism sectors provide valuable lessons regarding how a local tourism could adapt well and recover from the long-lasting pandemic crisis.

To gain insight into the vulnerability and adaptive recovery of the local tourism destination from the perspective of local governments, this study targeted the potential respondents who were in charge of tourism crisis management and governance. This enabled the researchers to explore how local governments balanced the dual targets between pandemic control and tourism revitalization. More specifically, this study recruited 40 officials from many tourism-related organizations, such as the Tourism Association, Department of Culture, Sports and Tourism, Center for Tourism Development, Department of Information and Communications, Department of Health, Department of Planning and Investment, Department of Finance, and local government at the district level. Creswell and Poth (2016) suggested that a minimum number of participants for a semi-structured interview should be at least 25; therefore, the number of informants selected in this study met the requirements of data collection. The interviews were conducted between October and November 2020.

The main interviews focused on the impact level of the COVID-19 pandemic on the key sectors of the local tourism system. The interviews focused on exploring the resilience of the tourism industry, measures to limit the negative impact of the epidemic on the tourism industry, measures to restore the tourism industry, measures to prevent anti-epidemic, tourism marketing, and promotions to revive the tourism industry in Can Tho city. As such, 280 respondents who were managers of different sectors of the local tourism system (e.g., hotels, restaurants, tourist attractions, and tour operators) were recruited for the interviews.

Regarding the respondent selection rationale, the random informants recruited in this study should be in charge of executive responsibilities, which might ensure that the respondents could provide profound data to meet the research objectives. In addition, the respondents should be managers of different tourism sectors of the local tourism system. Importantly, local tourism sectors selected in this study should be vulnerable businesses but successfully recovered from the pandemic impact. Last but not least, tourism enterprises selected in this study should be located in different areas of the examined case study in order to reflect the general status of the local tourism system. These critical criteria allow the researchers to shed light on the research phenomenon (see Table 1).

Table 1. Structure of quantitative research samples.

Item	Number of Interviews	Sample Rate (%)	Overall	Percentage (%)
Accommodations	80	28.5	275	29.1
Travel agencies	50	17.9	59	84.7
Dining establishments	50	17.9	200	25.0
Tourism fruit orchards and homestays	30	10.7	41	73.2
Tourist attractions	70	25	70	100

Source: Data from Huynh et al. (2021).

A total number of 280 respondents who were managers of hospitality-and-tourism enterprises were recruited for the semi-structured interviews. A thematic analysis was employed to interpret the qualitative data, while the quantitative data were analyzed by using SPSS 20 software.

4. Research Findings and Analysis

4.1. The Decline in Customers, Revenue, Service Utilization, and Staff Due to the COVID-19 Pandemic

The research findings generally reflect a significant downward trend in tourist arrivals, revenue, and service consumption but increasing employment downsizing in the research site during the waves of the COVID-19 pandemic.

The quantitative data of 280 managers of accommodation, dining establishments, travel agencies, and tourism sites revealed that the pandemic influenced a wide range of businesses in the research sites in a negative way. The findings indicated that the proportion of the impact of the pandemic on local businesses was at a serious and very serious level, with 49.3% and 40%, respectively. Reportedly, there was a significant decrease in the number of customers, sales, services, destination capacity, tourism assets, and staff in the tourism industry. More specifically, there was a decline in each enterprise in terms of customers, revenue, and employees by 11,234.4 people, VND 2.6 billion, and 9.3 employees, respectively, with relative percentages of 62.3%, 61.3%, and 50.3%, respectively. The decrease in customers also led to a decline in the capacity of exploiting and using services and assets at an average level of 57.4% per item. The quantitative data strongly reconfirmed the above concerns with over 63% of enterprises suspending operations, 7% of enterprises dissolving out of total suspended enterprises, 50% of enterprises temporarily shutting down, over 70% of employees being affected and unemployed or changing jobs, only 16% of enterprises being able to maintain business operations, and 14% cutting down on scale and staff to continue operating.

The results of qualitative interviews with many stakeholders related to tourism management and development also indicated a bleak picture for the tourism industry in Can Tho city during the COVID-19 epidemic. Such words and phrases as “collapse”, “extremely heavy losses”, “bankruptcy”, “job loss”, and “create a burden on society” were found common to indicate the serious impact of the epidemic on tourism in Can Tho city.

One of the typical assessments of the impacts of the COVID-19 epidemic on the tourism industry of Can Tho city was stressed:

“The epidemic has reduced the number of visitors, revenue, and human resources. and worse still, dissolve many businesses. This causes pressure on the economy, society and serious damage to the local tourism industry”. (a representative of Cai Rang District)

4.2. Measures to Minimize the Negative Impacts of the COVID-19 Pandemic on the Tourism Industry

Despite the unexpected crisis due to the pandemic, the research respondents positively claimed that the negative impact of diseases on tourism could be mitigated through a variety of measures, including limiting the spread of diseases in the tourism environment and implementing strategies to alleviate negative impacts. In addition, the research participants also believed that the policies and support from local authorities to some extent contributed to controlling and alleviating negative effects. One of the respondents stressed the importance of limiting the spread of disease in the tourism environment by quickly controlling the disease outbreak and thereby returning the business to normal and reducing negative impacts.

In addition to the role of the local authorities’ assistance, all of the managers participating in the interview believed that they also played a pivotal role in the success of local epidemic prevention by advising their employees and customers to wear masks, wash hands with an antiseptic solution, and keep contact distance. Further, tourism enterprises also claimed that they were committed to regularly cleaning their workplace or even agreeing on business suspension to prevent an outbreak with a high rate of respondents, with 85% and 61.4%, respectively. Measures such as serving clients only in non-epidemic locations and other options (e.g., online work, staff training in epidemic prevention knowledge and skills, and compliance with epidemic prevention recommendations from The Ministry

of Health and local authorities) were also prioritized by the respondents, with 43.6% and 8.6%, respectively (Table 2).

Table 2. Measures to limit the spread of diseases in the tourism businesses' environments (n = 280).

Measure	Percentage (%)
Advising employees and customers to prevent and combat epidemics	95
Ensuring regular hygiene at business establishments	85
Serving customers only in locations without the pandemic	43.6
Contemporary business suspension	61.4
Other measures	8.6

Source: Data from Huynh et al. (2021).

To promote the domestic tourist market, the local authorities have supported the local tourism enterprises by offering prioritized business loans, which allows the tourism sectors to restructure their business operation in the post-pandemic waves. In addition to tourism management and development agencies, enterprises and destinations prioritized employee safety and the domestic market, with 72.9% and 71.4%, respectively, whereas other measures regarding saving water and energy, resigning employees, and reducing staff salaries were fewer favorite measures, with 55%, 32.9%, and 17.1%, respectively (see Table 3).

Table 3. Measures to minimize the negative impacts of the pandemic on tourism business activities of local enterprises (n = 280).

Measure(s)	Percentage (%)
Focus on exploiting the domestic market	71.4
Ensure health safety for employees	72.9
Reducing staff salaries	17.1
Employee downsizing	32.9
Saving water and energy resources	55
Other measures	7.9

Source: Data from Huynh et al. (2021).

All of the tourism managers agreed that the epidemic was complicated and might have a long-term impact on the tourism industry. However, they all agreed that the group of pandemic prevention measures at the local to central level should be maintained and strengthened, while domestic tourism maintenance should be taken into account to sustain tourism-related businesses to a certain degree.

The research participants also agreed that effective policies or support from local authorities played a key role in supporting local businesses and tourism destinations to minimize the negative effects of the pandemic on businesses. According to the respondents, before the survey was conducted, the local authorities had initiated policies and support for businesses and destinations such as improving business capacity for businesses (31.8%), reducing tax (21.4%), a loan with a preferential interest rate (14.3%), and tax exemption (10.4%). In addition to the above policies and supports, the authorities also reduced electricity and water prices, boosted tourism marketing and promotion, and dealt with the unemployment of employees. However, it is likely that the overall support has not met the needs of the tourism and hospitality sector (Table 4).

Table 4. Local authorities' policy and support (n = 280).

Measure	Percentage (%)
Tax reduction	21.4
Loan with a preferential interest rate	14.3
Tax exemption	10.4
Enhancing business capacity for enterprises	31.8
Policy/other support	20

Source: Data from Huynh et al. (2021).

4.3. Measures to Revive the Tourism Industry Due to the Impact of the COVID-19 Epidemic

The COVID-19 epidemic is an unprecedented tragedy for mankind. The complicated development of the disease caused a lot of damage to the economy, society in general, and the tourism business in particular. The tourism industry of Can Tho city has experienced the third wave of epidemics with many difficulties and challenges (the first time on 1 April 2020, the second time on 25 July 2020, and the third time on 27 January 2021). To adapt well to the pandemic challenges, several businesses and destinations in Can Tho city have taken measures such as creating trust for customers (66.4%), promoting the communication of products (51.1%), reducing service prices (50.7%), and offering promotions (50%). In addition, other measures have also been used to revive the tourism business such as developing new products and seeking new business opportunities (Table 5).

Table 5. Measures to recover business operations of enterprises (n = 280).

Measure(s)	Percentage (%)
Service discounts	50.7
Promotion	50
Promoting communication	51.1
Empowering trust for customers	66.4
Other measures	7.1

Source: Data from Huynh et al. (2021).

The above measures have positively contributed to the recovery of the tourism business in Can Tho city. According to the assessment of many tourism management and development agencies, the resilience of the tourism industry in Can Tho city in both the short and long term is promising:

“By the end of 2020, the domestic tourism industry will be able to recover quickly. The coming year 2021 will mark the return and recovery of Can Tho’s tourism industry”.
(Mekong Delta Tourism Association)

According to the respondents, businesses and tourist destinations should implement a wide range of measures that should be flexible, sufficient, and effective to meet the needs of each local community.

5. Discussion and Conclusions

This study has highlighted the enormous impact of the COVID-19 pandemic on the local tourism system across different sectors of the economy. To alleviate the vulnerability of local tourism businesses, local governments were found to play a pivotal role in a local tourism system's recovery. Essentially, the financial support for tourism enterprises was indispensable to resume their tourism operation when most of the tourism businesses suffered from the long-lasting crisis, especially small and medium enterprises. More specifically, the monetary promotion measure indicates its decisive role in restructuring the destination image, ensuring the quality of tourism products and services and stimulating the domestic market demand. Although this is considered a temporary solution, a local tourism industry could be resumed systematically only when all tourism sectors could have access to the financial support scheme. This study reconfirms a previous finding by

Duong et al. (2022) that financial stimulus packages might be very crucial for not only the post-crisis recovery of tourism sectors but also for stimulating tourists' travel demand in post-pandemic destination recovery.

The adaptive strategy to co-live with COVID-19 enables the local tourism system to endeavor to alleviate the impact on the most vulnerable sectors and seek alternative approaches to recover in a more resilient way. In this sense, it requires all local tourism enterprises to work together to rebuild their organizational resilience to better respond to the crisis. This is critical to the recovery of the tourism system since most tourism sector businesses are interrelated (Huynh et al. 2021). Despite the necessity of the local government's support, the findings in this study imply the importance of proactive adaptation at the organizational level, which may enable tourism enterprises to ensure the quantity and quality of post-pandemic service delivery.

The majority of the examined respondents in this study stressed that the visionary mindset of "co-living with the pandemic" has fostered their business in a more sustainable way. The findings in this study indicate that enterprises with well-prepared strategies at the beginning are more proactive and effective in coping with the long-lasting pandemic. In addition, collaboration among the tourism sectors in the examined case study was found to be a critical factor that strengthens the organizational resilience and adaptive empowerment of the tourism system during the waves of the pandemic. First of all, the shared benefits during contemporary effective coordination enable different sectors to survive in the short term, which allows the enterprises to restructure their adaptive and transformative strategies to foster efficiency in the long term. This research finding is found similar to that of a study by Cygler et al. (2018) which stressed the importance of cooperative relationships among the competitors to gain benefits in a contemporary context. It is quite understandable that effective cooperation among tourism businesses during the waves of the COVID-19 pandemic co-creates multi-benefits and economic advantages for the whole tourism system.

Moreover, rebuilding organizational capacity was found critical to the recovery of tourism enterprises. The findings in this study indicate that the majority of enterprises focus on improving human resources by providing training courses to empower employees' professional skills. This enables tourism workers to ensure their operational practice aligns with disease prevention regulations. In this regard, the re-opening of tourism activities could minimize the spreading of the Coronavirus among employees and tourists. The majority of enterprises are committed to sustainable practices. One of the key changes in the mindset of tourism enterprises is the co-living intention with the pandemic. More enterprises are engaged in the post-pandemic recovery of businesses by promoting and marketing tourism programs to stimulate tourism demand recovery.

To be more resilient to the lingering pandemic wave, "thinking outside the box" was found to be critical to business maintenance in both the immediate and long-term recovery of the hospitality industry. The majority of the respondents in this study partially reflected their inactive response to the first wave of the pandemic but were generally more elastic to the following waves. More specifically, the examined hospitality enterprises decided to live with the ongoing COVID-19 pandemic. Whereas the Vietnamese government attempted to prevent the spread of the COVID-19 pandemic by closing some of or the entire economies of regions seriously affected by COVID-19, most of the enterprises have made necessary changes to co-live with the pandemic. As a result, these enterprises appeared to have made reasonable and more resilient decisions and visionary strategies against the ongoing variants of the COVID-19 pandemic. These findings are similar to previous studies (González 2021; Murakami et al. 2021).

From the demand side perspective, digital transformation was not only critical to internal business operation but also essential to meet the new demand of customers who generally preferred convenient service quality and safety-first priority post-COVID-19. The findings in this study reconfirm the significance of innovative practice to sustain business practice during the pandemic crisis (Huynh et al. 2022; Szabo et al. 2021; Rodríguez-Antón

and Alonso-Almeida 2020). Other solutions which were stressed include supporting tourism businesses in the area to revive human resources for the recurrence of future tourism development, actively preventing epidemics, and highlighting energy saving and online business. As highlighted by the representative of business and destination managers in this study, the tourism sectors have to actively engage in the recovery process by rebuilding their organizational adaptation and preparing well for the prospective scenarios of the pandemic waves. The research findings indicate the effectiveness of the early epidemic response, and the engagement of all stakeholders in the communities has enabled the local government to put the epidemic impact under control. Apart from this, the central government's pandemic prevention regulations and tourism enterprises' measures increase the possibility of better control of the pandemic, thereby empowering the tourism resilience of the city. This reconfirms the belief that tourism resilience depends on the involvement of the communities and may quickly recover within a year.

The findings in this study implies that the leading role of local authorities and the necessity of decentralizing power to the local governments allow them to flexibly balance between pandemic control and local tourism revitalization accordingly. This finding reconfirms the importance of effective governance that may determine the epidemic prevention and tourism resilience (Wan et al. 2022). However, economic support and capacity building for tourism businesses may need to be considered on case-by-case basis. To reduce the stamina and increase the resilience of the business operations of enterprises in different vulnerable regions, the locality needs to implement well-supportive policies for enterprises and workers seriously affected by epidemics under the direction of the central government regarding electricity price reduction, capital support, tax support, the suspension of paying social insurance to the retirement and death fund, delaying the time of the payment of trade union fees, and so on.

For businesses, it is critical for enterprises to restructure human resources towards compactness, quality, and efficiency, promote communication and exploit a disease-free market, create trust for customers, develop new products, and offer service discounts and promotions. Minimizing unnecessary costs and taking advantage of the government's support policies are critical for the local businesses. The active involvement of local enterprises indicates their critical role of mitigating the impact on their business and their measures have been effective during the lockdown period. According to Sharma et al. (2021), the tourism enterprises' need to relocate their business operations is an effective measure to overcome the pandemic's impact without governmental support. For major issues regarding unemployment, payment cuts, and company downsizing, economic measures from the local and central governments of Vietnam should be strengthened by increasing financial support to enable local businesses and people to overcome their current difficulties, thereby fostering quicker tourism resilience (Zhang et al. 2021; Williams 2021).

Theoretically, this study has provided some critical contributions toward disaster crisis management. First, this study highlights the leading role of government in disaster management and post-crisis destination recovery. As discussed earlier, proactive preparedness and policy-related measures (e.g., monetary promotion) foster tourism destination revitalization in a more resilient and effective way. At the same time, the adaptive transformation at the organizational level by taking disruptive technologies and changing mindset is also critical to organizational resilience in both the short and long term. This stresses the important role of tourism enterprises as key stakeholders during the pandemic and post-pandemic recovery. Due to the complicated nature of the COVID-19 pandemic, staged crisis management should be flexible to better cope with the unprecedented impact of the global pandemic.

Practically, this study provides several important implications for the tourism industry to better adapt to the current pressure of the pandemic. A quick and timely crisis response at the organizational level may contribute to better epidemic control and maintenance of the local businesses to a degree that mitigates a total crisis in tourism enterprises' businesses. Lessons learned from the failure of the tourism industry during the first wave

of the pandemic suggest that tourism enterprises may enhance their resilience by taking innovative measures such as disruptive technologies. Apart from strategic transformation and rebuilding organizational elasticity initiatives, long-term visions such as a co-competition strategy may provide all tourism-related services a better opportunity to survive during and after the pandemic crisis. This also means that sharing benefits among tourism sectors will enhance their survival chance in the post-pandemic recovery. Therefore, the activeness, consensus, and cooperation of all stakeholders may contribute to rebuilding a more resilient tourism system.

Despite the efforts to minimize the limitations in this study, there is more room for future research. Prospective studies may examine the key roles of other stakeholders toward epidemic prevention and destination resiliencies in post-pandemic recovery in other similar contexts. In light of the current findings, potential research may explore factors determining the ability of destination recovery and the extent to which local and central policies may be helpful in the resilience of emerging cities in developing countries.

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Article

Self-Confidence of Venezuelan Migrant Entrepreneurs in Colombia

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Abstract: This study determines the personality and behavioural factors related to pull motivation that explains the self-confidence of Venezuelan migrant entrepreneurs. Using a quantitative approach, this study conducted a survey with 88 migrants who own productive units in the urban area of Gramalote, North of Santander, in Colombia. This study examines the association between the variable ‘perception of having self-confidence’ with demographic and motivational contextual factors. Fisher’s exact test was used to determine the evidence of a statistically significant association between the variables. The findings of the multivariate multinomial logistic regression model suggest that the factors related to a high level of self-confidence are gender, perception of ability to take advantage of opportunities, perception of demanding efficiency and quality and perception of taking risks. These factors are to be considered in the policies of the Colombian state regarding education programmes and the formalisation of the labour market with a gender approach in a post-pandemic context. Given that the COVID-19 pandemic caused a crisis in countless aspects, one of which was in the labour market, this study is relevant because it analyses self-confidence as a driver of entrepreneurial development.

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Keywords: entrepreneur; self-confidence; Venezuelan migration; taking risks; seizing opportunities; Colombia; post-pandemic

1. Introduction

Setting up a business involves three elements: (1) personal motivation; (2) skills, abilities and resources and (3) the environment where the individual is located (Paturel 1997). The first element, motivation, comprises the psychological aspect exhibited in the personality traits and behaviour of individuals in the face of achievement (Alda-Varas et al. 2012; Solf Zárate 2006). Therefore, motivation examines what causes an individual to perform an activity and why, when facing the same stimulus, they act differently (Carsrud and Brännback 2011). Additionally, it is the key element for commitment and participation in entrepreneurial activities (Stephan et al. 2015).

Another important notion found in the literature on motivation theory is the push/pull theory that focuses on push and pull factors towards entrepreneurship for explaining the differences between entrepreneurs (Harrison and Hart 1983). On the one hand, push motivation suggests that an individual is being pushed into entrepreneurship by negative reasons but is motivated to overcome them, such as dissatisfaction with their current employment situation, unemployment, pressure to start a business, pressure to continue family tradition and so on (Block and Wagner 2007; Bögenhold 2019; Giacomini et al. 2007; Hipp et al. 2015; Holloway and Pimlott-Wilson 2021; Simón-Moya et al. 2016). There are reasons that push migrants to generate self-employment through entrepreneurship because it is common for this sector of the population to be excluded from the labour market, owing to discrimination, language barriers or validation of academic degrees, incompatible

training and unemployment in the host country (Schøtt 2018; Shinnar and Young 2008; Gómez et al. 2020).

On the other hand, pull motivation is related to positive, proactive inspiration and entrepreneurial passion to perform an activity (Herron and Sapienza 1992; Stephan et al. 2016; Yitshaki and Kropp 2016). For migrants, entrepreneurship is a way of generating self-employment, aspiring for a better income, improving living standards, having a greater sense of independence and achieving upward mobility. Moreover, in Latin American culture, being married, older and male are probable factors that attract entrepreneurship as a way to generate self-employment (Shinnar and Young 2008). In addition, the entrepreneurial initiatives of the migrant population are often beneficial because the emergence of new formal businesses counteracts the lack of employment and contributes to the payment of taxes in the states of the receiving countries (Gómez et al. 2020).

Considering the aforementioned details, the present study aims to determine demographic and motivational personality and behavioural factors that explain the perceived self-confidence of Venezuelan migrant entrepreneurs in Colombia. Geographically, the study sample is located in the municipality of Gramalote, Norte de Santander, Colombia, which borders Venezuela. The hypotheses set out in this study were: (H0): there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the demographic and motivational factors for entrepreneurship. (H1): there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the demographic and motivational factors for entrepreneurship.

In 2020, because of the fact that Norte de Santander was the third department with the highest unemployment rate in Colombia, registering 21 per cent and a variation of 6.4 percentage points compared to the previous year (National Administrative Department of Statistics (DANE) (2020)), and because of the willingness of Venezuelan migrants to live in the country, it is important to determine the positive motivational factors that explain the self-confidence of this migrant population who decided to start their own businesses. This is because there are factors to be considered in the policies of the Colombian state in terms of education programmes and formalisation of the labour market.

In this sense, entrepreneurship has become a topic of universal interest, which is why the results of this study on the factors related to the development of self-confidence contribute to the generation of programmes or strategies by the Colombian government to strengthen the entrepreneurial intention of individuals, motivating them and directly influencing business success and the generation of self-employment and employment.

Studies that have focused on investigating entrepreneurship or the motivation for entrepreneurship among immigrants have increased in the literature (Clark and Drinkwater 2010; Dabić et al. 2020; Elo et al. 2018, 2022; Elo and Dana 2019; Etemad 2017; González and Campbell 2018; Köllinger and Minniti 2006; Levie 2007; Liu et al. 2019; Minto-Coy 2019; Schøtt 2018; Shinnar and Young 2008; Shinnar and Zamantılı nayır 2019; Tienda and Rajjman 2004). However, there have been no similar studies on the Venezuelan migrant population, which is why this work is a novelty.

2. Theoretical Basis

2.1. Personality and Behavioural Traits of the Entrepreneur Associated with Pull Motivation

Personality and behavioural traits associated with pull motivation characterise proactive entrepreneurs and have been addressed in several studies. In the 1960s, (McClelland 1961) conducted research on entrepreneurs to determine entrepreneurial traits and establish the profile of a successful person, which enabled identifying behaviours of intelligent, risky, clear-minded, prepared, organised, creative researchers and empathetic individuals.

Moreover, (Barba Bayas 2015) consolidated 10 personal entrepreneurial traits associated with pull motivation observed in entrepreneurs as well as in any other individual and organised them into three sets:

- (1) Achievement set (seek opportunities and take initiative; take risks; demand efficiency and quality, persistence and compliance);
- (2) Planning set (information gathering, goal setting, planning and systematic follow-up);
- (3) Power set (creating support networks and having self-confidence).

Additionally, these entrepreneurial qualities were classified according to whether they are personality or behavioural traits as per the literature (Figure 1).

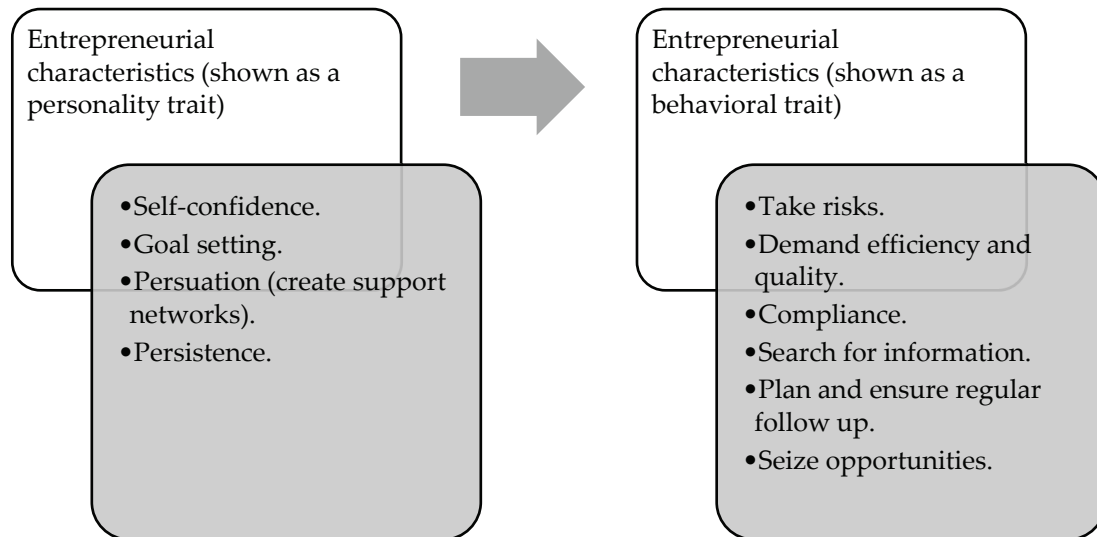


Figure 1. Entrepreneurial characteristics related to pull motivation. Source: authors.

2.2. Self-Confidence and Entrepreneurship

Self-confidence is the closest attribute characterising proactive entrepreneurs (Li et al. 2017). It has been related to the phenomenon of the entrepreneurial process as a psychological factor that stimulates people to be entrepreneurial (Bird 1988; Chen et al. 1998; Krueger and Brazeal 1994; McGee et al. 2009; Schultz 1980; Van Praag and Cramer 2001) and conduct entrepreneurial actions in general (De Noble et al. 1999). It is related to self-efficacy, that is, the individual's belief that they can bring about the desired effects of their actions (Benight and Bandura 2004).

Therefore, self-confidence refers to the security that an individual possesses as a capability, and together with available resources, it identifies opportunities and develops a business successfully (De Jorge Moreno et al. 2007; Harper [1991] 2003). Further, it is considered a positive psychological capital (own sense of self-esteem) that influences productivity (Luthans et al. 2004), and entrepreneurs who convey positive psychological capital are those who can raise more funds (Anglin et al. 2018).

In studies on motivational factors, self-confidence and gender have also guided the examination of entrepreneurship. Thus, the literature shows that female and male entrepreneurs present high levels of self-confidence; thus, both are equal in this regard (Navarro et al. 2012). Consequently, this condition may vary in some cases where men show greater self-confidence in their entrepreneurial capabilities than women; however, for some women, entrepreneurial self-confidence increases over time, for others it seems to continue being a limitation, thus, affecting their ability to access finances and reducing their growth aspirations (Kirkwood 2009).

2.3. Taking Risks

Being prone to taking risks implies facing uncertainties in relation to one's family, finances, life project and reputation (Biswas and Verma 2021; Schmitt et al. 2018). These are the people with the ability to make decisions in uncertain situations for taking advantage of opportunities (Veciana et al. 2005; Keat et al. 2011). Other studies have discussed the attitude towards risk according to the type of entrepreneur, those who seek a new business

by opportunity or those who do it out of necessity; thus, showing that opportunity-driven entrepreneurs focus on taking more risks than necessity-driven ones (Block et al. 2015).

Migrant entrepreneurs are driven to become self-employed because of limited opportunities, difficulties in finding formal employment and because they have a high ingrained tendency to take risks before or during their migration experience (Liu et al. 2019).

2.4. *Demanding Efficiency and Quality*

The need to do things better and faster ensures an outstanding compliance with standards, considering processes and requirements to meet and exceed expectations within an organisation (Pulgarín Molina and Cardona Acevedo 2011). This behavioural trait is also related to the need for achievement (Collins et al. 2004), that is, the individual is prone to set high performance standards (Gürol and Atsan 2006; McClelland 1987).

An individual, who demands efficiency and quality is also characterised by being perseverant, tends to return to unfinished tasks and aims for perfection (Kern et al. 2016).

2.5. *Compliance*

Entrepreneurs focus on carrying out work plans, achieving goals, which involves sharing tasks and management responsibilities, and coping with adverse situations through mutual support and information exchange (Jelinek and Litterer 1995). Fulfilment is related to the commitment (behavioural element) of entrepreneurial passion, and it has to be analysed separately from enthusiasm (affective element) and readiness (cognitive element) of entrepreneurial passion (Cardon et al. 2017; Chen et al. 2009).

In the case of migrant entrepreneurs, compliance and commitment is also related to their migration status. Some migrants, who do not have a regular or formal migration status, have a barrier to entrepreneurial action and to entering significant business arrangements. There are also transnational migrant entrepreneurs who have multiple formal identities, such as some citizens living in a border territory; in this case, they can make formal economic commitments in different countries, beyond their cultural and social identities (Elo et al. 2022).

2.6. *Search for Information*

Search for information is related to the trait of self-efficacy, and it refers to a person's judgement of their capabilities to face situations, take advantage of opportunities and make decisions, where the action will be in accordance with the information available and the manner of processing and conveying such information (Bandura 1977). The behavioural sciences literature identifies such individuals as maximisers, and they are people who constantly strive to make the best decision through an extensive search for information (González and Campbell 2018; Soltwisch 2021).

In entrepreneurship psychology, search for information is also related to an entrepreneur's openness to new experiences and intellectual and technical research. Furthermore, it includes imagination, curiosity and the search for new ideas in response to feelings (Brice 2004; Costa and McCrae 1992; Rauch and Frese 2007).

One trait of immigrant entrepreneurs is that they prefer to seek information relevant to their business from immigrant professionals, based more on personal consultations than on written information, which on the one hand simplifies communication, but on the other hand, their decisions may depend to a large extent on the recommendations of the immigrant professionals (Tienda and Raijman 2004; Triana et al. 1984).

2.7. *Setting Goals*

Setting goals is a characteristic related to awareness and refers to tenacity, work motivation, self-discipline, organisation, self-control, self-efficacy, ambition and persistence that enable the entrepreneur to strive to face challenges and achieve goals (need for achievement); in entrepreneurship psychology, this is known as conscientiousness (Costa and McCrae 1992; Hmieleski and Corbett 2008; McClelland 1961). Setting goals is related to

self-confidence because a person uses all the resources, skills and effort and feeds back on the achievements and obstacles to continue expanding previously set goals. This is because they consider unsolved situations to be opportunities (an attribute known as tolerance to ambiguity) (Bandura 1982; Shane et al. 2003).

2.8. *Planning and Regular Follow-Up*

Entrepreneurs are skilled and refer to the cognitive element of entrepreneurial passion (Chen et al. 2009), which allows them to plan tasks and subtasks to be developed in a flexible schedule of activities, delegate responsibilities and follow up on them.

Therefore, the literature qualifies planning as an important cognitive process for decision-making, in which the latter interacts with emotions and conscious will, and this conscious planning process implies that the entrepreneur anticipates (early planning), executes, represents and regulates activities during the entrepreneurial process and is the basis of his decisions (Das 2008).

Along these lines, Block and Petty (2020) present empirical evidence that previous entrepreneurial experience, level of education, general life experience and entrepreneurial education influence the extent of early business planning.

2.9. *Persuasion (Creating Support Networks)*

Persuasion refers to the ability of an entrepreneur to convince others to think or act in a certain way. Simultaneously, it is related to a personality trait that in entrepreneurship psychology is known as extraversion, that is, the attitude of people towards the outside world with an open character and ease for social interactions with enthusiasm and assertiveness when recruiting personnel for the company (Costa and McCrae 1992; Brice 2004). It also promotes the ability to tap new markets and grow in terms of social sophistication and entrepreneurial wisdom through formal and informal peer networks and mentoring (González and Campbell 2018). This provides social capital that is embedded in such entrepreneurs' networks, which positively influences the decision to start a business (Hindle et al. 2009; Wood and Bandura 1989).

Additionally, there is evidence in the literature that the migrant population is at a disadvantage when competing for the same jobs and wages with the native population. Thus, entrepreneurship becomes an option to obtain an income, so they access and integrate into the labour market in the host country, making use of migratory networks of fellow countrymen who have an entrepreneurial background in the host country (Martín-Montaner et al. 2018; Schøtt 2018; Shinnar and Zamantılı nayır 2019).

2.10. *Persistence*

Persistence is a personality trait that characterises entrepreneurs who are motivated to overcome adverse or unavoidable situations (Biswas and Verma 2021; Markman et al. 2005). For Caliendo et al. (2020), the notion of persistence in entrepreneurship involves two aspects. First, the founders maintain their entrepreneurial motivation and continue with their active and effortful commitment to their business. Second, they do so despite challenging conditions, obstacles, barriers or attractive alternatives.

In the face of the immigrant's entrepreneurial motivation, there are constraints to setting up a business (entrepreneurial skills, knowledge about legislation, economics in the host country, intercultural competences shared with other migrants), as well as obstacles related to limited access to local finance, which can be overcome given the entrepreneur's persistence and the use of family and non-family social networks (Dabić et al. 2020).

2.11. *Seizing Opportunities*

Seizing opportunities is an individual's ability to recognise business opportunities, new products, services or markets which others fail to see (Shane 2003; Shane and Venkataraman 2000). Generally, these individuals prevent others from profiting from them, avoid

regrets and, thus, take the risk of exploiting the opportunity to start a business (Bergner et al. 2021; Loomes and Sugden 1982).

The ability to seize opportunities is related to self-confidence. Thus, Hogarth and Karelaia (2012) consider self-confidence as a critical factor in the entrepreneurial decision-making process, further concluding that self-confidence in entrepreneurial skills has both a positive (through seizing business opportunities) and negative (because of overestimation of individual capabilities) effect when assessing an individual's decision to start any entrepreneurial activity.

The opportunity for the creation, expansion and survival of immigrant businesses is influenced by the existence of family networks, networks of fellow countrymen and friends, and other integration activities that contribute to the entry of the business into the market in the host society (Minto-Coy 2019).

3. Methodology

3.1. Context of the Venezuelan Migration Phenomenon and the Target Population

The current Venezuelan migration flow is the largest forced mobility in the history of Latin America. Since August 2016, they started migrating en masse, mainly to Colombia, Peru, Ecuador and Chile, as well as to Spain and the United States (Gedan 2017). This migration phenomenon is due to an economic crisis, aggravated since 2015, by the fall in oil prices (the country's only source of income) which caused a macroeconomic imbalance, hyperinflation, poverty and a decrease in food production and imports (Mijares and Rojas Silva 2018). In addition, people migrated because of repression and social control by the Venezuelan state, restrictions on access to basic goods, the total collapse of the health and education systems, and because of the situation of violence and insecurity (Gedan 2017; Mazuera-Arias et al. 2020). Since 2018, these migrants are considered as displaced Venezuelans abroad, in possible need of international protection (United Nations High Commissioner for Refugees (UNHCR) (2020)). The migration of Venezuelans in the world as of 5 August 2021 stands at 5,667,835 migrants, of which 4,621,562 are in Latin America and the Caribbean. The figures may actually be higher because some governments fail to add migrants without a migration status because they do not possess any identity documents (R4V 2021).

The migration of Venezuelans in the world as of 5 August 2021 is 5,667,835 migrants, of which 4,621,562 are in Latin America and the Caribbean (R4V 2021). In Colombia, 1,729,537 Venezuelans were registered in December 2020 (approximately 37% of all Venezuelans worldwide): 49% women and 51% men; 44.1% with formal migration status and 55.9% without such status (Colombia Migration 2020).

Of the total number of Venezuelans in Colombia, 187,854 (10.86 per cent) are in the Department of Norte de Santander, located in the north-eastern part of Colombia bordering Venezuela. This department includes 40 municipalities, and one of them is the municipality of Gramalote, where 194 Venezuelan migrants (0.1 per cent of migrants in the department) are registered by the migration authority (Colombia Migration 2020).

3.2. Data

The data came from a structured instrument applied to a population of 88 Venezuelan migrants over 18 years of age who were entrepreneurs of productive units in the urban area of the municipality of Gramalote, Norte de Santander, Colombia. The population consulted for this study represents 45.36 per cent¹ of the population registered by the migration authority in this municipality.

The instrument was a structured survey comprising two parts:

1. Socio-demographic variables.
2. Context variables (used to determine the personality and behavioural traits associated with pull entrepreneurial motivation, which explain the perception of self-confidence of Venezuelan entrepreneurs).

The instrument comprised 55 items, grouped into nine motivational perception factors, with a Likert scale measurement level defined by 5 categories: Never = 1, Rarely = 2, Sometimes = 3, Usually = 4 and Always = 5. Before applying the instrument, the informed consent form was read to each respondent, through which they decided whether to participate in the study. Data processing and analysis were performed with SPSS package version 24. The primary data for this study are open access (Albornoz-Arias and Santafé-Rojas 2022).

3.3. Variables and Technical Statistics

A descriptive analysis was performed between the dependent variable “perception of having self-confidence” and each of the demographic and contextual factors (entrepreneurial qualities related to personality traits or behavioural traits) using Fisher’s exact test, at a 5 per cent confidence level. Moreover, Cramer’s V test—to evaluate the strength of association in the case of nominal categorical variables—and Kendall’s Tau-b test—to measure strength and directionality in those ordinal categorical variables that present evidence of statistically significant association—were used.

The variable categories were regrouped and recoded to be treated statistically by multinomial logistic regression. The dependent variable “perception of having self-confidence” was defined by the following response categories: Low level = 1, Medium level = 2 and High level = 3.

Table 1 presents the descriptive statistics of the variables and the analysis of association between the dependent variable “perception of having self-confidence” and each of the independent variables (socio-demographic and contextual factors).

3.4. Statistical Analysis

Fisher’s exact test for independent samples was applied as a test of statistical significance, at a 5 per cent significance level. In the cases where significant relationships were evidenced in nominal variables, Cramer’s V test for strength of association was applied, and in the case of ordinal variables, Kendall’s Tau-b test for strength of association and directionality was conducted.

Regarding the dependent variable ‘perception of self-confidence’, it was found that of the total number of entrepreneurs ($n = 88$), 6.8 per cent ($n = 6$) had a low level of perceived self-confidence, 59.1 per cent ($n = 52$) were at the medium level and the remaining 34.1 per cent ($n = 30$) had a high level of perceived self-confidence.

Table 1. Study Variables, Associations and Direction Statistics. If we add this last column, we would present the table horizontally.

Socio-Demographic Variables	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Association and Direction Statistics	Nominal and Ordinal Directional Measures *	
		Low (1)		Medium (2)		High (3)					
		n	%	n	%	n	%				
Gender	Women	0	5 _a	83.30%	28 _{a,b}	53.80%	8 _b	26.70%	Fisher's exact	8.973	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and gender. H1: there is significant evidence of a relationship or association between perceived self-confidence of Venezuelan immigrant entrepreneurs and gender. Cramer's V The results of Fisher's exact test, at a significance level of 0.05, presented moderate evidence of a statistically significant relationship between gender and perceived self-confidence 8.973; $p = 0.009$, $V = 0.322$. Sig. 0.007
	Men	1	1 _a	16.70%	24 _{a,b}	46.20%	22 _b	73.30%	Sig.	0.009	
Age Groups	18–34	1	2 _a	33.30%	10 _a	19.20%	8 _a	26.70%	Fisher's exact	3.982	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and age groups. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and age groups. No evidence of a statistically significant relationship with perception of self-confidence.
	35–49	2	1	0.00%	17 _a	32.70%	6 _a	20.00%	Sig.	0.394	
	Over 50	3	4 _a	66.70%	25 _a	48.10%	16 _a	53.30%			
Education Level	High school or lower	0	2 _a	33.30%	32 _a	61.50%	18 _a	60.00%	Fisher's exact	1.763	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the level of education. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the level of education. No evidence of a statistically significant relationship with perception of self-confidence.
	Technical and Professional	1	4 _a	66.70%	20 _a	38.50%	12 _a	40.00%	Sig.	0.428	

Table 1. Cont.

Socio-Demographic Variables	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Directional Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Administration/ Accounting/ Law	1	1 _a	16.70%	5 _a	9.60%	5 _a	16.70%	8.166	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the knowledge area. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the knowledge area. No evidence of a statistically significant relationship with perception of self-confidence.
	2	1	0.00%	2 _a	3.80%	1 _a	3.30%	0.347	
	3	1 _a	16.70%	9 _a	17.30%	2 _a	6.70%	Fisher's exact	
	4	2 _a	33.30%	5 _a	9.60%	7 _a	23.30%	Sig.	
	5	2 _a	33.30%	31 _a	59.60%	15 _a	50.00%		
Knowledge Area									
Employment Generation	No	2 _a	33.30%	17 _a	32.70%	9 _a	30.00%	0.198	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the employment generation. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the employment generation.
	Yes	4 _a	66.70%	35 _a	67.30%	21 _a	70.00%	Sig.	No evidence of a statistically significant relationship with perception of self-confidence.

Table 1. Cont.

Context Variables (Perception of Personality Traits and Behavioural Traits—Pull Entrepreneurial Motivation)	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Direction Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Taking Risks	1	5 _a	83.30%	6 _b	11.50%	1	0.00%	Fisher's exact 33.786	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the risk-taking variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the risk-taking variable. Kendall's Tau-b 0.544 Sig. 0.000 Kendall's Tau-b statistic, which measures strength and directionality, indicated a moderate positive relationship, i.e., increasing the level of perceived risk-taking ability increases the level of perceived self-confidence.
	2	1 _a	16.70%	35 _b	67.30%	10 _a	33.30%	Sig. 0.000	
	3	1	0.00%	11 _a	21.20%	20 _b	66.70%		
Demanding Efficiency and Quality	1	5 _a	83.30%	1	0.00%	4 _b	13.30%	Fisher's exact 63.686	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the demanding efficiency and quality variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the demanding efficiency and quality variable. Kendall's Tau-b 0.000 Sig. 0 Kendall's Tau-b statistic indicated a moderate positive relationship, i.e., increasing the perceived level of demanding efficiency and quality increases the perceived level of having self-confidence.
	2	1 _a	16.70%	41 _b	78.80%	2 _a	6.70%	Sig. 0.000	
	3	1	0.00%	11 _a	21.20%	24 _b	80.00%		

Table 1. Cont.

Context Variables (Perception of Personality Traits and Behavioural Traits—Pull Entrepreneurial Motivation)	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Direction Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Compliance	Low	1	0.00%	1	0.00%	1	0.00%	Fisher's exact 10.88	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the compliance variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the compliance variable. Kendall's Tau-b 0.33 Sig. 0 Kendall's Tau-b statistic indicated a moderate to mild positive relationship, i.e., increasing the level of compliance increases the level of perceived self-confidence.
	Medium	61	100.00%	31 _a	59.60%	10 _b	33.30%	Sig. 0.003	
	High	1	0.00%	21 _a	40.40%	20 _b	66.70%		
Searching for Information	Low	5 _a	83.30%	1	0.00%	1	0.00%	Fisher's exact 48.442	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the searching for information variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the searching for information variable. Kendall's Tau-b 0.593 Sig. 0.000 Kendall's Tau-b statistic indicated a moderate positive relationship, i.e., increasing the level of perceived information seeking increases the level of perceived self-confidence.
	Medium	1 _a	16.70%	35 _b	67.30%	5 _a	16.70%	Sig. 0.000	
	High	1	0.00%	17 _a	32.70%	25 _b	83.30%		

Table 1. Cont.

Context Variables (Perception of Personality Traits and Behavioural Traits—Pull Entrepreneurial Motivation)	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Direction Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Setting Goals	Low	1	0.00%	1 _a	1.90%	1	0.00%	Fisher's exact 27.146	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the setting goals variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the setting goals variable. Kendall's Tau-b 0.51 Sig. 0.000 Kendall's Tau-b statistic indicated a positive relationship, i.e., increasing the level of perceived Setting Goals increases the level of perceived self-confidence.
	Medium	61	100.00%	31 _a	59.60%	4 _b	13.30%	Sig. 0.000	
	High	1	0.00%	20 _a	38.50%	26 _b	86.70%		
Planning and Regular Follow-ups	Low	5 _a	83.30%	1 _b	1.90%	1	0.00%	Fisher's exact 38.047	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the planning and regular follow-ups variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the planning and regular follow-ups variable. Kendall's Tau-b 0.527 Sig. 0.000 Kendall's Tau-b statistic indicated a moderate positive relationship, i.e., increasing the perceived level of planning and regular follow-ups increases the perceived level of self-confidence.
	Medium	1 _a	16.70%	38 _b	73.10%	10 _a	33.30%	Sig. 0.000	
	High	1	0.00%	13 _a	25.00%	20 _b	66.70%		

Table 1. Cont.

Context Variables (Perception of Personality Traits and Behavioural Traits—Pull Entrepreneurial Motivation)	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Direction Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Persuasion (Creating Support Networks)	1	5 _a	83.30%	1	0.00%	1	0.00%	Fisher's exact 62.757	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the persuasion variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the persuasion variable. Kendall's Tau-b 0.721 Sig. 0.000 Kendall's Tau-b statistic indicated a high positive relationship, i.e., increasing the level of persuasion and creating support networks increases the level of perceived self-confidence.
	2	1 _a	16.70%	49 _b	94.20%	10 _a	33.30%	Sig. 0.000	
	3	1	0.00%	3 _a	5.80%	20 _b	66.70%		
Persistence	1	1	0.00%	1 _a	1.90%	1	0.00%	Fisher's exact 8.278	H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the persistence variable. H1: there is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the persistence variable. No evidence of a statistically significant relationship with perception of self-confidence.
	2	61	100.00%	33 _a	63.50%	14 _a	46.70%	Sig. 0.06	
	3	1	0.00%	18 _a	34.60%	16 _a	53.30%		

Table 1. Cont.

Context Variables (Perception of Personality Traits and Behavioural Traits—Pull Entrepreneurial Motivation)	Code	Perception of Self-Confidence						Fisher's Exact Test for Independent Samples *	Nominal and Ordinal Direction Measures *
		Low (1)		Medium (2)		High (3)			
		n	%	n	%	n	%		
Low	1	5 _a	83.30%	2 _b	3.80%	1	0.00%	Fisher's exact	42.891
Medium	2	1 _a	16.70%	37 _b	71.20%	7 _a	23.30%	Sig.	0.000
High	3	1	0.00%	13 _a	25.00%	23 _b	76.70%	Kendall's Tau-b	0.592

Source: authors. Note: values in the same row and sub-table that do not share the same subscript are significantly different at $p < 0.05$ in the bilateral test of equality for column proportions. Cells without subscripts are not included in the test. Tests assume equal variances. * Significance level is 0.05.

H0: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the perception and ability to seize opportunities variable.
 H1: there is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the perception and ability to seize opportunities variable.

Kendall's
Tau-b 0.592
 Sig. 0.000
 Kendall's Tau-b statistic indicated a positive relationship, i.e., increasing the level of ability to seize opportunities increases the level of perceived self-confidence.

3.5. The Independent Variables

1. Socio-demographic variables. Gender: 46.6 per cent women and 53.4 per cent men. Age group: 22.7 per cent were aged between 18 and 34 years, 26.1 per cent were aged between 35 and 49 years and 51.1 per cent were aged over 50 years. Education: 59.1 per cent had a high school education or less, while 40.9 per cent received higher education (university studies); 12.5 per cent have knowledge about management and/or accounting, 3.4 per cent have knowledge about law, 13.6 per cent about engineering, 15.9 per cent have technical knowledge and 54.5 per cent have other types of knowledge; 31.8 per cent of the entrepreneurs did not generate employment, while 68.2 per cent did.

At the national level, according to official data recorded by the Observatory of the Venezuelan Migration Project as of January 2020, from the total number of Venezuelans employed in Colombia (879,057), 20 per cent are self-employed; approximately 50 per cent of them were aged under 30 years, 77 per cent were aged under 40 years; 57.7 per cent were men; 23 per cent had a professional degree and 98.8 per cent worked in the informal sector (Semana 2020).

2. Context variables (personality traits and behavioural traits associated with pull entrepreneurial motivation) according to levels of perception of having the ability for the following (Figure 2):

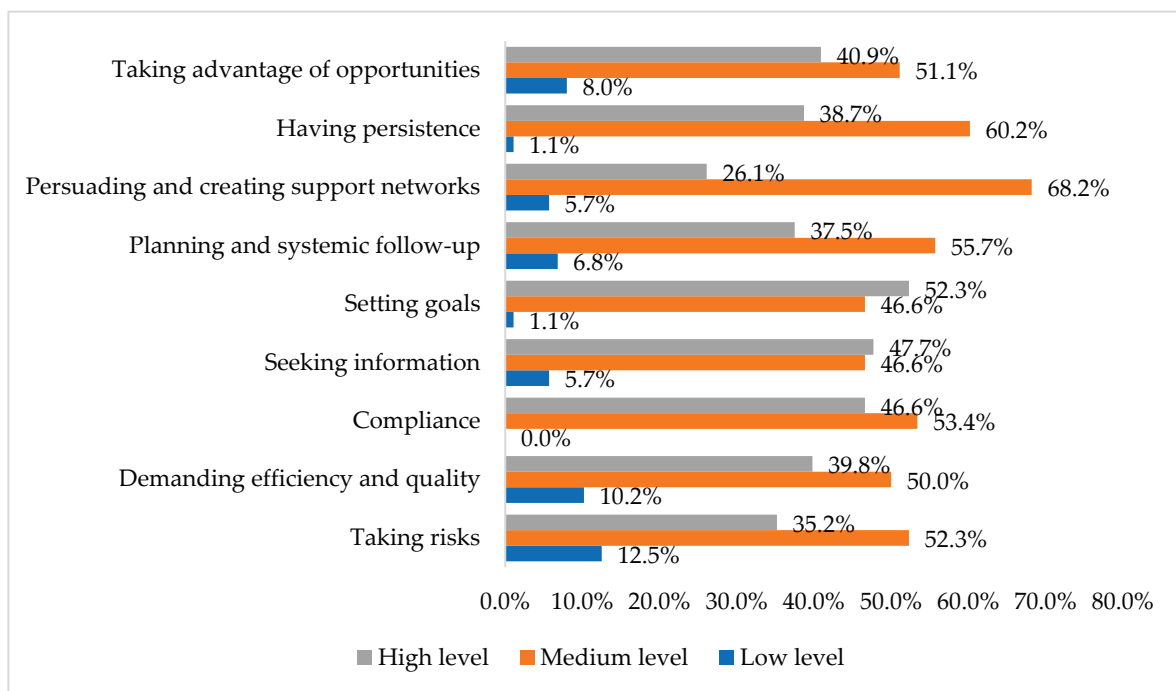


Figure 2. Personality traits and behavioural traits associated with pull entrepreneurial motivation, according to levels of perception. Source: authors.

4. Model of Factors Related to the Perception of Self-Confidence

To estimate the interrelationships between the dependent variable perception of self-confidence and the independent variables, a multinomial logistic regression model was fitted using the stepwise method. To estimate the model coefficients and their standard errors, the maximum likelihood estimation was used.

The probability of an event occurring given a set of independent variables was estimated, represented by the following expression:

$$\text{Prob}(Y_i = j/x) = \frac{e^{\beta'kj Xki}}{1 + \sum_{k=1}^j e^{\beta'kj Xki}} \text{ for } j = 1, 2, 3 \tag{1}$$

where Y represents the dependent variable—in this case, the level of perception of self-confidence—which takes the value of 1, 2 and 3 (low, medium or high, respectively), Xk is the vector of the k independent variables and $\beta'kj = \beta_0j \dots \beta_1j \dots \beta_kj$ includes the β_0j intercept, the coefficient vector to be estimated for the Xk effect in j election.

Table 2 presents the summary of the model wherein the likelihood ratio test was significant, ($\chi^2 = 102.527$; $gl\ 14$; $p < 0.000$), indicating the gain with respect to the null model. The model deviance test was not significant ($\chi^2 = 40.468$; $gl\ 94$; $p = 1.000$), thus, confirming a good model fit.

Table 2. Model Adjustment Information.

Model	Adjustment Criteria	Likelihood Ratio Tests			Goodness of Fit			Pseudo R-Square			
	Logarithm of Likelihood −2	Chi-Square	gl	Sig.	Chi-Square	gl	Sig.	Cox and Snell	Nagelkerke	McFadden	
Intersection Only	146.231				Pearson	44.157	94	1.000	0.688	0.838	0.677
Final	43.704	102.527	14	0.000	Deviation	40.468	94	1.000			

Source: Authors.

The Cox and Snell pseudo R-square estimated a value of 68.8 per cent, which indicated the proportion of variance explained. In contrast, the Nagelkerke pseudo R-squared statistic (corrected version of the Cox and Snell’s pseudo R-square) indicated that 83.8 per cent of the proportion of variance of the dependent variable was explained by the regressor (independent) variables of the model. The McFadden pseudo R-squared statistic of 67.7 per cent explained variability and the degree of improvement in fit of the final model relative to the null model.

5. Results and Discussion

Table 3 presents the results of the related and significant independent variables resulting from the logit model. The hypotheses were:

Table 3. Regression coefficients for a multinomial logistic model.

Variables	Low Perception of Self-Confidence					High Perception of Self-Confidence				
	Coefficient (B)	Standard Error	gl	Sig.	Exp (B)	Coefficient (B)	Standard Error	gl	Sig.	Exp(B)
Intersection	−43.737	1416.855	1	0.975		2.855	0.545	1	0.000	
Gender (women = 0)	14.134	710.102	1	0.984	1.375×10^6	−1.692	0.564	1	0.003	0.184
Ability to seize opportunities (low level = 1)	1.722	1303.764	1	0.999	5.598	−49.915	0.000	1		2.100×10^{22}
Ability to seize opportunities (medium level = 2)	13.640	998.276	1	0.989	8.391×10^5	−2.422	0.610	1	0.000	0.089
Demanding efficiency and quality (low level = 1)	55.804	1823.345	1	0.976	1.72×10^{24}	56.162	1562.733	1	0.971	2.460×10^{24}
Demanding efficiency and quality (medium level = 2)	0.122	1105.453	1	1.000	1.129	−2.677	0.670	1	0.000	0.069
Running risks (low level = 1)	0.378	1198.015	1	1.000	1.460	−14.264	1508.025	1	0.992	6.388×10^{-7}
Running risks (medium level = 2)	13.446	937.745	1	0.989	6.909×10^5	−1.917	0.533	1	0.000	0.147

Source: authors. The reference category (or normalised to zero): medium level (2) of the self-confidence perception factor scale.

Hypothesis 0 (H0). *There is no significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the relationship between demographic and motivational factors for entrepreneurship.*

Hypothesis 1 (H1). *There is significant evidence of a relationship or association between the perceived self-confidence of Venezuelan immigrant entrepreneurs and the relationship between demographic and motivational factors for entrepreneurship.*

The model was designed to take the medium level (2) of the variable perception scale of having self-confidence as a reference category; therefore, the interpretation of the results of each of the independent variables are evaluated between the levels of low (1) and high (3). The estimation coefficients of the regression model are presented with respect to this reference category (medium level 2, the scale of the factor perception of being self-confident). The effects of the estimated parameters are interpreted using odds ratios to enable the interpretation of the negative coefficients; moreover, the inverse of the odds ratio or $\text{Exp}(b)$ was calculated.

The main findings of this study indicate that Venezuelan immigrant entrepreneurs in Colombia are mostly driven by entrepreneurial qualities associated with behavioural traits such as the ability to seize opportunities, ability to demand efficiency and quality and willingness to take risks.

The results of these findings are highlighted below.

1. Regarding the medium level scale (2) of the variable perception of self-confidence (reference category or standardised to zero), the female gender variable, with a negative coefficient ($b = -1.692$), is negatively and significantly related ($p = 0.003$) to the high-level scale (3) of perception of self-confidence. Female entrepreneurs are associated with a low probability of having a high level on the scale of perceived self-confidence. To facilitate the analysis, the inverse of the odds ratio ($\text{Exp}(b)$), where $1/(e^{-1.692}) = 5.43$, was calculated, indicating that a male entrepreneur is 5.43 times more likely to have a high level (3) on the scale of perceived self-confidence than a female entrepreneur.

This result is similar to that found by (Navarro et al. 2012), which showed that men had greater self-confidence. Further, the results are also consistent with (Martín-Montaner et al. 2018), which revealed that male entrepreneurs have greater self-confidence and take advantage of opportunities and create support networks (by knowing other entrepreneurs). This increases the probability of developing a new business, unlike women, who are driven to start a business only by their employment situation and self-confidence.

Notably, 40.9 per cent of the sample consulted in this study present university education levels that contrast with (Paz Marcano et al. 2020), wherein entrepreneurs with training in Venezuelan universities were characterised by an entrepreneurial spirit in which self-confidence, persistence and vision, among other traits, stand out. Moreover, studies by Martín-Montaner et al. (2018) and Shinnar and Zamantılı nayır (2019) also show that educational achievements are related to the probability that immigrants generate self-employment, which will also depend on the degree of adaptation within the economy of the host country.

Migrant entrepreneurs face additional complexities and richness related to their business environments and contexts, own resources and business models, regimes and borders, but also to their transnationality; however, these complexities can generate advantages and development (Elo et al. 2018; Etemad 2017), provided that the element of transnationalism involving spatiotemporal and identity elements is taken into account in public policies (Elo et al. 2022). Regardless of gender, the immigrant population that decides to start a new business in a host country needs both behavioural and personality traits associated with the pull motivation addressed in the literature because they migrate in search for opportunities to improve their economic condition and that of their families.

Thus, this process demands self-confidence and self-motivation from immigrants, and they must have a drive for achievement (Silva Oliveira and García Iglesias 2012).

2. Regarding the medium level (2) scale, the perception of self-confidence (reference category) variable and the coefficient of the medium level (2) factor of perception of the ability to seize opportunities, is negative and significant ($b = -2.422$). Quotient $1/(e^{-2.422}) = 11.27$, which indicates that the chances of presenting a high level (3) on the scale of the factor perception of self-confidence increases by 11.27 to the extent that the medium level (2) factor of perception of ability to seize opportunities increases by one unit.

The literature indicates that entrepreneurs who are confident of their capabilities have, simultaneously, the ability to identify business opportunities and do so through social networks (migratory and non-migratory), and together, they stimulate immigrants to undertake new businesses (Falavigna et al. 2019; Martín-Montaner et al. 2018; Shinnar and Zamantılı nayır 2019). This finding indicates that the higher the ability to seize opportunities, the more the increase in self-confidence, which is consistent with Tubadji et al. (2020). Their study found strategic links with natives' networks to be beneficial to the performance of new businesses and that the networks that favour migrant entrepreneurs, thus, allowing them to discover and seize business opportunities are (a) the local diaspora and (b) fellow citizens residing in the country of origin (transnational networks).

Moreover, this result reveals that many immigrant entrepreneurs are embedded in their global migration networks, in socio-professional contexts and in networks of relationships in their country of origin, evidencing a double rootedness, both in the country of origin and in the host country, which is positive in cross-border business operations (Elo and Dana 2019; Elo et al. 2022) because it brings experience in two contexts, which facilitates links between the home and host country (Dabić et al. 2020). Likewise, the convergence of culture and origin in migrants' ventures also gives rise to informal networks (family, neighbourhood, countrymen, friends, trust-based relationships) that may even lead to opportunities for other migrants along the supply chain (Minto-Coy 2019). This whole ecosystem of relationships and interactions increases the self-confidence of the immigrant entrepreneur.

3. Regarding the medium level (2) scale of the factor perception of self-confidence (reference category), the negative and significant coefficient ($b = -2.677$) of the factor medium level (2) of the scale perception of demanding efficiency and quality is associated with a low probability that the entrepreneur will present a high level (3) in the scale of perception of having self-confidence. Quotient $1/(e^{-2.677}) = 14.53$, which indicates that the chances of presenting a high level (3) on the perception of self-confidence scale increases by 14.53 as the medium level (2) factor of perception of demanding efficiency and quality increases by one unit.

This finding reveals the presence of a personal characteristic derived from psychology for micro-level analysis, such as the efficiency competence of the immigrant entrepreneur (Dabić et al. 2020) and indicates that the higher the perception of demanding efficiency and quality, the higher the increase in self-confidence, which is in line with the results found in the study of (Paz Marcano et al. 2020). Their study found that a characteristic of entrepreneurs trained in Venezuelan universities is that they are focused on achieving results and success, which implies seeking quality, doing things correctly and complying with processes and standards; this combination of attributes increases their self-confidence for entrepreneurship.

This result is also similar to Silva Oliveira and García Iglesias's (2012) study, in which they show that immigrants in Spain reflected a clear notion that success depends on their own actions and possessing the locus of control (the belief that personal characteristics affect their actions, but the results of those actions can be controlled); thus, success requires achieving goals with the least use of resources (being efficient) through daily planning of their activities.

4. Regarding the medium level (2) scale of the factor perception of self-confidence (reference category), the negative and significant coefficient ($b = -1.917$) of the factor medium level (2) of the scale perception of taking risks is associated with a low probability that the entrepreneur presents a high level (3) in the scale of perception of self-confidence. Quotient $1/(e^{-1.917}) = 6.8$. It indicates that the chances of presenting a high level (3) in the perception of self-confidence increases by 6.8 times to the extent that the medium level factor (2) of perceived risk-taking increases by one unit.

This finding indicates that the higher the perception of risk, the more the increase in self-confidence. The case of migrant entrepreneurs is a special one, because the first risk they take is leaving everything they had in their own country to seek economic and social growth in the host country (Constant et al. 2003; Silva Oliveira and García Iglesias 2012). This propensity to risk is positively related to self-employment intentions influenced by self-confidence (Zhao et al. 2005).

Precisely, according to data from the Observatory of the Venezuelan Migration Project as of January 2020, the fact of not finding a salaried job motivated slightly more than half of employed Venezuelans to become self-employed, and 22.6 per cent did so to have more independence and 57 per cent to have a flexible schedule (Semana 2020).

The risk propensity of Venezuelan migrants is related to entrepreneurial motivation, which allows us to understand how human and social capital influences entrepreneurial activity (Elo et al. 2018); as it is a forced migration due to the socio-economic crisis and political instability in the country of origin, they retain traditions, entrepreneurship and skills after settlement (Elo and Dana 2019), as well as taking advantage of new learning (skills, education and adaptation in the host country) and fostering networks in the society, which has a positive impact on the Venezuelan migrant's entrepreneurship.

6. Conclusions

Unemployment is a difficulty faced by Venezuelan immigrants in the Department of Norte de Santander and throughout Colombia. In the Department of Norte de Santander, the geographical area where this study was conducted, the informality rate is the highest in Colombia. This is because of the scarce opportunities to enter the formal labour market under an employment relationship, weak business fabric, obstacles to access financing and lack of an entrepreneurial culture (Semana 2020). The irregular migratory status of a high percentage of Venezuelan migrants is added to the causes of informality. Consequently, almost all (98.8 per cent) of Venezuelan immigrants who are self-employed carry out their activities in the informal sector and are unaware of the legal and tax regulations for formalising a business (Semana 2020).

Certainly, policy design and formulation must have a broader scope than the field of entrepreneurship as it encompasses migration and integration policies, social balances, opportunities and development (Elo et al. 2018). Therefore, it is necessary for migration policy to regularise the situation of Venezuelan migrants in Colombia in a post-pandemic and cross-border context to give meaning to their entrepreneurial activities, reduce bottlenecks and help with sustainable livelihood projects for migrant entrepreneurs and their families, as pointed out by Elo et al. (2022). After this, they will be able to open bank accounts and have a credit rating, register their businesses at the Chamber of Commerce, generate self-employment and formal employment, contribute to the health and pension system and, in general, contribute to the Colombian state through the payment of taxes.

To this end, it is essential that the Colombian government take the following measures: (1) identify Venezuelan immigrant entrepreneurs through a census; (2) provide them with free advice for the formalisation of their businesses through a simplified path of processes, requirements and documents to be processed; (3) sensitise and educate them in the framework of the formalisation of their businesses and tax culture to prevent the contagion effect towards the immigrant population—the culture of informality inherent to the native population of the border area; (4) make economic barriers more flexible, especially access to financing for business projects that demonstrate viability; (5) encourage

training for entrepreneurship with a gender approach, oriented towards pull motivation, thus, strengthening personality traits and behavioural traits.

Finally, the main contributions of this research to academia are as follows: A review of the literature on motivational pull factors based on personality and behavioural factors towards entrepreneurship of the migrant entrepreneur. It is a pioneering quantitative study on the subject because the primary information collected and analysed came from the Venezuelan immigrant population in Colombia and guidelines are recommended for public policy of the Colombian state, aimed at strengthening motivational factors for entrepreneurship in terms of education programmes and formalisation of the labour market with a gender focus in a post-pandemic context.

6.1. Limitations of the Research

The limitation refers to the fact that the study was conducted in only one municipality in the Department of Norte de Santander, due to the limited access to the entire population of the department. This limitation is acknowledged, but the study can be replicated in the other 39 municipalities that make up this department. This replication would be a basis for future comparative studies on Venezuelan immigrant communities, which could guide the Colombian state's public policies at the local, regional and national levels with a border approach.

6.2. Future Research

For the Venezuelan immigrant population, host countries in South America were attractive due to geographical proximity, ease of access to transport, a common language and the existence of migratory networks, both family and non-family. This population has spread throughout these countries with emerging economies, with Colombia being the country neighbouring Venezuela, which has the largest number of immigrants including its land borders. The existence of the Venezuelan migrant population settled on the Colombian–Venezuelan border is also due to the existence of family, cultural and social ties. Given that the economic dynamics on the Colombian–Venezuelan border are marked by high rates of informality and unemployment, together with limited resource networks to take advantage of opportunities and the existence of institutional gaps, future studies should consider public policies in border territories that include the objectives of the Global Compact for Safe, Orderly and Regular Migration, together with business policies that attract migrant entrepreneurs, facilitating their incorporation into formal business ecosystems in order to take advantage of the social capital of the diaspora.

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Note

¹ Immigration authorities report 194 immigrants registered as of 31 December 2020 (Colombia Migration 2020).

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Article

Barriers to Innovations and Innovative Performance of Companies: A Study from Ecuador

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Abstract: This research aimed to examine the relationship between the barriers to the development of innovation and innovative performance. This is a quantitative, not experimental, cross-sectional research, and the National Survey of Innovation Activities of Ecuador is used. Bivariate Probit regression was used to process the data. The results show empirical evidence that Ecuadorian companies have a great number of barriers to innovation. The main barriers to product innovation and process innovation are as follows: lack of company funds, high costs of innovation, and lack of qualified personnel in the company and the country. In addition product innovation is affected by the lack of market information, and process innovation is affected by the lack of financing from external sources, lack of information on technology, and a market dominated by established companies. The research has theoretical implications because it contributes empirical evidence on the relationship between innovation barriers and innovative performance in developing countries where evidence is scarce. The research has practical implications because it serves as a basis for forming public policies. Business managers and administrators can improve innovative performance by minimizing the impact of the main barriers to innovation.

Keywords: barriers to innovation; innovative performance; product innovation; process innovation; innovation

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1. Introduction

In the theories of economic development, technological change and innovation have an important role; thus, in the economic development theory of Schumpeter (Schumpeter 1934), he considers that the fundamental force that causes the processes of transformation of the production and economic system is technological innovation, which can cause decisive transformations in society and in the economy. Meanwhile, the theory of endogenous economic growth (Romer 1994) considers that an improvement in human capital leads to economic growth through new forms of technologies and means of production that can be created.

The long-term growth of a country is related to technological innovation, so there is an endogenous capacity of countries to create technology and growth through knowledge. Therefore, government policies, research and development (R&D) and property laws are necessary factors to develop knowledge and drive innovation in a country (Romer 1994).

Innovation has been explained through the resource-based view of the firm (Penrose 1959; Wernerfelt 1984), which considers that the results that companies obtain are in relation to the various resources and capabilities that they use in their processes, among the various resources. Knowledge is considered the most important resource to achieve innovation in companies (Farooq 2018; Grant 1996), and according to the open innovation

paradigm (Chesbrough and Bogers 2014), companies implement external knowledge search strategies to complement internal knowledge to increase the flow of knowledge and its innovative potential.

According to OECD (2018), innovation requires the use of new knowledge or a new combination of existing knowledge and found that there are several types of innovation: product innovation, which is a new or improved good or service; in process innovation implements new processes or significant change processes to existing ones; organizational innovation; and marketing innovation.

Due to the importance of innovation for companies and the development of countries, several studies have examined the different factors that influence the innovative performance of companies, however, very few studies address the study of barriers or obstacles faced by companies to develop innovation, so there is still a gap in the literature on the effect of barriers to developing innovation that they have on companies, especially in developing countries (Pellegrino 2018).

The development of successful innovations in companies depends on a set of factors such as exploring and incorporating new technologies, implementing new innovation-oriented practices, mechanisms for the development of new ideas, and mitigating the effect of the barriers that affect the ability to succeed in innovation (Das et al. 2018), so companies that place importance on managing barriers to innovation are generally among the most innovative (Wilches-Ocampo et al. 2020).

Barriers to innovation are the conditions present in an organization or their environment that hinder the development of innovation (Barrera 2017; Pellegrino 2018). Organizational rigidity and lack of resources become barriers to achieving innovation (Kim and Park 2018). There are three groups of innovation barriers: (a) cost and financing barriers, including lack of internal funds, lack of external financing, and high costs for innovation (D'Este et al. 2012; Pellegrino 2018); (b) knowledge barriers, which includes lack of qualified personnel, lack of information on technology, lack of access to market information, and the difficulty in finding cooperation partners for innovation (D'Este et al. 2012; Pellegrino 2018); and (c) market barriers established by dominant companies and uncertainty barriers regarding the demand of products and services (D'Este et al. 2012; Pellegrino 2018).

In the practice of open innovation, several barriers, restrictions, and limitations to innovation that the company has can be mitigated or reduced because it is not only limited to carrying out R&D activities, but the company also develops collaboration with other organizations, and professionals to be able to access knowledge and skills that they do not have internally (Chesbrough and Bogers 2014).

Many academics have examined the relationship between the effect of the barriers to innovation and the innovative performance of companies. Much of the research on barriers to innovation has found relationship between the firms' innovation barriers and their innovative performance (Yen et al. 2019). Different explanations have been given regarding these positive connections, including the ability to overcome the obstacles presented by the barriers (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018). The effects of financial barriers and market barriers are similarly crucial for developing innovation, so companies must direct their attention to all types of barriers as they can limit innovation development (Pellegrino and Savona 2017).

This research aims to examine the relationship between the barriers to the development of innovation and the innovative performance in Ecuadorian companies using the national survey of innovation activities 2015 because the evidence on this relationship generally corresponds to contexts of developed countries, and there is little empirical evidence of this relationship in developing countries that have another context and where the barriers to innovation can affect companies differently. The innovation activities survey of Ecuador is aligned with the Oslo manual (OECD 2018), which includes the guidelines for national innovation surveys that are used mainly in OECD countries.

The article is structured in the following parts: the introduction section that includes the review of the literature, the description of the general characteristics of the economy

and companies of Ecuador, and the development of hypotheses. The methodology section includes the research design, the measures of the variables, and the econometric model. In the results sections the descriptive results and the results of the regression used are presented. In the discussion section, the results obtained are discussed with respect to other existing investigations, and in the conclusions section, the conclusions and the theoretical and practical implications of the investigation are presented.

1.1. Barriers to High Cost and Financing

Cost and financing barriers, including lack of internal funds, lack of external financing, and high costs for innovation, can influence innovations since the company is limited in the expenses required for R&D and to acquire technologies, or, in turn, very expensive innovations can be avoided in the company due to the difficulties of financing and recovering the investment (D'Este et al. 2012; Pellegrino 2018).

Innovation presents economic risks of not recovering the investment when the market does not respond to the commercialization of innovated products (Leiponen 2012; Leiponen and Helfat 2010). This problem increases in developing countries, since they have many financial barriers to find financing for innovation (Zanello et al. 2016). In this way, financial barriers exert a strong negative effect on companies to invest in innovation (Amara et al. 2016; Ghisetti et al. 2017), which mainly impacts the innovation conception stage and affects the probability that companies abandon innovation projects (García-Quevedo et al. 2018).

Some companies that have high innovative capacity have found financial barriers but have managed to overcome these financial barriers and achieve innovation (Hottenrott and Peters 2012). This is explained because the financial resources that are used in expenses for innovation activities provide knowledge and develop capabilities in the company, but innovation can be achieved even with scarce financial resources because it is the product of the combination of several bodies of knowledge that come from R&D and external sources of information (Crisuolo et al. 2018; Laursen and Salter 2006). In these cases, companies have the ability to overcome the obstacles presented by financial barriers (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018).

Madrid-Guijarro et al. (2009) examined the barriers in Spanish manufacturing small- and medium-sized enterprises (SMEs) in product, process and management innovation with the concept that innovation is doing something new or different, and found that cost and financial barriers are related to product and process innovation but with a different impact on both types of innovation, which limits the competitiveness and utility of the company, they also find that cost barriers have a greater impact on small companies than large companies. In addition, Zhu et al. (2012) examined institution-based barriers to the innovation of SMEs in new technology-based sectors in China with companies that have product, service, and process innovations and found that the companies have limited access to funds, which affects the innovation in these companies.

Demirbas et al. (2011) examined manufacturing SMEs in Turkey from the point of view of the perception and experience of business owners and found that there are barriers of high costs and lack of appropriate sources of financing, which impact the propensity of SME owners to innovate. Barrera (2017) used the 9th National Innovation Survey of Chile 2015 to examine SMEs that develop product, process, organizational, and marketing innovation and found that they have barriers to innovation due to the high costs to develop innovations. Furthermore, Seenayah and Rath (2017) looked at Indian manufacturing companies with the aim of examining the impact of innovation barriers on innovation activities and found high cost of innovation and a lack of appropriate sources of finance, which affects innovation activities and significantly delays innovation projects in manufacturing companies. Hvolkova et al. (2019) conducted a study in SMEs in Slovakia to determine the impact of innovation barriers on innovation activities, and found that a lack of financing resources was the main barrier for micro and small enterprises, while the cost of innovation was a barrier for medium-sized enterprises. These barriers affected the innovation activities of companies.

1.2. Knowledge Factor Barriers

Knowledge barriers include a lack of qualified personnel, a lack of information on technology, a lack of access to market information, and difficulty in finding cooperation partners for innovation. These restrict the company's capacity for innovation because innovation comes mainly from the knowledge resource and requires skills to manage knowledge that leads to innovation (D'Este et al. 2012; Pellegrino 2018).

Knowledge is an essential resource to attain innovation (Farooq 2018; Grant 1996). Companies having limitations in internal R&D seek to increase their innovative potential through external cooperation and often encounter barriers in absorbing external knowledge (Thomä 2017). Knowledge barriers in developing countries are associated with a less extensive search for external sources of information (Adeyeye et al. 2018). Innovation comes from combining a new body of knowledge with an old one in the company and the internal knowledge with the external knowledge acquired from their connections with other market players. A company with a lack of qualified personnel, market information, or technological information has limitations in combining knowledge and achieving innovation (Amara et al. 2016).

To manage knowledge, companies require human capital: the know-how, education, and the learning capacity of the staff (Aleknavičiūtė et al. 2016; McGuirk et al. 2015). Human capital provides absorptive capacity, which is the capacity to identify the external knowledge that reaches the company as a result of its interaction with other market actors (González et al. 2016). Cognitive barriers hinder collaborative innovations, especially in the supply chain (Skippari et al. 2017).

Companies receive market information primarily from customers and consumers. Customers provide information about their needs (Pejić Bach et al. 2015) and their experiences with the products (Gu et al. 2016). Cooperation with external market actors such as customers, suppliers, competitors, and consultants allows for an increasing flow of external knowledge to the company (Chang and Taylor 2016; Estrada et al. 2016; Kumar et al. 2017). Cooperation for innovation is a strategic action between organizations that seek reciprocal incentives and benefits (Arranz et al. 2019). The lack of cooperation has a greater impact on SMEs due to their limited human and technological resources and knowledge (Strobel and Kratzer 2017).

Madrid-Guijarro et al. (2009) found barriers to qualified human resources in Spanish SMEs. Similarly, Demirbas et al. (2011) found, in their study conducted in Turkey, that low human resource ratings negatively impact innovation, while Seenayah and Rath (2017) found a lack of qualified labor in Indian companies. On the other hand, in a study performed in Scotland, Freel (2000), encountered that low-skilled human resources are a significant barrier to innovation. Yen et al. (2019) found that human resources is the main barrier to innovation in Vietnamese SMEs due to the low level of job qualifications. Similarly, Pellegrino (2018) found that Spanish companies had restrictions to innovate due to the qualifications of their staff and that young companies are less affected by the lack of qualified human resources than older firms.

Knowledge factors correspond to technology, impacting the company's production processes and product improvement (Kumar et al. 2017). The lack of information on technology negatively affects innovative performance since companies do not know the technologies that can improve their processes, such as production, including the production plant and the technologies to develop the product (Kumar et al. 2017).

Stankovska et al. (2016) found that SMEs lack information about technology and, more specifically, about digital channels in the UK. This shortcoming affects companies' innovative performance, as it prevents firms from progressing or using technology to boost their processes.

1.3. Market Factor Barriers

The lack of resources and the structure of the market are obstacles especially for new companies since this restricts them in knowledge, the required organizational skills, and

the experience in the technologies used, while the structure of the market can impose restrictions in the form of competition, company size, and conditions of appropriability of innovations (D'Este et al. 2012). These factors can prevent a company from initiating innovation as well as its deceleration of its innovative process (Pellegrino 2018). Barriers due to market concentration and the risk of not satisfying demand are factors that prevent companies from participating in the development of innovations (D'Este et al. 2012).

Market barriers include markets dominated by established companies and uncertainty in demand for innovative products or services, which are barriers related to the market structure and demand that can mainly affect companies with less experience or companies that operate in saturated markets, which restricts companies to finance and develop innovations due to the difficulties in recovering the innovation investment (Pellegrino 2018).

Barrera (2017), in a study implemented in Chilean SMEs, evidenced a lack of information about the market, and García-Quevedo et al. (2016) found that the uncertainty of the demand and a low product demand alter innovation differently. Barrera (2017) found in Chile that the market is dominated by some established companies, which is an essential restriction for SMEs to develop innovation.

In general, barriers to innovation negatively affect more small companies than large firms due to the difficulties in obtaining funds and financing, the scarce qualified human resources, and the predicaments they face to obtain market information (Barrera 2017). The lack of qualified personnel and the lack of resources for innovation affect older companies more than younger businesses (Barrera 2017).

1.4. General Characteristics of the Economy and Companies of Ecuador

Ecuador is a country in South America, it is a dollarized country dependent on the export of oil and primary products (Ray and Kozameh 2012) with plans for economic growth and substitution of industrial imports through science and technology strategies knowledge-based (Purcell et al. 2017). The directory of companies for the year 2015 was made up of 843,644 companies, and of the 6275 companies that were part of the survey, the participation by sector corresponds to mining and quarrying companies 3.8%, manufacturing 25.8%, service 40%, and trade 30.4% (INEC 2016b). The main manufactures present in the sample correspond to food products, wearing apparel, rubber and plastics products, manufactured metal products, and chemical products. In the mining and quarrying sector, the companies are mainly involved in extraction of metallic ores and extraction of crude oil and natural gas. In the services sector, the companies mainly corresponds to those in building construction, food and beverage services, accommodation services, financial services, and real estate services. Finally, in the trade sector, companies are mainly car and motor trade, wholesale, and retail trade companies.

Ecuador has been selected in this study because it is a developing country and for its economic and business environment at the level of financing, knowledge, and market for the development and commercialization of innovations. At the level of investment, its R&D expenses in 2014 was 0.44% of the GDP (World Bank 2019), which is a low level of investment in R&D compared to developed countries. The educational level of the staff in the sample was as follows: doctors PhD 0.20%, master's degree 1.61%, specialist degree 1.45%, staff with completed higher education 19.99%, technological/technical 5.31%, and the rest of the staff with a lower level of education (INEC 2016b). The sizes of the companies in the sample are as follows: small companies 72.41%, medium-sized companies 10.23%, and large companies 17.36% (INEC 2016b). It is a market where SMEs predominate, and in the sample, 17.61% of companies were part of business groups and 6% of companies have located their headquarters outside of Ecuador (INEC 2016b).

1.5. Hypothesis

To propose the hypotheses, the definition of product innovation has been considered as new or improved goods or services of the company (OECD 2018) without distinguishing the degree of novelty of the innovation if it is new for the company or the market national

or international (radical innovation). Identically, process innovation is considered as new or improved processes in the company (OECD 2018).

It is considered to examine both product innovation and process invocation because the barriers to innovation can have a different impact on product and process innovation (Madrid-Guijarro et al. 2009), and to achieve product and process innovation, the company requires different knowledge and skills (Ruiz-Pava and Forero-Pineda 2018). It is considered that the size of the company can influence the relationships of the variables due to the fact that larger companies can access a greater number of qualified personnel (Díaz-Díaz and De Saá-Pérez 2014; Gu et al. 2016), and the age of the company in the business can be of influence because older companies can accumulate more knowledge (Lefebvre et al. 2015).

Figure 1 shows the relationship of the variables identified in the literature.

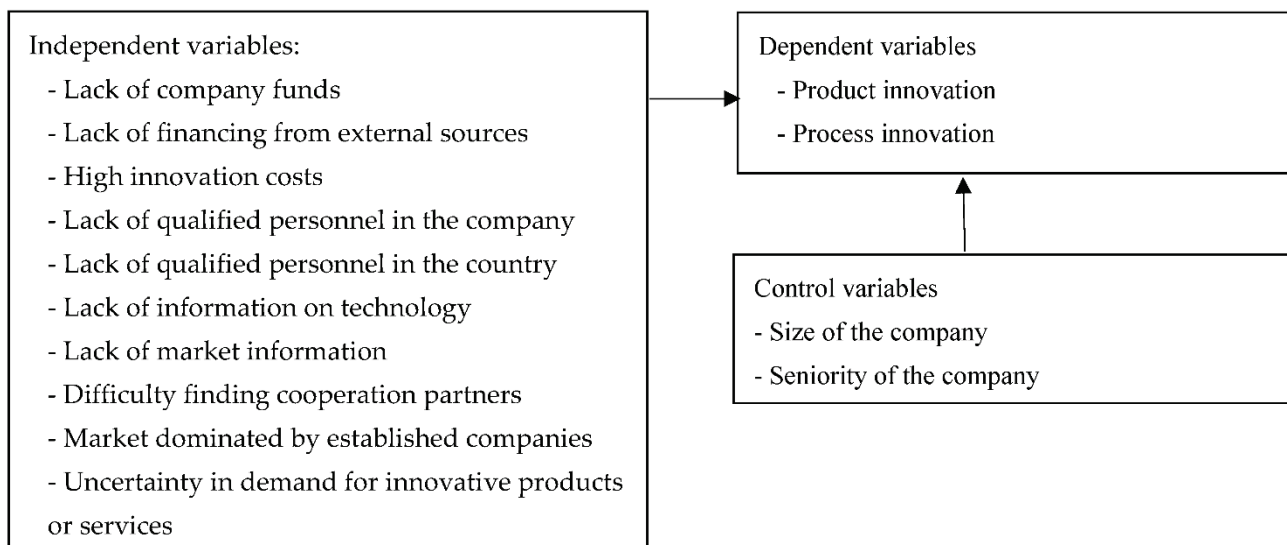


Figure 1. Relationship of the variables.

Considered that knowledge is the main resource to achieve innovation in companies (Farooq 2018; Grant 1996), and investment in research and development (R&D) allows the company to develop skills and obtain machinery and technologies necessary to achieve innovation in developing countries since, generally in these countries, companies acquire technologies instead of developing them internally (Zanello et al. 2016). Thus, the lack of funds in the company is a limitation to financial innovation. Companies not having funds are limited in carrying out R&D and in developing innovation. Financial barriers exert a strong negative effect on companies in investing in innovation (Amara et al. 2016; Ghisetti et al. 2017). We propose the following hypothesis:

Hypothesis 1 (H1). *The lack of funds in the business is negatively related to product and process innovation in Ecuadorian companies.*

Because there are risks in the return on the investment made to develop the innovations (Leiponen 2012; Leiponen and Helfat 2010), external sources of financing such as government agencies and financial institutions play an important role in financing innovation when companies have difficulties in allocating internal funds for innovation (Zhu et al. 2012). The lack of financing from external sources to the company, such as government agencies and financial institutions in a developing country, is a limitation for innovation because the company must seek internal financing and assume the economic risks of innovation. We propose the following hypothesis:

Hypothesis 2 (H2). *The lack of financing from external sources is negatively related to product and process innovation in Ecuadorian companies.*

Developing innovation has economic risks (Leiponen 2012; Leiponen and Helfat 2010), and when innovation is expensive, there is a probability of abandoning the innovation (García-Quevedo et al. 2018). In developing countries, companies have less propensity to develop innovation alone and not in collaboration with other companies (Zanello et al. 2016), so these companies assume all the costs of innovation. We propose the following hypothesis:

Hypothesis 3 (H3). *The high innovation costs are negatively related to product and process innovation in Ecuadorian companies.*

Knowledge is the primary resource for innovation (Farooq 2018; Grant 1996). Skilled workers provide the company with human capital, which is an essential driver of innovation and provides the absorptive capacity to the company that is necessary to internalize external knowledge in the company (González et al. 2016). Human capital refers to the processes of education, training, and career plans to provide skills and abilities. It is a part of intellectual capital, known as the company's most relevant intangible asset (Allameh 2018). Developing countries have a shortage of qualified personnel for innovation (Zanello et al. 2016). We propose the following hypothesis:

Hypothesis 4 (H4). *The lack of qualified personnel in the company is negatively related to product and process innovation in Ecuadorian companies.*

Human capital is a constraint to innovation and companies perceive that unskilled personnel are a severe obstacle to business activities (Botrić and Božić 2018). Because of this, when companies do not have qualified personnel, they seek to hire them in the country. We propose the following hypothesis:

Hypothesis 5 (H5). *The lack of qualified personnel in the country is negatively related to product and process innovation in Ecuadorian companies.*

The lack of information on technological advances limits the company's knowledge of new technology's advantages and how to acquire it. So, companies cannot take advantage of technological advances in their processes and R&D to achieve innovation. Technology is defined as the set of knowledge and techniques applied in a logical and orderly way, and knowledge is the primary resource for innovation (Farooq 2018). We propose the following hypothesis:

Hypothesis 6 (H6). *The lack of information on technology is negatively related to product and process innovation in Ecuadorian companies.*

When innovation is carried out using market information, the company obtains knowledge about customer needs (Pejić Bach et al. 2015) and their experience with products (Gu et al. 2016). With market information, the company can develop the most appropriate innovation for their customer's needs. We propose the following hypothesis:

Hypothesis 7 (H7). *The lack of information on the market is negatively related to product and process innovation in Ecuadorian companies.*

Internal knowledge and external knowledge are complementary to develop innovation in the company (Rodríguez et al. 2017), so developing innovation with other players' cooperation, such as suppliers or competitors, is important because they provide knowledge about their clients, the supply chain, and the knowledge base to develop innovation. The difficulty of finding partners to cooperate in innovation limits the company from developing innovation. We propose the following hypothesis:

Hypothesis 8 (H8). *The difficulty in finding cooperation partners is negatively related to product and process innovation in Ecuadorian companies.*

Innovation is an activity that has economic risks (Leiponen 2012; Leiponen and Helfat 2010), and when established companies dominate the market, they could prevent a company that auspiciously develops product innovation from being commercially successful with the innovative product. We propose the following hypothesis:

Hypothesis 9 (H9). *The market dominated by established companies is negatively related to product and process innovation in Ecuadorian companies.*

Innovation is an activity that has economic risks (Leiponen 2012; Leiponen and Helfat 2010), and the company will try to compensate with the sales of the innovative product. However, given the uncertainty of the demand for an innovative product in the market, the company may limit itself to investing and carrying out R&D, thus limiting innovation. We propose the following hypothesis:

Hypothesis 10 (H10). *The uncertainty in the demand for innovative products or services is negatively related to product and process innovation in Ecuadorian companies this research.*

2. Methodology

The design selected is quantitative, cross-sectional, and non-experimental, following criteria for quantitative designs. This research follows a deductive approach as it derives from existing theories. The data used come from the 2015 Ecuadorian National Survey of Innovation Activities, which INEC developed following the Oslo manual criteria. The sample obtained for the national survey of innovation activities was 7055 companies, and once the survey was collected, the valid number of surveys was 6275 companies that belong to the mining and quarrying, manufacturing, services, and construction sectors (INEC 2016a). The sampling method was stratified by province and by economic sector, with a 10% error and a confidence level of 90% (INEC 2016a).

2.1. Measurement of the Variables

Two measures of variables were considered for innovative performance, product innovation, and process innovation. These dependent variables take the value of one if the company has carried out innovation and take the value of zero if the company has not executed innovation. The binary dependent variable as a measure of innovative performance is evidenced in the literature (Demirbas et al. 2011; Leiponen 2012).

The variable barriers to innovation in the survey appear on a 1 to 4 Likert scale, considering how they affect innovation in the company, being 1 = high, 2 = medium, 3 = low, and 4 = not experienced. A binary variable has been generated for each innovation barrier that takes the value of 1 from the scale (1 = high, 2 = medium) and takes the value of 0 from the scale (3 = low and 4 = not experienced) from the 1 to 4 scale recorded in the survey. Each variable of the barriers was converted into a binary variable (1, 0). As evidenced in the literature, the process was followed by authors to alleviate potential measurement errors that might arise from use of a Likert scale (Cohen and Malerba 2001; Laursen and Salter 2006; Leiponen and Helfat 2010).

For the variable size of the company, the number of workers was considered as a measure. This criterion has been used in the literature (Díaz-Díaz and De Saá-Pérez 2014; Gu et al. 2016; Pejić Bach et al. 2015; Robinson and Stubberud 2011). For the variable seniority of the company, the time the company has been in the business was considered a measure (Gu et al. 2016; Lefebvre et al. 2015). Table 1 presents the composition of the variables under study.

Table 1. Variable composition.

Variable	Nomenclature	Composition	Variable Type
Product innovation	Y_1	1 = There is product innovation; 0 = There is no product innovation	Binomial
Process innovation	Y_2	1 = There is process innovation; 0 = There is no process innovation	Binomial
Lack of company funds	X_1	1 = There is a lack of funds in the company for innovation; 0 = There is no lack of funds in the company for innovation	Binomial
Lack of financing from external sources	X_2	1 = There is a lack of financing from external sources; 0 = There is no lack of financing from external sources	Binomial
High innovation costs	X_3	1 = There are high innovation costs; 0 = There are no high innovation costs	Binomial
Lack of qualified personnel in the company	X_4	1 = There is a lack of qualified company personnel; 0 = There is no lack of qualified company personnel	Binomial
Lack of qualified personnel in the country	X_5	1 = There is a lack of qualified personnel in the country; 0 = There is no lack of qualified personnel in the country	Binomial
Lack of information on technology	X_6	1 = There is a lack of information on technology; 0 = There is no lack of information on technology	Binomial
Lack of market information	X_7	1 = There is a lack of market information; 0 = There is no lack of market information	Binomial
Difficulty finding cooperation partners	X_8	1 = There is a difficulty in finding cooperation partners; 0 = There is no difficulty in finding cooperation partners	Binomial
Market dominated by established companies	X_9	1 = The market is dominated by established companies; 0 = The market is not dominated by established companies	Binomial
Uncertainty in the demand	X_{10}	1 = There is uncertainty in the demand; 0 = There is no uncertainty in the demand	Binomial
Size of the company	X_{11}	Number of workers	Continuous
Seniority of the company	X_{12}	Number of years in business	Continuous

2.2. Econometric Model

The following econometric model is used for the research, considering two measures, product innovation, and process innovation. They will be used for innovative performance:

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \varepsilon_i \quad (1)$$

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \varepsilon_i \quad (2)$$

where:

Dependent variables:

Y_1 = Product innovation;

Y_2 = Process innovation.

Independent variables:

X_1 = Lack of funds in the company;

X_2 = Lack of financing from external sources;

X_3 = High innovation costs;
 X_4 = Lack of qualified personnel in the company;
 X_5 = Lack of qualified personnel in the country;
 X_6 = Lack of information on technology;
 X_7 = Lack of market information;
 X_8 = Difficulty finding partners for cooperation;
 X_9 = Market dominated by established companies;
 X_{10} = Uncertainty in demand for innovative products or services.
 Control variables:
 X_{11} = Company size;
 X_{12} = Seniority of the company.

The Bivariate Probit model was selected for processing the data. The Probit model is appropriate because the dependent variables are binary (1, 0). Using the ordinary least squares estimators (OLS) when a binary dependent variable exists is not recommended. The Bivariate Probit model is used because two dependent variables (product innovation and process innovation), which have the same group of independent variables in common and can be correlated, are processed simultaneously. There exists in the literature evidence of the use of the Bivariate Probit model to process the dependent variable product innovation and process innovation (Criscuolo et al. 2018; Gómez et al. 2016; Ruiz-Pava and Forero-Pineda 2018).

3. Results

In the development of this investigation, the reliability was verified with Cronbach's alpha, obtaining a reliable value of 0.843. When processing the existence of endogeneity, multicollinearity, and heteroscedasticity, we verified the existence of problems. The robustness of the model was validated by using the modern econometric approach. The following considerations were taken into account: (a) In respect to strong non-multicollinearity, the VIF (variance inflation factor) test was used, yielding results of a value less than 10, ruling out multicollinearity problems; (b) the model incorporated robust standard errors to avoid heteroscedasticity problems. The Stata statistical software, which allows obtaining the Bivariate Probit regression with robust errors, was used to process data. The correlations among the variables were also analyzed, verifying that they are less than 0.8. Thus, it was determined that there is no high correlation among the independent variables.

Table 2 shows the descriptive results of the companies that reported having cost and financing innovation barriers. Table 3 shows the descriptive results of the companies identified as having barriers to knowledge factor innovation. Table 4 shows the descriptive results of the companies presenting barriers to market factor innovation. Table 5 shows the results of the Bivariate Probit regression performed with robust errors.

Table 2. Companies with innovation barriers: Cost and financing factors (Expressed as a percentage of the total number of companies that carried out innovation activities or carried out product or process innovations).

Innovation Barriers: Cost and Financing Factors	%
Lack of funds in the company.	59.78%
Lack of financing from external sources.	45.21%
High innovation costs.	61.33%

Table 3. Companies with innovation barriers: Knowledge factors (Expressed as a percentage of the total number of companies that carried out innovation activities or carried out product or process innovations).

Innovation Barriers: Knowledge Factors	%
Lack of qualified personnel in the company.	50.81%
Lack of qualified personnel in the country.	42.24%
Lack of information on technology.	50.90%
Lack of market information.	49.99%
Difficulty finding partners for cooperation.	34.86%

Table 4. Companies with innovation barriers: Market factors (Expressed as a percentage of the total number of companies that carried out innovation activities or carried out product or process innovations).

Innovation Barriers: Market Factors	%
Market dominated by established companies.	54.90%
Uncertainty in demand for innovative products or services.	56.81%

Table 5. Regression Results from the Bivariate Probit.

Variables	Product Innovation Coefficient (Error)	Process Innovation Coefficient (Error)
Lack of funds in the company.	0.1880876 *** (0.034228)	0.2548544 *** (0.0351948)
Lack of financing from external sources.	−0.0876784 ** (0.0352625)	−0.1295372 *** (0.0382892)
High innovation costs.	0.2016872 *** (0.0648308)	0.6944521 *** (0.0661728)
Lack of qualified personnel in the company.	0.5365761 *** (0.0873716)	0.9346326 *** (0.0952594)
Lack of qualified personnel in the country.	−0.6139617 *** (0.1038566)	0.556819 *** (0.116178)
Lack of information on technology.	−0.0376503 (0.0735551)	0.2882179 *** (0.0782597)
Lack of market information.	−0.1936364 *** (0.075563)	−0.0612834 (0.0844584)
Difficulty finding partners for cooperation.	−0.0646217 (0.0753547)	−0.1839626 ** (0.083821)
Market dominated by established companies.	−0.0325535 (0.0858906)	−0.2398122 ** (0.0992136)
Uncertainty in demand.	0.033355 (0.1021214)	−0.0654684 (0.1169863)
Company size.	0.3884464 *** (0.0362482)	0.429193 *** (0.0371567)
Seniority of the company.	0.2504346 *** (0.0761566)	0.2116035 *** (0.0752724)
Constant.	−2.18035 *** (0.1014355)	−2.092372 *** (0.0986912)
Number of observations	6275	
LR chi2(9)	3309.05	
Prob > chi2	0.0000	

Note: *** p value < 0.01, ** p value < 0.05.

In the following hypotheses are the innovation barriers related to the innovative performance of the company:

H1 Lack of funds in the company, positively related to product and process innovation;
H2 Lack of financing from external sources is negatively related only to process innovation;

H3 High innovation costs are positively related to product and process innovation;

H4 Lack of qualified personnel in the company is positively related to product and process innovation;

H5 Lack of qualified personnel in the country is positively related to product and process innovation;

H6 Lack of information on technology is positively related only to process innovation;

H7 Lack of market information is positively related only to product innovation;

H8 Difficulty in finding partners is negatively related only to process innovation;

H9 Market dominated by established companies is negatively related only to process innovation;

H10 is rejected for both product innovation and process innovation.

In the control variables, it is observed that the size and seniority of the company are positively related to the innovation of products and processes.

The results show that, in Ecuador, there are barriers that are positively related to the innovative performance of companies, which indicates the ability of the company to overcome the obstacles presented by the barriers (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018), and they are lack of funds in the company, high innovation costs, lack of qualified personnel in the company, and lack of qualified personnel in the country related to product and process innovation. There is also lack of information on technology, which is positively related only to process innovation, and lack of market information, which is positively related only to product innovation.

The results also show that there is a group of barriers that is negatively related to innovative performance. The negative relationship of barriers with innovative performance reduces the company's innovative potential (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018), and these barriers are lack of financing from external sources, difficulty in finding partners, and markets dominated by established companies, related to process innovation.

4. Discussion

The results show empirical evidence that Ecuadorian companies have many barriers to innovation in the three types: high-cost innovation and financing barriers, knowledge factor barriers, and market barriers. This result follows Zanello et al. (2016), who mentioned that developing countries have difficulties in financing innovations, lack of qualified personnel, and difficulties in companies for cooperation for innovation.

The positive relationship of the barriers to innovation with innovative performance indicates the ability of the company to overcome the obstacles presented by the barriers (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018) or that companies have achieved innovation despite the existence of barriers. On the contrary, the negative relationship of barriers with innovative performance reduces the company's innovative potential (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018).

Regarding barriers to innovation, the positive relationship that exists between the lack of funds in the company and the high-cost innovation with the innovative performance indicates that the company, despite the reduction in its innovative potential due to these financial barriers, overcomes the obstacles presented by the barriers (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018). Analyzing the results, it is found that the control variables size and seniority of the company are related to the innovative performance of the company. This is explained because large companies develop the ability to combine internal and external financing, which is crucial to invest in innovation (Nylund et al. 2019); large companies have greater possibilities to increase innovative performance because they

have more resources and can accumulate knowledge in greater quantity (Díaz-Díaz and De Saá-Pérez 2014; Gu et al. 2016); and because innovation is achieved mainly by combining several knowledge bodies that include internally acquired knowledge through R&D and external knowledge of information sources (Criscuolo et al. 2018; Laursen and Salter 2006). Although financial barriers restrict R&D and knowledge acquisition, companies acquire the necessary knowledge to innovate. The negative relationship of the lack of funding sources from external sources with innovative performance restricts their investment in innovation and the innovative potential of companies (Amara et al. 2016; Ghisetti et al. 2017).

These financial barriers found in Ecuadorian companies are similar to those identified in other countries as reported by Madrid-Guijarro et al. (2009) in Spanish SMEs, Zhu et al. (2012) in China, Seenayah and Rath (2017) in India, and Hvolkova et al. (2019) in Slovakia. The results identified that the lack of internal and external financing restricts the company from investing in research and development (R&D). The positive relationship between high innovation cost barriers and innovative performance found in Ecuadorian companies is similar to the results discovered by Demirbas et al. (2011) in Turkey and Barrera (2017) in Chile. These researchers identified high innovation costs as an important barrier to innovation development, consistent with Zanello et al. (2016) companies in developing countries prefer to acquire technology than to develop it internally due to the costs involved and its appropriability. Funding barriers and high innovation costs are the most critical barriers that companies face (Barrera 2017), even more so considering that innovation activity involves risks (Leiponen 2012; Leiponen and Helfat 2010).

Regarding knowledge factor barriers, the lack of qualified personnel limits Ecuadorian companies in human capital and the absorptive capacity that the company has to absorb the external knowledge. The lack of qualified personnel restricts the company in its innovative capacity and, along with financial barriers, is the most important barriers to innovation in Ecuadorian companies.

The positive relationship of the barriers of lack of qualified personnel in the company and the country with the innovative performance found in Ecuadorian companies is similar to results found by other researchers: Madrid-Guijarro et al. (2009), who examined Spanish SMEs; Demirbas et al. (2011) in their study in Turkey; Freel (2000), who examined industrial companies in Scotland; Pellegrino (2018) in Spanish companies; and Yen et al. (2019), who examined Vietnamese companies, found that human resources at a low level of job qualification is the main barrier to innovation that these companies have.

Regarding market factor barriers, the positive relationship between the barrier of lack of market information and product innovation found in Ecuadorian companies is similar to Barrera (2017), who evidenced Chile's SMEs' lack of information on the market regarding information that comes from customers or consumers and information about suppliers.

Innovation comes from the knowledge that a company acquires from its R&D activities. Interaction with other market players (Farooq 2018) and the lack of information from customers prevents knowledge from experience with products and consumers' needs (Pejić Bach et al. 2015), as well as on customers' emotions regarding products (Christensen et al. 2017), which is important information for product development and innovation success.

The positive relationship of the barrier to lack of information on technology with the innovation of processes found in Ecuadorian companies concurs with Stankovska et al. (2016), they found, in UK SMEs, that the lack of information on technology affects the company's innovative performance. Technology, especially that used in production plants and the technology that comes from suppliers, is an important source of information (Kumar et al. 2017). When this barrier exists, companies find their innovative potential restricted.

The negative relationship of the barrier of difficulty in finding partners for the process of innovation in Ecuadorian companies causes the firms to decrease their innovative potential because the company is limited in external knowledge that can be used for innovation (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018). This result parallels the one obtained by Barrera (2017) in Chile, where it is difficult for SMEs to find partners for innovation.

The negative relationship between the barrier market dominated by established companies and the innovation process in Ecuadorian companies causes businesses to decrease their innovative potential due to restrictions in commercializing innovations (Galia and Legros 2004; Mohnen and Röller 2005; Pellegrino 2018). This result is similar to those obtained by Barrera (2017) in Chile, who found that the industry concentration dominated by established companies is an important restriction for SMEs to develop innovation.

Regarding the control variables, both the size and seniority of the company are positively related to the innovation of products and processes. This relationship implies that larger companies can have more knowledge to create innovation due to having more personnel and resources. The same happens with older companies that can compile more knowledge for innovation.

These results on the barriers to innovation in Ecuadorian companies contribute to understand the innovation process because companies in developing countries generally have low innovative potential. The empirical evidence of the barriers contributes to understanding their impact on the innovation process.

5. Conclusions

The main barriers to product and process innovation found in this research on Ecuadorian companies are lack of funds in the company, high costs of innovation, lack of qualified personnel in the company, and lack of qualified personnel in the country. Product innovation, in addition, is affected by the barrier generated by the lack of market information and process innovation. Furthermore, it is affected by the lack of external sources of financing, the lack of information on technology, and the market dominated by established companies.

This study provides empirical evidence, which is scarce in developing countries, on how barriers impact innovation. This research contributes to close the knowledge gap and understand the impact of these barriers on innovation in Ecuadorian companies. The results of this paper are of importance to the academy since the lack of qualified personnel in innovative companies shows the need to design and direct the offer of education and training, especially to the fields of innovative companies, so that firms can develop their innovative potential.

The results also contribute with evidence that high innovation costs, lack of funding and financing for innovation, and lack of qualified personnel are the most critical barriers to innovation. Other barriers found in this research, such as the lack of market and technology information, are also present in the literature. The results of this research differ from those found in the literature in that, in previous studies, especially those carried out in developing countries, companies have few barriers to innovation. In contrast, in Ecuador, many barriers are observed that affect innovation development, and a higher percentage of innovative companies are affected.

The research has practical implications because its results can serve as a basis for forming public policies. Business managers and administrators can improve the innovative performance of their companies by minimizing the impact of the main barriers to innovation in businesses.

One of the limitations of this research is the temporality with which the study was carried out. So, it is recommended to implement studies in other developing countries. In addition, given that the impacts on innovation are seen over time, new longitudinal studies can provide data to endorse this research's results.

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Review

Sustainable Drive Tourism Routes: A Systematic Literature Review

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Abstract: Drive tourism (DT) has become an attractive way to visit tourism destinations for an increasing number of visitors along driving routes. This flow of visitors has made sustainability a major issue, that is, the way by which tourism development ensure economic benefits for local communities and preserves local identity, along the route, without compromising the environmental resources. Many studies focused the topic of DT, mainly the analysis of a particular angle, either be economic sustainability, e.g., advantages of the ones related to economic and environment sustainability, such as the impact of tourists along the route environment. Nevertheless, little attention has been paid to the social consequences of DT in the local entrepreneurial environment and the resulting exaggeration of their cultural representativeness in the sense of authenticity. Our aim is to summon these points of view and achieve, through a systematic literature review, a clear and integrative picture of the driving tourism impacts in terms of sustainability along the routes throughout local communities. A systematic literature review was performed using the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology. This systematic literature review sought to consolidate knowledge on the subject. In order to illustrate the link between major categories and their corresponding trends, authors used *VOSviewer* scientific software. The gathering of existing knowledge around the three components of sustainability highlighted the importance of community involvement and collaboration among DT stakeholders to address the trade-off between the protection and promotion of DT routes. Opportunities for future studies are suggested.

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Keywords: drive tourism; routes; sustainable; systematic literature review; PRISMA

1. Introduction

The environment, social justice, and development have become an important issue worldwide and one of the main topics of analysis. A change in values has been carried out in order to ensure the sustainability of future generations, while triggering change with regard to behaviors and raising consciousness about sustainability issues.

All sectors, including tourism, face several challenges in order to achieve sustainable goals, with investments on infrastructure, processes, procedures, and equipment that support this change (Jiang and Lyu 2022; Ooi et al. 2018; Hanrahan et al. 2017; Guizzardi et al. 2022). Tourism agents struggle to balance the environmental, economic, and social priorities that are continuously changing and evolving.

Factors affecting climate change, economic instability, and other macro-environmental issues have profound implications on economic ecosystems and to society with unknown impacts for the future.

To balance this, tourism stakeholders face new challenges on a daily basis, connected not only to the new trends that emerged in the last decade, but also with the need to create new strategies and business solutions that balance environmental, economic, and social issues. Therefore, tourism is also changing and evolving rapidly in both developed and developing regions (Ooi et al. 2018).

Sustainable tourism comprehends optimizing the exploitation of environmental resources to preserve natural, cultural heritage and ensuring authenticity of the host community, while ensuring socio-economic benefits in the long term. Therefore, it requires sustainable planning to maximize community benefits and minimize community costs thus increasing community participation (Hanrahan et al. 2017). According to UNWTO (World Tourism Organization), sustainable tourism could be defined as “takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities”. Its objectives encompass improving the quality of life of the host population both in the short and long term, fulfilling the tourists’ demands, and protecting nature. Literature posits that a superior conservation of the heritage is the central indicator of perceived sustainability, whereas tourism could be a trigger for destinations’ competitiveness in terms of sustainability (Guizzardi et al. 2022). However, there are a few studies published in sustainable drive tourism.

Conflicting perspectives of sustainable tourism subsist (Buffa 2015; Filimonau et al. 2022). Some researchers argue that sustainability is not constantly compatible with tourism because there are too many competing interests that end up with certain interests overriding others (Filimonau et al. 2022). Moreover, new small businesses have thrived based on local cultural and natural heritage, while feeding local entrepreneurship (Filimonau et al. 2022). Some literature claims that sustainable tourism can become a marketing label assumed by destinations to draw an increasing number of visitors who are aware about sustainability concerns (Guizzardi et al. 2022; Buffa 2015).

Several authors (Hanrahan et al. 2017; Buffa 2015; George et al. 2013; Taylor and Carson 2010; Fjelstul and Fyall 2015) mention that sustainability is a strategic goal that needs to be achieved by all tourism destinations, besides their scale of geographical area. To accomplish this goal, destinations need to amend the objectives of tourism, as a facilitator of cross-cultural commitment, ecological enjoyment, and spiritual development rather than selfish and hedonistic modes of tourism (Fjelstul and Fyall 2015; Saluja et al. 2022). Sustainability is one of the main competitive factors for tourism destinations, creating value for tourists and to the overall community (Laws and Scott 2003; Saluja et al. 2022). In addition, sustainable tourism becomes a comparative advantage that prompts economic growth, within a bidirectional relationship between the two variables (Brida et al. 2015).

Tourism destinations face constant challenges, and measures related to sustainable tourism must be adapted depending on demand, supply, and mainly host communities’ needs (Butler et al. 2021a; Sykes and Kelly 2016). A central condition is a cultural change inherent to values and behaviors that may trigger new visitors, businesses, and associated organizations that can lead in turn to positive behaviors to enhance safe and enjoyable experiences (Buffa 2015; Butler et al. 2021a; Wu 2015). Sustainability should be shared in the tourism actors’ goals towards sustainable behaviors such as the case of motorcycle tourism, in which dynamic interaction leads to a new motorcycle leisure lifestyle whilst ensuring new business demand (Sykes and Kelly 2014).

Additionally, tourists should be conscious of sustainability issues, whilst hosting communities should aim to ensure cultural and natural integrity, reinforce the tourists’ connection to the destination through memorable experiences, and allow the reinforcement of identity creation (Marschall 2012).

Sustainable tourism is particularly interesting when examined in sites of DT (Taylor and Carson 2010; Cartan and Carson 2009; Taylor and Young 2005). The term DT is used here to refer to tourism routes connecting the city to the rural areas by linking a variety of activities and attractions, that in turn stimulate entrepreneurial opportunities through the development of ancillary products and services along the route, integrated to support

the development of a region, conservation, and rehabilitation of cultural and natural resources (Zakariya et al. 2020). It comprehends special tourists whose travel motivation is to experience the rural environment, e.g., wine routes or storehouses routes and entails the desire for personal escape, experiencing the flow state while riding down the routes, for example, in the case of motorcycle tourists (Frash et al. 2018).

DT routes exhibit an inherent cultural (e.g., archaeological artifacts) and recreational value (e.g., exploring landscape), in which tourist satisfaction positively leads to the intention to revisit sites (Qiu et al. 2018) and connect regions (Shih 2006). DT combines elements of diverse tourism trends (e.g., visits to industrial and natural sites), as almost a quarter of all recreational trips (over 60 miles) are taken in private vehicles. Despite this fact, there is a scarcity of studies in the tourism literature covering the topic of DT (Shanahan 2003).

The flow of visitors entering DT routes leads to a need for balancing in terms of sustainability, for example, in how to ensure a trade-off between conservation of landscape and tourism promotion (Prideaux et al. 2001; Dou et al. 2022). Despite the significance of this issue, several studies do not explicitly mention sustainability goals, favoring the economic development instead. In this regard, quite a few studies have so far focused on environmental impact, in terms of conservation of natural resources (Filimonau et al. 2022; Larsen et al. 2020; Wu et al. 2018) by discussing factors such as the impact of air quality on visitors (Wu et al. 2018). Other authors investigated economic implications (Rolfe and Flint 2018), for example, about the potentialities of rural contexts (Ramsey and Malcolm 2018). The social implications have been disregarded in such studies though (Ramsey and Malcolm 2018), while ignoring that without the commitment of locals, the goal of sustainable tourism may not be achieved (Fjelstul and Fyall 2015). The aim of this paper is to summon these diverse perspectives and attain, through a literature review, a clear picture of the sustainability of tourism along the DT routes.

In the following sections, we first describe the method adopted for the review of existing studies that have analyzed the sustainability tourism issues in DT routes. Next, based on a deductive coding process, we discuss existing knowledge according to the three components of sustainability, that is, economic, environmental, and social dimensions through three different sections. The last section concludes and delivers conclusive insights.

2. Materials and Methods

The research method adopted in this study is the systematic literature review, allowing the definition of a research boundary that should be developed from a scientific perspective, constituting a transparent, replicable, and scientific process, which aims to minimize biases through exhaustive bibliographic research publications and unpublished studies. Thus, after the formulation of research questions, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology was applied. The references papers selection process consists of four stages: (1) databases selection, (2) papers extraction, (3) abstract screening and (4) full-text screening. The selection process is explained using the PRISMA 2020 flow diagram (Figure 1) (Moher et al. 2009). The research formulated three research questions related to drive tourism, the tourist segments, the relationship between sustainability and drive tourism routes, and the emergent entrepreneurship and subsequent quality of life. The databases used for consultation were Scopus by Elsevier and Web of Science (WoS) by Clarivate.

The research method was developed starting with the keyword that appears in abstracts "Drive Tourism" with the Boolean term "OR" with keyword "Self-drive tourism", since it was noted that the researchers do refer this keyword with the same meaning to drive tourism. We add another keyword ("routes entrepreneurs") with the Boolean term "OR", since we are interested in perceiving the small business along the route. Finally, we limited our research only to scientific articles with peer review (LIMIT-TO DOCTYPE, "ar") to guarantee that we are searching without differences. Overall, 99 potentially selectable contributions were identified within the database of "Scopus" and 45 contributions were found within the database "web of Science". Only scientific papers written in the English

language and published in business, tourism, heritage, economy, hospitality, environment, and management areas were selected (Figure 1).

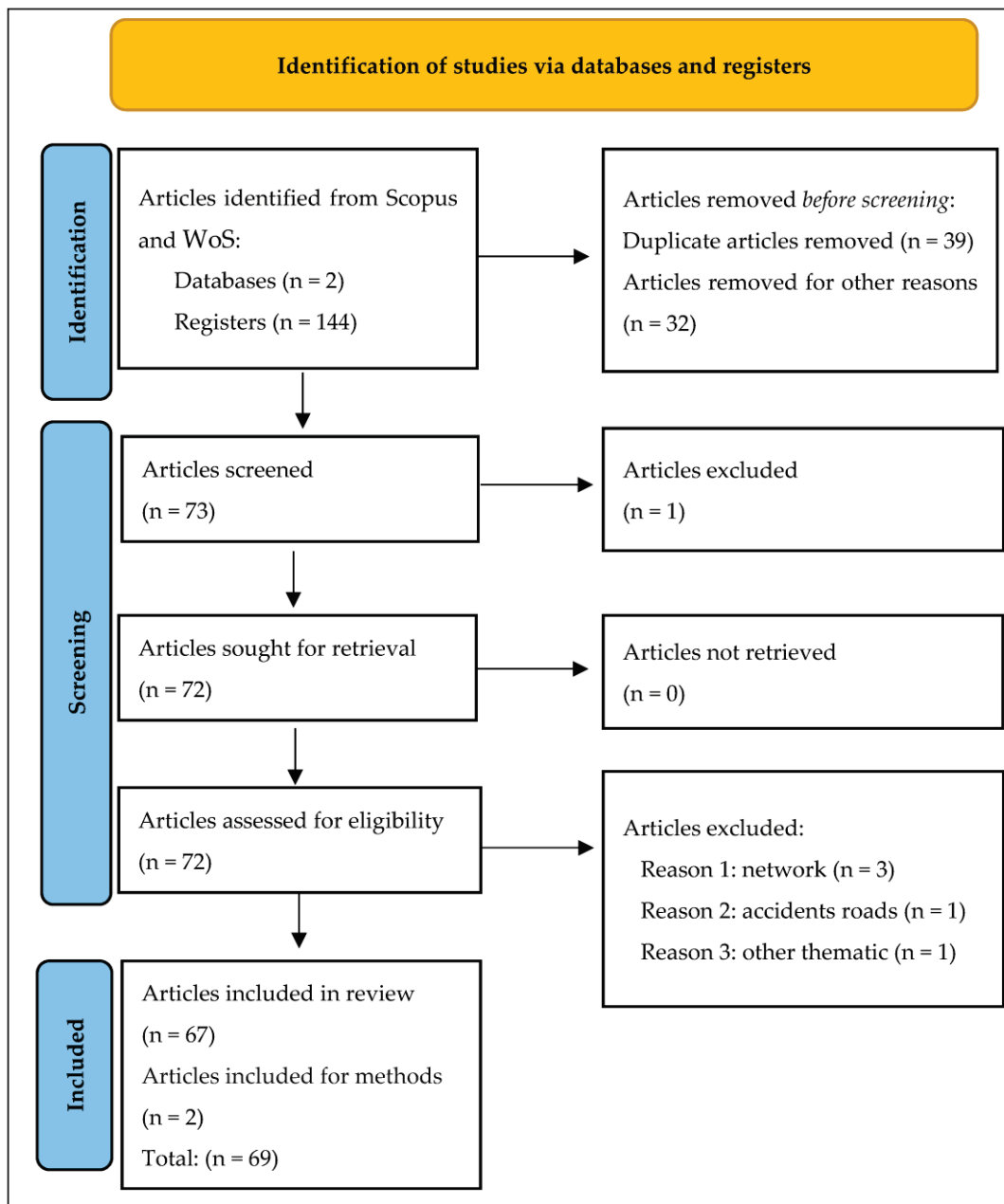


Figure 1. PRISMA 2020 flow diagram (source: own elaboration).

In order to illustrate the link between major categories and their corresponding trends, authors used *VOSviewer* scientific software. *VOSviewer* is a software tool for creating maps based on network data and for visualizing and exploring these maps (Waltman et al. 2010). Items may be grouped into clusters. A cluster is a set of items included in a map. Clusters are non-overlapping in *VOSviewer*. In other words, an item may belong to only one cluster. Clusters do not need to exhaustively cover all items in a map (Waltman et al. 2010) Hence, there may be items that do not belong to any cluster.

3. Results

Literature Analysis: Themes and Trends

Authors analyzed peer-reviewed documents on the topic in the period between January 2001 and July 2022. This analysis allowed us to understand that 2022 was the year with the highest number of peer-reviewed documents on the subject, with 14 contributions. Since 2011, the interest in research on drive tourism has had an increasing trend (Figure 2). Despite the pandemic outbreak of COVID-19 in 2020, we can observe an increasing trend.

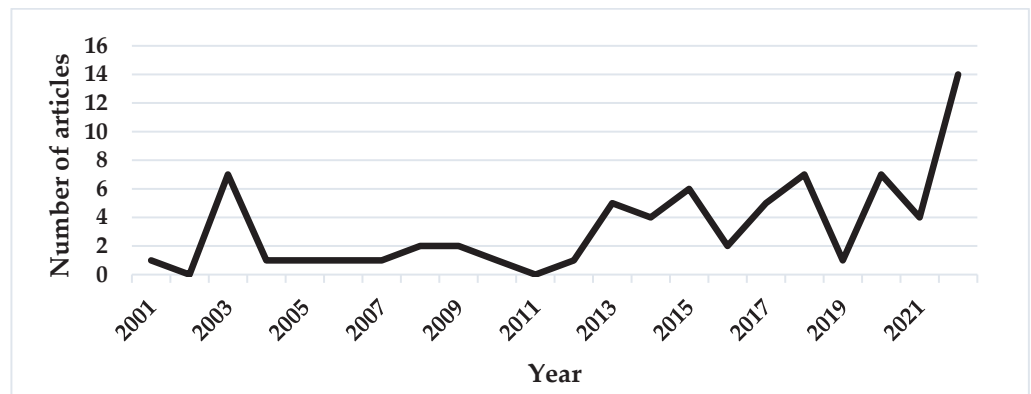


Figure 2. Number of articles by year. Source: own elaboration.

When researched by authors, it is possible to observe that 151 authors wrote about the topic of drive tourism, but only 15 authors published two or more articles on the subject, as for example D. Carson and B. Prideaux that published four articles about the topic. (Figure 3).

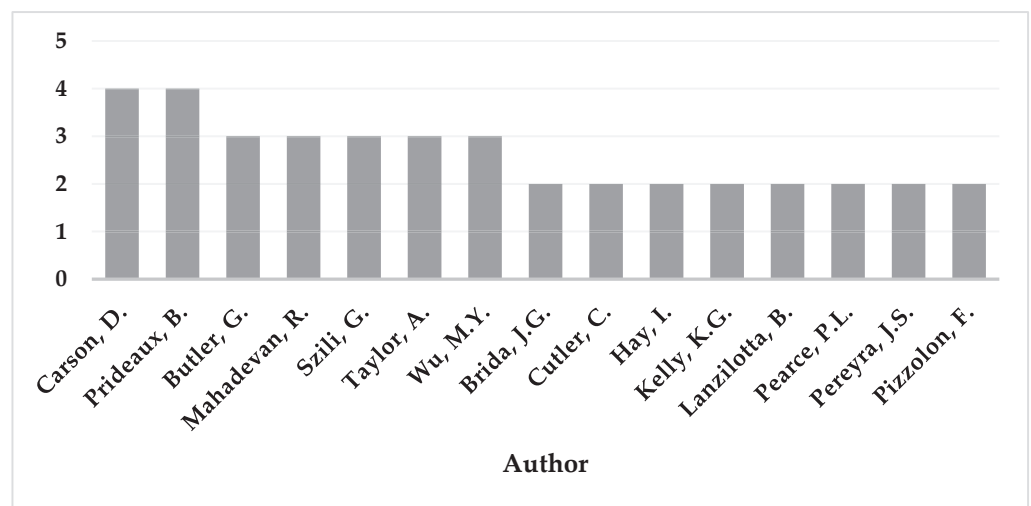


Figure 3. Authors with two or more publications. Source: own elaboration.

Among all analyzed journals, the Journal of Vacation Marketing with nine articles has the highest number of published articles on drive tourism, followed by Tourism Analysis, Journal of Destination Marketing and Management, Tourism and Journal of Heritage Tourism, Tourism Recreation Research and Proceedings of N. Academy of Sciences (Figure 4).

When analyzed by country, it is possible to see that Australia, USA, China, South Africa, United Kingdom, and Italy were the top for articles about “Drive Tourism” (Figure 5).



Figure 4. Number of publications by journals Source: own elaboration.

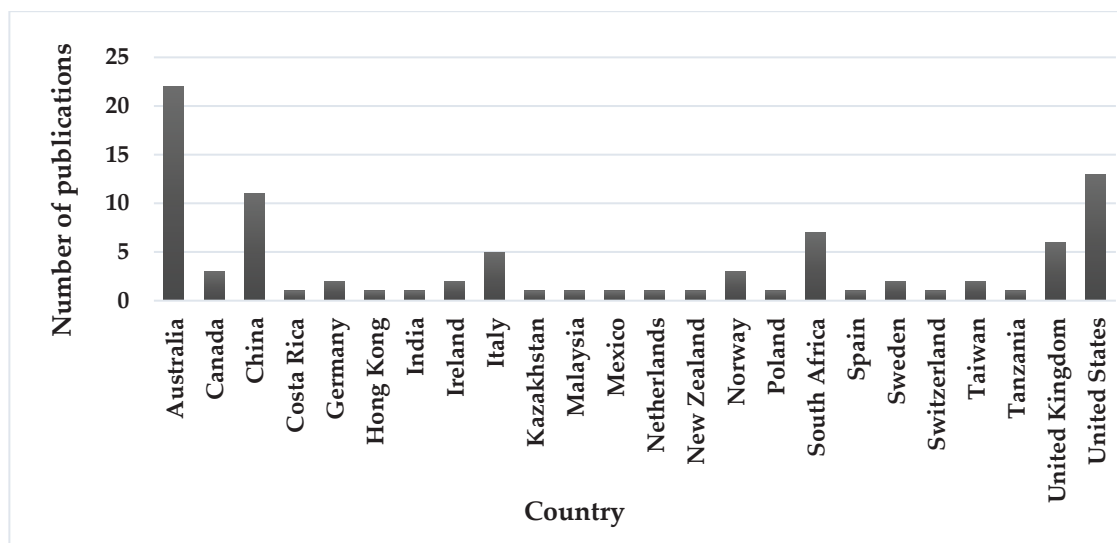


Figure 5. Number of publications by country. Source: own elaboration.

In Table 1, we represent the Scimago Journal and Country Rank (SJR), the best quartile, and the H index by publication. "Proceedings of The National Academy of Sciences of The United States of America" was the highest, with 805 (SJR), Q1, and the H index was 4.18.

Table 1. Scimago journal and country rank impact factor. Source: own elaboration.

Title	SJR 2021	Best Quartile	H Index
Journal of Vacation Marketing	0.6	Q1	68
Journal of Destination Marketing and Management	1.75	Q1	50
Journal of Heritage Tourism	0.82	Q1	36
Tourism Analysis	0.65	Q2	39
Tourism Recreation Research	0.88	Q1	50
Asia Pacific Journal of Tourism Research	0.89	Q1	44
Journal of Sustainable Tourism	2.48	Q1	114
Journal of Tourism and Cultural Change	0.63	Q1	31
Journal of Travel Research	3.29	Q1	145
Tourism Geographies	2.27	Q1	73
Tourism Management	3.38	Q1	216
African Journal of Hospitality Tourism and Leisure	0.21	Q3	14
Australian Geographer	0.83	Q1	48
Biological Conservation	2.14	Q1	213
Canadian Geographer	0.47	Q2	48
Current Issues in Tourism	1.84	Q1	82
Economic Analysis and Policy	0.77	Q1	34
Economic Modelling	1.07	Q1	87
Food Quality and Preference	1.15	Q1	129
International Journal of Culture Tourism and Hospitality Research	0.6	Q2	36
International Journal of Geoheritage And Parks	0.37	Q2	7
International Journal of Hospitality and Tourism Administration	0.62	Q2	36
International Journal of Tourism Research	1.14	Q1	67
Journal of Mountain Science	0.55	Q2	41
Journal of Organizational Computing and Electronic Commerce	0.65	Q2	43
Journal of Policy Research in Tourism Leisure and Events	0.7	Q1	27
Journal of Sport and Tourism	0.53	Q2	46
Journal of Tourism History	0.26	Q1	11
Journal of Travel and Tourism Marketing	2.05	Q1	82
Journal of Travel Research	3.49	Q1	145
Land Use Policy	1.64	Q1	125
Leisure Studies	0.67	Q1	69
Online Information Review	0.63	Q1	64

Table 1. Cont.

Title	SJR 2021	Best Quartile	H Index
Planning Malaysia	0.26	Q2	9
Proceedings of The National Academy of Sciences of the United States of America	4.18	Q1	805
Rangeland Journal	0.45	Q2	42
Revista de Economia Mundial	0.2	Q1	13
Scandinavian Journal of Hospitality and Tourism	1.17	Q1	50
Sustainability Switzerland	*	*	*
Tourism Culture and Communication	0.32	Q1	16
Tourism Economics	1.04	Q1	64
Tourism Planning and Development	0.84	Q1	36
Tourism Review	148	Q1	38
Tourismos	0	(a)	20
Tourist Studies	0.93	Q1	50
Transportation Research Part F Traffic Psychology and Behaviour	1.46	Q1	100
Tropical Geography	0.19	Q3	5

Note: * data not available; (a) Not yet assigned quartile. Source: own elaboration.

There was a total of 54 contributions in Q1, 9 contributions in Q2, and 2 contributions without quartile. There was a total of two contributions in Q3 and no publications in Q4. Articles retrieved with quartile Q1 represent 80.6% of the total publication and for best quartile Q2 represents 13.4% of the total publication.

The bibliometric study is displayed to investigate and identify indicators on the dynamics and evolution of scientific information. The study of bibliometric results, using the scientific software *VOSviewer*, aims to identify the main research keywords in studies focused on drive tourism (Figure 6). Keywords provided by authors of the paper and occurred more than four times in the WOS core database were enrolled in analysis. *VOSviewer* provides eight clusters, referred to as the network visualization of bibliometric study. The keywords that appeared most were “DT”, “rural tourism”, “road”, “automobility”, “mobility”, “Conservation”, “Heritage management”, “accommodation”, “travel”, to refer to the principal terms. The size of nodes indicates the frequency of occurrence. The curves between the nodes represent their co-occurrence in the same publication. On the other hand, the shorter the distance between the nodes, the larger the number of co-occurrence of the two keywords (Figures 6 and 7).

VOSviewer provides the visualizations referred to as the overlay visualization. The author keywords can be examined in Figure 7, making clear the network of keywords that appear in each scientific article, thus allowing us to know the topics studied by the researchers and identify future research trends. Thus, we can observe that the “Drive tourism” keyword was published linked to keywords such as opportunity, pandemic, economic development, country, community engagement, motorcycle backpacker, to refer to the principal terms.

The network visualization for citation authors is in Figure 8. We can highlight several authors, writing on drive tourism from different but connected perspectives. This bibliometric analysis of citations shows eight clusters in different colours for the most cited author.

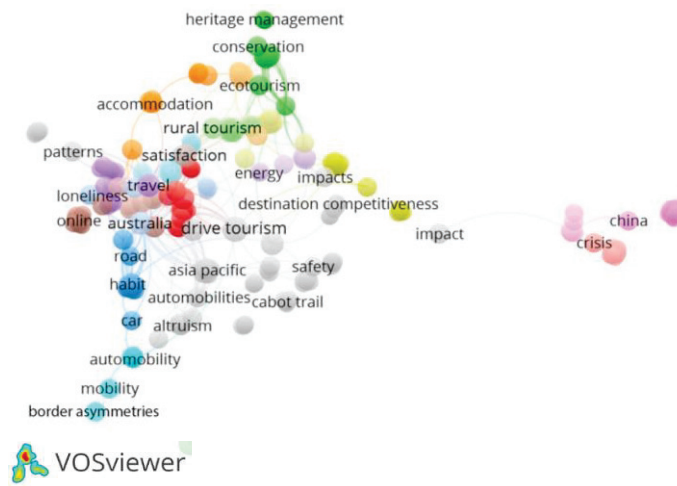


Figure 6. Network visualization for all keywords.

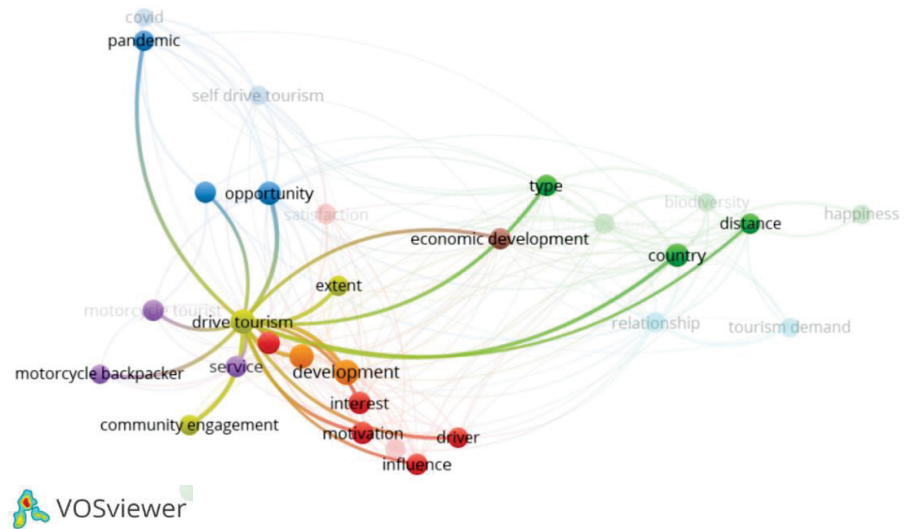


Figure 7. Overlay visualization for the Keyword "Drive tourism".

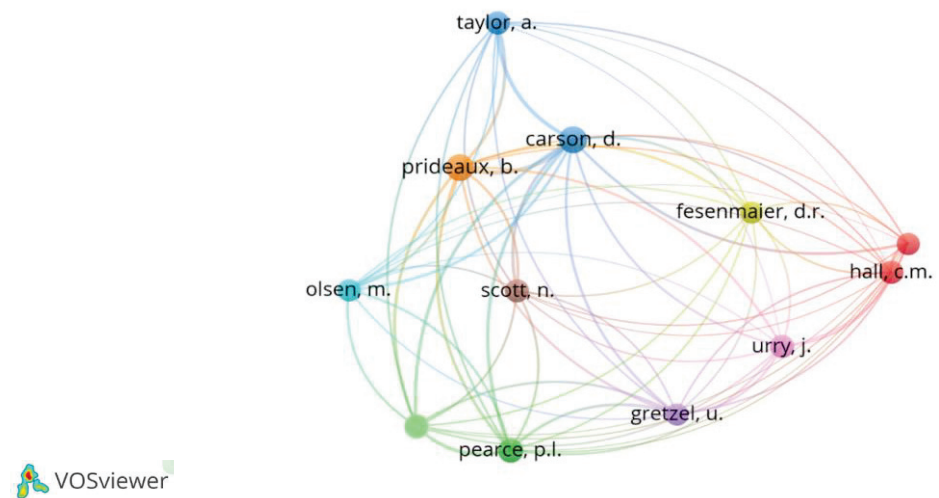


Figure 8. Authors Networks of bibliographic citations.

4. Discussion

In the following sections, we have gathered insights from pieces of literature included in this review and set the analysis around the three dimensions of sustainability: economic, environmental, and social (Guizzardi et al. 2022).

4.1. Economic Dimension

Some authors focus on the economic characteristics of sustainability, pointing out the importance of DT as an added tourism attraction to the destination, with positive impacts on the local economy, creating job opportunities, encouraging investment in new businesses, in particular in rural areas, while maintaining the destination attraction through a collaborative management effort (Lemky 2017). It is notable the existence of an interplay between real per capita GDP and tourism (Lemky 2017), as tourism activity leads—in the long term—to economic growth, or, on the other hand, economic development drives tourism growth, being apparent a bidirectional interplay (Brida et al. 2015). For example, scenic travel routes created to provide opportunities for tourism and recreation and to encourage economic development, in particular in rural areas, while maintaining the destination attraction through a collaborative management effort (Lemky 2017). Despite the positive economic implications, it will avoid several environmental issues (Lemky 2017).

A strategic planning is needed with regard to DT routes. Authors argue that, depending on destinations and geographical areas, the public road administration and route planning procedures are different, using Norway as an example that implemented a top-down principle regarding the labeling of routes. On the contrary, in Sweden, the standard is of muddling through, giving street-level planners more opportunities for individual influence on both the route and the surrounding area planning (Antonson and Jacobsen 2014), to better supply the DT market (Sivijš 2003).

Some studies about the economic dimension of sustainability are more connected to the management dynamics of the supply side, while analyzing the pertinent characteristics of visitors, to better ascertain the impact of tourism on the local community and ensuring alternative strategies of livelihood. A good example is India's first National Geopark in Varkala cliffs, a well-established tourism destination, for both domestic and international travelers, that constitutes the major source of livelihood for the local communities, despite the issues related to seasonality (Saluja et al. 2022). In this vein, dinosaur fossils provide a potential resource for remote-region economic development through commoditization as a new tourism attraction and new tourism services (Laws and Scott 2003). With respect to supply side, network strategies and marketing policies are suitable to promote the attractiveness of these DT routes and thus generate economic benefits in the surrounding areas, as in the case of the economic benefits of an access road to encourage tourism at deserts or at coast (Rolfe and Flint 2018). However, the introduction of a new product such as *4Whel Drive market* as a new economic strategy, developed in Australia, does not always have positive net economic benefits for the local community (Cartan and Carson 2009).

Regarding the factors that influence the attractiveness of DT routes, authors suggest, for example, the proximity to other tourism attractions and tourism segments (Buffa 2015; Laws and Scott 2003; Fjelstul and Fyall 2015), physical infrastructures, location, access, attractions, promotion, accommodation, and the history of the place (Saluja et al. 2022; Butler et al. 2021a; Marschall 2012).

Other authors mentioned that national cooperation and coordination is mandatory, and helps contribute to a territorial image, which is important to point out authenticity and sustainability characteristics and to create common strategies to attract and retain the visitors in the route for more time (Qiu et al. 2018; Antonson and Jacobsen 2014).

Regarding the transport infrastructures, it is important to evaluate the physical conditions of highway and tolls price, as these can be determinant factors for the tourist to feel more attracted to travel by other modes of transport, for example, high-speed railway. Literature also suggests that factors that influence the attractiveness of DT routes include proximity to other tourism attractions and tourist segments.

For many tourists, the DT routes themselves are not the main motivation for travel, as normally tourists add some other visits and territorial attractions to the main experience. For this reason, it is very important to create common strategies between private and public entities, to promote and develop a solid product that values the main characteristics of the route and the territory, their attractions, services, history, and other elements that may be important for tourist decision. In this framework a route manager could improve the potential of the DT routes and develop tools to gather data concerning the visitor profile, expenditures, economic impacts, and others that bring new information and knowledge (Prideaux and Carson 2003).

National cooperation and coordination are paramount, as visitor road corridors have shown to be central to visitor dispersion, while relying on cross-sector tourism cooperation, as in the case of themed routes, deemed as ‘win-win’ tourism outcomes, thus highlighting the need for greater national coordination (Olsen 2003). In the same vein, one can weigh against the impact of two different transport infrastructures, highway and high-speed railway, on tourist flows, in which tourism via high-speed railway was responsive to the position of trip destination, whilst self-drive tourism was more susceptible to travelling time (Liu et al. 2022). Noteworthy, this strategy, combined, contributes to the creation of a “territorial image” that emphasizes the importance of authenticity and sustainability (Olsen 2003).

Some authors state that local cultural traditions and previous experiences underpin diverse types of capital and shape entrepreneurship in decisive times, as was the case for women tourism entrepreneurs during COVID-19 (Filimonau et al. 2022). For example, Morden, a small city in Manitoba, Canada, has been lately doing well in diversifying its economy, including hospitality, manufacturing, services, and tourism. This was partly due to a south-central Manitoba location and to an innovative local entrepreneurship attitude towards tourism (Ramsey and Malcolm 2018).

Regarding the demand size of DT routes, studies found different typologies of tourists with 4WD (four-wheel-drive)—for example, the explorer-traveler that feels more attracted to desert areas, or the independent travelers, or multiple-vehicle-trips travelers, or also tag-along-tours travelers (Taylor and Prideaux 2008). Moreover, it could also include active/adventure tourism and geo-tourism; among other business initiatives, such as motels that can improve the mix of attributes, they are advertising to attract drive tourists along the route (Shanahan 2003). As a consequence of distinct tourist segmentation, literature suggests that the number of activities in which drive tourists participate depends significantly on the segment they belong to (Pennington-Gray 2003).

DT routes demonstrate a great tourism potential because of the heterogeneous interest amongst driving tourists. Its strength relies mostly on the aforementioned development of attractions, a profound understanding of the drive tourist, community involvement, effective interpretation, and infrastructure (Hardy 2003). The output could be substantial economic return, for example, through an increasingly entrepreneurial attitude within communities (Zheng et al. 2016). Driving tourists can contribute to the improvement of the local economy by staying in accommodations along the road, visiting local villages, and buying local products related to the local heritage, in which senior tourists constitute a central segment (Prideaux et al. 2001).

The driving forces behind tourists’ travel choices, the main motivational influences include the destination attractiveness, the desire to enhance one’s relationship and socialization, discover new places, and experiencing feelings of enjoyment (Buffa 2015; Wu et al. 2018; Patterson et al. 2015). Motorcycle tourists are a good example of customers that value infrastructures, environment, hospitality, and good services (Frash et al. 2018) in DT routes. They are good customers, who normally return to the same routes and bring others with them. DT routes managers need to look for the different tourist profiles and develop strategies and promotional campaigns accordingly, in order to capture their attention and visit overtime, with direct impacts on the local economy of the area (Frash et al. 2018). In so, there is a need to develop segmentation strategies that match the types of tourists

targeted by destination (Tkaczynski and Rundle-Thiele 2019), for both international and domestic tourism (Lin et al. 2020; Leick et al. 2021; Tripathi and Shaheer 2022).

4.2. Environmental Dimension

Environmental issues are also very important to evaluate sustainability. Several authors (Ooi et al. 2018; Taylor and Carson 2010; Saluja et al. 2022; Dou et al. 2022; Echeverri et al. 2022) argue that the development of sustainable tourism should be based on the suitable usage of natural resources and the cautious improvement of natural processes of the sites. In terms of DT routes, several authors mention the importance of the environmental issues that need to be balanced in order to protect natural resources and assure that new investments can provide both biodiversity conservation and positive economic impacts for the local community.

There are environmental goals that guide the development of tourism, aimed at enhancing and protecting the environment of DT routes. There is a need to balance tourism with the protection of the natural resources. Yet, the degree to which biodiversity goals drive tourism, especially with respect to infrastructure, is poorly understood, while investments in infrastructure must keep up with successful biodiversity conservation for tourism to create attractive economic revenue (Echeverri et al. 2022).

Regarding the relationship between tourism development and the environment, although the latter is sometimes identified as a restraint, it turns out that it often enhances destinations' competitiveness instead (Guizzardi et al. 2022). For example, the migration of more than a million wildebeest in the Serengeti-Mara, in Africa ecosystems, generates economic benefits through ecotourism and strengthens the continued conservation of ecosystems that contain wildlife resources (Larsen et al. 2020).

It is worthwhile to identify and categorize all the elements present in DT routes that can attain an important impact at the environmental level, and are representative of the site, of scientific and recreational interest. It is valuable to acquaint the scenery, road facilities, and available activities that might have a significant impact on drivers' satisfaction. For example, for the Chinese drive tourists, the responses of the local community to their trip, as well as central environmental issues, in particular air quality, are peculiarly key concerns (Wu et al. 2018).

There are ways that accomplish a balance between tourism enhancement and the protection of natural resources, such as the cooperation between local actors in order to develop a sustainable model of tourism, that protect the main environmental characteristics of the areas along the route and contribute in a positive way for the overall community. The tourism industry can collectively respond and adapt to changes, based on human interactions with sensitive ecosystems through resiliency, innovation, and adaptation, allowing us to combine natural issues of the route and their cultural value. These measures can improve drive tourists' experience, thus allowing for tourism development (Ooi et al. 2018; Fjelstul and Fyall 2015).

Cooperation amongst the diverse stakeholders (scientists, local authorities, owners—public and private institutions) is needed to distinguish the potential of the natural resources and improve the safety of the environment—for example, for the people who drive through natural environments, often at fast speeds and more destination-oriented, whose interest for the sites along the route is relative and likely not fully exploited (Ooi et al. 2018; Saluja et al. 2022)

Another way of interest to lead a balanced support of the natural resources in DT routes relies on the tourists' profiles in terms of educational and demographic segmentation that impact on their decision-making processes, motivations, and behaviors. For example, a distinction is made between hard path young tourists and soft path young tourists. Their different profiles should be deemed in destination strategies, as the strong sympathy of the former to sustainability suggests the likelihood of developing offers that optimize some distinctive features of a territory (Buffa 2015). Thus, planning the DT routes is demanded to open further paths, able to include the needs of several actors, such as decision makers,

residents, local firms, and tourists for the management and preservation of DT routes (Fjelstul and Fyall 2015).

4.3. Social Dimension

The social dimension of sustainability comprehends a social viewpoint to approach the socio-cultural outcome of tourism development. Consumers are deemed as identity seekers, in which the sensory experience of tourism creates a unique link for visitors with the destination, therefore providing memorable and, thus, authentic experiences (Esau and Senese 2022). In this way, sustainability adds value to the input of people to tourism development and to the development of the DT routes to accomplish the growth of the local economy and ensure the approval of tourists' demand. Sustainability also embraces the impacts of tourism development on ameliorating the quality of life of the local communities in the long range, emphasizing their community identity and authenticity, whilst linking tourists' happiness with the local quality of life at a destination (Jiang and Lyu 2022; Paniagua et al. 2022).

A literature review allows us to understand that social cultural repercussions in DT routes is connected to the creation of community identity and collective participation in the decision-making process of tourism development. Some authors refer the potential of DT routes to the economic revitalization of less attractive regions (Wu 2015; Liu et al. 2022; Taylor and Prideaux 2008), mainly because these territories are identified and shared by different visitors, on social media or even on live streams (Saluja et al. 2022). Visitors play an important role in the informal promotion of a DT route, improving the knowledge of the areas for others that are not so familiar with them.

The potential of the DT routes with respect to the social and economic revitalization of previously tourism, less attractive regions has been mentioned by studies of this topic (Jiang and Lyu 2022; Paniagua et al. 2022; Li et al. 2022). Some territories were put on the map by tourism live streamers' while sharing their travel experience, in terms of entertainment and self-presentation, in which monetary incentives are identified as a central motivation. (Li et al. 2022). Additionally, by improving eco-tourism practices throughout the route, mainly in peripheral regions less developed (Ramsey and Malcolm 2018), allow the development of some adventure tourism activities, being more attractive and allowing the improvement of roads and creating some synergies along the route between destinations (i.e., cities, villages) (Qiu et al. 2018). Either the escape to an attractive destination, or the appeal of the rally itself, the desire to socialize, was leading motivational influences (Wu and Pearce 2017).

Authors argue that tourism development can improve the quality of life of hosting communities, suggesting that drive tourism could create a community engagement and garner their support, mainly if they perceive that public entities and route managers to be creating strategies under sustainable principles with correct planning measures that could benefit the overall community (Fjelstul and Fyall 2015; Carson and Taylor 2008; Dou et al. 2022). Furthermore, scenic travel routes have been developed to offer opportunities for tourism and to promote the economic development of rural areas. However, maintaining the site attraction requires a collaborative destination management effort (Lemky 2017).

With the involvement of all the main actors and a collaborative destination management effort, a DT route can allow for the improvement of job opportunities and development of rural areas and local and familiar businesses. Some authors believe that local entrepreneurship can allow the development of a more sustainable quality of life of the residents (Filimonau et al. 2022; Saluja et al. 2022; Sykes and Kelly 2014; Mahadevan 2014; Armbrecht 2014). Tourism development along DT routes impacts substantially the sense of community along the host destinations, while offering visitors core cultural experiences (Patterson et al. 2015), shaped by a closer interaction with residents and their cultural traditions, enhancing their proud as a community. Also it is important to note that being accessible by car is a motive of proud for many communities, which means that they are

connected to other regions and they can be more attractive for visitors and tourists. A good example is Africa, that in the first decade of the twentieth century, through motor touring and by printing road reports became more known (Pirie 2013). Nevertheless, support to local initiative and infrastructures are sometimes scarce as in the case of parks. In particular, park capacity, to support the drive-tourism experience, in terms of caravanning and accommodation facilities (Caldicott and Scherrer 2013a). Community identity has a symbolic nature with the function of representing reality, as the constructs have been found to manage sport tourists' safety risk perceptions, in how the interrelationships amongst these constructs can positively influence repeat visitation (George et al. 2013).

Local communities believe in the significance of including DT in their identity to preserve their history, through memory, as memory is a crucial factor in choosing a destination due to its impact on the tourist experience at the destination and on the sharing of the experience with others after the trip, which contributes to the process of identity formation (Marschall 2012). Nonetheless, when these sites suggest negative memories, it is therefore realized as negative heritage, becoming crucial to create a new narrative (Marschall 2012). Moreover, it is important to develop products and experiences that reflect the motivations and experiential aspirations of their target as in the case of 4WD tourism in Australian desert areas (Taylor and Prideaux 2008), as there appear to be market segments based on motivations, activities, and demographics, which resemble a diversified marketplace (Taylor and Carson 2010). This process of integrating DT routes into the community's identity is often hampered by the difficulty in assuming DT routes as part of local identity, even though the inclusion of one or more professional rally sports teams, for example, among a community, with limited extent in terms of self-drive sports impacting and representing marketing opportunities for the host communities (Taylor and Young 2005), in the field of tourism behavior (Woodside et al. 2004).

Finally, the segment of senior travelers go on holiday, travel by car, and prefer the non-school-holiday periods for travel (Prideaux et al. 2001); whereas, younger travelers would rather seek fast driving irrespective of the time of year and aim to achieve an 'authentic' driving experience (Gross 2020). Either way, driving tourists engage in self-drive tourism due to the feelings of safety, adventure, and discovery that it offers compared with other modes of transport, (Butler et al. 2021a, 2021b), through which, after the pandemic of COVID-19, has become a tourism mode that enable tourists to travel freely (Gross 2020), by using at its best new vehicles technologies (Brida et al. 2013), including in caravans (Caldicott and Scherrer 2013b), according with each ones' economic conditions (Grechi et al. 2017), driving contexts (Thompson and Sabik 2018), and extant key factors for the successful development of touring routes (Dahl and Dalbakk 2015; Prideaux 2020).

5. Conclusions

Sustainable tourism is increasingly seen as an important element for tourist destinations, and DT routes can contribute to its development. For this, DT routes managers must integrate into their planning the three components of sustainability (economic, environmental, and social), emphasizing its function as a catalyst for intercultural engagement.

DT routes allow us to enhance natural and cultural resources, bringing to light cultural traditions, history, and some storytelling of the local communities. Most of the DT routes cross rural areas with sensitive environments that need to be evaluated and analyzed in deep in order to create sustainable and planned offers integrated in the territory in a positive way.

The involvement of public and private stakeholders as well as other community members is very important and urgent, as it allows for the creation of integrated measures and a sustainable development of the area and the route.

Many sites along DT routes are also considered UNESCO sites (e.g., along US Route 66), which are, of course, of interest to preserve in a sustainable way. The sustainability goal is therefore intrinsic along different sites along the routes, through which one can show up by economic, environmental, and social modes.

This review has provided a snapshot of the sustainable improvement of tourism in DT routes, related with the three dimensions of sustainability: economic, environmental, and social. This approach intends to deliver an integrative standpoint of those three perspectives.

The literature review carried out here demonstrates the pieces of economic literature related to DT routes and sustainability, emphasizing its strategic weight and opportunities in terms of investment in infrastructure and small businesses. Therefore, DT routes might create crucial economic benefits to their sites. Furthermore, there are plenty of tourism modes associated with DT routes, such as the aforementioned adventure tourism and cultural tourism.

The reviewed pieces of literature are also centered on environmental sustainability, underscoring that DT tourism growth must be based on the efficient use of natural resources, that need to be integrated with the local communities, that need to be involved in the overall process. Finally, the articles that highlight social sustainability regarding DT routes, suggest that the sites along the road carry out a strategic function in terms of regional entrepreneurship. In short, tourism improvement might stimulate local entrepreneurship, with ensuing enhancement of quality of life, while augmenting the sense of community.

To summarize, this literature review unveils some critical requirements with respect to DT routes, worth mentioning the need to prompt a collective decision-making process when it comes to DT routes development, with the involvement of all local communities and tourism stakeholders, focusing on promoting the destinations in terms of strategic policies.

This review underscores the need for an inclusive perspective to approach the DT routes issue that deems it as key to augment the attractiveness of a broader region, while considering the inclusion of all stakeholders aiming at sustainability. Furthermore, this review might be a trigger to start up a potential new decision-making outline that is able to collectively promote new sites down the route.

With regard to further research avenues, this piece of literature has shown that current studies have mostly focused on the environmental issues of DT routes. It would be worthy to study diverse sustainable modes of tourism in DT routes from varying more or less developed contexts and/or through distinct lens. Moreover, it would be worthwhile to extend this review through empirical research, as well as in diverse regional contexts such as the peripheral context of Portugal and its iconic EN2. Modeling and foreseeing the demand that may occur at EN2 route is crucial in determining how much money should be invested in developing infrastructures and business. Additionally, studies using a combination of spatial autocorrelation and georeferentiation systems or detectors could recognize patterns of drive tourism demand and provide information to create sustainable business along the routes, especially Portugal EN2 route.

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