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PREFACE

IVO HRISTOV[1]

The issues of sustainable development and green practices have received increased attention in recent decades. One of the world's most important mandatory sustainability initiatives is the European Union's new Corporate Sustainability Reporting Directive (CSRD). The CSRD seeks to standardize sustainability performance disclosures by organizations so that they clearly address environmental, social, and governance factors. This is intended to enhance the consistency and quality of publicly available data and to accelerate the move towards more sustainable business models throughout the European Union (Hristov & Searcy, 2024).

The CSRD focuses on reporting related to a company's business model and strategy, policies, governance, time–bound targets, indicators, and due diligence processes related to sustainability. While reporting concerns detailed public disclosures at periodic intervals, the CSRD's broad requirements have clear implications for measurement, which is reflected in its references to targets and indicators, and management, which is reflected in its references to policies, strategy, and governance, among other issues. Thus, the motivation for the CSRD goes beyond making sustainability reporting mandatory; rather, it is to provoke development on a large–scale sustainable transition plan (ESRS 1 General requirements, 2023). It provides insight into the challenges and opportunities from the dual perspective of planning and compliance (Hristov & Searcy, 2024). For instance, in the last decade, more and more companies are moving towards a strategic approach designed to integrate environmental considerations into their strategies. Since the Gond *et al.* (2012) framework on the integration of Sustainability Control Systems (SCSs)

[1] University of L'Aquila, Italy.

and "regular" Management Control Systems (MCSs) of the organizations, growing attention was attributed to this critical theme. While MCSs are traditionally designed to address financial goals, their limited scope often hinders their ability to support sustainability objectives. Conversely, SCSs aim to align organizational strategies and operations with sustainability concerns. Although many organizations have embraced sustainability rhetoric in their mission statements and external reporting, the integration of corporate sustainability and management accounting practices remains a challenge. This also implies insights on understanding of accounting as a social, institutional or behavioral practice. Although challenging, these changes can make organizations more resilient and engender more flexible attitudes and new business behaviors that need to be studied and analyzed.

In this research context, the 3rd Conference on Business Research and Management (CBR&M) aims to discuss the most important business and organizational implications of the "CSRD novelty" and the future challenges that public and private organizations will face in the coming years.

The 3rd Conference on Business Research and Management (CBR&M) was organized by the University of Cuenca – La Mancha, University of L'Aquila and the University of Rome Tor Vergata.

The event took place on January 16th and 17th, 2025, on–site at the University of Cuenca – La Mancha, but also allowing the participants to join online. At the end of the promotional window, 72 Extended Abstracts

(EAs) were collected, and 60 were accepted for presentation. The EAs are theoretical, conceptual, and empirical contributions to accounting, business research and management.

In total, the number of authors was 117. The Institution distribution of corresponding authors was the following: Universidad de Castilla – La Mancha (8 EAs); University of Rome "Tor Vergata" (6 EAs); Ss. Cyril and Methodius University of Skopje (1 EA); University of Foggia (2 EAs); University "Ss. Cyril and Methodius" University in Skopje (1 EAs); Polytechnic University of Valencia (1 EA); D'Annunzio

University of Chieti–Pescara (1 EA); University of Alicante (1 EA); University of Extremadura (1 EA); Universidade de Vigo (1 EA); University of Málaga (2 EAs); University of Belgrade (1 EA); Universidad Industrial de Santander, Colombia (2 EAs); Rey Juan Carlos University, Madrid (2 EAs); Rey Juan Carlos University, Madrid (6 EAs); Universitat Politècnica de València, Alcoy (4 EAs); University of L'Aquila (2 EAs); Luarasi University, Tirane (1 EA); Universidad Politécnica de Madrid (2 EAs); Hochschule Fresenius, Berlin (1 EA); Government College of Engineering & Leather Technology, India (1 EA); Faculty of Economic Science, University of Algiers (1 EA); Georgian Technical University (2 EAs).

The country distribution of corresponding authors' institutions was: Italy (12 EAs); Albania (6 EAs); Spain (21 EAs); Colombia (2 EAs); North Macedonia (2 EAs); Turkey (1 EA); Germany (1 EA); Serbia (1 EA); Algeria (1 EA); India (1 EA); Georgia (1 EA).

This synthesis demonstrates that the Conference reached an international audience, forming a solid basis for future editions.

During the days of the Conference, two lectio magistralis were delivered:

- Noelle OConnor – Leads the National Teaching and Learning (SATLE–funded) initiative on embedding Education for Sustainable Development (ESD). She delivers TUS's first Certificate in Embedding ESD in the Curriculum at Technological University of the Shannon (Ireland);
- Nicola Allocca – Chair of the Business at OECD Anticorruption Committee & Risk, Business Integrity & Reselience Director at Autostrade per l'Italia.

The Scientific Committee granted the best paper award to the following EAs: "Corporate Leverage and Financial Resilience in Emerging Markets: Exploring the Role of Market Conditions and Firm–Specific Dynamics (2009–2023)" (Author: Ardita Bylo); "The successful strategy of distributors in the Italian construction industry.

First insights from the 2007–2020 recession" (Authors: Francesca Mandanici and Fabrizio Berti).

The best reviewers were: Lorenzo Coronella (University of Rome Tor Vergata), Eriona Shtembari (University of New York Tirana).

Apart from the scientific 'duties', participants of the Conference could visit the city of Cuenca thanks to an organized tour. Participants had to know each other better at a social dinner on May 16th.
As publication opportunities, apart from this Conference Proceedings, were offered the following Special Issues:

- Special Issue of 3rd Business Research & Management (BRM) Conference: Towards A More Sustainable World, International Journal of Business Research Management (IJBRM);
- Emerging Issues in Reporting, Planning, and Controlling Corporate Sustainability. International Journal of Business Research Management (IJBRM);
- Innovating for Sustainability: Business and Management Strategies for a More Sustainable World, Cogent Business & Managment Journal.

Finally, it is here reported the Conference Organization, which fully expresses its fulfillment for the overall experience of the Conference, especially the connections made and the reinforced friendship.

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THE UTILISATION OF ARTIFICIAL INTELLIGENCE TO CIRCUMVENT FOOD WASTE IN THE TOURISM INDUSTRY

JUAN–MANUEL AGUADO–GARCÍA[1], ALICIA OREA–GINER[1], CARMEN DE–PABLOSHEREDERO[1], SARA ALONSO–MUÑOZ[1]

1. Objectives

Technologies associated with artificial intelligence (AI), including machine learning, can be employed to enhance the management of food waste (Ifham *et al.*, 2023). A substantial body of research spanning several decades has examined the adverse environmental consequences of food waste generated by tourism activities (Zhang *et al.*, 2011). Digital technologies are regarded as a catalyst and a significant enabler of the transition towards a circular economy and reduced waste in the tourism sector (Nassanbekova & Yeshenkulova, 2022).

The tourism industry, encompassing hotels, restaurants, and related services, significantly contributes to global food waste (Gretzel *et al.*, 2020). The United Nations Environment Programme's (UNEP) Food Waste Index Report 2024 indicates that the food service sector, which includes tourism–related services, accounts for approximately 27.56% of global food waste. This substantial proportion underscores the critical need for targeted interventions within the tourism sector to effectively mitigate food waste. Considering that previous literature has not specifically addressed the integration of AI as a solution to this issue, there is a research gap in exploring AI–driven strategies to enhance efficiency, reduce waste, and promote sustainability in the tourism industry.

The objective of this study is to conduct an exploratory analysis of literature on the application of artificial intelligence in the context of food-waste in the tourism sector. In addition, the study examines the evolution

[1] Rey Juan Carlos University, Madrid.

of the number of publications in this field, identifying the most productive and prolific journals and authors. This research addresses a significant gap in the existing literature, as no previous bibliometric studies have been conducted on these topics.

The following research questions are put forth for consideration:

RQ1. What is the current state of knowledge in the field of artificial intelligence and food waste within the tourism sector?
RQ2. How has the number of publications on artificial intelligence and food waste in the tourism sector evolved over time?
RQ3. Which journals and articles have been most frequently cited?

Keywords: artificial intelligence, tourism, food waste, circular economy, sustainability.

2. Theoretical background

The application of artificial intelligence (AI) to analyse large data sets enables the formulation of recommendations for the automation and intelligent management of resources (Khan *et al.*, 2024). Consequently, strategies for the tourism sector can be developed as immersive technologies that facilitate efficient management while promoting the sustainability of the sector (Jia *et al.*, 2023; Pérez López *et al.*, 2024).

To illustrate, within the context of larger tourism establishments, it is not uncommon for food items to become spoiled within the refrigerators themselves. This is often due to the fact that the exhaustive control required to prevent such occurrences is often secondary to the already demanding workload of the workers. Technologies such as the Internet of Things (IoT) and machine learning tools have the potential to address this challenge (Kumar & Prashar, 2022).

3.Methodology

In this study, bibliometric methods have been employed to investigate the role of artificial intelligence (AI) in preventing food waste in the tourism sector. This analysis was conducted using the Web of Science

(WoS). The period covered was November, from 2012 to 2024, spanning the last 12 years. The database was selected for their ability to index high–quality journals that meet academic standards (Hu *et al.*, 2023).

The search terms used were categorized into three main themes: artificial intelligence (AI), waste management, and tourism and hospitality. The specific search string applied was: TS = ("Artificial Intelligence" OR "AI" OR "Machine learning" OR "ML" OR "Deep learning" OR "Robotics" OR "Neural Networks" OR "Data Learning" OR "Expert Systems" OR "Intelligent Interfaces") AND TS=(waste*) AND TS=("touris*" OR "restaurant*" OR hospitality OR "hotel*"). This search was filtered to include terms in the title, abstract, and keywords.

The preliminary search returned a total of 149 papers (n=149) from WoS, documents deemed irrelevant to the subject matter under analysis (n=104) were excluded. This resulted in a final sample of 45 documents (n=45).

4. Findings

Figure 1 illustrates the exponential growth in the number of publications, which has increased markedly following the advent of the SARS CoV–2 pandemic in 2020. This surge in publications correlates with the rising prominence and proliferation of artificial intelligence (AI) in recent years.

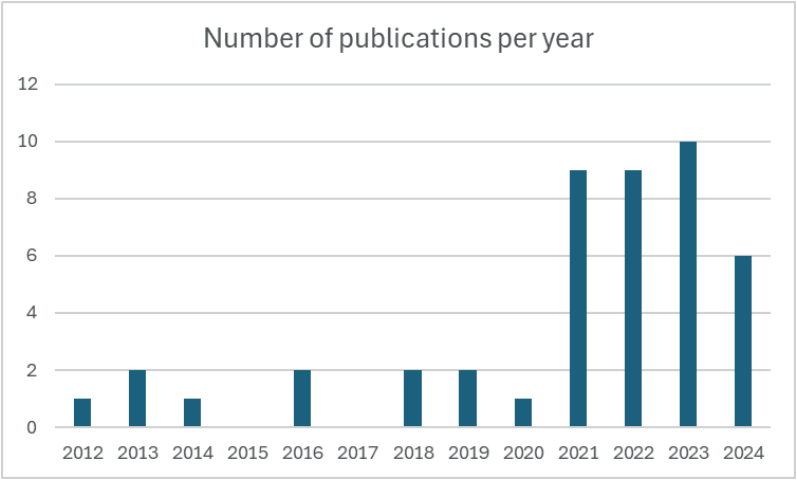


Figure 1. Number of publications per year.

Table 1 illustrates the most frequently cited articles on the subject. As it can be seen, these articles are strongly linked to the tourism sector, particularly to the area of catering or services to prevent food waste. Furthermore, they demonstrate a strong technological component, with publication in technical journals rather than in social sciences or tourism.

Article	Journal	Citations
Applying Modern Robotics Technologies to Demand Prediction and Production Mangement in the Quick.Service Restaurant Sector	Sage Journals	60
Comparative Modelling and Artificial Neural Networks Inspired Prediction of Waste Generation Rates of Hospitality Industry: The Case of North Cyprus	Sustainability	24
Machine Learning–Based Automatic Litter Detection using Neural Networks in Smart Cities.	International Journal on semantic Web and Informations Systems	13
Big Data in Food: Systematic Literature Review and Future Directions.	Journal of computers informations systems	13
Smart eNose Food Waste Management System	Journal of sensors	12
SeVa: A Food Donation App for smartliving	IEEE	11
When "Old" Meets "New": Unlocking the future of innovative technology implementation in Heritage Tourism	Journal of Hospitality & Tourism Research	9
An Intelligence Passenger Flow Prediction Method for Pricing Strategy and Hotel Operations	Complexity	9
Design of Machine Learning Algorithm for Tourism Demand Prediction	Computer and Mathematical Methods in Medicine	7
Automated Identification Algorithm Using CNN for Computer Vision in Smart Refrigerators	CMC–Computers Materials & Continua	5

Table 1. Most frequently cited articles in this field of study.

5. Conclusions

Future research directions are proposed, along with illustrative case studies showing the implementation of artificial intelligence in various settings. Furthermore, new lines of research could prepare future models that could be adapted to any tourism establishment with the aim of reducing food waste using artificial intelligence.

The review of the current state of bibliometric studies reveals a dearth of research that directly addresses the application of this emerging technology. This can be attributed to the recent emergence of this technology, which has not yet gained sufficient traction in the field. The findings of the analysis irrefutably substantiate the necessity for sustainability in the sector, evidenced by the proliferation of items in recent years and their potential contribution to the circular economy. For example, prominent industry leaders such as Iberostar have already established the reduction of food waste as a primary objective. This aligns with the targets set forth in the Sustainable Development Goals of the 2030 Agenda, which aim to reduce food waste by 1,600 tonnes using AI (Iberostar, 2023). The integration of artificial intelligence could prove to be a pivotal factor in achieving this substantial waste reduction.

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BIBLIOMETRIC ANALYSIS OF CYBERSECURITY AWARENESS

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1. Objectives

This proposal is part of a broader research project aimed at analyzing cybersecurity awareness (CSA) considering its background, evaluating the scientific production and proposing future research lines as a lever for improving business management and fostering social and economic development within the framework of the SDGs.

We aim to thoroughly examine the current state of research on cybersecurity awareness, seeking to disentangle the knowledge structure in this area.

This objective can be splitted into the following specific aims: (1) Determine the structure of this research topic (2) Assess the academic productivity (3) Identify key contributions (4) Determine thematic trends (5) Discover collaboration networks and (6) Discuss areas of opportunity. These questions are addressed through a bibliometric analysis, as a standard method for understanding the state of the art in a scientific field that overcomes the limitations of traditional literature reviews, enhancing the objectivity in assessing academic progress (Chellappandi & Vijayakumar, 2018).

Keywords: cybersecurity, awareness, bibliometric.

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2. Theoretical background

Cybersecurity, also known as Information Technology Security, emerged in the 1960s due to concerns about unauthorized access to military, corporate, and research data (Johnson & Thompson, 2016). In the academic field its significance became significant with the work "How to own the Internet in your spare time" (Staniford *et al.*, 2002) presented at the 11th USENIX Security Symposium.

There is no universally accepted definition of cybersecurity, with various interpretations depending on the context. Craigen *et al.* (2014) describe it as the organization of resources, processes and structures to protect cyberspace and cyber systems.

Interest in cybersecurity has grown over time, driven by the increased importance of data and the greater visibility of the associated risks. Several bibliometric studies on cybersecurity have been published in recent years. Table 1 shows the most recent ones, published in the first half of 2024.

Title	Authors
Health Care and Cybersecurity: Bibliometric Analysis of the Literature	Jalali, Razak & Madnick
A bibliometric review of Internet of Things (IoT) on cybersecurity issues	Ganji & Afshan
Cybersecurity in higher education: a bibliometric review	Orosco–Fabian
Using ChatGPT in construction projects: unveiling its cybersecurity risks through a bibliometric analysis	Sonkor & de Soto
Impact of 5G Technology on Cybersecurity: A Comprehensive Systematic and Bibliometric Review	Gamboa–Cruzado, Cuya–Chuica & Del–Valle–Jurado

Table 1. 1st half 2024 bibliometric studies on cybersecurity.

While cybersecurity is multifactorial and multicausal, recent studies point to the importance of the human factor. 85% of security breaches are linked to human actions and 52% of companies see their employees as the main vulnerability in terms of cybersecurity (ENISA, 2023). Moreover, the value of digital data is increasing (KPMG, 2016). It is

therefore considered essential that employees and partners with access to sensitive data and information are made aware of its importance.

Shaw *et al.* (2009) define cybersecurity awareness (CSA) as 'the degree of users' understanding of the importance of information security and their responsibilities, and actions to exercise sufficient levels of information security control to protect the organisation's data and networks'.

To reduce the risks associated with data breaches, ENISA (2023) underscores the importance of adopting a robust cybersecurity awareness plan. Such a plan should prioritize thorough employee training and the use of simulated scenarios to help identify and counteract phishing and social engineering attacks.

Despite this increasing relevance of the concept of cybersecurity awareness in the current context, a comprehensive and systematic study addressing this topic has not been developed. The absence of an in–depth analysis exploring trends, approaches and developments related to cybersecurity awareness reveals a gap in existing literature. Therefore, it is essential to carry out a comprehensive and systematic review of the academic literature dealing with cybersecurity awareness.

3. Methodology

Systematic Reviews are considered a useful tool to consolidate the knowledge basis related with a scientific discipline, broaden our understanding of scientific phenomena and anticipate the most probable future research streams (Donthu *et al.*, 2021). The research methodology employed in this study is a bibliometric analysis, a variation of the Structured Literature Review (SLR).

To conduct our bibliometric review on the concept of cybersecurity awareness, a selection of papers was carried out through a keyword search across the academic literature, in order to eliminate the possibility of researcher bias. The Preferred Reporting Items for Systematic Reviews and Meta–Analyses (PRISMA) framework is reckoned as a warranty of rigor and transparency when performing a systematic review, so it has been used through the entire process (Page *et al.*, 2021).

The initial phase of the study involved searching and extracting relevant literature from the Web of Science database, one of the most common data sources for scientific and academic research (Birkle *et al.*, 2020). A combination of keywords (cybersecurity, information security, understanding, consciousness, awareness, acknowledge, understanding) related to "cybersecurity awareness" and its synonyms were used to query titles, abstracts, and keywords. The inclusion criteria focused on peer–reviewed journal articles, conference papers and technical reports. The search was set up to publications from 1990 until 30.06.2024 to ensure the relevance of the research.

Metadata from the selected studies were subsequently exported, enabling the identification of scientific productivity through various metrics such as the number of publications per year, leading journals, authors, institutions, and countries contributing to the field of cybersecurity awareness. Additionally, a co–authorship and country collaboration network analysis was conducted, helping to identify the most significant connections among authors and geographical regions. VOSviewer (Van Eck & Waltman, 2009) was then used to visualize keyword co–occurrence networks and perform citation analysis. This software enabled the creation of bibliometric maps that illustrated relationships between the most frequently used terms in the selected articles, providing insights into the conceptual evolution of cybersecurity awareness. The results were integrated and compared to offer a comprehensive and global view of the current state of research in this field.

4. Findings

There has been a significant rise in publications on Cybersecurity Awareness (CSA) over time, with notable peaks in 2015 and 2020, reflecting a growing academic interest. Most works are published in technical journals, revealing a research gap at the intersection of social sciences and technical disciplines.

The field shows diversity in contributions, with no dominant group of authors. Journal articles and conference papers make up 91.5% of

the analyzed publications. Research is globally distributed, with significant contributions from South African and Indonesian institutions, while the United States leads in publication volume, followed by South Africa, England, Saudi Arabia, and Australia.

Co–word analysis identifies five main research clusters at three levels: operational (daily activities), business (organizational concerns), and stakeholder (societal impact). Literature coupling highlights three focal areas: user psychological and behavioral assessment, the role of education in cybersecurity awareness, and user behavior in response to cyber threats.

5. Conclusions

Our work emphasizes the interdisciplinary nature of CSA research, underscoring the need for collaboration across technology, human behavior and education to address technical and social dimensions comprehensively.

As an additional conclusion, our study suggests the existence of various scientific works indicating a positive correlation between CSA and business performance. However, it also highlights the lack of a universal or widely adopted model for evaluating CSA, with scattered initiatives that lack continuity and practical application.

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CORPORATE LEVERAGE AND FINANCIAL RESILIENCE IN EMERGING MARKETS: EXPLORING THE ROLE OF MARKET CONDITIONS AND FIRM–SPECIFIC DYNAMICS (2009–2023)

ARDITA BYLO[1]

1. Objectives

The primary objective of this study is to examine the relationship between corporate leverage, financial resilience, and both firm–specific and country–level variables within emerging markets. By focusing on non–financial firms in China, India, South Africa, Brazil, and Türkiye over the period from 2009 to 2023, the research seeks to explore how different factors, including market conditions and macroeconomic dynamics, influence corporate financing decisions and the ability of firms to withstand economic volatility.

A key aspect of the study is to assess the impact of leverage on financial resilience, considering how firms' debt levels and capital structure choices contribute to their capacity to recover from economic disruptions. This research also aims to provide a comprehensive understanding of how external shocks, such as the COVID–19 pandemic, have altered financial resilience in emerging markets, and how firms adapt to such crises.

Additionally, the study seeks to investigate the role of firm–specific characteristics, such as profitability, asset tangibility, and transaction volume, in shaping financial stability and resilience. On the macroeconomic level, it examines how broader factors, such as corporate tax rates, GDP growth, inflation, and the effects of global disruptions, influence corporate behavior and resilience in these markets.

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Keywords: corporate leverage, financial resilience, emerging markets, Covid–19.

2. Theoretical background

The theoretical foundation of this study draws from several established frameworks in corporate finance, macroeconomics, and resilience theory, integrating them to explore the dynamics of corporate leverage and financial resilience in emerging markets.

Corporate leverage theory is rooted in the Modigliani–Miller theorem, which posits that in a perfect market, a firm's capital structure does not affect its value (Modigliani & Miller, 1958). However, in the real world, factors such as taxes, bankruptcy costs, and agency conflicts make leverage a critical component of corporate strategy. Trade–off theory and pecking order theory further enrich this framework. The trade–off theory suggests that firms balance the benefits of debt, such as tax shields, with the costs of financial distress. The pecking order theory, on the other hand, suggests that firms prioritize internal financing over external debt and equity, with leverage reflecting the firm's financial condition and its access to capital markets (Modigliani & Miller, 1963; Myers, 1977, 1984; Ross & Jaffe, 2019). Financial resilience, a concept that has gained prominence in recent years, is defined as a firm's ability to absorb, adapt, and recover from economic shocks and disruptions. This concept draws from resilience theory, which has been applied across various disciplines, including economics and organizational behavior. In the context of firms, financial resilience is characterized by the capacity to maintain or restore financial stability in the face of economic volatility, including liquidity management, profitability sustainability, and operational adaptability. Scholars have emphasized the importance of resilience frameworks in understanding how firms respond to periods of uncertainty, such as financial crises or global disruptions like the COVID–19 pandemic. (Alam *et al.*, 2024; Essuman *et al.*, 2023; Juan & Li, 2023).

From a macroeconomic perspective, the study incorporates country–level factors that shape corporate behavior. The impact of corporate

tax rates, GDP growth, and inflation on corporate financing decisions has been widely explored in the literature. Higher tax rates, for example, may incentivize firms to adopt debt financing due to the tax–deductible nature of interest payments, whereas economic growth tends to correlate with lower levels of financial distress and higher investment opportunities (Miller, 1977; Myers, 1984; Overesch & Voeller, 2010; Ross & Jaffe, 2019). Similarly, inflation can influence the real value of debt, thereby affecting leverage decisions and financial stability. (Fabiani & Piersanti, 2023; Hochman & Palmon, 1985).

3. Methodology

This study adopts a quantitative research methodology to explore the relationship between corporate leverage, financial resilience, and both firm–specific and macroeconomic variables in emerging markets. The data, covering the period from 2009 to 2023, consists of a sample of 811 non–financial firms across five emerging market economies: China (357 firms), India (352 firms), South Africa (34 firms), Brazil (37 firms), and Türkiye (31 firms). The period includes significant economic events, such as the global financial crisis and the COVID–19 pandemic, offering insights into how these disruptions affected corporate leverage and resilience. The research methodology is structured into two main groups of models, based on the dependent variables. The first group focuses on leverage as the dependent variable, and the second group focuses on financial resilience.

In the first group, leverage is the dependent variable, and the model explores how firm–specific and macroeconomic variables influence corporate leverage decisions. The leverage measures include debt–to–total–assets ratios (book and market value), with firm–specific factors like transaction volume, profitability, and asset tangibility, as well as macroeconomic variables such as corporate tax rates, GDP growth, inflation, and a dummy for the pandemic period.

In the second group, financial resilience is the dependent variable, with leverage as one of the independent variables. Other firm–level fac-

tors such as transaction volume, profitability, asset tangibility, and macroeconomic variables (corporate tax rate, GDP growth, inflation, and pandemic effects) are also included to assess their impact on resilience. Financial resilience is measured through the current ratio and the Revenue Stability Index (RSI).

The primary data sources for this study are financial databases such as Datastream, World Bank, and national financial regulators.

The study employs panel data regression techniques, specifically Fixed Effects and Random Effects models, to account for both time–series and cross–sectional data. The Fixed Effects model controls for unobserved heterogeneity at the firm level, while the Random Effects model captures variability across firms and countries.

The study tests hypotheses regarding the impact of leverage on financial resilience, the role of firm–specific factors in enhancing resilience, and the effects of macroeconomic conditions on corporate leverage and resilience. It will also examine the moderating role of the COVID–19 pandemic on these relationships.

4. Findings

The findings indicate that leverage levels are significantly influenced by firm–specific characteristics such as profitability, asset tangibility, and transaction volume. Firms with higher profitability tend to exhibit lower leverage ratios, aligning with the pecking order theory, as they prefer internal financing over external debt. Conversely, firms with greater asset tangibility demonstrate higher leverage, as tangible assets provide collateral that facilitates debt financing. Additionally, larger firms with higher transaction volumes tend to take on more debt, benefiting from economies of scale and better access to capital markets.

At the macroeconomic level, corporate tax rates are positively associated with leverage, as higher taxes incentivize firms to utilize debt for its tax–deductibility benefits. Economic growth shows a mixed effect, with periods of high growth enabling firms to take on more debt due to favorable conditions, while periods of economic downturn increase

financial constraints. Inflation exerts a negative impact on leverage, reflecting its role in eroding the real value of debt and increasing borrowing costs.

The resilience models reveal that leverage negatively impacts financial resilience, particularly during periods of economic volatility. High leverage reduces liquidity (as measured by the current ratio) and increases revenue instability, indicating that over–leveraged firms are more vulnerable to financial distress during crises. However, firms with higher profitability and efficient capital expenditures tend to maintain better resilience, showcasing the importance of operational efficiency in mitigating the adverse effects of leverage.

The pandemic significantly moderated the relationship between leverage and resilience. The dummy variable for the pandemic and post–pandemic years (2020–2023) highlights the heightened vulnerability of highly leveraged firms during this period, as disruptions in global supply chains and market contractions strained their financial stability. Interestingly, firms with robust liquidity management practices and diversified revenue streams demonstrated higher adaptability and recovery rates, emphasizing the value of strategic resilience planning.

5. Conclusions

This study contributes to the literature on corporate finance and resilience in emerging markets by providing empirical evidence on the dual role of leverage: while it supports growth through accessible capital, it also heightens financial fragility, particularly during economic disruptions. The findings underline the importance of a balanced approach to debt management, where firms align their leverage strategies with their capacity for resilience.

From a policy perspective, the results emphasize the need for governments in emerging markets to maintain stable macroeconomic conditions, including moderate inflation and supportive tax policies, to encourage sustainable corporate financing practices. Policymakers should

also consider incentivizing resilience–building measures, such as promoting diversified financing options and supporting innovation in risk management practices.

For corporate managers, the study highlights the significance of maintaining a prudent capital structure and strengthening liquidity buffers to enhance resilience against economic shocks. Investing in operational efficiency, particularly during periods of growth, can serve as a buffer against future crises.

In conclusion, the research underscores the complex relationship between leverage and resilience, offering actionable insights for firms and policymakers. By striking a balance between growth and stability, emerging market firms can navigate the challenges of volatility while fostering long–term financial health.

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A TAXONOMY OF INNOVATION LABS USING A BIBLIOMETRIC ANALYSIS METHODOLOGY

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1. Objectives

Organizations are increasingly interested in creating physical spaces to foster innovation (Osorio *et al.*, 2019). Depending on the context, these physical environments can take the form of laboratories with different types of spaces, such as creativity and prototyping rooms, coworking spaces, test rooms, immersive rooms, etc.

Depending on the nature of the environment — whether it is a real–life setting or its counterpart — they are often categorized as either a living lab or an innovation lab. Accordingly, a living lab can be defined as a hybrid of think tanks, digital R&D labs, social enterprises and charities (Williamson, 2015).

Innovation labs can be defined as "islands of experimentation" where the public and private sectors can test and scale up innovations across services.

We could therefore say that an innovation lab is an entity in itself within the company itself, in which the goal is to foster creativity and develop innovative solutions. In these spaces, where experimentation and learning take place, professionals from a wide variety of subjects come together, but with a common denominator, which is high qualification, working collaboratively and developing disruptive solutions.

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[2] Università degli studi della Basilicata, Dipartimento di Ingegneria.

In this study, we aim to explore the field with a particular focus on innovation labs, examining whether they are commonly utilized tools in companies and public organizations. Additionally, we seek to identify the sectors where their use is most widespread and those where their application is notably limited or absentthis particular study is to find out whether an innovation lab is actually a commonly used tool in companies and public bodies and to identify those sectors in which its use is most widespread and those in which its use is almost never applied.

Keywords: corporate leverage, financial resilience, emerging markets, Covid–19.

2. Theoretical background

The concept of innovation lab, has grown in popularity in recent years, and, nowadays, a variety of interaction spaces work with these principles in mind (e.g., 'living labs', 'hubs', 'fablabs') (Høegh–Guldberg *et al.*, 2022).

An innovation lab is mainly associated with an innovative space (Moultrie *et al.*, 2007).

These spaces arise as a consequence of the gaps left by traditional R&D laboratories (Schiuma & Santarsiero, 2023). In fact, it is proven that these laboratories, even though they have cutting–edge technology and qualified personnel, cannot sustain and improve business innovation. This situation occurs because they function as autonomous entities without any type of interaction with the rest of the company and building separating barriers such as technical language.

An Innovation Lab can be seen as an innovation management model based on three pillar dimensions distinguishing its structure: i) "*atmosphere for innovation*", i.e. the construction of an innovative space, which can be physical, virtual, hybrid, relational, promoting and supporting interactions and a context for innovation; ii) "*time for exploration*", i.e. the definition of time for creating and critical thinking spurring inno-

vative ideas related to the challenges at hand; iii) "*platform to experiment*", i.e. the provision of tangible and intangible infrastructure and tools that can support the prototyping, experimentation and demonstration of possible innovative solutions. (Santarsiero *et al.*, 2023)

3. Methodology

Due to the high number of articles identified, to explore and understand the growing phenomenon, a bibliometric analysis method has been conducted. This type of study provides objective and reliable results in contrast to a systematic reading of the literature (Moral–Munoz *et al.*, 2019).

This type of methodology enhances the research process by identifying publication patterns and trends within the bibliographic material (Broadus, 1987).



Figure 1. Parameters of the bibliometric analysis.

In this study we use bibliometric analysis to obtain guidelines of everything published in Scopus with the parameters we selected. We will carry out the analysis on a total of 7,084 articles searched with the identifiers "Innovation Lab*", "i–lab*" and "Living Lab*". In addition, we restrict publication to a closed period of 20 years, and we select those articles published in English or Spanish.

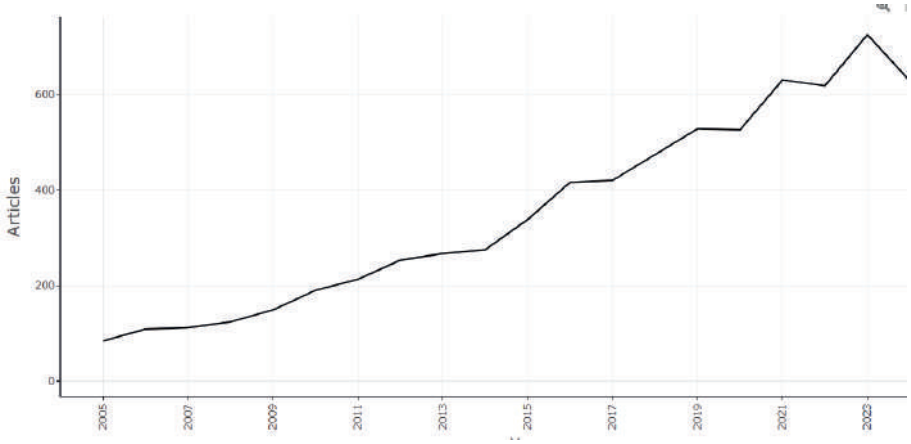


Figure 2. Annual scientific production; own elaboration. Bibliometrix.

We can observe that since the beginning of the period studied, in 2005, growth has been an increasing constant, demonstrating the growing interest in the field of "Innovation Labs".

To understand the interconnectedness and thematic evolution within this body of work, we conducted co–citation, following methodologies established by Cobo (Cobo *et al.*, 2011).

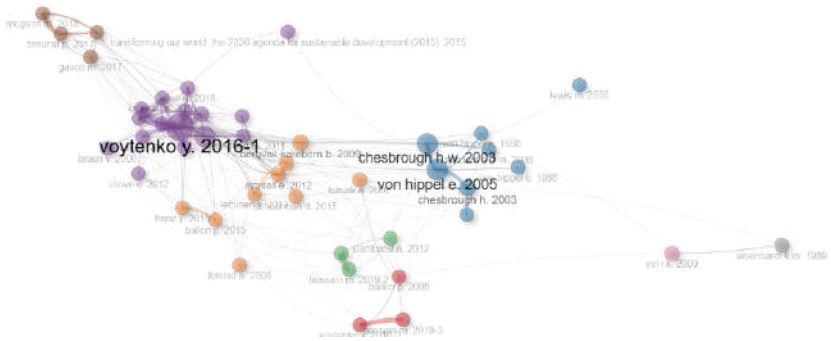


Figure 3. Co–Citation Network; own elaboration. Bibliometrix.

Finally, we observe that the majority of publications are written by authors from the USA and China, with Spain far from the lead. The SCP graph, in orange, corresponds to publications in a single country and MCP, in green, corresponds to those of several countries.

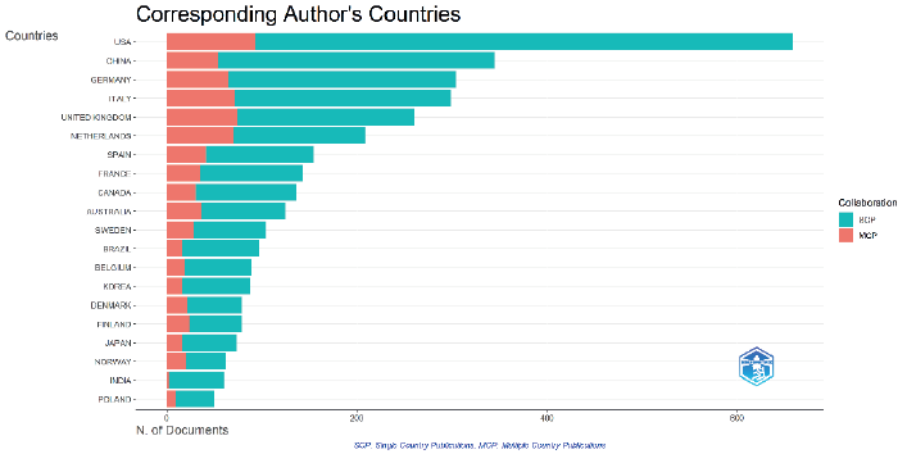


Figure 4. Corresponding Author's Countries; own elaboration. Bibliometrix.

4. Findings

The main themes detected once the analysis was carried out can be seen in the Figure 5.

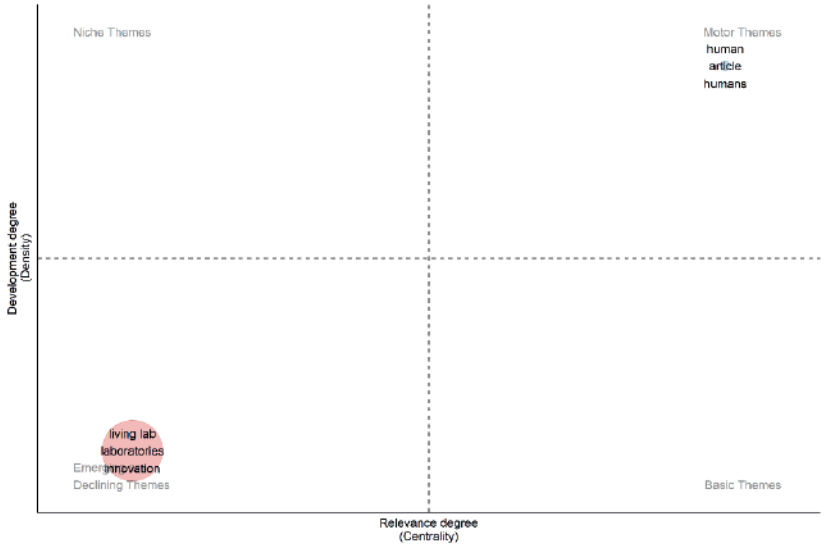


Figure 5. Thematic Map; own elaboration. Bibliometrix.

The quadrant is made up of two axes indicating density (vertical) and centrality (horizontal). Quadrant 1 (top left) represents peripheral topics; These are topics linked to the main ones, but of little appearance. Quadrant 2 (upper right) indicates the main themes of the research called motor themes. Quadrant 3 (bottom left) represents themes that are emerging or may be declining. Finally, quadrant 4 would represent the basic themes that are considered transversal themes (López–Robles *et al.*, 2019).

When creating a map of clusters by document coupling and keeping in mind that coupling is considered when two source documents cite the same document, we obtain 3 well–differentiated clusters, observing that the three clusters are found in the area of high impact and centrality. marked.

In figure 6 we can see an explanatory graph.

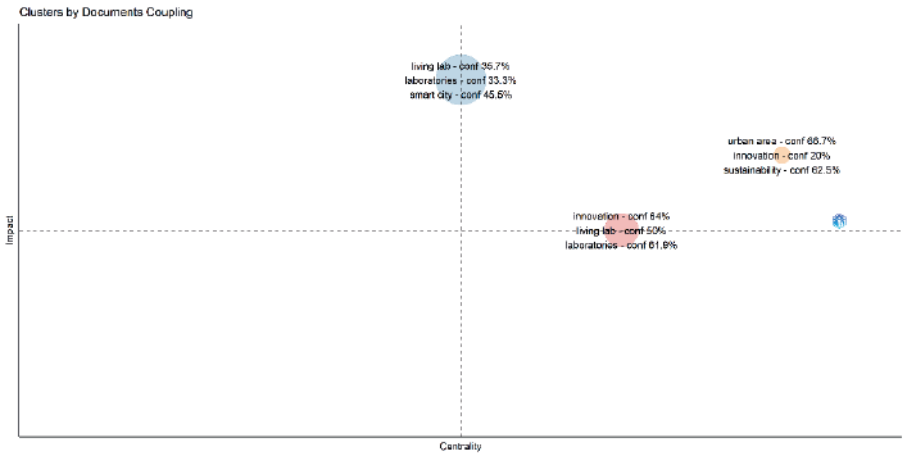


Figure 6. Cluster by documents; own elaboration. Bibliometrix.

As we can see "Living Lab, Laboratories and Innovation" can be emergin or declining themes. It is difficult to be able to specify with this data which ones are in decline or are emerging, but it is suggested that both are emerging because, after reading the documents and the data provided in the growing number of publications.

As we can see in the following figure, the most cited word with a total of 853 times is "Living lab" which gives us a glimpse that, as we previously indicated, innovation laboratories are a hot topic.



Figure 7. WordCloud; own elaboration. Bibliometrix.

5. Conclusions

As the business world becomes more complex and competitive, innovation becomes even more essential for the growth and survival of companies.

We can observe, after this brief analysis, that innovation labs, and their closest derivatives such as living labs, are a topic that is increasingly present in published studies, arising great general interest as a possible tool of innovation management. In Spain there is still a lot of potential for study on the use of these tools and their application in strategic sectors such as the tertiary sector, and more specifically tourism.

An innovation lab encounters a series of challenges that can be the subject of future research:

– Implementation and maintenance costs.

– Uncertainty of results.
– Interdepartmental integration within the company.

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BEYOND THE ALGORITHM: THE CONTRADICTORY IMPACTS OF AI ON STRATEGIC DECISION–MAKING

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1. Objectives

Artificial Intelligence (AI) is revolutionizing strategic decision–making by enabling machines to perform tasks traditionally requiring human intelligence (Simon, 1995). Its adoption is rapidly increasing, with a 2023 Deloitte survey showing that 38% of U.S. CEOs are experimenting with generative AI and none ruling out its use. This widespread interest is driven by AI's unparalleled ability to process vast datasets and reduce cognitive limitations in decision–making (Nguyen, 2024). However, this technological advancement comes with a paradox: while AI promises to enhance objectivity, it can also amplify cognitive biases such as anchoring, confirmation, and hubris (Tversky and Kahneman, 1974; Picone *et al.*, 2014). For example, Netflix, a company known for its data–driven strategies, uses AI algorithms to analyze viewer preferences and guide content production. While this approach streamlines decision–making, it also risks anchoring decisions to early AI outputs, reinforcing pre–existing biases and limiting flexibility (Chan–Olmsted, 2019). These biases are not isolated phenomena; they interact and compound one another, significantly impacting decision quality (Abatecola *et al.*, 2018). Anchoring bias, where initial information disproportionately influences judgments, limits adaptability even as new information emerges (Tversky and Kahneman, 1974). Confirmation bias leads decision–makers to favor data that aligns with their beliefs, resulting in selective interpretations of AI outputs (Nickerson, 1998). Hubris bias

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further complicates decision–making by fostering overconfidence in AI–generated insights, reducing critical scrutiny (Picone *et al.*, 2014). To address these challenges, it is crucial to understand the cognitive mechanisms underpinning decision–making. Dual–process theory provides a valuable framework, distinguishing between intuitive (System 1) and deliberative (System 2) thinking (Kahneman, 2011). System 1 is fast and prone to errors and biases, while System 2 is slower, analytical, and capable of mitigating distortions. AI's role in influencing the balance between these systems is pivotal; it can either support deliberative thinking by providing robust data or exacerbate intuitive biases when its outputs are uncritically trusted. This dynamic underscore the dual–edged nature of AI, as its integration can simultaneously enhance decision–making and introduce significant risks. By exploring how varying levels of AI adoption shape cognitive processes, this study aims to suggest organizations how they can better navigate the complexities of human–machine collaboration, leveraging AI's strengths while mitigating its potential to entrench harmful biases.

Keywords: strategy, decision making, biases, artificial intelligence, paradox.

2. Theoretical background

This study integrates paradox theory, behavioral strategy, and cognitive biases to examine how AI adoption intensity shapes strategic decision–making. Paradoxes, defined as persistent contradictions requiring simultaneous engagement with opposing forces (Smith and Lewis, 2011; Putnam *et al.*, 2016), highlight the tension between intuitive (System 1) and deliberative (System 2) thinking. Behavioral strategy provides a lens to understand biases like anchoring, confirmation, and hubris, which distort judgment and disrupt the balance between intuition and deliberation (Cristofaro *et al.*, 2024). Anchoring bias involves reliance on initial information (Tversky and Kahneman, 1974), confirmation bias reflects favoring preexisting beliefs (Nickerson, 1998), and hubris bias manifests as overconfidence and resistance to feedback (Picone *et*

al., 2014). Dual–process theory underscores the interplay of cognitive processes in mitigating these biases (Kahneman, 2011), though recent critiques advocate for a more integrated framework (Cristofaro, 2020; Cristofaro *et al.*, 2022). AI reshapes this dynamic by moderating intuition and deliberation. Moderate AI usage enhances deliberation by providing diverse insights, reducing biases like anchoring and confirmation (Agrawal *et al.*, 2019). Excessive reliance on AI risks reinforcing biases through uncritical acceptance of outputs, while the absence of AI leaves intuitive errors unchecked (Goddard *et al.*, 2012). For example, moderate AI adoption fosters analytical engagement, mitigating anchoring bias by challenging initial anchors. Similarly, it reduces confirmation bias by encouraging evaluation of conflicting evidence, while extremes of adoption amplify this bias. For hubris, moderate AI usage balances reflection and confidence by presenting diverse perspectives, while high reliance or no usage intensifies hubristic tendencies. Consequently, this study hypothesizes that moderate AI adoption optimizes deliberative thinking to mitigate anchoring, confirmation, and hubris biases, while high or no AI usage exacerbates them. These findings highlight AI's paradoxical role in decision–making, advancing understanding of its dual potential to enhance or impair strategic judgment.

3. Methodology

The study employed a robust experimental design to investigate the effects of AI adoption intensity and freedom of use on cognitive biases in strategic decision–making. A between–groups experimental methodology was chosen, assigning participants to one of four conditions: manual execution without AI, mandatory high AI adoption, optional moderate AI adoption, and optional high AI adoption. This design enabled systematic manipulation of variables while controlling for confounding factors, ensuring internal validity (Cristofaro *et al.*, 2024). The experiment was conducted with 251 professionals who assumed the role of executives tasked with deciding whether a technology company should enter the South American market. Cognitive processes were measured using the think–aloud method (Wolcott and Lobczowski, 2021), with

verbalizations categorized into intuitive and deliberative thinking, and quantified through a Cognitive Thinking Index developed for the study. Anchoring, confirmation, and hubris biases were assessed using established metrics, including proximity to anchor values (Tversky and Kahneman, 1974), cue selection tendencies, and overplacement self–assessments. AI adoption intensity was operationalized based on the number of input–output interactions with ChatGPT, with clear thresholds validated through pilot testing and inter–rater reliability (Cronbach's alpha = 0.95). Random assignment, Cognitive Reflection Test scores, and an AI literacy scale ensured group parity and controlled for participant differences. These methodological choices provided a comprehensive framework to explore the nuanced impacts of AI on decision–making processes.

4. Findings

The study demonstrates the nuanced role of AI adoption intensity in shaping cognitive biases during strategic decision–making. Moderate AI adoption, allowing up to 15 interactions, emerged as the most effective condition, reducing anchoring bias by 52%, confirmation bias by 60%, and hubris bias by 51% compared to the baseline (no AI). This balanced approach fosters an integration of intuitive and deliberative thinking, promoting critical engagement with diverse information and mitigating cognitive distortions. Conversely, high AI adoption, with over 16 interactions, significantly amplified biases. In conditions with or without decision–making freedom, anchoring bias increased by 38–40%, confirmation bias by 40–45%, and hubris bias by 38–43% relative to the baseline. These outcomes highlight the risks of overreliance on AI, where diminished deliberative thinking leads to uncritical acceptance of AI outputs, reinforcing intuitive judgments and cognitive shortcuts. Similarly, the no AI condition resulted in the lowest cognitive engagement, leaving biases largely unchecked.

6. Conclusions

This study examined how freedom in AI usage and adoption intensity influence cognitive biases and decision–making. Results highlight AI's paradoxical effects on deliberative thinking and strategic behavior. The findings provide three significant theoretical contributions. First, they challenge the assumption that AI uniformly reduces cognitive biases, demonstrating its paradoxical effects. While moderate adoption mitigates biases by enhancing deliberative thinking, high adoption amplifies biases through over–reliance on AI (Goddard *et al.*, 2012). Second, the study extends paradox theory by linking cognitive processes to paradox configurations, showing how cognitive modes shift between neither–nor, either–or, and both–and approaches (Smith and Lewis, 2011). Third, it contributes to behavioral strategy research by empirically validating the critical role of balanced intuitive–deliberative thinking in decision–making, using the Cognitive Thinking Index (Cristofaro, 2020; Cristofaro *et al.*, 2022). These insights offer a foundation for future research on AI's role in strategic contexts, emphasizing the nuanced interplay between technology and cognition. On a practical level, organizations are advised to implement policies encouraging moderate AI usage, structured workflows integrating AI and human reasoning, and AI tools designed to support reflective practices. By fostering a balanced approach, organizations can enhance decision–making effectiveness while mitigating cognitive biases.

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AI IN THE BANKING SECTOR FROM CUSTOMER PERCEPTION

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1. Objectives

Artificial intelligence is rapidly changing the conditions of the labor market and transforming the work environment and people's daily lives. In other words, AI is becoming a part of all spheres of life. Taking this into account we need to strive to embrace a future focused on the development and improvement of AI. As AI develops and advances, the banking sector and its employees will need to adapt and follow its applications, which will allow them to have a more organized and efficient working day and to better understand their customers and offer them services and products tailored to their needs and demands. But just as banks need to adapt to AI, so do their customers. This current topic is the main reason to delve deeper into the analysis of AI in the banking sector from customer perception in Republic of North Macedonia.

Keywords: AI, banks, customers.

2. Theoretical Background

2.1. *Citiation of references*

As a powerful tool with many applications in the banking and insurance sectors, AI is quickly replacing humans in important financial tasks like risk assessment, stock trading, and extending credit to those who apply for loans (Polireddi, 2024). The banks

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using the AI and ML can manage big volumes of data collected from clients, transactions, and other sources with unprecedented precision which will allow them to provide highly personalized financial services (Polireddi, 2024). AI systems can assist a central bank in fulfilling its objective to maintain financial stability (Ozili, 2024). On the other hand, the usage of AI systems in central banking operations or decision making needs close monitoring by humans that should be proportionate with the risks that may arise from the usage (Ozili, 2024). With the use of AI, banks must prioritize the data access and privacy due to global regulations and that's why protecting data assets are important from ethical and security reasons (Ashwardhini and Duraiarasan, 2024). When using AI and blockchain technology, it is very important that data is kept confidential and fully protected in order to prevent an attack on the system or theft of information from the banking sector (Alenizi *et al.*, 2024). In modern banking, digitalization has progressed from being a choice to an imperative, with AI standing out as a key force behind major digital achievements in banking channels, services, and solutions (Grover and Dubey, 2024). The transformation from traditional to modern banking has accelerated the need to find AI solutions that are beneficial for both banking institutions and customers (Ashwardhini and Duraiarasan, 2024). The customers always want quick and accurate answers from banking representatives, but usually they don't have enough tools for delivering fast response (Bansal, 2024). On the other hand chatbots are no longer "bots" with restricted and defined inputs, their responses are on the same level as a human and the customers will always have an assistant to answer their questions in real–time (Bansal, 2024). One of the AI tools used by banks is to retain the existing customer base by offering the best products and target rewards offers based on their historical data (AmCham EU, 2024). Credit risk assessment by financial institutions is one of the benefits of applying AI (AmCham EU, 2024). Currently, many banks are limited to using credit scores, credit history, customer references, and bank transactions to determine whether an individual or company is creditworthy or not (Kaushik and

Sharma, 2023). Even though technology is always evolving, banks need to ensure that customer data is always protected and AI systems are not prone to threats and hacking (Nagarajan *et al.*, 2023). The security threat is the main factor where customers hesitate to use AI (Sreedhar *et al.*, 2021). Effective security measures can protect sensitive financial data, while also protecting customers from potential harm resulting from the rise in cyber threats (Asmar and Tuqan, 2024). In order for banks to properly use AI–based technology, they need to invest in training and hiring experts to manage those systems, and this can cost the banks a lot (Nagarajan *et al.*, 2023). The effectiveness of applying artificial intelligence in the banking sector is based primarily on the opinion and loyalty of customers towards this technology (Ryzhkova *et al.*, 2020). In a time when humans are being replaced by machine intelligence, convenience is increasingly preferred, which is one of the reasons for the help of AI (Sreedhar *et al.*, 2021).

3. Methodology

The collected data for the analysis were obtained through an online survey conducted from November 20 to November 24, 2024 and the survey was answered by 108 people. Besides the demographic questions the survey consisted of 16 closed–ended questions, limiting the respondents to only one answer. The first five questions were general questions about AI, i.e. about familiarity, use and impact of AI and the remaining questions were related to AI in banks, i.e. how familiar are clients with AI in banks, its impact, whether they use or would use services supported by AI technology, etc.

4. Findings

In the conducted survey, the largest number of respondents, 45 or 41.7%, belong to the age group from 29 to 39 years and the smallest number of respondents belong to the age group from 51 to 61 years,

i.e. 7.4% or 8 respondents. From the questions that were related to AI in general, 31 of the respondents answered that they were slightly familiar to AI and only one respondent chose the option expert. 14 of the 21 respondents who use AI daily, responded that they were vey familiar with AI. Out of the 21 respondents who answered that never use AI, 12 of them were not familiar at all with AI. Most of the respondents, i.e. 36.1% don't think that AI will have a negative impact on the humanity and 24 of those respondents answered that maybe, depending on the context/situation they would trust an AI system to advise/guide them, 14 answered with yes and only one answered that would not trust an AI system to advise/guide them. In total, out of 108 respondents, 71.3% answered that maybe they would trust an AI system to advise/guide them, 16.7% answered with yes and 12% with no. Almost half of the respondents, 51 of them, don't think that AI will replace their job position/profession but they will use it as a support for their daily activities. Regarding the questions about AI in banks, 43.5% of the respondents answered that they were not familiar at all about AI being used in AI, 29.6% were slightly familiar, 20.4% moderately familiar, 5.6% very familiar and only one answered with expert. Out of the 108 respondents, 76 of them answered that they had never interacted with a banking chatbot and out of the 76 respondents 67.1% prefer to talk to a bank employee that works in a 24/7 call center rather than with a banking chatbot. On the other hand out of the 32 respondents who answered that they have had interacted with a banking chatbot, 65.6% of them also prefer to talk to a bank employee. Almost half of the respondents, 45.4%, somewhat agree that AI–driven services in banks will be more efficient than the traditional, human–provided services and more than half of the respondents believe that maybe AI can enhance the personalization of banking services to meet customer needs. 45.4% of respondents answered that maybe they would trust the process AI–powered automated loan approval. Regarding the use of the benefits of AI in banks in the future, 64 of the respondents answered that it depends on the services/products that will be offered and 49 of the respondents answered that maybe they would trust the process of AI–powered automated loan approval. As for the data security, more than half of the respondents, 54.6%, are not sure whether their personal

and financial data are safe in the banks that use AI and 50.9% of the respondents somewhat agree that the development of AI could be a risk for the banking sector. 66.7% of the respondents think that AI can reduce the human errors in the banks, but to a certain level.

5. Conclusions

The results of this research show that in Republic of North Macedonia there is a lack of knowledge about the benefits of applying and using AI in the banking sector. Republic of North Macedonia is a developing country in which digitalization is not yet at the desired level of development. On the other hand, our country faces limited resources that would lead the artificial intelligence revolution. Considering this, it is necessary to find ways and opportunities that will not only educate and introduce customers with the benefits of AI, but also the banking sector should rapidly follow the applications of AI technologies.

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TOWARDS A MULTI–ENDS LEADERSHIP FOR THE COMMON GOOD OF BUSINESS AND SOCIETY: A CONCEPTUAL PAPER

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1. Objectives

This conceptual paper explores the nexus between "corporate purpose" and "leadership" in order to answer the following research question: "How can a leader steer the organization and its members toward the common good for both business and society?".

Keywords: common good, corporate purpose, real entity, stakeholder theory, leadership.

2. Theoretical background

The approach to corporate purpose in the past decades has been dominated by conventional Anglo–American theories (Clarke, 2020) such as the shareholders theory (Friedman, 1970) and the stakeholder theory (Freeman, 1984), which have long cast their influence over organizational culture, governance dynamics, and the approach to stakeholder management.

These theories predominantly consider the rational and egoistic facets of the market, often overlooking the detrimental consequences of this myopic management approach (Canals, 2010).

Consequently, this perspective falls short in its consideration of individuals beyond their utilitarian and material interactions and entails

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a mono–dimensional purpose of the firm resulting in profit maximization, as advocated by the shareholder theory. In this complex business milieu, considering the firm as an instrument useful to maximize shareholder's wealth (shareholder theory) or to satisfy the interests of a certain group of stakeholders (stakeholder theory) does not give the possibility to find a common benefit for the plurality of interests involved.

Yet, stakeholders' interests often diverge, necessitating ethical frameworks that guide interactions with a degree of impartiality (Freeman, 1994). The firm's objective has to evolves into a distinct societal mission (Snowden & Boone, 2007) assuming the form of a multi–ends purpose consistent with the common good (MEPCCG). It represents a superior interest that harmonizes the array of variables at play striking equilibrium among financial, environmental, and social sustainability (Melé, 2019).

The MEPCCG asks for a multi–dimensional mission and consequently for a multi–dimensional leadership style since leaders must cultivate deliberate cognitive processes and harmonize all variables involved, ensuring the enterprise's continuity while also upholding the well–being of its internal and external stakeholders.

2.1. *The central role of leadership for corporate purpose*

In today's thinking, the realization of sustainable value hinges on fundamental shifts in how human resources and the firm itself are conceptualized. Leadership, as the catalyst for such changes, starts from within and necessitates leaders' investment in their followers (Bender, 1997). Presently, leadership manifests in two overarching dimensions. The first dimension revolves around social–emotional and moral aspects, emphasizing empathy, and fostering the development of individuals' inherent potential (Page & Wong, 2000). The second dimension concerns the practical implementation of leadership, encompassing managerial competencies such as decision–making, visionary thinking, and strategic execution.

However, this approach, alongside related incentive structures, may hinder productivity compared to methods driven by social and intrinsic motivations. Lopes and Calapez's (2011) research suggest that elevated

relational and moral goods at work correlate with reduced self–interested cooperation. The COVID–19 pandemic has stressed the importance of moral, benevolent, and people–centric leadership. In this vibrant scenery, leaders who refine their perceptions, put ethical behaviour at first, consider stakeholders and entrust their teams improve the possibility of guiding their organizations toward sustainable achievement (Forster *et al.*, 2020).

The synthesis of literature on leadership and corporate purpose accentuates the pressing need for an ethical context underpinned by leadership styles that embrace diverse moral attitudes towards stakeholders. Table 1 shows the main dimensions belonging to each leadership style focusing on those aspects that make of a leader a moral agent, able to create a compassionate organization more than an individualistic one.

However, the pursuit of such an ethical paradigm may elicit concerns about potential economic repercussions that could compromise a firm's survival and long–term growth. As businesses grapple with this delicate balance, the evolving landscape demands leaders who can strategically integrate ethics, purpose, and profitability for enduring success.

3. Methodology

This is a conceptual paper. A review of the literature on leadership linked to corporate purpose has been adopted as the most suitable for finding results on the existent literature on leadership to a specific corporate objective. The database was searched by requiring those articles containing the keyword "leadership" and "corporate purpose" and "common good" in the abstract. To select relevant studies the authors reviewed firstly the titles of the resulting papers to find apparent consistency with the analysis and then, among the properly selected articles, the authors reviews their abstracts to ensure these substantive contents. Only published peer–reviewed journal articles written in English were taken into consideration. According to the just mentioned criteria we found out the following consideration.

4. Findings

Approaching an organization as solely a tool for serving stakeholders' interests can be as perilous as viewing it purely as a profit–generating mechanism. The risk is compromising the essential conditions required for sustained growth and development over time (Di Carlo, 2020).

By systematically analysing and critiquing existing literature on leadership and corporate purpose, this paper results in identifying the gaps and intersections within three emerging theories of the firm: the real entity theory, the stakeholder theory, and theory of the common good paving the way for the development of the Multi–Ends Leadership (MEL) style framework. While the specific methodological steps are not detailed due to the nature of the paper, the selection of sources, their critical evaluation, and the synthesis of their insights were central components of this approach. The real entity theory mandates recognizing the organization as a distinct entity from its stakeholders, characterized by the potential for indefinite existence and independent interests (Di Carlo, 2020; Lozano *et al.*, 2015). The stakeholder theory emphasizes the need for leaders to harmonize the divergent interests of all stakeholders participating in business activities and, last but not the least, the common good theory underscores the importance of viewing persons as ends in themselves, belonging to a community (the real entity) with a higher interest (Melé, 2012). When considered in isolation, each theory accentuates one dimension (i.e. human dimension) while overlooking others (i.e. economic dimension). Correspondingly, each analysed leadership style emphasizes one dimension over the others thus the vulnerabilities inherent in existing leadership styles find resilience through the intersections of these theories and the birth of MEL.

The MEL adeptly balances the interests of individuals, the organization, and the community, thanks to its ability to assess complex challenges and consider multiple variables simultaneously when making decisions. It inherently strives for the holistic well–being of individuals both within and outside the organization, always cognizant of the parameters within which business continuity, as well as personal growth and development, are sustained.

The outcome is an equilibrium between leadership styles concerned with the growth of followers and leadership styles focused on organizational performance, as the MEPCCG requires.

Table 2 briefly highlights the core distinctions between MEL and the other existent leadership styles.

Leadership's dimensions	Servant leadership (Stone et al. 2004, Dierendonck 2011, Patrick et al. 2005)	Transformational leadership (Burns 1978, Bass 1985; Graham 1991)	Authentic leadership (Avolio and Gardner 2005, Ladkin and Taylor 2010)	Ethical leadership (Brown et al. 2005)	Level 5 leadership (Collins 2001)	Empowering leadership (Bandura 1986, Ertec and Arad 1986)	Spiritual leadership (Fry and Slocum 2008, Fry 2003)	Self-sacrificial leadership (Choi and Mai-Dalton 1999, De Cremer 2006, De Cremer et al. 2009)	Benevolent leadership (Karakas and Sarigollu 2013)	Common Good Leadership (Alexander and Buddhapham 2011) - or ethical
Concern for the organization		x								
Concern for the followers	x			x	x	x		x	x	
Inspire followers for the sake of the organization		x								
Empower and develop people	x			x		x				
Intellectual stimulation		x								
Supportive behaviors		x								
Humility	x		x	x	x					
Authenticity	x		x							
Interpersonal acceptance	x									
Providing direction	x				x					
Stewardship	x								x	
Self awareness			x	x					x	
Relational transparency			x							
Internalized transparency and moral perspective			x							
Encourage followers to express their "true self" with their inner emotions			x							
Ethical sensitivity and normative behaviors				x						
Integrity	x			x					x	
Serving the good of the whole	x			x			x		x	
Fair decisions for the best interest of stakeholders	x			x						
Delegation of authority to increase intrinsic motivation	x					x				
Create a culture and a sense of meaning to intrinsically motivate leaders and followers							x		x	
Altruism, make followers feeling part of a community							x	x		
Pro-social behaviors								x	x	
Self-discipline										x
Economic and state management										x

Table 1. Literature on moral leadership.

	MEL	Existent leadership style	Example
1	Balances followers' interests with the interest of the firm	Has a concern on followers or on the organization	Servant leadership; Benevolent leadership; Authentic leadership;
2	Inspire followers to achieve the multi-ends purpose of the firm consistent with the common good	Inspire followers to achieve the purpose of the firm but without specifying which it has to be (it can match every kind of corporate purpose)	Transformational leadership
3	Considers the firm as a real entity (community of person)	Consider the firm as an instrument for profit	Transactional leadership
4	Considers *man* as an end of the business activity	Consider *man* as an instrument for profit	Pseudo transformational leadership; transactional leadership
5	Matches different leadership styles according to the context in order to achieve the multi-ends purpose of the firm consistent with the	Matches different leadership's dimensions and competences to manage the *leader-followers* relationship	Situational leadership

Table 2. Main differences between MEL and the existent leadership styles; authors' elaboration.

Figure 1 shows the underpinning theory of MEL that introduces innovation by weaving together three distinct theories: the real entity theory, the stakeholder theory, and the common good theory. The convergence of these theories is contingent on the trajectory traced by the literature, as discussed in prior sections.

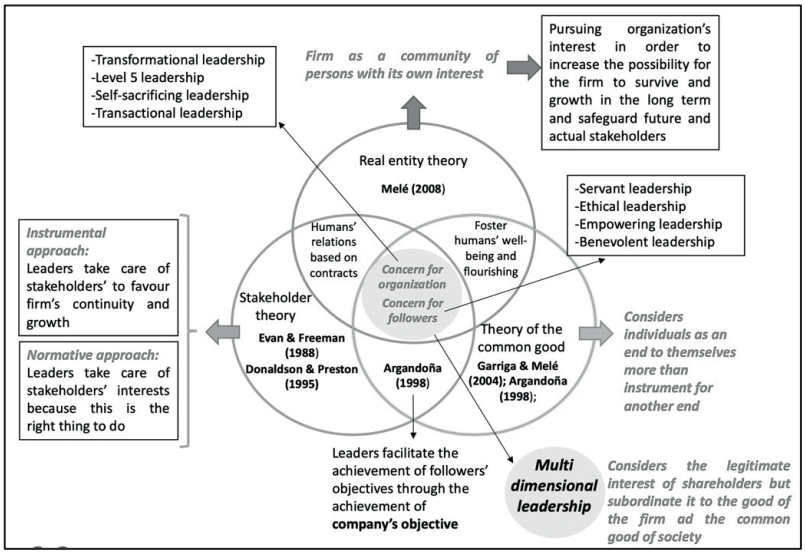


Figure 1. Multi–ends leadership. Intersections between the real entity theory, the stakeholder theory and the theory of the common good; Authors' elaboration.

5. Conclusions

The MEL framework introduces a dynamic and holistic approach to leadership that bridges the gap between individual well–being, stakeholder interests, and organizational objectives. By integrating the real entity theory, stakeholder theory, and theory of the common good, MEL offers a comprehensive perspective that encompasses the intricate dimensions of leadership and organizational purpose.

MEL grasps that an organization is more than the sum of its parts and highlights the need of contemplate both personal and shared interests. It declares that while stakeholders have different needs and expectations, their interests are interrelated and should play in harmony for the overall benefit of the organization and its wide community.

This enriches stakeholder theory by offering specific strategies for leaders to ensure equitable consideration and sustainable outcomes.

MEL gives its contribution also to the literature that examine the economy for the common good (Campos *et al.*, 2020; Talavera & Sanchis, 2020; Felber *et al.*, 2019; Campos Climent, 2023; Ejarque & Campos, 2020), since it operationalizes its principles within the organizational environment.

MEL's inclusion of the real entity theory ensures that leaders consider the long–term interests of the organization alongside stakeholder needs. The balance between short–term and long–term objectives is needed to create sustainable and resilient businesses, in line with the common good economy's goals.

Practitioners can adopt MEL as an integrated leadership approach that transcends dichotomies between individual–focused leadership and organizational success. By leveraging the strengths of various leadership theories while maintaining focus on sustained equilibrium and long–term continuity, MEL can effectively manage the complexities of a rapidly changing business landscape. While the proposed MEL framework offers a compelling approach to leadership that integrates various theories and aligns with the common good, implementing the MEL framework could be challenging due to its multi–dimensional nature. Balancing individual well–being, stakeholder interests, and

organizational objectives while considering the common good might require significant organizational restructuring and cultural shifts.

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THE IMPACT MEASUREMENT OF DIGITAL TECHNOLOGIES IN LONG–TERM CARE ORGANIZATIONS

MARCO DI MARTINO[1], GABRIELE PALOZZI[1],
ANTONIO CHIRICO[1], GIANLUCA ANTONUCCI[22]

1. Objectives

This study aims to address the following research question: which are the key variables required to measure the impact of digital health technologies on the sustainability and performance of Long–Term Care organizations?

Keywords: digitalization, performance measurement, long–term care.

2. Theoretical background

Demographic trends in OECD countries (OECD, 2023a) reveal an unprecedented aging population, with a progressive increase in non–self–sufficiency, thus urgently requiring more services for Long–Term Care (LTC). The growing demand for health and social care services for elderly adults poses substantial challenges on health providers worldwide (OECD, 2023b). This is particularly true in a context where strategic health policy objectives are focused on improving outcomes and patients' quality of life (WHO, 2024a).

Among the changes affecting Primary Care (European Commission, 2014; WHO, 2018) there is the requirement to rethink LTC

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services towards new and more sustainable operational models (Rostad *et al.*, 2023; Yang *et al.*, 2022), from both an economic and organizational perspective (Mosca *et al.*, 2017; WHO, 2022b; Notarnicola *et al.*, 2024).

The evolution of these needs is leading, over time, to the strong conviction that health technology, including digital one and artificial intelligence (OECD, 2023b), may play a key role also in improving well–being and independence of elderly people, and it would do it with high levels of efficiency, potentially reducing individual and societal costs for their caring (Schulz *et al.*, 2015; WHO, 2024b). Digital health technology implemented in the LTC sector (WHO, 2022a), is recognized not only as a driver of growth in terms of innovation and productivity, but also as a key factor for sustainable development (Tebbutt *et al.*, 2016), with the potential to attract human capital in the long term despite the workforce shortages affecting the sector (Topol, 2019; OECD, 2020). In Italy, this vision has led to the recent enactment of Missions 5.C2 and 6.C1 of the EU funding National Recovery and Resilience Plan (NRRP) specifically devoted to digitalization and innovation of public health services. However, as of today, there are no frameworks in place to measure the impact of digital technologies on the sustainability and performance of LTC organizations. This results in limited support for a correct decision–making in investment choices and a lack of attention to the contributions of digitalization by LTC managers (Furnari *et al.*, 2024).

3. Methodology

This is a conceptual paper. A review of the literature on leadership linked to corporate purpose has been adopted as the most suitable for finding results on the existent literature on leadership to a specific corporate objective. The database was searched by requiring those articles containing the keyword “leadership” and “corporate purpose” and “common good” in the abstract. To select relevant studies the authors reviewed firstly the titles of the resulting papers to find

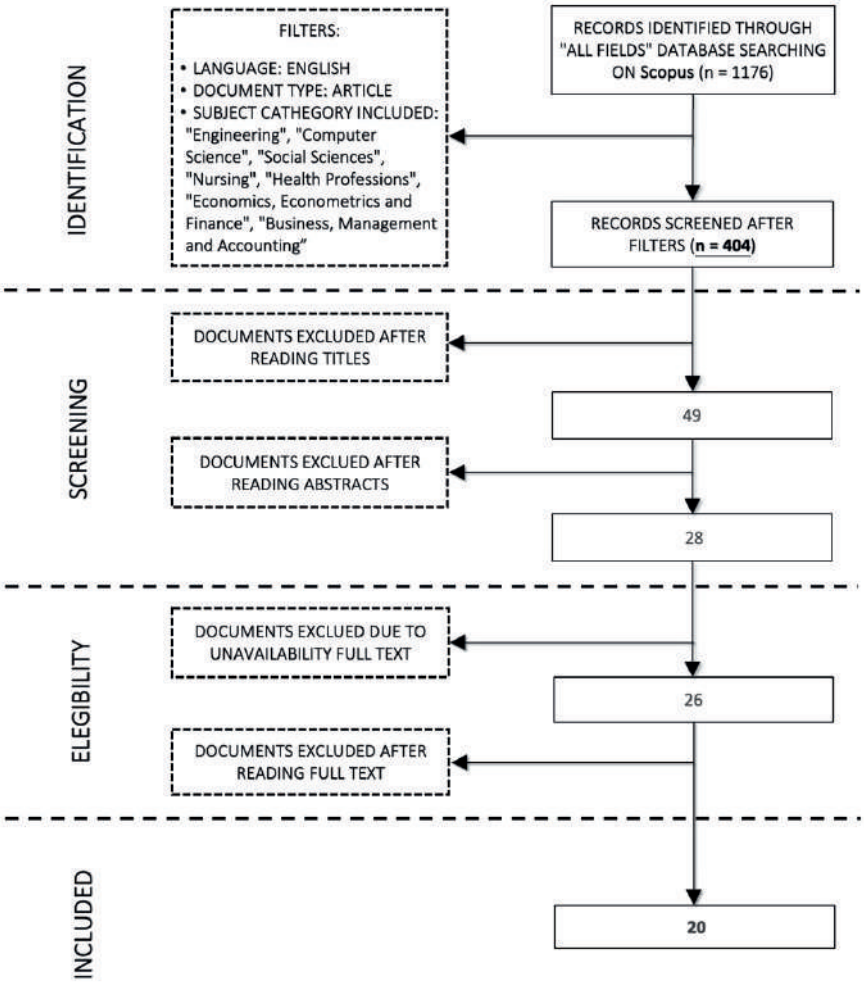


Figure 1. Paper selection and extraction template. Authors' elaboration from the PRISMA model.

apparent consistency with the analysis and then, among the properly selected articles, the authors reviews their abstracts to ensure these substantive contents. Only published peer–reviewed journal articles written in English were taken into consideration. According to the just mentioned criteria we found out the following consideration.

4. Findings

4.1. *Quantitative descriptive analysis*

The dataset includes 20 articles, the majority of these originate from OECD countries. We found the United States leading, and this is due to its availability of centralized, computerized, and open–access databases (e.g., NH Compare) that facilitate longitudinal analyses of nursing home quality metrics. Only six of the 20 articles employ statistical methods to investigate causal relationships between digital technologies and organizational performance, underscoring the underexplored nature of this domain. The studies span six academic fields — medicine, nursing, health professions, social sciences, computer science, and mathematics — but they lack a dominant publishing journal, indicating a fragmented research landscape. Collaboration is limited, with no international co–authorship observed, highlighting the localized nature of LTC service delivery. Notably, 29 of the 69 authors are affiliated with the University of Missouri, with Gregory L. Alexander and Richard W. Madsen leading significant contributions. These findings emphasize the need for tailored, context–specific solutions and further exploration of the role of digitalization in enhancing LTC performance and sustainability. The results of the descriptive–quantitative analysis are presented in Figure 2.

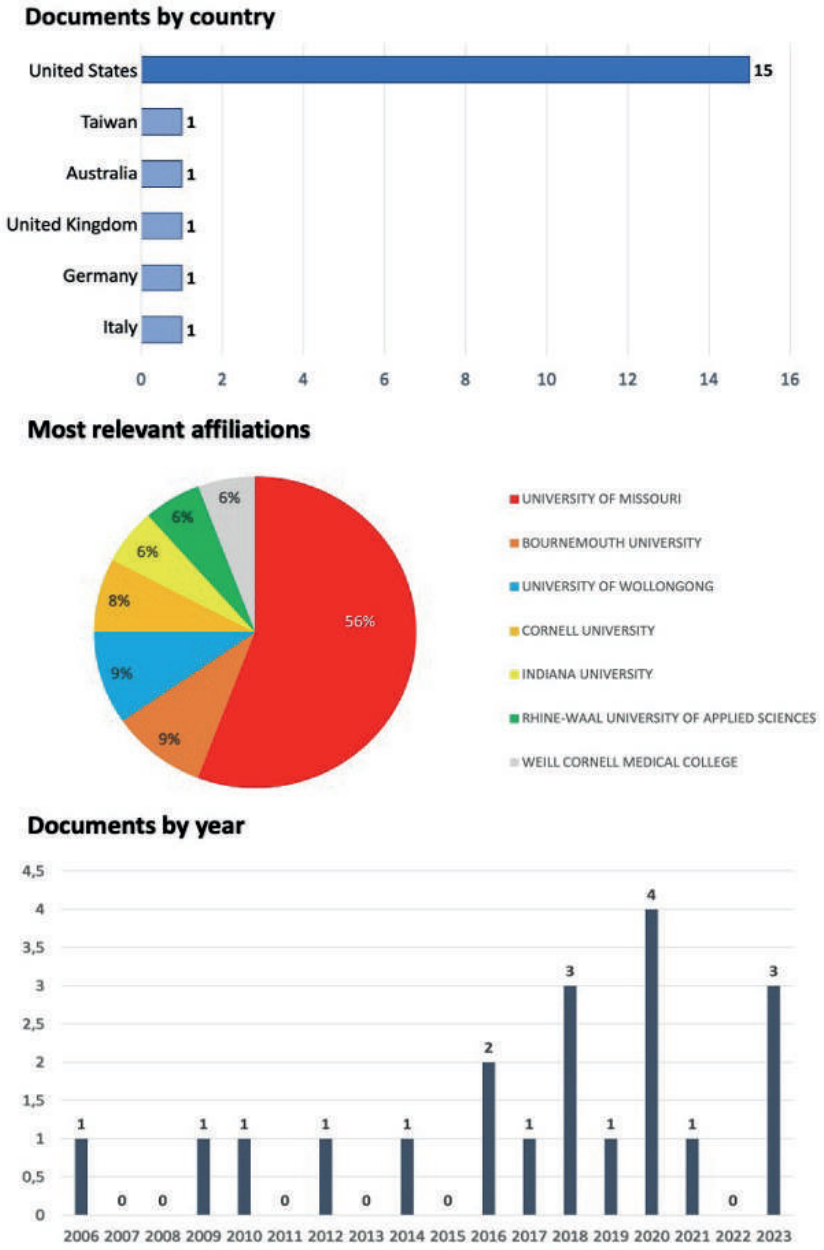


Figure 2. Scientific production by country, author affiliation, and year of publication. Authors' elaboration based on Scopus.com (2024).

4.2. *Qualitative conceptual analysis*

The analysis reveals the absence of a consolidated framework for evaluating the impact of digital technologies on the sustainability and performance of LTC organizations. The most significant contributions stem from studies led by Gregory L. Alexander (University of Missouri), which introduced the "IT sophistication" model to assess the effectiveness of digitalization through three dimensions: IT capability, IT utilization, and integration. These studies demonstrate a positive but weak correlation between digitalization and quality of care, highlighting the need for further exploration of contextual factors, such as facility size, ownership type, and organizational culture.

Care quality emerges as the primary variable for evaluating LTC performance, often extended to include the well–being of patients and families. Measurement relies on quality indicators derived from national standards or literature, emphasizing collaboration between LTC organizations and central healthcare institutions. However, economic and organizational sustainability remains underexplored, with limited studies addressing their relationship to digitalization or LTC performance.

While some articles focus on specific digital technologies (e.g., telemedicine), evaluations of overall digitalization levels and their correlation with organizational outcomes are scarce. Sustainability, when discussed, is primarily measured through cost–containment policies or business performance models, indicating the need for standardized metrics and collaboration with public administrations for data accessibility.

The findings underscore the critical need for a unified evaluation framework that integrates quality, digitalization, and sustainability, supported by national–level data systems to enable comprehensive and longitudinal analyses.

5. Conclusions

While several public initiatives, such as the NRRP's Mission 6, mark advancements in promoting digitalization, their effectiveness is hindered by the absence of a comprehensive system for measuring their organizational and performance impacts. This research identifies the key variables necessary for such a system: the degree of digitalization — structured into IT capability, IT utilization, and integration — and quality, evaluated across care outcomes and stakeholder well–being. Measurement tools, such as structured interviews and statistical analyses, are proposed to examine the interplay between these variables.

By implementing a robust evaluation framework, LTC organizations can overcome uncertainties surrounding digital technology adoption, optimizing investments and addressing LTC sector challenges. Despite limitations, including reliance on a single database and qualitative methods, this study provides valuable foundations for future research and policy planning. Further studies could refine the proposed system, explore additional variables, and develop context–specific indicators to deepen understanding of digitalization's impact on the sustainability and performance of Long–Term Care organizations.

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A COMMUNICATION ETIQUETTE IN THE AGE OF ARTIFICIAL INTELLIGENCE

ALESSIA DORIGONI[1]

1. Objectives

This study investigates how knowledge of a message's source (friend, florist, or AI) influences its perceived creativity, authenticity, and respect in emotionally significant contexts. Specifically, it explores:

1. The extent to which AI–generated messages differ in perceived emotional depth compared to human–authored messages.
2. How perceptions change before and after participants discover the source.
3. The moderating role of emotional scenarios (positive vs. negative events) in shaping these perceptions.

Keywords: artificial intelligence, emotional proximity, symbolic contamination, authenticity, creativity, respect.

2. Theoretical background

Communication, especially in emotional contexts, relies on symbolic effort, effortful creation, and emotional investment (Rozin & Nemeroff, 1994). Symbolic contamination suggests that personal involvement imbues messages with added value, while conversational maxims (Grice, 1975) emphasize quality, relevance, and emotional depth.

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Artificial Intelligence, despite its technical capabilities, lacks the personal, symbolic weight inherent in human–generated communication. Its increasing role as a cultural agent (Brinkmann *et al.*, 2023) raises concerns about its ability to replace emotional effort and authenticity in meaningful exchanges. This study introduces the emotional proximity scale, positioning AI as the most emotionally distant source relative to a friend or intermediary.

3. Methodology

Study Design

Two between–subjects experiments were conducted:

Study 1

– Participants: 120 participants evaluated a printed note accompanying flowers in two scenarios:\n–Positive scenario: Birth of a child. \n–Negative scenario: Terminal illness. \n–Procedure: The message content was identical, but participants were later told the source: \n 1. Friend, 2. Florist (intermediary), 3. AI (ChatGPT). \n–Measures: Perceptions of creativity, authenticity, and respect (5–point Likert scale), before and after learning the source.

Study 2

– Participants: 120 participants ranked four sources — Friend, Florist, Google, AI — on creativity, authenticity, and respect.
– Scenarios: Same as Study 1 (positive and negative events). Moderators.
– Participants' personal connection to AI was assessed as a moderating factor.

4. Findings

Study 1

- Intra–group Analysis (H1.1): Creativity, authenticity, and respect ratings declined significantly when the source was revealed as AI or the florist, particularly in negative scenarios.
- Inter–group Analysis (H1.2): The drop (delta) was most pronounced for AI, highlighting its perceived lack of emotional involvement. Participants with stronger connections to AI showed smaller declines.

Study 2

- Ranking Results (H2): The following pattern emerged:\n 1. Friend: Highest scores for creativity, authenticity, and respect.\n 2. Florist: Moderate scores.\n 3. Google and AI: Lowest, with AI ranked least favorably overall.
- Negative scenarios amplified perceptions of inauthenticity for AI–generated messages.

5. Conclusions

The study reveals a symbolic gap between AI–generated and human–authored messages. While AI excels in formal communication, it lacks the emotional resonance and authenticity that human effort conveys.

Practical implications emphasize balancing AI efficiency with emotional depth, particularly in sensitive contexts. For AI to gain acceptance, it must evolve to better replicate human symbolic and emotional investment.

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ATTRIBUTING RESPONSIBILITY IN AI–ASSISTED SUPPLY CHAIN MANAGEMENT DECISIONS: THE IMPACT OF OUTCOMES ON LOCUS OF CONTROL

ALESSIA DORIGONI[1]

1. Objective

This study examines how decision outcomes (success vs. failure) influence the attribution of responsibility between AI systems and human managers in supply chain management. It explores whether AI is perceived as a neutral tool or as an autonomous agent and how these perceptions impact managerial accountability, trust, and the locus of control. Additionally, the study investigates the role of personal attitudes toward AI in moderating responsibility attributions.

Keywords: AI responsibility, decision–making, locus of control, accountability, AI trust.

2. Theoretical background

As AI becomes integral to decision–making processes, questions surrounding responsibility attribution have emerged. The locus of control (Spector, 1982) refers to individuals' beliefs about whether outcomes are controlled by internal factors (e.g., human decisions) or external factors (e.g., technology). AI is often viewed as a neutral tool in successful decisions but blamed less in failures, shifting accountability to human managers. Outcome bias (Kahneman & Miller, 1986) exacerbates this asymmetry, where individuals judge decisions based on their

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outcomes rather than the decision process itself. Personal attitudes toward AI, including familiarity and connection, further influence perceptions of accountability and trust (Shank *et al.*, 2019).

3. Methodology

A between–subjects experimental design was used with 160 participants assigned to one of two conditions: positive outcome or negative outcome.

Procedure

Participants read a scenario where a supply chain manager follows AI–generated forecasts:

- Positive outcome: Accurate AI predictions lead to increased profits and operational efficiency.
- Negative outcome: Inaccurate AI predictions result in overproduction and financial losses.

Measures

Participants rated responsibility on a 5–point Likert scale for:

- AI's responsibility for the outcome.
- The manager's responsibility for the outcome.
- The decision's importance in using AI.

The belief that the manager's independent decision would have changed the outcome.

Attitudes toward AI (e.g., usage, connection) and demographics were also collected.

4. Findings

Responsibility Attribution: Success was attributed more to AI ($\beta = 0.75$, $p < 0.001$), while failures shifted blame to the manager ($\beta = -0.27$, $p = 0.059$).

- AI Connection: Participants with stronger personal connections to AI were less likely to blame the manager in failures ($\beta = -0.22$, $p = 0.049$).
- Decision Importance: Participants consistently viewed the manager's decision to use AI as critical, regardless of outcome ($p > 0.05$).
- Counterfactual Thinking: In failures, participants believed the manager's independent decision would have led to better outcomes ($\beta = -0.36$, $p = 0.007$).

5. Conclusion

This study highlights an outcome–based asymmetry in responsibility attribution for AI–assisted decisions: success reinforces trust in AI, while failure increases managerial accountability. Personal attitudes toward AI moderate these perceptions, with stronger connections reducing blame on managers.

Practical Implications: Organizations must develop clear accountability protocols for AI systems, balancing human oversight and technological insights. Educational programs should equip future managers with AI literacy and critical thinking skills to navigate responsibility and trust in AI–driven decisions.

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HOW EMOTIONAL FRAMING SHAPES ATTENTION, EMOTIONS, AND DONATION INTENTIONS: INSIGHTS FROM AN EYE–TRACKING AND FACIAL EXPRESSION ANALYSIS OF CHARITY ADS

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1. Objectives

This study investigates the \ framing on attention allocation, emotional responses, and donation intentions in the context of charity advertisements. Specifically, it explores the differences between negative emotional framing (Medici Senza Frontiere ad) and positive emotional framing (Save the Children ad) using eye–tracking and facial expression analysis. The objective is to provide novel insights into how emotional appeals influence visual attention, emotional engagement, and prosocial behavior such as donations.

Keywords: emotional framing, attention allocation, emotional valence, donation intentions, eye–tracking, facial expression analysis.

2. Theoretical background

Emotional framing plays a key role in shaping individuals' decision–making processes. Framing theory (Kahneman & Tversky, 1984) posits that presenting information in terms of potential gains (positive framing) or losses (negative framing) influences behavior and emotions. In charity advertising, negative framing, which emphasizes distress or urgency, tends to elicit stronger empathetic distress and is more effective

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in prompting donations (Erlandsson, Nilsson, & Västfjäll, 2018). Conversely, positive framing emphasizes hope and success, fostering positive emotions but often reducing the urgency to act (Batson *et al.*, 1991).

The Limited Capacity Model of Motivated Mediated Message Processing (LC4MP; Lang, 2009) suggests that emotional stimuli capture cognitive resources, influencing attention allocation. Eye–tracking metrics such as fixation duration and saccades provide objective measures of attention, while tools like the Facial Action Coding System (FACS) capture real–time emotional responses (Ekman & Friesen, 1978).

Previous research highlights that negatively framed ads, especially when paired with congruent negative imagery, trigger stronger emotional engagement (Chang & Lee, 2009). Emotional valence — the degree to which an emotion is positive or negative — is critical in understanding the effectiveness of such appeals (Lang, Bradley, & Cuthbert, 1990).

3. Methodology

Two studies were conducted to assess attention and emotional responses to charity ads.

Study 1: Attention Allocation

Participants: 48 participants (Prolific, informed consent obtained).

Procedure: Two 30–second charity ads (Medici Senza Frontiere: negative framing; Save the Children: positive framing) were presented randomly after a 3–minute YouTube video. A distraction area was placed on the right side of the screen to create a naturalistic environment.

Measurement: Eye–tracking technology recorded gaze duration, fixations, and saccades to calculate an Attention Index (AI).

Analysis: AI values were normalized (0–100 scale) to compare attention across the two ads.

Study 2: Emotional Responses and Donation Intentions

Participants: 102 participants (Prolific, informed consent obtained).

Procedure: The same two ads were presented in random order without distraction.

Measurement: Facial expressions were analyzed using automated FACS software to measure emotional valence (positive/negative) and intensity. Donation intentions were self–reported using a 5–point Likert scale.

4. Findings

Study 1: Attention Allocation

Participants exhibited similar attention levels to both ads (AI for Medici Senza Frontiere: 49.46; Save the Children: 48.84; $p = 0.72$). This finding ruled out significant differences in visual attention, ensuring that emotional framing, not attentional bias, influenced subsequent emotional and behavioral responses.

Study 2: Emotional Responses and Donation Intentions

Emotional Valence: The Medici Senza Frontiere ad elicited significantly more negative emotions (mean valence: –2.84) compared to the Save the Children ad (–1.68; $t(75) = -2.01$, $p = 0.047$).

Donation Intentions: 50% of participants preferred donating to Medici Senza Frontiere, compared to 24% for Save the Children ($\chi 2(4) = 68.21$, $p < .001$). This indicates that stronger negative emotional responses were associated with greater donation intentions.

5. Conclusion

This research demonstrates the powerful role of emotional framing in shaping attention, emotions, and prosocial behaviors such as donations. Negative framing (Medici Senza Frontiere) elicited stronger negative emotions and motivated higher donation intentions compared to positive framing (Save the Children). While positive framing may strengthen long–term organizational perception, it is less effective in driving immediate action.

These findings have significant practical implications for charity campaigns. To balance ethical concerns and avoid donor fatigue, organizations should combine short–term negative appeals with follow–up communications that emphasize positive outcomes. Future research should explore cultural factors, empathy, and repeated ad exposure to assess the long–term impact of framing strategies.

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THE IMPACT OF ANTHROPOMORFISM ON PERCEIVED RISK: THE CASE OF BELLABOT SERVICE ROBOT

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1. Objectives

Robot–consumer interaction has become an emerging topic in research (Kim *et al.*, 2019; Sheng *et al.*, 2024) with one of the main concerns being how the level of anthropomorphism of the robot influences whether or not the robot is accepted by the customer (Sheng *et al.*, 2024). Anthropomorphism is considered a key element that enables robots to perform service tasks (in restaurants, hotels and airports, etc.) (Zhang *et al.*, 2022). However, despite the importance of human–robot interaction in the service experience, only a few studies have applied this interaction in the area of tourism and hospitality (Jia *et al.*, 2021).

Unlike industrial robots, service robots (SR) have particular characteristics that allow them to perform their tasks while being and interacting with customers (Qiu *et al.*, 2020). They are perceived as novelty and allow businesses and tourists to offer memorable experiences (Seyitoglu and Ivanov, 2022). When robots are anthropomorphized, consumers tend to evaluate the robot more favorably (Aubel *et al.*, 2022). Anthropomorphism drives customer trust, intention to use, comfort, and enjoyment (Van Pinxteren *et al.*, 2019). Also, human attributes to a robot can make people prefer to spend more time with robots (Qiu *et al.*, 2020). A human voice encourages customers to continue using machines and they are even more tolerant to service failures caused by robots with a more human voice (Fan *et al.*, 2016).

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The impact of anthropomorphism on the perceived risk of a robot has been examined by different authors in the literature. However, the results to date prove contradictory. Although humanoid robots are increasingly adapted in different business environments, the dynamic effects of A and functional perceptions of SR on consumer responses remain unclear (So *et al.*, 2023). There is no global consensus on the circumstances under which A promotes interaction with robots (Roesler *et al.*, 2021). Because of this, it is necessary to use more types of robots in future research and to study anthroporphism in a more in–depth and nuanced manner (Jia *et al.*, 2021). In order to contribute to the growing body of literature on service robots and anthropomorphism, this paper aims to examine the impact of a medium level of anthropomorphism on the consumer's perceived risk towards a service robot in a restaurant context. It also aims to examine the role of consumer empathy in this relationship.

Keywords: service robots, restaurants, anthropomorphism, consumer empathy, perceived risk.

2. Theoretical background

Drawing from Anthropomorphism Theory (Kim *et al.*, 2011; 2019) anthropomorphism refers to the real or imagined behavior of non–human agents with human–like characteristics, motivations, intentions, or emotions, influencing how they interact with humans. Consumers assign human characteristics or traits to non–human SR, making robots similar to humans in appearance or behavior (Yang *et al.*, 2024). A robot that behaves unintuitively, unpredictably, unsure, clumsy, or inefficient is not pleasant to be around (Williams, 2016). In fact, Kim and McGill (2011) assert that risk perceptions are influenced by anthropomorphism, so the robot's anthropomorphism should influence the client's perception of risk and subsequent behavioral response (Aubel *et al.*, 2022).

Specifically, the consumer's empathy with the SR as a function of its level of anthropomorphism may cause them to perceive as less negative co–sequences in the failures that the robot might have.

For example, Sheng *et al*. (2024) indicated that for a robot with a low level of anthropomorphism, customer complaints and dissatisfaction become lower as impatience increases. With a robot with a high level of anthropomorphism, consumer empathy generates more negative responses and a lower level of satisfaction.

Therefore, we propose:

H1. A service robot with a medium level of anthropomorphism positivily influences in the risk perceived by the consumer.
H2. Consumer empathy moderates the relationship between a medium level of anthropomorphism and perceived risk.

3. Methodology

To examine the impact of anthropomorphism on perceived risk in a service robotics context, Bellabot, a robot with a medium level of anthropomorphism, was chosen. This robot has become popular in recent years due to its applicability in different restaurants in Spain. This study is still at an early stage. It is expected that the data for this study will be collected online through a questionnaire distributed to customers who have visited a restaurant establishment with a Bellabot robot. To test the research hypotheses PLS–SEM is used through a structural equation modeling approach.

5. Findings

We hope that the results of this study will contribute to the knowledge of the literature on service robots and help managers make decisions to adopt these technologies in order to improve service experience. The findings will determine whether the level of anthropomorphism of an SR influences the perception of risk toward that SR and to what extent the degree of empathy shown by the consumer moderates the relationship between anthropomorphism and perceived risk.

6. Conclusions

Although the level of anthropomorphism of a robot is considered a key variable in the perception and intention of use by customers, there are still many questions to be solved in this aspect. In particular, how does the level of anthropomorphism of the robot influence the risk perceived by the customer. Robot developers and restaurant managers must take into account the anthropomorphic design of the robot in order to increase the level of empathy with the robot and consequently with the degree of customer satisfaction with the service.

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BIBLIOMETRIC ANALYSIS OF THE RELATIONSHIP BETWEEN SUSTAINABLE HUMAN RESOURCE MANAGEMENT S–(HRM) AND SUSTAINABLE LEADERSHIP S–(LDP): SUSTAINABLE ORGANIZATIONS

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1. Objectives

The main objective of this bibliometric study is to relate decentralised and disseminated research on S–(HRM) management and sustainable leadership. In addition, we explored, contextualised and visualised the paradigms that are trending in research on the proposed topic, analysing 406 articles from the Web of Science (WoS) database, to arrive at the final sample of 169 scientific articles. The research team used exclusion and inclusion criteria to the first database (406 documents) under the PRISMA flow approach.) Subsequently, the analysis for the visualisation of the final graphs was performed using keywords and co–occurrence analysis in the Vosviewer software.

Keywords: sustainable performance, S–(HRM), S–(LDP), sustainability strategy, impacts, SDGs, Agenda–2030.

2. Theoretical background

Guerci (2016) argues that sustainable resources not only bring a competitive advantage to the company but are linked to the improvement of society and community well–being. Studies have shown that

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S–(HRM) has a positive impact on company management, leading to improved economic, social and environmental performance (Kramar, 2022).

Therefore, S–(HRM) orients the organisation's strategic focus towards preservation over time. From the perspective of Renwick *et al.* (2013), sustainable human resource management refers to the use and setting of organisational goals focused on sustainability. On the other hand, S–(HRM) management practices comprise the aspects in the performance management system of both the staff and the organisation, starting with responsible and fair recruitment, training and development, reward and compensation system.

The term sustainable leadership has been established as a transversal and strategic practice adaptable to corporate culture and strategy Martínez *et al.* (2016), laying its foundations in fair, coherent, rational and responsible practices. Therefore, as Ruíz (2021) argues in his research, traditional leadership is no longer effective today if the organisation really aspires to a sustainable strategy, being essential a more responsible, inclusive and transformative corporate governance (Ruíz, 2021).

Hernández *et al.* (2023) in their research argues that sustainable leadership, which transcends the economic, social and environmental spheres, from responsible behaviour favours the well–being of the community, the environment and workers, establishing lasting and stable relationships over time. Sustainable leadership becomes a catalyst for building a prosperous and harmonious future (Hernández, 2023).

This research is based on different parts, starting with the selection of Web of Science as the database for the extraction of the 169 articles that constituted the final sample. As a second step, the PRISMA approach was used for data selection. As a third step, the statistical programme Vosviewer version 1.6.18 was used for the quantitative analysis.

> The following search terms were used to extract the raw material: Sustainable Human Resource Managers* or leadership Sustainabl* and the first filter used was a search by title and topic.

3. Findings

From the results of the co–occurrence and co–word analysis it appears that S–(HRM) and S–(LDP) management are strongly connected to sustainable development, innovation, impact, sustainable results, sustainable performance and strategic sustainability. In turn, our bibliometric study establishes a direct connection between heterogeneous knowledge clustering and sustainable leadership. S–(HRM) connects directly to the Sustainable Development Goals, sustainable HR practices, artificial intelligence and sustainability reporting.

From the Vosviewer graphs it was visualised how S–LDP and S–HRM are the key drivers of sustainable business strategy, as the former articulates (Coherence) — and the latter connects (Cohesion) (Yanini, 2023). Without adequate coherence and cohesion in strategy, business management will not allow for proper decision–making and fair management of resources, especially time, money and people. In turn, it is evident how the Triple Button Line generates a network of connection with the proposed terms and with education for sustainability.

From the results, this research shows that S–(HRM) guides the strategic approach of the organisation for its preservation over time, providing tangible and intangible tools for those responsible for each process to make consistent, necessary, fair and rational decisions. This is how sustainable human resource management practices are framed in an important growth, for companies to be sustainable and competitive in the market (Guerci *et al.*, 2016).

By adequately realising the above aspects, employees are motivated to engage in practices that lead to sustainable development of the organisation (Longoni *et al.*, 2018). These sustainable practices will serve the organisation to obtain attractive impacts with improved performance in economic, social and environmental aspects.

Engaging in these sustainable activities through S–(HRM), enables employees to respond creatively to problem–solving and make fair and responsible decisions, and provides an opportunity for sustainable leadership.

To obtain accurate S–(LDP) results, companies must have professionals trained in sustainability issues with the ability to think strategically and forward–looking, oriented towards decision–making to generate shared value for stakeholders, where sustainability challenges are transformed into opportunities for the business (Echeverry and Ruiz, 2020).

5. Conclusions

This research is considered highly relevant and pioneering in linking two terms of great importance for the understanding of sustainable business practices. While it is true that there is evidence from several bibliometric analyses in the field of S–(HRM) management, there is no evidence implying a relationship between S–(HRM) management and S–(LDP) management. The closest to the relationship proposed in this research is a paper by the authors (Macini, Sengupta, Moin and Caldana, (2023) who make a systematic review between spiritual leadership and sustainable human resource management. This line of research proposed in this study is still in its infancy, as shown by the heat map of the analysis, where sustainable clusters become highly relevant from 2019 onwards. Therefore, the articulation of terminologies is necessary for a proper understanding of business sustainability and its impacts. This is how, by conceptualising different fields of study in a unique relationship, we help the scientific development of new academic strands.

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THE INFLUENCE OF DIGITAL TRANSFORMATION STRATEGY ON INNOVATION CAPABILITIES IN MANUFACTURING SPANISH FIRM THE INCIDENCE OF SUSTAINABLE LEADERSHIP AND SUSTAINABLE HUMAN RESOURCE MANAGEMENT ON THE SUSTAINABLE PERFORMANCE OF COMPANIES IN THE FIRST SECTOR

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1. Objectives

The main objective of this research focuses on analysing how the incidence of sustainable leadership generates positive impacts on the organisation's sustainable performance. From the specific level: (a) To de–termine the impact of the aspect of Sustainable Human Resource Management S–(HRM) on sustainable leadership for efficiency in sustainable practices; (b) To contextualise the impact of sustainable leadership on economic, social and environmental aspects; (C) To argue the impact of Sustainable Leadership on the Sustainable and Efficient Performance of the organisation; and (D) To argue the impact of Sustainable Leadership on the Sustainable and Efficient Performance of the organisation.

To this end, we hypothesise: Sustainable leadership has a positive impact on the sustainable performance of the organisation. And, at a specific level: (a) Sustainable Human Resource Management has a positive im–pact on sustainable leadership for efficiency in sustainable practices. (b) Sustainable leadership has a positive impact on economic,

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social and environmental aspects. (C) Sustainable Leadership has a positive impact on the organisation's Sustainable and Efficient Performance.

Keywords: S–(HRM), sustainable leadrship, sustainable performance, triple botton, sustainable HRM practices.

2. Theoretical background

From the literature studied, a transversal concept of Sustainable Performance is generated by its relationship with the conventional Triple Bottom Line theory (Kouaib *et al.*, 2020) which seeks a balance between the economic, social and environmental dimensions in the strategic components of the company, in order to seek the durability of the organisation over time (Lopes *et al.*, 2023). This leads to determining sustainable practices that generate benefits, not only on the economic side, but also in the environmental and social management of both the company and the environment and its stakeholders, through a balance between what is fair, what is necessary and what is realistic.

Therefore, Sustainable Performance in companies is configured from the ability of an organisation to maintain and constantly grow its profitability over time, including the efficient economic management of costs and the intelligent allocation of finances to budgets Lo *et al.*, (2021), from the economic aspect; in turn, the implementation of environmentally friendly practices, such as the efficient use of resources, the use of renewable energies, the reduction of waste allow the proper conservation of ecosystems Achmad *et al.* (2023), from the environmental aspect; in the same order, caring for the impact of the environment with responsible and fair actions, acting honestly when hiring people, paying attention to the welfare of employees and the commitment to generate an inclusive and participatory development in local communities Achmad *et al.* (2023), are actions that the company must generate from the social aspect.

By realising this integration into the company's operations, the organisation can achieve sustainable and lasting growth over time, to

ensure competitive advantage and generate empowering, inclusive and sustainable economic development and actions (Junaid *et al.*, 2023).

On the other hand, the theory of Sustainable Leadership interacts with the aforementioned aspects of purposeful decision making and positive impact. This theory is linked to better knowledge management, sustainable practices, and innovation, contributing to a whole in sustainable performance Iqbal *et al.* (2021).

3. Methodology

The first step was to review the literature in order to adjust the measurement instruments to the subject matter of this research and thus generate a scientific, truthful and argumentative result. Subsequently, the questionnaire was developed with high reliability and validation indexes in reference to the selected scales with questions referring to economic incentives, social perceptions, HRM management, environmental practices, leadership, sustainable performance, among others. A quantitative and empirical type of research was carried out, in relation to factor analysis and exploratory analysis. The research model was analysed using the Partial Least Squares Structural Equation Model (PLSSEM).

4. Findings

We have decided to identify and contextualise the role of Sustainable Leadership and Sustainable Human Resource Management in influencing Sustainable Performance and business results in its three economic, social and environmental dimensions, especially in companies in the first sector.

The findings reveal significant positive relationships between sustainable leadership and Sustainable Human Resource Management. In addition, the direct impact of Sustainable Leadership on Sustainable Performance and the mediation of S(HRM) on economic, social and environmental aspects.

This knowledge contributes to the sustainability knowledge of companies in the first sector by demonstrating that S(HRM) oriented sustainable leadership substantially improves sustainable performance and positive impacts in all three dimensions. In practice, this research offers valuable insights for business and academia by providing responsible, truthful and verified knowledge for possible policy making in the development of strategies that foster sustainable development and good sustainable practices in first sector companies.

Achieving this alignment between Sustainable Performance, Sustainable Leadership and S(HRM) guides sustainable human resource practices to shape business strategies that are responsive to the environment, the surroundings and the stewardship of resources and corporate funds.

In turn, we find a great need to improve existing knowledge and analyse how top management involvement can ensure sustainable HR practices in order to achieve a more responsible, orderly and focused market position from purposeful decision making.

Our research also seeks to highlight the lack or absence of studies of this type, so that the expected results can be further expanded in cross-cutting, empirical and theoretical studies that help understanding, applicability and appropriate sustainable management.

5. Conclusions

This study is considered original, as it is one of the few to examine the relationship of Sustainable Leadership, Sustainable Performance and S(HRM) and its link to environmental, economic and social aspects.

This research strengthens and accentuates the impact of Sustainable Leadership for an articulation of purposeful sustainable performance, especially in companies in the first sector. Our findings show that S(HRM) has positioned itself as the main architect of people management today in companies that are orienting their strategy towards sustainable models. Furthermore, it is conceptualised and demonstrated that the articulation between Sustainable Leadership and S(HRM) is positive for sustainable performance.

While there is evidence in the literature that leadership strategies impact the level of sustainable performance in an organisation and can support or hinder the implementation of sustainable actions, little is known about these practices, as it is an emerging field of study; hence, it is an opportunity to expand a new line of research, accentuating solid foundations for integrating research efforts in an organised and scientific manner that will help the academic community develop a sustainable research environment.

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FINANCIAL STABILITY IN THE INSURANCE SECTOR

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Abstract

The global pandemic COVID–19 had significant repercussions on numerous industries worldwide. We examine the side effects of the COVID–19 pandemic on the operational and financial outcomes of insurance firms operating in Albania. The selected sample consists of twelve insurance firms of the Albanian insurance market for nine years, from 2013 to 2021. This research is based on secondary data from the financial statements of both life and non–life insurance companies and investigates how performance, as the most important indicator of financial stability, is affected by different factors. Our findings show that the COVID–19 pandemic, the capital ratio, and the profitability significantly influence insurance firms' Return on Assets (ROA).

Keywords: Covid–19, insurance industry, performance.

1. Introduction

This study assesses the factors affecting the financial stability of insurance companies doing business in Albania. Performance is considered one of the most crucial deciding elements. In Albania, the insurance industry plays a vital part in promoting economic expansion and supporting the financial system. "The insurance industry must manage difficult market conditions and continue to operate while simultaneously

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safeguarding policyholders and employees" (EIOPA, 2020). Because they operate as middlemen that enable the transfer of risk through diversification, insurance markets, and financial institutions have a big influence on people's lives.

In Albania, the insurance industry is still new. No insurance businesses were operating before 1991. Nevertheless, there are currently twelve different life and non–life insurance firms. The Albanian Financial Supervisory Authority (AFSA) regulates the insurance sector in Albania, following several laws and regulations. To improve and preserve financial stability, the AFSA carries out EU directives and rules established by the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA). Risk and performance issues in the insurance industry have been the subject of much research throughout the last ten years. It is crucial to look at the economic sustainability and possible hazards of these businesses in Albania during the last 10 years. Numerous factors influencing the operational effectiveness of non–life insurance firms have been thoroughly examined in earlier scholarly studies. In order to provide a thorough picture of the sector's overall financial stability, this study also includes life insurance businesses.

Using Return on Assets (ROA), this study examines how well businesses perform within the industrial sector. We try to have a better understanding of these firms' performance by looking at key financial metrics including Return on Assets (ROA), liquidity, the effect of COVID–19, the capital and equity ratios, profitability, leverage, and the current assets ratio. To investigate the statistical importance of certain variables over nine years (2013–2021), including non–life and life insurance entities, two hypotheses have been developed.

The empirical findings show that COVID 19 followed and the lockdown restrictions harmed the insurance industry and affected its performance, which is concerning given its crucial role in ensuring financial stability.

The limitations of this study include a lack of data in the financial statement of the insurance companies.

2. Literature review

2.1. Background on the insurance sector

> The first evidence of Albania's insurance sector development is found before World War II. However, following the change of the communist regime in the 90s the flourishing of the insurance sector marked its beginning. In a decade of privatization, buying and selling, old investors leaving the country, and new ones exploring opportunities, regulators setting the pace for business activity, we find today the insurance sector hosting both life and non–life insurances and offering a variety of products to the market. According to (Sherifi, 2015), the most significant changes in the industry were noticed after the market liberalization and regulation, the real estate development, and the introduction of new insurance products, which consequently attracted more capital.

Of Albania's twelve insurance firms, six provide non–life insurance, two provide life insurance, and two, INSIG and Albsig, provide both non–life and life insurance. Four insurance firms operate outside of Albania in different foreign countries, and one business has a legitimate authorization to offer reinsurance services. Madani *et al.* (2014) state that ALBSIG only functions in Macedonia, but INSIG, SIGMA, and SIGAL are active in both Kosovo and Macedonia. The Financial Supervisory Authority is the regulatory and supervisory body in charge of the insurance financial markets. Its other goal is to protect customers and maintain stability and openness in the insurance industry.

With a market share of 52.74% in 2021, the Sigal Uniqa Group Austria was the leading company in the life insurance sector, according to the AFSA study (see Figure 1). The percentages of Sicred sha at 19.54%, Insig Life sha at 15.25%, and Albsig Life sha at 12.47% are displayed in the following figures. Due to its new entry into the life insurance market, Albsig Life Sha only has a small market share as of 2019. Nevertheless, it is clear from comparing Sicred with Insig Life that Sicred is expanding quickly in the market. With a 25.6% market share, non–life firms are the main competitor of Sigal Uniqa Group Austria in 2021, according to Figure 2. In terms of percentage, Albsig

has the second–highest (18.69%). With 13.02%, Sigma Interalbanian Viena Insurance Group is in third place, not far behind. Eurosig achieves a similar 13.01% percentage as well. Among market players, Intersig Viena Insurance Group has the largest share (9.8%). In contrast, Insig sha has the least percentage (9.62%), followed by Ansig sha (6.41%) and Atlatik sha (6.55%).

The Return on Assets (ROA) for the last five years is shown graphically in Figure 2. The year 2020, when the pandemic was prevalent, shows a higher ratio, but the real effect is seen in 2021 when insurance companies' profits drops. Even though the epidemic started in March 2020, its effects persisted throughout 2021. All firms had a decrease in net income during this time.

Figure 2 shows that the gross written premium volume in 2020 was ALL 16.6 billion, which is a 5.73% drop from 2019. Because certain combined life insurance contracts were not resigned, life companies' gross written premium revenue fell. Since the COVID–19 pandemic made it illegal to transport motor vehicles over international borders, non–life firms saw a decline in revenue from their mandatory auto insurance, Green Card, and Border Insurance portfolios. The total amount of gross written premiums produced in 2021 was ALL 19.3 billion, a 16% increase over 2020.Due primarily to the number of debtor life insurance contracts, which accounted for roughly 82.23% of the overall rise in life insurance premiums, gross written premiums for life companies grew by 22.74% when compared to 2020. The mandatory motor vehicle insurance portfolio contributed to a 15.5% rise in gross written premiums for non–life businesses compared to 2020, or around 53.8% of the overall increase in non–life insurance premiums.

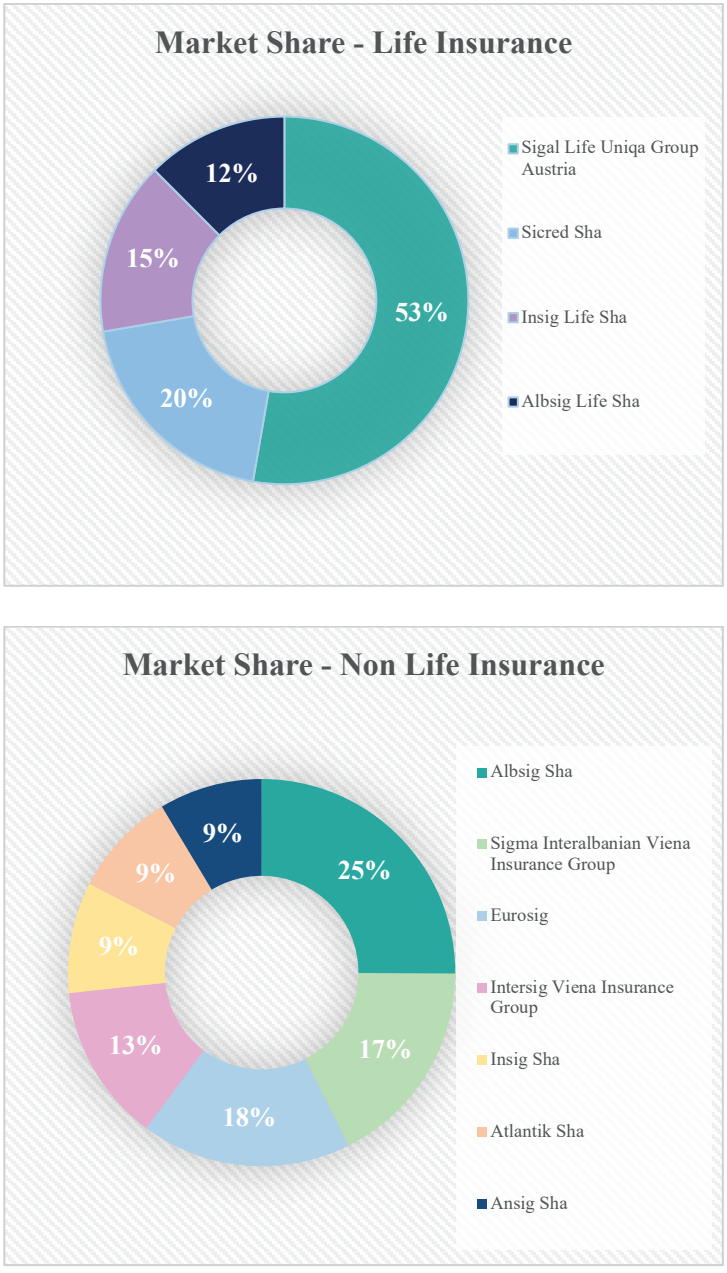


Figure 1. Market share – Life insurance and Non–Life Insurance. Source: Albanian Financial Supervisory Authority, 2021.

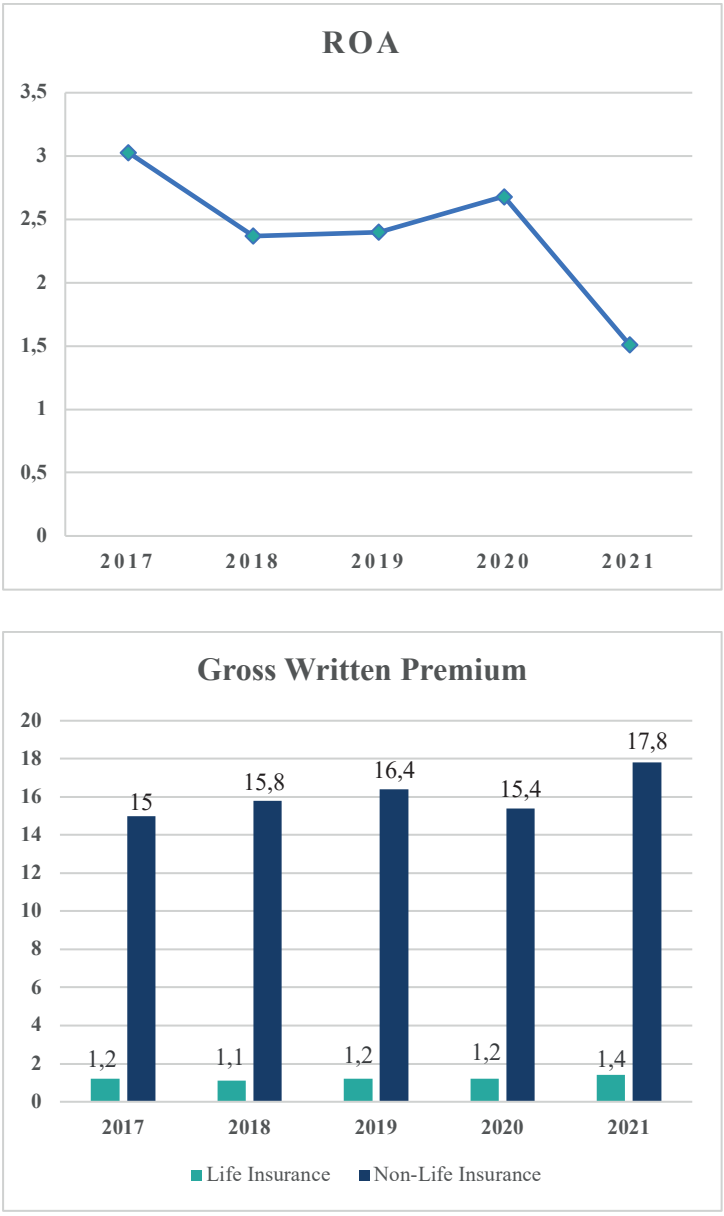


Figure 2. ROA and Gross Written Premiums. Source: Albanian Financial Supervisory Authority, 2021

2.2. Measuring the performance and risk

The performance of insurance companies significantly boosts overall economic growth in addition to having a beneficial impact on the market value of the businesses. It is essential to evaluate the development of this industry and to identify the common problems that this sector faces. This contributes to the interpretation and analysis of data that managers may use to assess performance levels and offer insights into strengths and shortcomings. Three important aspects define the performance of the insurance companies as seen in the literature: profitability, the level of receivables and their efficient management, and the risk that they are willing to undertake.

Burca and Batrinca (2014) state that profitability draws in investors, improves solvency, and therefore increases consumer confidence. All businesses' financial accounts demonstrate the importance of financial data. By depending on the thorough financial data shown in these financial statements, investors from both established and emerging markets make a variety of investments, which in turn promote economic growth. "Therefore, achieving profit is one of the goals of the management of insurance companies as a fundamental necessity for conducting any insurance business" (Lee, 2014).

The financial success of a business depends on many factors, and it is imperative to use economic indicators and assess how well organizational objectives are being accomplished. These metrics are used to evaluate the performance of the business, help improve financial skills and find investment possibilities in a variety of industries. By successfully satisfying stakeholder needs, these metrics support the business's success (Mansur, 2003). As such to evaluate the performance of insurance companies, the Return on Assets (ROA) in combination with various independent variables is tested.

According to Tauringana and Afrifa (2013), insurance firms may refuse claims if their receivables are not well handled. This implies that management should give priority to collecting unpaid debts. Receivables have a significant impact on working capital management and a company's overall profitability. It should be mentioned that outside

variables pertaining to the company might frequently have a significant impact on receivables collection.

In addition to the risk associated with the execution of various financial transactions, insurance firms also face the risk of economic interactions with other businesses and individuals, as well as with their policyholders. Probabilities, capital losses, financial stability, and income decrease are characteristics of this risk. (Hausler, 2004; Neroniya *et al.*, 2018). Insurance businesses use Solvency II standards and Z–scores to assess risk. The rules of Solvency II do not apply to the Albanian market. As a result, the data from the financial statements only includes the solvency standards set out by the Albanian law pertaining to insurance firms. The Solvency Margin as established by law was specifically mentioned in the financial accounts of insurance firm

The impact of COVID–19 on insurance businesses in Belgium, France, Germany, Italy, and Poland was examined by Pulawska (2021). A fixed effects model was used to analyze performance and risk across a ten–year period using quarterly data prior to and during the pandemic. For every country examined, the study found a strong and positive correlation between life insurance and both short– and long–term economic development. Legislators in these nations debated enabling insurers and reinsurers to examine plans that shifted insurance risk to the government during the epidemic. While the Z–score ratio was found to be unaffected by the COVID–19 pandemic, the estimation findings of the European nations show that the pandemic had a detrimental impact on the stability of the insurance business. According to the estimation results, the COVID–19 epidemic raised the value of insurance firms' receivables.

According to Morara and Sibindi (2021), there is a positive correlation between insurers' size as shown by their total assets and their financial performance. Furthermore, the results show that, when considering the length of time, the insurance company has been in business, performance is negatively connected with age. Lastly, as insurers should maximize their returns by implementing wise investment strategies, the study shows a positive correlation between the insurer's financial success and investment returns.

Tomislava *et al.* (2017) examine the insurance industry in Eastern European countries in their research. This study looks at how the performance of the insurance markets in a few selected Central and Eastern European nations is affected by macroeconomic, industry–specific, and insurance company–specific factors. The empirical results demonstrate a strong and significant relationship between the performance metrics of the Return on Equity (ROE) and Return on Assets (ROA) models and the lagged age variable, which represents the number of years an insurance firm has been in operation. According to these findings, businesses that have been on the market for a longer time do better. Furthermore, the macroeconomic variable of real GDP per capita growth has a significant and favorable effect on performance, but only when seen in relation to the return on equity (ROE). This result suggests that enhancing insurance performance requires favorable macroeconomic conditions. Therefore, a mix of macroeconomic factors and insurance company–specific factors affect an insurance company's profitability.

In continuance to the above, the elements affecting the financial performance of insurance businesses in the UK are examined by Jadi (2015). This study uses empirical data to show that organizational structure, size, liquidity, and profitability all have statistically significant effects on the financial performance of insurance businesses in the UK. This study suggests a different method for determining an insurance company's size by using the gross premium written metric. Additionally, this study explores how the global financial crisis has affected insurance companies' financial performance. The study's findings demonstrate a significant difference in rating performance between the pre–crisis and post–crisis eras. According to this study, several critical factors, including profitability, liquidity, company size, and organizational structure, have an impact on the financial success of businesses that participate in FSR. Notably significant are the performance disparities between the financial and post–financial crisis eras.

This paper aims to identify the variables that have affected insurance companies' performance in the last ten years. Prior studies have looked at how different independent factors, like the COVID–19 pandemic, firm size, leverage, profitability, liquidity, equity ratio, and capital ratio,

affect insurance businesses. We present two hypotheses based on prior research and test them using two models: Receivables to Total Assets and Return on Assets (ROA).

Our hypotheses are as below:

H1: Insurance companies perform better during the pandemic than before.
H2: Insurance companies have more receivables during the pandemic than before.

Summarizing the above, we can say that defining the insurance companies' performance factors is crucial in determining their management and their stability during turmoil and economic shocks.

3. Data and Methodology

We collected information from the "National Business Center", to conduct an empirical analysis of the performance of insurance companies. The study's panel data set spans the years 2013 through 2021. The financial information gathered from the yearly financial reports of twelve Albanian insurance companies is examined in this study. This suggests that the pre–pandemic, pandemic, and post–pandemic years are all taken into account. The impact of business disruption on insurance coverage and the difficulties insurance businesses faced during the initial lockdown period were the main issues affecting the Albanian life and non–life insurance companies.

Two regression analyses are used in this study. Regression analysis is a statistical technique for determining relationships between variables, according to Bowerman *et al.* (1990). A standard definition of a regression model, as stated by Draper and Smith (1981), is a single algebraic equation in the given form.

This study looks at the relationship between several independent variables, such as the influence of COVID–19, capital ratio, profitability, and leverage, and the performance of Albanian insurance businesses

as indicated by the ROA measure. Boyjoo and Ramesh (2017) and Kusi *et al*. (2019) claim that the Return on Assets (ROA) indicates how profitable a company's assets are in comparison to those of its competitors in a certain industry. Furthermore, to understand more the financial stability of the insurance companies, we look at the receivables to total assets and how they're correlated with the dependent variables, including the COVID–19 pandemic's effects, long–term debt, profitability, leverage, capital ratio, and liquidity.

The following models are used:

$$ROAj,t = \beta_0 + \beta_1 COVID{-}19pandemic_t + \beta_2 Size_{j,}t + \beta_3 FinLeverage_{j,t} + \beta_4 Profitability_{j,t} + \beta_5 Liquidity_{j,t} + \beta_6 EquityRatio_{j,t} + \beta_7 CapitalRatio_{j,t} + \varepsilon_{i,t} \quad (1)$$

$$Receivables/Total\ Assets_{j,t} = \beta_0 + \beta_1 COVID{-}19pandemic_{j,t} + \beta_2 Size_{j,t} + \beta_3 FinLeverage_{j,t} + \beta_4 Profitability_{j,t} + \beta_5 Liquidity_{j,t} + \beta_6 EquityRatio_{j,t} + \beta_7 CapitalRatio_{j,t} + \varepsilon_{j,t} \quad (2)$$

where: the dependent variable is ROAi,t (Return on Asset) which measures the performance in insurance company i at time t. In the second model, our dependent variable is receivables to the total asset in insurance company i at time t.

$Covid19{-}pandemic_{j,t}$ = Dummy variable with values 0/1.
$Size_{j,t}$ = Natural Logarithm of Assets.
$FinLeverage_{j,t}$ = Long term Debt/Total Assets.
$Profitability_{j,t}$ = Logarithm of Net Income.
$Liquidity_{j,t}$ = Current Assets/Total Assets
$EquityRatio_{j,t}$ = Equity/Total Assets.
$CapitalRatio_{j,t}$ = Capital/Total Assets.
$\varepsilon_{j,t}$ = error term.

To capture the effect of the COVID–19 pandemic on insurance firms, we use a binary variable having values of 0 or 1. Using a fixed–effect model, we proceed into a panel data analysis to examine the hypotheses' validity. Wooldridge (2013) states that this model makes it easier to account for unnoticed variation among businesses concerning

their standards, regulations, or advancements in financial reporting. The fixed–effect model's ability to accurately account for firms' unobserved features is one of its main advantages. Hausman's (1987) specification test determines which model is chosen under the current specification.

4. Results

Based on the model summary generated in Table 1, the coefficient of determination (R–squared) is determined to be 0.53 indicating that the independent variables account for 53% of the variation in the dependent variable.

Dependent variable ROA	Model (1)
Intercept	−78.71***
	(−5.50)
Covid–19	−11.33***
	(−4.30)
Capital_Ratio	0.0487**
	(2.42)
ProfitabilityLogNI	5.023***
	(6.55)
LeverageLongtermDebtTotal	0.00894
	(0.16)
Observations	80
R–squared	0.53
Time fixed effects	Yes
Industry FE	Yes

t statistics in parentheses
* p < 0.10, ** p < 0.05, *** p < 0.01

Table 1. Fixed effects panel regression analysis.

COVID–19 reduced the average ROA by 11.33 times, as indicated by the preceding data, which are highly statistically significant. The first

hypothesis is supported by the detrimental effects of COVID–19 lockdowns on the insurance industry. With a statistically significant value of 0.0487, the capital ratio has a positive effect on ROA. With a value beta of 5.023, profitability has a highly statistically significant positive effect on business performance. Although it is not statistically significant, using long–term debt with a beta value of 0.00894 improves the performance of insurance firms.

Dependent variable Receivables to Total Assets	Model (2)
Intercept	12.94
	(0.90)
Covid–19	0.470
	(0.20)
Capital_Ratio	−0.105***
	(−3.21)
Equity_Ratio	0.179**
	(2.13)
ProfitabilityLogNI	−1.339*
	(−1.99)
LeverageLongtermDebtTotal	0.0655
	(0.82)
LiquidityCurrentAssetsTotal	0.574***
	(7.72)
Observations	80
R–squared	0.45
Time fixed effects	Yes
Industry FE	Yes
t statistics in parentheses	
$^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$	

Table 2. Fixed effects panel regression analysis.

The second model's results are displayed in Table 2, with the dependent variable being Receivables to Total Assets and the independent variables being COVID–19, the capital ratio, the equity ratio, liquidity, leverage, and profitability. The R–squared value in the model summary is 0.45, which indicates that independent variables account for 45% of the model's overall variation.

The findings from testing Hypothesis 2 show that the COVID–19 pandemic has a positive impact of 0.047, which is not statistically significant and suggests that the pandemic has not had an influence on the insurance companies' receivables. Additionally, the Capital Ratio indicates a statistically significant negative impact on Receivables of –0.105 times. The equity ratio showed a statistically significant coefficient of 0.179. Profitability shows a statistically significant negative impact of –1.339. Leverage does not affect receivables and has a positive coefficient of 0.0655, although it is not associated. According to the p–value, liquidity exhibits a positive coefficient of 0.574 and is highly statistically significant. Receivables rise by 0.574 points as a result. With a value of 7.72, liquidity was a significant predictor of receivables. Since Receivables to Total Assets are unaffected by the COVID–19 pandemic, the second hypothesis is rejected. Our study only lasted a year following the pandemic, though, so there might be long–term implications.

5. Conclusion

In summary, it is critical to understand and evaluate how insurance companies function in both typical and unique situations, as well as how vulnerable they are to different outside influences. This study offers an empirical methodology for analyzing the variables affecting Albanian insurance firms' financial performance during the COVID–19 epidemic, as measured by Return on Assets (ROA) and Receivables to Total Assets. The financial statements of a sample of twelve insurance businesses that operated in Albania between 2013 and 2021 provided the secondary data used in this study. Considering the results shown in the previous session we can conclude that:

1. Return on Assets is explained at a level of 53% by the independent variables and is positively and significantly affected by COVID–19, which makes hypothesis 1 accepted. Other variables that are significant and affect ROA include capital ratio, profitability, and leverage.

2. Receivables to total assets are explained at a level of 45% by the independent variables and are positively but not significantly affected by COVID–19, which makes hypothesis 2 rejected. Other variables that affect receivables significantly include the capital ratio, the equity ratio, the profitability, and the liquidity.

The above results are in line with previously reviewed literature that shows that COVID–19 besides other factors has a negative effect on the profitability of insurance firms. As such cautiousness and special actions should be undertaken by insurance firms to manage these situations. More importantly, considering other operational variables, the management of insurance companies can adjust its policies and decision–making process to better align and support the increase in performance. In this way, financial stability and growth are ensured and sustained.

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THE INFLUENCE OF DIGITAL TRANSFORMATION STRATEGY ON INNOVATION CAPABILITIES IN MANUFACTURING SPANISH FIRMS

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1. Objectives

This paper aims to focus on the links between digital transformation strategy, knowledge strategy, digital capabilities, and innovation capabilities of enterprises in manufacturing sector, and tries to address the following research questions: Firstly, how does a digital transformation strategy contribute to develop innovation capabilities by being aligned with the digital capabilities? Secondly, how does knowledge strategy affect the impact of digital transformation strategy on companies' digital capabilities to achieve innovation performance? In doing so, this paper revolves around two objectives: 1. To assess the specificities of the digital transformation and knowledge strategies' development at each investigated company; and 2. To analyse the interplay between the digital business strategy and the firm innovation results through the lens of the digital capabilities and knowledge strategy.

Keywords: digital transformation strategy, knowledge strategy, digital capabilities, innovation capabilities, quantitative study, PLS–SEM.

2. Theoretical background

In the modern hyper–competitive, turbulent, and dynamic business environment, businesses look towards digital technologies and related disruptive innovations to improve their performance and competitiveness

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(Sarwar *et al.*, 2023). However, due to the growing usage of digital technologies, which help firms to digitalize processes and enable increased efficiency, companies' strategies became hardly separated from digitalization (Proksch *et al.*, 2024). Thus, to capitalize on the benefits of these current developments, many firms incorporate a digital transformation strategy (Hess *et al.*, 2016; Matt *et al.*, 2015; Nousopoulou *et al.*, 2022; Sebastian *et al.*, 2020; H. Wang *et al.*, 2020; X. Zhang *et al.*, 2023).

In the current era of digitalization, firms' transformation capacity and performance are embedded in digital technology capabilities (Benitez *et al.*, 2022; Sarwar *et al.*, 2023). Thus, managers have to make their organizational capabilities and business strategies aligned and complementary. Through mutual support the organizations' technological capabilities and business strategies can not only facilitate the organization's digitalization efforts but also enhance its innovation performance. This understanding of digital transformation implementation is limited, yet the demand for it is urgent as economies have realized its potential in creating value for organizations (Grieva *et al.*, 2024).

While organizational capabilities are mainly responsible for articulating knowledge from different sources (Nascimento *et al.*, 2021), it is necessary to emphasize the role of various knowledge management practices. Thus, realizing that the development and application of digital technologies requires the creation and dissemination of new knowledge (König *et al.*, 2018), it is possible to affirm that digital capability, as a dynamic capability, can be an essential condition for the efficacy of the depicted framework. Meanwhile, the companies' knowledge strategy is an institutional requisite to support changes regarding these innovations. Knowledge management efforts are often seen distinctly from strategic planning and execution. However, having an appropriate knowledge strategy in place is essential to ensure that knowledge management efforts are being driven by and are supporting the firm's competitive strategy (Zack, 1999). All these ways of dealing with new technologies through KM result in innovation performance and sustainable competitive advantage.

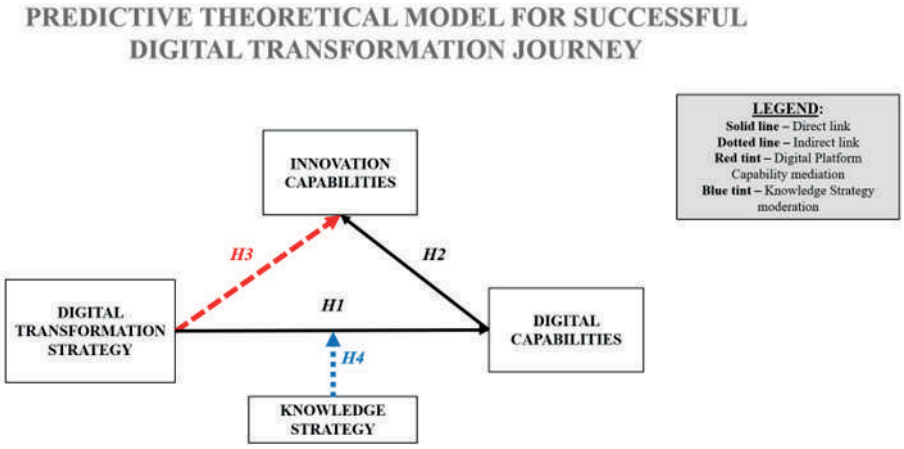


Figure 1. Predictive theoretical model.

According to Yoshikuni *et al.* (2022) many studies have not fully explored the relationship between knowledge and information systems strategies and their overall impact on firm performance. In an attempt to address this knowledge gap, this study draws on the dynamic capabilities view, and on recent literature on digital transformation and knowledge management to examine the alignment between digital trans–formation strategy and knowledge strategies to enable dynamic innovation capabilities to improve innovation performance.

Recently Proksch *et al.* (2024) studied the influence of a digital strategy on the digitalization of new ventures, analysing the mediating effect of digital capabilities and a digital culture. They identified that a higher degree of digitalization in new ventures' product/service offerings and their processes can lead to a faster time to market and the ability to rapidly scale. Understanding that it has the possibility to significantly impact firm's innovation performance, our research aims to determine how digital capabilities affect innovation capabilities and mediate the relation between digital transformation strategy and innovation capabilities. Speaking of the novelty of our contribution in respect to the work of Proksch *et al.* (2024), in place of measuring the degree of digitalization of company´s products/services and process, we investigate their level of innovativeness. In addition, this research is not only referring to digital transformation strategy as a means to influence

innovativeness of companies' products/services and processes but also describing two intervening factors. Those factors include digital capabilities (Nasiri *et al.*, 2023; Proksch *et al.*, 2024) and knowledge strategy (Ajith Kumar & Ganesh, 2011; Miller *et al.*, 2007).

Digital transformation, knowledge management and innovation are evolving research streams in the strategic management field, and its growing importance inspires researchers to investigate it from different perspectives and contexts. We propose a framework that can guide managers and policymakers in successfully implementing a digital transformation journey in their organizations. From our point of view, digital transformation strategy, knowledge strategy, and digital capabilities considered jointly will create efficiencies in the strategic management processes and elevate corporate competencies to achieve intended outcomes. Even though the analysed literature points to the existence of relationships between strategy, knowledge management, technology and the dynamism inherent in these interactions, their positive effects on companies' results have not been properly discussed (Nascimento *et al.*, 2021).

3. Methodology

Once the academically recognized company directory SABI has been consulted and the sample database has been configurated, the online data collection was launched. A questionnaire was sent to firms, requesting that it be completed by high, middle and operational level of management who were familiar with the topic of this study – Digital transformation strategy and Innovation. All constructs were measured through multiple items on a 7–point Likert scale, ranging from 1 ("strongly disagree"/"very low") to 7 ("strongly agree"/"very high"). The questionnaire was designed and developed on the basis of a thorough literature review. We measured the digital transformation strategy using seven items, which we adapted from the digital transformation literature (Kroh *et al.*, 2024; Nousopoulou *et al.*, 2022; Proksch *et al.*, 2024). To measure digital capabilities, we used 22 items. The original construct was based on an adaptation of items measuring human,

collaboration, technology, IT infrastructure and innovation capabilities (Kroh *et al.*, 2024; Li & Chan, 2016; Nasiri *et al.*, 2023), knowledge strategy (Ajith Kumar & Ganesh, 2011; Miller *et al.*, 2007), and innovation performance (Chi *et al.*, 2018; Donate & Guadamillas, 2011; Porfírio *et al.*, 2021; Sia *et al.*, 2016). We adapted the items during the pretests to fit the context of new ventures. The statistical analysis of the collected data will be conducted with the help of the Structural Equation Modelling (SEM). Drawing upon the characteristics of the study (predictive modelling), the technique that best fits in hypotheses testing is PLS (Partial Least Squares) (Hair *et al.*, 2016).

4. Findings

Analysis is underway

5. Conclusions

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SCIENTIFIC RESEARCH IN ALBANIA: INSIGHTS FROM A BIBLIOMETRIC ANALYSIS

GENTIAN HOXHALLI[1], IRISI KASAPI[2], GENTJAN ULAJ[2], ENRIK SEJDINAJ[3]

Abstract

The aim of this study is to map out the scientific research of Albania. We accomplish this aim by analyzing the publications on Scopus database of Albanian scholars. Furthermore, various bibliometric analysis such as performance analysis and keyword co–occurrence analysis are conducted.

The research has identified three main areas on which the majority of Albanian scholars are focused. The first area is medical research, more specifically on public health and epidemiology. Economic studies, with a focus on labor studies and agriculture specifically, make up the second main topic area, while environmental studies comprise of the third one.

Keywords: bibliometric, Albania, co–word, co–author.

1. Theoretical background

The scientific growth of Albania is closely linked to its historical, economic, and political circumstances. Prior to the communist era, scientific research in Albania was limited due to the country's isolation and insufficient institutional infrastructure. Under the communist era

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(1945–1991), research was centralized and predominantly guided by state interests, emphasizing agriculture, industry, and self–sufficiency. University of Tirana was established in 1957 making a significant impact in academic landscape. The Academy of Sciences of Albania was established in 1972, coordinating research across 25 different research institutes operating in Albania[4]. The post–communist transition following 1991 resulted in significant transformations as Albania transitioned to a market economy (Bartlett, 2009). A significant increase in the number of public universities was observed, followed by the establishment of private universities in early 2000. The development and variety of Albania's higher education system is noteworthy (Keqi, 2014), with 40 active Higher Education Institutions (HEIs) already in operation, 24 of which are universities. Albania's progress illustrates its commitment to provide diversified possibilities for learning and addressing the evolving needs of students across multiple fields. The existence of diverse institutions supports the nation's intellectual capital and capacity for innovation, so reinforcing its standing in an international knowledge–based economy. The research system underwent major reform to connect into the worldwide academic community, with a concentration on European Union alignment. Engagement in initiatives like the Bologna Process has been essential in advancing changes and promoting collaboration with global scholars.

Despite the significant number of universities and published works in Albania, to the best of our knowledge, no comprehensive review has been conducted to map the current state of scientific research in the country. In a related study, Ulaj *et al.* (2024) mapped organizational research in the Western Balkans and recommended that bibliometric analyses should be conducted for each country separately. Responding to this call and addressing the lack of a comprehensive review, this study aims to analyze the performance of Albanian scholars and provide an in–depth overview of the scientific landscape. By doing so, we seek to enhance the understanding of academic contributions within Albania and identify key areas for future research development.

[4] https://unitir.edu.al/historiku/

2. Methodology

Bibliometric analysis is known as analyzing bibliometric data such citation, authors, keywords, institutions or countries by employing quantitative methods (Broadus, 1987). There is an exponential increase of bibliometric analysis recently, mostly because viability of data and the number of software's which improve the efficiency of analysis (Mukherjee *et al.*, 2022). Two main streams in bibliometric analysis are performance analysis and science mapping. Performance analysis consist in evaluating most important authors, papers, institutions, and countries, while scientific mapping is a popular tool to understand dynamics and social structure of a specific field (Zupic & Čater, 2015). Bibliometric analysis is a flexible research method used in many contexts. Some researchers study broad fields like strategic management (Nerur *et al.*, 2008), while others focus on narrower topics such as corporate entrepreneurship (Castriotta *et al.*, 2021). Additionally, bibliometric studies are often applied to specific regions such Latin America (Diaz Tautiva *et al.*, 2024), Europe (Bilir *et al.*, 2020; Hoxhalli *et al.*, 2024), or even specific countries such Turkey (Barca & Hızıroğlu, 2009) or Ecuador (Herrera–Franco *et al.*, 2021) highlighting local research trends and contributions. This shows how the method can explore both broad themes and regional academic activity. To conduct our bibliometric analysis we rely strictly on guidelines of (Öztürk *et al.*, 2024) and Donthu *et al.* (2021). In the first step we define the aim, which in our case is to map scientific output of Albania. The second step is to select the methods that will be employed. In our study we conducted performance analysis, co–author analysis, keyword co–occurrence analysis and trend topic analysis. Each of these analyses has different aims and coverage. Performance analysis is extensively used to identify the most important authors, papers, institutions and country, and it is descriptive in nature. Öztürk *et al.* (2024) argue that performance analysis alone is not enough to conduct bibliometric analysis, therefore additional analysis like co–author analysis are required. Co–authorship analysis investigates the collaboration networks of researchers, emphasizing their connections, nations, and intellectual outcomes.

This methodology clarifies research clusters, geographical representation, and the progression of collaboration over time, so providing essential recommendations for developing future academic relationships (Donthu *et al.*, 2021). Co–word analysis focuses on examining the content of publications by analyzing frequently co–occurring words, often derived from author keywords, titles, or abstracts, to uncover thematic relationships and helps to identify most dominant research topics in a specific field of research (Marzi *et al.*, 2024).

The third step is to select database and collect the data. We have gather our data from Scopus database since is considered more suitable for narrow topics and small study areas (Bretas & Alon, 2021). Data collection occurred in 11.2024 using the descriptor 'Albania' in the abstract, title, keyword section. Furthermore, we select only Albania as country affiliation. The preliminary search produced 3796 documents. Several explicit and implicit selection criteria were employed in the construction of the database, similar to Herrera–Franco *et al.* (2021). Firstly, we limited our timeframe from 1990 to 2023. Furthermore, we only select publications that in the keyword "Albania" take place and language of document is in English. After the application of these criteria, 3324 documents were incorporated for analysis. The final part of the process is analyzing the data using different software's like VOSviewer (Van Eck & Waltman, 2010) or R Biblioshiny (Aria & Cuccurullo, 2017) and presenting the results.

3. Findings

3.1. *Overview*

In Scopus database Albanian researchers have published 3324 papers which contain Albania as keyword from 1990 to 2023. Annual growth rate is 13.51%, while publications average age is 8,5 years, indicating that scientific research in Albania is significantly increasing in last years. Publications that are conducted from single authors are 565, while average authors number is 4.66, furthermore almost half of publications are in collaboration with international authors (44.52%).

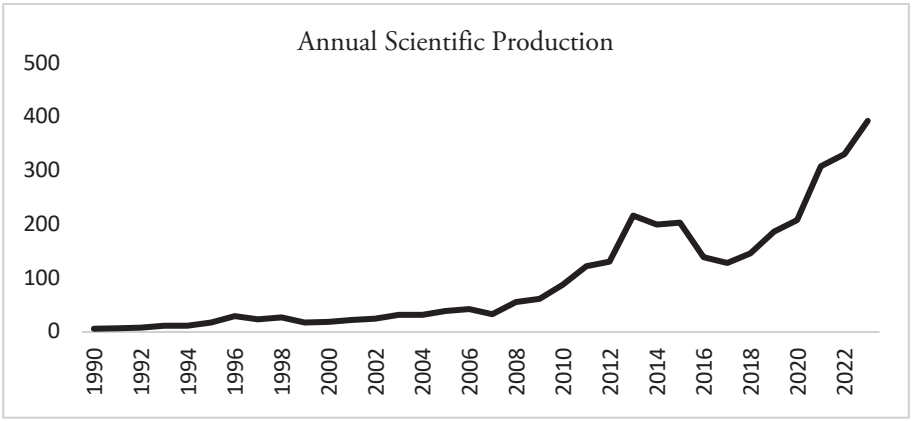


Figure 1. Annual Scientific Production.

We observe a general increase in the number of published papers, although there was a notable decline between 2013 and 2017. This period coincides with a suspension of PhD programs in Albania, which may have been a contributing factor. Furthermore, in 2023, the number of published articles reached a record high, with a total of 393 publications.

Rank	Author	Number of publications
1	Genc Burazeri	76
2	Silva Bino	68
3	Drini Imami	62
4	Pranvera Lazo	41
5	Edvin Zhllima	38

Table 1.

Table 1 presents prominent scholars in Albania. Genci Burazeri is the leading author with a total of 76 publications. Silva Bino holds the second position with 68 articles, and Drini Imami occupies the third position with 62 publications. The list continues with Pranvera Lazo, who has 41 papers, and Edvin Zhllima, who has 38, ranking fourth and fifth, respectively.

3.2. *Co–Authors Analysis*

Additionally, to gain a deeper understanding of the intellectual structure in Albanian research, we look at the co–authorships of Albanian scientists (figure 2). Our data shows the presence of eleven clusters of co–authors in Albania. Silva Bino is the author with the most co–authorships in the primary cluster (Red), including 21 authors, and she predominates it. Upon thorough review of the data, it is evident that most research are epidemiological investigations focused on Albanian individuals. The second cluster (Green) consists of collaborations among Fatmir Guri, Ilir Kapaj, Gentjan Cera, and others. The predominant study within this cluster examines the economic impacts of agriculture. The third cluster, shown by the color blue, is centered on collaboration with Genc Burazeli. This cluster's partnerships encompass intriguing cross–sectional investigations, indicating a primary focus on medical sciences and public health. Cross–sectional studies facilitate the examination of relationships between variables, providing a snapshot of a population at a certain point in time. These publications can enhance our understanding of medical sciences and public health issues while offering valuable insights into many health–related phenomena.

The fourth cluster (yellow) is predominantly comprised of Albanian economic studies. The collaborative efforts of the writers from the Agricultural University of Tirana, particularly under the guidance of Drini Imami and Edvin Zhlillima, render this work significant. Elvisa Drishti's research from Luigj Gurakuqi University of Shkodra, concentrating on labor economics and employment studies is also significant in these studies.

The fifth cluster include Aida Bani, Artan Hysa, Sokol Dervishi, among others. This underscores a focus on environmental sciences.

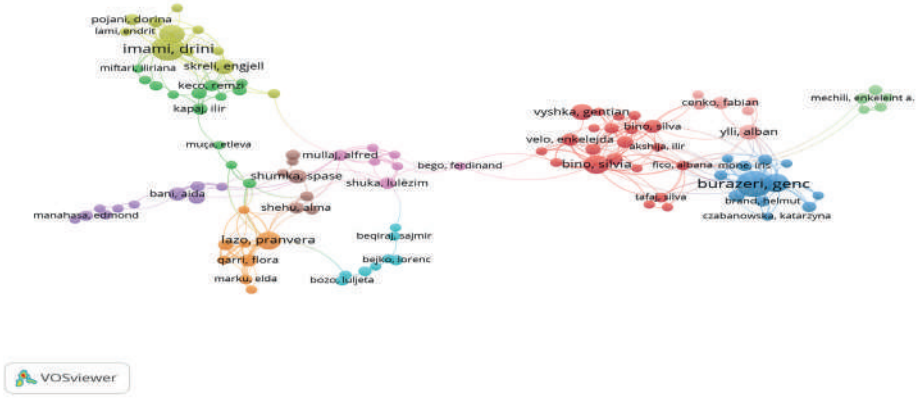


Figure 2. Co–Author Analysis.

4. Conclusions

Over 30 years, Albanian researchers have published 3,427 Scopus indexed papers, with 44.73% involving international collaborations. Despite a minor annual decline from 2013 to 2020, overall output has grown. The Mediterranean Journal of Social Sciences is the most popular journal, while top authors Genc Burazeri and Silva Bino focus on medicine, followed by Drini Imami in economics. Leading institutions are the University of Tirana, Agricultural University of Tirana, and Polytechnic University of Tirana. Co–authorship analysis reveal 11 clusters, focusing on epidemiology, economics, and environmental issues. Themes like business, public health, and environmental studies domi–nate Albanian research.

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HOW THE IMPLEMENTATION OF A PERFORMANCE MANAGEMENT SYSTEM AFFECTS START–UPS SURVIVAL AND GROWTH?

IVO HRISTOV[1], GIANMARCO MANZO[2]

1. Objectives

Start–ups and new ventures are essential components of economic systems, often acting as drivers of innovation, job creation, and economic growth. Their survival and success depend on various critical factors, among which the adoption of an effective Performance Management System (PMS) and Management Control System (MCS) is increasingly acknowledged as crucial. However, currently, no literature reviews clearly explain the role of management systems in start–ups and their impact on performance. The inherently dynamic nature of new ventures allows them to quickly adapt to changes in market demands and technological advancements, but this same flexibility can hinder the implementation of PMS, which are typically designed for environments with well–defined and stable roles, metrics, and processes.

By examining the use, design, and future implications of PMS in start–ups, this research seeks to provide a comprehensive understanding of the benefits and challenges associated with PMS in entrepreneurial settings, as well as provide implications for further research on performance management in entrepreneurial contexts.

Keywords: management control, start–ups, performance management system, review.

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2. Theoretical background

As previously stated, start–ups and new ventures play a fundamental role in the growth of the entire economic system. These enterprises typically start as small, entrepreneurial initiatives aimed at creating new products or services under conditions of extreme uncertainty, focusing on addressing market gaps or introducing innovative offerings. (Ries, 2011). Despite their critical role, start–ups face significant challenges to survival and growth. Research indicates that approximately 20% of start–ups fail within their first year, 50% within five years, and 70% within ten years (Silva Júnior *et al.*, 2023). These high failure rates highlight the need for effective management practices to enhance the performance and scalability of start–ups.

The study of MCSs has mostly focused on cross–sectional variation in large established firms (Cardinal 2001; Chenhall 2003); it is only recently that empirical evidence on their emergence in early–stage startup firms is accumulating (Davila, 2005; Davila and Foster, 2005; Sandino, 2007; Cardinal *et al.*, 2004). The existing literature lacks comprehensive reviews that clearly explain the role of management systems in start–ups and their influence on performance. Arend, Zhao, Song, and Im (2017) suggest that employing management control systems (MCS) as part of strategic planning can hinder innovative activities. This aligns with Honig and Hopp's (2016) findings, which indicate that initial business planning, if not followed by continuous planning, does not positively influence performance. Conversely, Davila, Foster, and Oyon (2009) argue that introducing MCS at an appropriate stage can enhance a company's performance. Similarly, Okvist and Pavlovic (2018) found that implementing MCS in high–growth firms supports their expansion. Additionally, Gomez–Conde, Lunkes, and Rosa (2019) emphasize that combining MCS with an innovation strategy contributes to improved performance in startups. The difficulty in obtaining results that confirm a positive or negative connection in the use of PMS/MCS within startups can be partially explained by the definition of MCS: formal, information–based routines and procedures managers use to maintain or alter patterns in organizational activities" (Simons, 1995). Moreover, Nelson and Winter (1982) and Zollo and

Winter (2002) further add that the key characteristics of MCS/PMS are their repetitiveness, formalization, and information–based nature. In contrast, startups operate in unstable environments and focus on immediate adaptability.

However, there is no universally applicable PMS and MCS suitable for all types of organizations and conditions, as the system must be tailored to align with specific organizational factors (Ferreira and Otley, 2009; Franco–Santos and Otley, 2018).

3. Methodology

The SLR method was chosen as, unlike traditional narrative reviews, it is suitable to guide a self–contained research project that aims to explore specified research questions (Denyer & Tranfield, 2008, p. 671). A concise review of key literature published between 2005 (when the first article that discuses PMS and START–UPS) and 2024 is explored. The selected sample of 32 papers was first analyzed in terms of descriptive statistics in order to provide accounting scholars with an overview of the most suitable journals in collocating their research (e.g., methodology used or total contributions per journal). Then a qualitative research approach will be used to analyze in detail the content of the papers. This approach allow us to inductively guide qualitative investigation to obtain the desired granular understanding of the main trends previously identified. At the same time, we deductively identify design, implementation, use, and evolution of management control or performance management systems in the start–ups. The following subsections explain step by step our research protocol.

3.1. *Sample selection*

Relevant publications were identified through a structured and iterative search strategy. The authors implemented the following procedure for sample' identification (see Tranfield *et al.*, 2003):

I. Keywords selection. As I investigate the interaction between two macro dimensions (i.e., performance management and start–ups), I

focused on the following keywords: "scorecard OR kpi* OR "performance management" OR "performance measurement" OR "Management control" AND "new firm*" OR "new venture*" OR "venture*" OR "start*up*" OR "newly founded organi*ation*" OR "newly founded business" OR "new business" OR entrepreneurial OR "organi*ational death" OR "liabilit* of newness". The search operators "AND" and "OR" were introduced in order to fit the terms as best as possible. The asterisk has been included in the Boolean search so that different variants of the terms can be considered.

II. Papers identification. The database chosen to collect articles was Scopus, as it offers the broadest overview of articles and peer–reviewed journals and is thus already used for authoritative SLRs of accounting research (e.g., Lombardi *et al.*, 2022). Only peer–reviewed journal articles in the accounting field, as determined by the Association of Business Schools' Academic Journal Guide (AJG) 2021 have been included. The research had no time restrictions; its end was July 1st, 2024. At the end of this step, 428 contributions emerged.

III. Eligibility. To keep a high standard, and to maintain a convenient trade–off between the extent and relevance of the review (Hristov *et al.*, 2022), similarly to other authoritative reviews in the field (Soto-Simeone, 2020), the authors considered those articles published only by journals that were ranked by the 2021 AJG. At this point, 50 articles remained.

IV. Screening (Exclusion and Inclusion). After the sample selection, to ensure suitability, two authors separately read the title and the abstract of the articles. Thus, the authors excluded articles treating public or non–governmental organizations (NGOs) or papers not specifically focused on the designing, implementing and using performance management systems for start–ups. Moreover, corporate sustainability reporting (Brown *et al.*, 2009) and sustainability auditing (Nitkin & Brooks, 1998) were excluded. There is a growing body of research on these specific themes that require a specific review. At this point, 33 articles remained. Finally, full text of the 33 articles to collectively select those able to contribute to answering research objectives. Adherence to the research question was the criterion followed to conduct this first screening. So, the authors removed

papers from the sample that did not fall within the research scope[3] (Soto–Simeone, 2020). This initial screening resulted in XXX papers. The authors adopted the snowballing technique to ensure that the article selection overlooked no relevant contributions. Thus, 17 articles were added to the final sample of 33 articles. The time period covered by the sample is 2005–2024.

4. Findings

The results from the analysed sample, composed by 33 articles, which means around 7,7% of the papers identified as reported above in point ii), highlight an increase in the publication intensity of articles related to PMS and MCS in startups over the past 4–5 years, as shown in Figure 1.

This growth reflects a rising interest in the development and application of performance management tools in new ventures. It is also worth noting that approximately half of the articles in the analyzed sample are published in journals ranked 3, 4, or 4* according to the 2021 AJG classification.

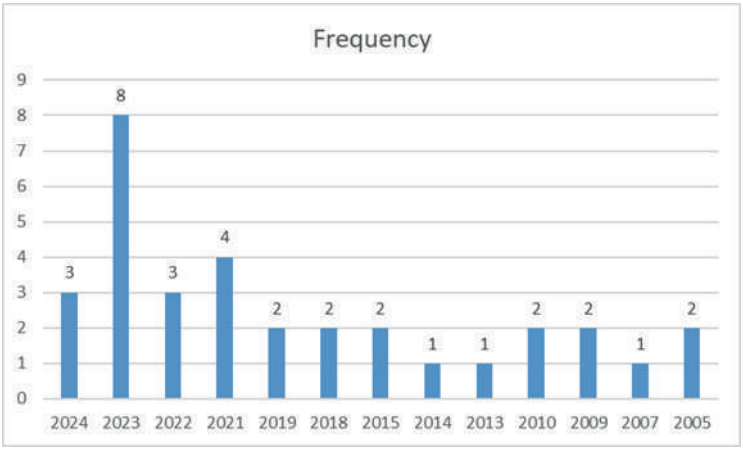


Figure 1: Statistics per year

[3] Note that the author independently reviewed the papers before comparing their assessments. The reasons for any inclusion or exclusion were motivated in an excel file "ad hoc" prepared. At the end of this process any disparities prompted collaborative discussions to resolve differences, ensuring a collective decision on each paper's inclusion.

5. Conclusions

After having selected the sample and performed descriptive statistics, the study will focus on the data analysis where I will proceed with a content analysis. In particular, a database with 10.000 startups contacts is under development, and a tailorized questionnaire will be sent out.

The authors expect a return rate of about 3%, so a total of around 300 replies is expected from the selected database.

Future findings on the implementation of performance management systems (PMS) in startups have significant implications for several stakeholders. For start–up founders and managers, these findings offer guidance on designing PMS that remain flexible and adaptable, allowing startups to maintain agility while benefiting from structured management processes. Investors can use the insights to evaluate how PMS influences startup performance, aiding in more informed investment decisions by identifying businesses likely to achieve sustainable growth. Academic researchers are provided with new avenues to explore, such as the long–term effects of PMS and the role of technology in enhancing performance systems across various industries and regions. Lastly, entrepreneurial ecosystems like incubators and accelerators can integrate the study's recommendations to help startups develop management capabilities, supporting earlystage growth and long–term sustainability. Overall, this study would not want only to offer practical recommendations but also lays the foundation for future research on performance management in entrepreneurial contexts.

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USER–GENERATED CONTENT (UGC) THROUGH THE LENSES OF SOCIAL MEDIA MARKETING: A SYSTEMATIC LITERATURE REVIEW

IRISI KASAPI[1], LAILA FILI[1]

Abstract

User–generated content (UGC) is online brand–related content created and shared by consumers or "users", and its role in social media marketing has been growing continuously since the inception and rise of social media. This growth has made it necessary for brands to understand the impact UGC has in practical settings to optimize their sustainable marketing strategies and understand their consumers' behaviors. Additionally, with the overlapping of user–generated and brand–generated content, there has been an increasing rate of UGC in brand social media marketing strategies. Despite this increasing prevalence, there is a gap in our understanding of the role of user–generated content in social media marketing. Hence, the research problem revolves around user–generated content utilization by brands on social media, focusing on what role UGC has and what mechanisms underlie this relationship in social media marketing.

The research objectives are twofold:

1. To identify the factors related to user–generated content (UGC) in social media marketing.
2. To explore the effects of user–generated content (UGC) on brand engagement and consumer loyalty.

Keywords: user–generated content (UGC), social media marketing, consumer loyalty, brand engagement, sustainable marketing.

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1. Theoretical background

User–generated content (UGC) is a relatively newly studied topic when in the context of social media. UGC refers to content made and published by users of online social platforms (Wyrwoll, 2014). Other terms used to refer to user–generated content in these studies include "consumer–generated content", "consumer–generated media", and "consumer–generated ads", or when referring to the leveraging of UGC in brand marketing, it is called "consumer–generated advertising". Several studies have explored the topic of user–generated content and social media marketing (Cooke & Buckley, 2008; Hardey, 2011; Alves *et al.*, 2016).

These papers have examined various aspects of UGC, like advertising, values, quality and its impact on purchase behaviors, online reputation, brand engagement, and consumer perception (Krishnamurthy & Dou, 2008; Mohammad *et al.*, 2020; Beurer–Zuellig & Klaas, 2020; Abdelkader & Ebrahim, 2021). However, there are inconsistencies and gaps in the literature for understanding the role that UGC has in social media marketing, highlighting the need for a holistic synthesis of existing literature to explain the factors underlying the effect of UGC in social media marketing. Figure 1 presents the conceptual framework of the literature review.

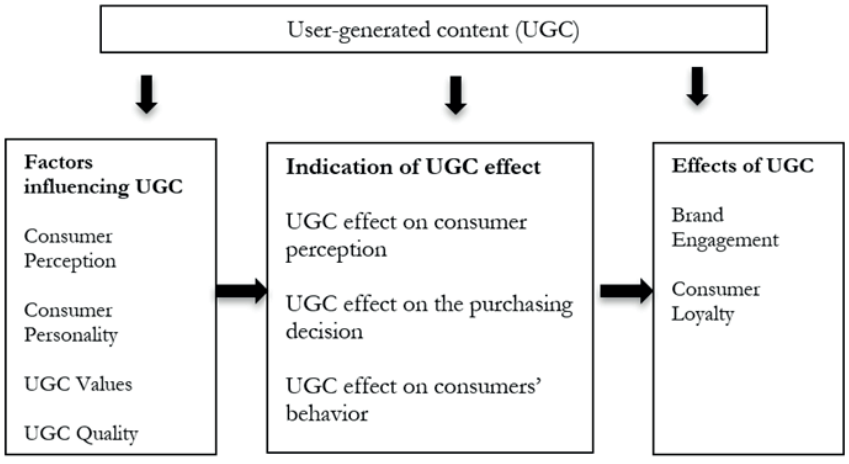


Figure 1. Conceptual Framework for the Literature Review.

2. Methodology

A systematic literature review was conducted to identify, synthesize, and discuss publications that investigate the role of user–generated content in social media marketing. The guidelines proposed by Rousseau *et al*. (2008) and Paul and Criado (2020) were used to plan and implement the research. Further, the research protocol was revised to:

- establish a comprehensive synthesis of the effect of user–generated content on consumer engagement and loyalty; and
- identify and unfold the main themes and sub–themes.

The process of searching and selecting articles was implemented in a rigorous way as described in Figure 2. The selected articles (n=35) were coded based on various variables, such as year of publication, article title, authors' names, journal title, article type, research methods applied, and themes that emerged and were recorded in an Excel spreadsheet. Descriptive and content analysis was employed based on the selected articles to examine and synthesize the role of user–generated content in social media marketing.

3. Findings

3.1. *Characteristics of the Literature*

The first grouping of the findings is based on the representation of the data according to publication year, source of publication, number of citations per article, research methodology applied, and knowledge type. As such, the timeframe of the published articles comprises the period between 2008 and 2023. The increase in studies in recent years indicates a growing interest in the topic and its relevance over the past few years.

We observe a general increase in the number of published papers, although there was a notable decline between 2013 and 2017. This period coincides with a suspension of PhD programs in Albania, which may have been a contributing factor. Furthermore, in 2023, the number of published articles reached a record high, with a total of 393 publications.

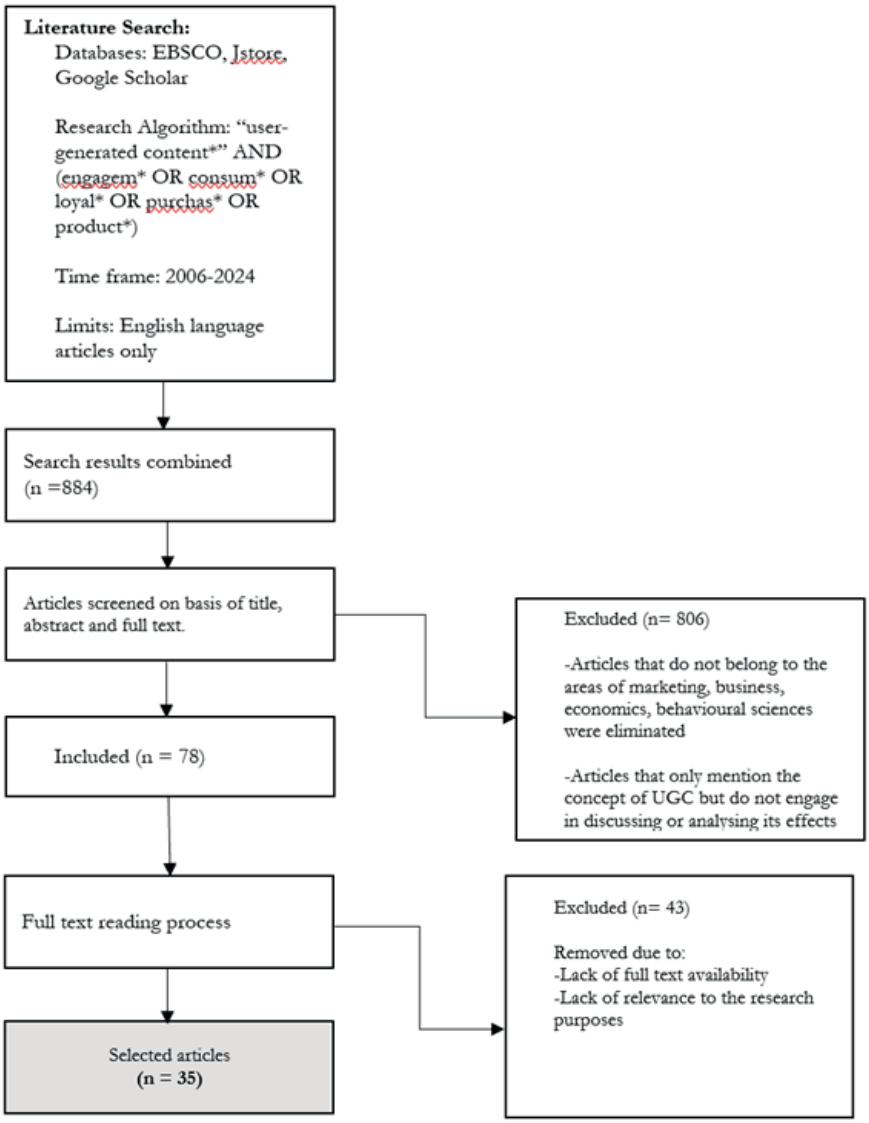


Figure 2. Study selection flow diagram.

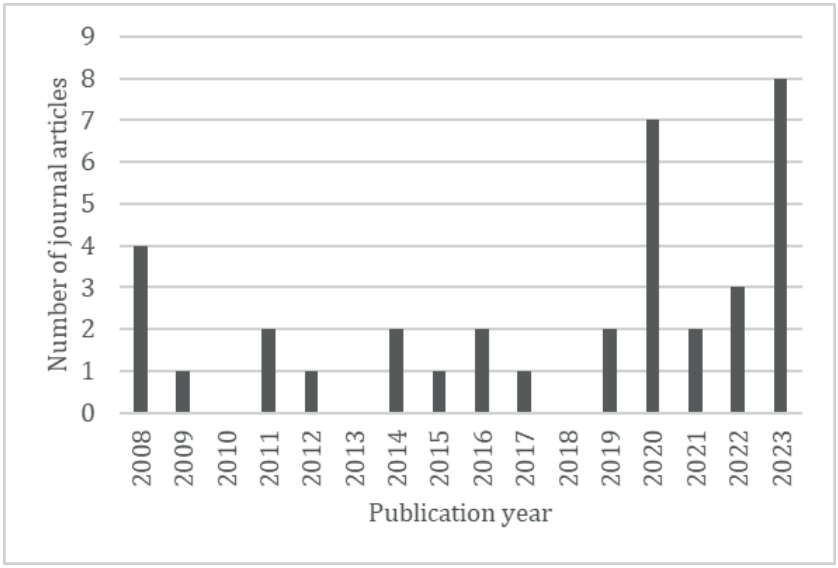


Figure 3. Time distribution of the journal articles; Authors' calculations based on the databases's data.

The 35 articles selected for the literature review have been published in 28 academic journals (Table 1). The journal with the most articles published and reviewed in this paper was the 'Journal of Advertising' with 3 articles (You & Joshi, 2020; Liu–Thompkins *et al.*, 2020; Shulga *et al.*, 2023). The variety of journals signifies that the topic is considered to be important by many academic circles. The scope of these journals was primarily marketing, advertising, management, consumer behavior, and so on. Table 1 presents the journals of all the articles selected for the literature review.

In addition, Table 2 presents the number of citations for each article. while most of the articles have been cited several times by other papers, this literature review has not omitted the articles with few or no citations due to their relevance and contributions to the topic. Furthermore, most of the articles with few citations have been published recently and they have provided studies that focused deeper on specific aspects of UGC. In contrast, the articles with the most citations are older studies that mainly help build the foundation of UGC and its role in social media marketing.

Source of Publication	No. of articles	Studies
Journal of Advertising	3	You & Joshi, 2020; Liu–Thompkins *et al.*, 2020; Shulga *et al.*, 2023
International Journal of Market Research	2	Cooke & Buckley, 2008; Hardey, 2011
Journal of Advertising Research	2	Christodoulides & Jevons, 2011; Christodoulides *et al.*, 2012
Journal of Consumer Behaviour	2	Nikolinakou & Phua, 2019; Naeem & Ozuem, 2020
Journal of Interactive Advertising	2	Krishnamurthy & Dou, 2008; Cheong & Morrison, 2008
Journal of Marketing Communications	2	Knoll & Proksch, 2015; Mathur *et al.*, 2021
ASM Business Review	1	Verma *et al.*, 2017
California Management Review	1	Berthon *et al.*, 2008
Economic Research–Ekonomska Istraživanja	1	Yasin *et al.*, 2020
Electronic Commerce Research	1	Li *et al.*, 2020
Future Business Journal	1	Shetu, 2023
International IJC	1	Güngör & Çadırcı, 2022
International Journal of Electronic Commerce Studies	1	Galib *et al.*, 2023
International Journal of Engineering Business Management	1	Ma & Gu, 2022
International Journal of Online Marketing	1	Abdelkader & Ebrahim, 2021
Journal of Eastern European and Central Asian Research	1	Santy & Andriani, 2023
Journal of Electronic Commerce Research	1	Mohammed *et al.*, 2020
Journal of Intercultural Management	1	Santiago & Su, 2023
Journal of Marketing	1	Tang *et al.*, 2014
Journal of Marketing Development & Competitiveness	1	Beurer–Zuellig & Klaas, 2020
Journal of Marketing Management	1	Malthouse *et al.*, 2016
Journal of Revenue and Pricing Management	1	Ghose & Ipeiroti, 2009
Management of Organizations: Systematic Research	1	Israfilzade & Baghirova, 2022
Marketing Science	1	Timoshenko & Hauser, 2019
MIS Quarterly	1	He *et al.*, 2023
Psychology and Marketing	1	Alves *et al.*, 2016
Scientific Papers of Silesian University of Technology	1	Hofman–Kohlmeyer, 2023
Trends in Finance and Economics	1	Shushma *et al.*, 2023
	35	

Table 1. Source of Journal Publications.

Article title	Citations
Consumers' Reliance on Product Information and Recommendations Found in UGC	683
Ad Lib: When Customers Create the Ad	360
Memo to Marketers: Quantitative Evidence for Change How User–Generated Content Really Affects Brands	321
Identifying Customer Needs from User–Generated Content	320
Evidence that user generated content that produces engagement Increases purchase behaviours	276
Social Media Marketing: A Literature Review and Implications	276
Web 2.0, Social Networks, and the Future of Market Research	263
Is Neutral Really Neutral? The Effects of Neutral User–Generated Content on Product Sales	255
Special Issue on Online User–Generated Content Advertising with User–Generated Content: A Framework and Research Agenda	139
The Voice of the Consumer Speaks Forcefully in Brand Identity User–Generated Content Forces Smart Marketers to Listen	74
The EconoMining project at NYU: Studying the economic value of user–generated content on the internet	55
Do human values matter for promoting brands on social media? How social media users' values influence valuable brand–related activities such as sharing, content creation, and reviews	44
The Effect of User–Generated Content Quality on Brand Engagement – The Mediating Role of Functional and Emotional Values	40
Why we watch others' responses to online advertising – investigating users' motivations for viewing user–generated content in the context of online advertising	39
Understanding digital consumer: A review, synthesis and future research agenda	29
The Impact of User–Generated Content and Traditional Media on Customer Acquisition and Retention	29
Creating, Metavoicing, and Propagating: A Road Map for Understanding User Roles in Computational Advertising	25
The impact of customer personality and online brand community engagement on intention to forward company and users generated content – Palestinian banking industry a case	23

Article title	Citations
Developing UGC social brand engagement model – Insights from diverse consumers	23
Modeling the Factors affecting Online Purchase Intention: The Mediating Effect of Consumer's Attitude towards User– Generated Content	23
To spin straw into gold? New lessons from consumer–generated content	21
Economical User–Generated Content (UGC) Marketing for Online Stores Based on a Fine–Grained Joint Model of the Consumer Purchase Decision Process	19
The influence of firm–Generated video on user–Generated video: Evidence from China	12
Branding Co–Creation with Consumer–Generated Advertising: Effect on Creators and Observers	9
Role of Social Media in Modern Marketing Communication Strategy	5
Decomposing Customer Engagement Effect Between Marketer– and User–Generated Content and Repurchase Intention in the Online Airline Service Community	4
The Social Side of Brick and Mortar: The Impact of Brand–Related User–Generated Content on Different Consumer Typologies in Food Retailing	4
Comparing the Impact of Brand and User–Generated Video Content on Online Shoppers' Purchasing Intentions	2
Do user–generated content and micro–celebrity posts encourage generation Z users to search online shopping behavior on social networking sites — the moderating role of sponsored ads	1
Purchase Decision in Terms of Content Marketing and E–WOM on Social Media	1
Can a Vlogger Help to Build Brand Awareness? The Impact of Vloggers on Customers' Attitude towards Brand Advertisement and Purchase Intention	1
Motivating User–Generated Content: Unintended Consequences of Incentive Thresholds	1
Determinants of Customer Engagement on Social Commerce Sites: Role of User–Generated Content	0
Brand–Related User–Generated Content In New Media – Systematic Literature Review	0
A Study on the Impact of Social Media on Marketing a Brand	0

Table 2. Number of citations per article.

Figure 4 presents the methodology used in the selected studies, which include quantitative, qualitative, mixed, and unknown methodologies. The majority of the studies, 20 articles (or 57%), were quantitative, while 8 (23%) were qualitative, 5 (14%) were mixed, and 2 (6%) did not specify their methodology.

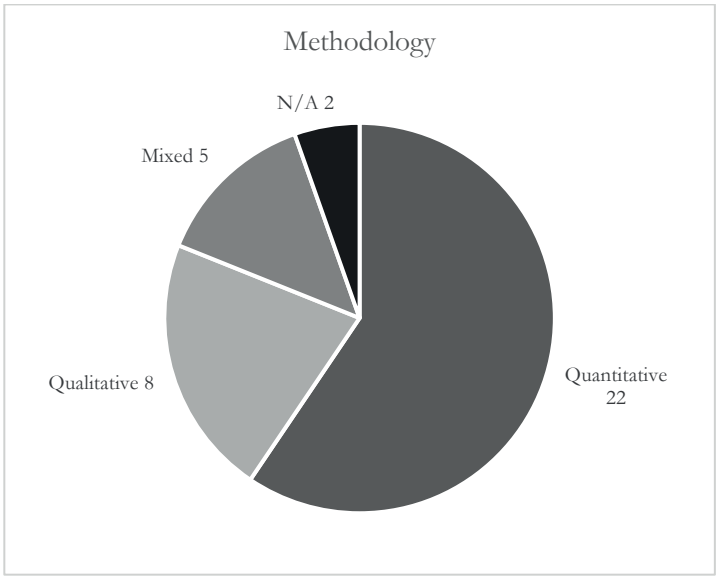


Figure 4. Research Methodology identified in the articles.

4.1. *Thematic findings*

4.1.1. Factors influencing user–generated content (UGC)

Earlier studies like Berthon, Pitt, and Campbell (2008) have examined drivers of UGC to be intrinsic enjoyment, self–promotion, and change perceptions. So, some users create UGC for the sake of creating, others do so to bring awareness to themselves, while some create intending to change their target audiences' perceptions, and users may have more than one driver to create UGC (Berthon *et al.*, 2008). Their findings also show that consumers may be empowered to engage with UGC because of the context, not the brand and that consumers who engage for self–expression may prefer doing so for brands that are less established

as they feel that they can be more creative and have greater impact on others' perceptions (Christodoulides *et al.*, 2012).

Further, Yasin, Porcu, Abusharbeh, and Liebana–Cabanillas (2020) have studied the impact of consumers' personalities and their engagement with brand communities online on their intentions to share brand and UGC in a Palestinian banking industry context. Their results have shown that personality traits like conscientiousness, extraversion, and openness positively influence consumers' engagement with brand communities online and that this engagement has a crucial role in motivating consumers to share UGC.

4.1.2. The effect of UGC on brand engagement and consumer loyalty

Several studies have found that UGC impacts brand engagement and consumer loyalty. Beurer–Zuellig & Klaas, (2020); Li *et al.* (2020) have found that user–generated content impacts online purchase decisions of consumers since it reduces their perceptions of risk associated with the product. To properly analyze this impact, they have proposed a model that accounts for the psychological thresholds and consumer behaviors at different stages of the decision–making process. They have developed this model to help marketers optimize their utilization of UGC to effectively enhance their sales (Li *et al.*, 2020).

Mohammad *et al.* (2020) have examined the effect of UGC quality on brand engagement through the emotional and functional values of UGC. They have found that the technical and content quality of UGC have noteworthy effects on the emotional and functional values of UGC, and that emotional and functional values have great and positive effects on customer–brand engagement. Interestingly, their results have shown that UGC design quality did not directly affect UGC values and it did not indirectly affect customer–brand engagement. They have also shown that UGC's emotional and functional values facilitate the connection between technological and content quality and customer–brand engagement. Overall, their results highlighted the important role of UGC's content and technological quality in increasing the emotional and functional values of consumers (Mohammed *et al.*, 2020).

4. Conclusions

To conclude, user–generated content, that is, content created and distributed by users or consumers online, has had a continuously increasing role in social media marketing, and understanding that role has practical implications for brands wanting to optimize their strategies and understand their customers' behavior towards UGC. A systematic literature review (SLR) was conducted to explore the connection between user–generated content and social media marketing, with a special focus on the factors that influence consumer–generated content in social media and its effects on brand engagement and consumer loyalty.

The review identified consumer perception, consumer personality, UGC value, and UGC quality as important factors in the success of UGC in social media marketing. Furthermore, it was shown that the emotional and functional values of UGC are significantly influenced by its content quality, whilst the latter has a significant and beneficial impact on customer–brand engagement.

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EUREKA: SUSTAINABILITY IS THE ANSWER. OR IS IT NOT?

ANDROMAHI KUFO[1]

1. *Objectives*

We're living in the days of trumpeting sustainability as a remedy to planet emergencies, geopolitical views, business continuity, and individual well–being. Consequently, it is more than necessary to understand whether the pathway to sustainability raises any collateral damages, disadvantages, or even costs, especially for small emerging economies and heavily regulated industries such as the banking system. Sustainability has a broader context including the policies and actions that enable physical and legal entities to live in a better future, but in the context of banks, it is mostly concentrated on the implementation of the ESG framework, standing for environmental, social, and governance.
The purpose of this paper is threefold:

1. To represent the ESG framework implementation in the banking industry through a literature review.
2. To represent the case of the Albanian banks and their actions regarding implementing the ESG framework.
3. To critically assess the benefits and drawbacks of the eventual implementation of the ESG framework in the Albanian Banking sector.

Keywords: sustainability, ESG, banking industry.

[1] University of New York Tirana, Albania.

2. Theoretical background

The importance of ESG has become crucial in all life aspects, especially in the economy and banking. As per the recent regulations imposed, every financial institution is obliged to report on its ESG activity and level of implementation, due to investor's requests to make informed investment decisions (Mackintosh, 2020). As a result, this has incentivized other businesses to consider their behavior toward the sustainability process and enhance their reporting and transparency. Moreover, ESG reporting is considered an important risk management tool that helps trigger and prevent reputational and other institutional risks. Strong ESG performance may help businesses distinguish themselves from other companies and potentially attract more clients (Xie *et al.*, 2018), providing a competitive advantage for them. Finally, ESG helps maintain a good reputation and goodwill, which supports the institution to provide transparency, keep viability, and increase its financial performance through good governance regulations (McIntyre, 2015).

The European Union financial regulations encompass the ESG reporting by keeping track of four important requirements:

1) The taxonomy criteria: a common ground of communication between investors and businesses to interact in the market (Bruno & Lagasio, 2021).
2) The Non–Financial Reporting Directive: encourages big institutions to maintain transparency and consistency by reporting regularly their ESG factors application.
3) The Capital Requirement Regulation 2: defines the minimum capital every institution should hold as a reserve, that can be affected by ESG scores.
4) The Sustainable Finance Disclosure Regulation: requires institutions and banks to disclose data and all the necessary information to observe and detect the potential impact ESG factors might have on their sustainability state.

The above regulations have been considered confusing and heavy for financial institutions, but at the same time they have created an area for research from the academic perspective on whether their implementation affects the banks' profitability and continuity as the two major substances of a sustainable business environment. The systematic literature reviewed in the paper explores the different dimensions of ESG and banking institutions including the direct effects on performance and risk, and the indirect effects produced by the implications of bank size, country, gender, and ICT development.

3. Methodology

To fulfill the aims of this paper a systematic literature review has been processed researching papers from EBSCO, Jstore, Google Scholar, Open Access Databases, by using the keywords "ESG", "bank", "performance". The results of the initial sample of 35200 were pooled down according to the following criteria: (a) article written in the last 5 years, (b) Articles published, (c) article is scientific and applicative, (c) article is cited, (d) article covers the keywords.

In continuance, we made a comparative analysis of the legal framework recently approved by the Central Bank referring to the financial risks linked with the climate and the environment with the European framework and following that an analysis of the secondary data collected from the Corporate Social Responsibility Report of the banks in Albania for the period 2016–2021. We analyze which of the 19 SDG goals included in the Paris 2030 agenda, banks in Albania have been mostly focused on.

4. Findings

There are two schools of thought when it comes to defining the direct effect of ESG to the banks' performance and activity, as follows:

ESG has positive impact

- ESG activities disclosure makes the institutions more attractive during financial turmoils (Chiaramonte *et al.*, 2021).
- ESG factors help to maintain a good rating, as these activities provide a higher chance not to fail on their short and long–term commitments (Kernan, 2017).
- High ESG scores provide a high rating and a greater chance for banks to perform better during a financial recession (Das *et al.*, 2018).
- Long tun application of ESG policies, higher performance on issuing bonds regarding the green movement (Friedea *et al.*, 2015).
- High ESG scores banks take fewer risks, thus maintaining their capital, sustainability and reputation (Galletta et.al, 2022), (Thornton & Di Tommaso, 2020), (Lupu *et al.*, 2022).
- In high–risk banks, environmental and governmental factors have been proven to have a negative relationship with the unique risk of the banks (Izcan & Bektas, 2022), (Aras & Kazak, 2022), thus providing a higher value for the company (Galletta & Mazzu, 2022) and attracting more clients (Miralles–Quiros *et al.*, 2019).
- The environmental factor has a positive effect on ROA and ROE (Buallay, 2019), generate higher cash flows and reduce the cost of equity (Azmi *et al.*, 2020), (La Torre *et al.*, 2021).

ESG has negative impact

- ESG application and financial performance should be balanced to the level that it doesn't damage the bank's image and operations efficiency since large–amount issuance of green bonds might negatively impact the bank's performance (Wang & Wang, 2022).
- Banks with high ESG score that take lower risk, face a decreased networth (Thornton & Di Tommazo, 2020).
- As the lower risk tends to provide sustainability in the short run, in the long run is created uncertainty, due to the non–linear

relationship between the ESG score and financial stability (Lupu *et al.*, 2022).
- Engaging in ESG activities due to regulatory pressure might disrupt internal operations affecting negatively the value of the banks (Miralles–Quiros *et al.*, 2019).
- Poor application of social and governance dimensions may reduce ROA and ROE, as they are directly linked to the human factor (Buallay, 2019), (Asgari & Molyte, 2023), (Alessandro, 2023).

ESG in different countries

- ESG performance may increase influence through foreign stakeholders (Velte, 2022)
- Banks in high–income nations adopting ESG principles offer more diversification opportunities that boost their profitability, financial stability, and sustainability (Saif–Ayousoufi *et al.*, 2023)
- Banks in the Eurozone countries adopting ESG have seen better performance in terms of ROA (Crona & Passador, 2019)
- The ESG score of banks in the US is found to positively affect the financial performance, market value, and sustainability in the short run (Ersoy *et al.*, 2022), but this loses effect in times of war natural disasters or pandemics when banks tend to focus more on the ESG social factor (Yuen *et al.*, 2019).
- In the Scandinavian countries, ESG implementation compliance is among the highest and in compatibility with economic stability, financial sustainability, and positive performance (Ziolo *et al.*, 2019).
- In developed Asian countries, ESG implementation goes along with cost–efficient economic state, while the in–development countries they need to focus more on environmental and governmental factors of ESG to have the same cost–efficiency results (Chang *et al.*, 2021).
- In MENAT (Middle East, North Africa, Turkiye) countries ESG factors improve the banking and financial sector services system, but in the long run depending on the banks priorities, the application of ESG decreases efficiency and sustainability (El Khoury *et al.*, 2021).

ESG affects differently the banks performance based on size, technology, gender and ICT:

- Bank size is significant when implementing ESG factors and behaves differently in large and small–size banks (Albbdiwy *et al.*, 2022)
- Large banks incorporating ESG factors enhance sustainability and stability, while small banks doing the same reduce viability (El Khoury *et al.*, 2021).
- ESG implementation of policies is better when there are more women in the workplace, as they encourage a more sustainable and ethical method of operating business (Shakil *et al.*, 2021).
- Excessive proportion of female employees may cause interruption of activities. Maintaining a gender balance ensures better implementation of ESG policies that enhance long–lasting sustainability (Birindelli *et al.*, 2018).
- ESG adoption when there is minimal use of ICT, may harm a bank due to the challenge it puts in applying new practices. Thus, the market is unable to acknowledge the significance of these activities, which my decrease the net worth of banks (Hyun, 2022).
- When ICT infrastructure is developed, ESG activities positively affect the bank's value, as they tend to improve the transparency and ability to prove the dedication to sustainable practices.

The case of Albania

Albania is a small country in the Mediterranean, adhering to the EU, and recently opening negotiations. The country has 11 active banks, 5 of which are under big groups, and others locally owned, all of them monitored by the Central Bank of Albania. The Central Bank of Albania has recently, in August 2024, proposed a legal framework on the financial risks linked with the climate and the environment. All banks are expected to comply in defining: a) a system of risk administration including the climate risk, b) administering the credit risk considering the climate and environmental factors, c) administering the operational risk, market risk and liquidity risk including the risk factors involving the environmental aspects, d) re–defining the stress–tests and scenario

analysis considering the climate risk. All banks are obliged to assess their exposure to climate risk, define a self–evaluation process for this risk, define a plan for resolving it, and monitor and implement this plan.

Compared with international groups, the banks in Albania are of relatively small size banks, with a controlled NPL ratio and applying capital requirements under Basel II + III. Banks are not considered in a very advanced ICT implementation, while they maintain a balanced gender diversity ratio.

Before the launch of the guidelines to include the climate risk, banks in Albania have produced an annual corporate responsibility report, which presents adequate information on their activities regarding the 19 SDG goals and their achievement to promote sustainability and stability.

From the analysis of CSR reports, we were able to find out the annual amounts spent for a time period 2015–2021 for each SDG, their composition and their trend.

Year	Contribution
2015	1,075,800.00
2016	4,279,800.00
2017	1,048,550.00
2018	1,187,000.00
2019	2,379,201.11
2020	1,604,249.29
2021	2,910,603.43

Table 1. Total contribution in SDGs in ALL.

GOALS	2015	2016	2017	2018	2019	2020	2021
NO POVERTY	6.97%	0.33%	1.81%	2.53%	1.10%	3.53%	41.24%
HUNGER	3.90%	0.75%	2.48%	0.67%	0.11%	3.28%	0.40%
GOOD HEALTH	17.48%	3.50%	14.21%	4.55%	8.60%	23.81%	4.55%
QUALITY EDUCATION	6.23%	81.78%	35.38%	12.13%	10.32%	12.11%	12.12%
GENDER EQUALITY	0.60%	0.09%	0.95%	8.42%	0.76%	0.71%	0.02%
CLEAN WATER &SANITATION	0.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AFFORDABLE & CLEAN ENERGY	0.19%	0.00%	0.00%	0.84%	0.00%	0.13%	0.00%
WORK & ECONOMIC GROWTH	1.39%	0.23%	8.68%	1.68%	0.96%	16.14%	2.84%
INDUSTRY INNOVATION INFRASTRUCTURE	21.84%	5.37%	11.64%	21.31%	7.00%	4.04%	14.22%
REDUCED INEQUALITIES	1.14%	0.47%	2.38%	3.37%	2.41%	2.77%	1.31%
SUSTAINABLE CITIES	27.89%	3.27%	15.35%	16.85%	19.98%	8.58%	5.69%
RESPONSIBLE CONSUMPTION PRODUCTION	2.23%	0.12%	0.02%	0.00%	27.52%	18.16%	1.33%
CLIMATE ACTION	1.58%	0.75%	0.60%	14.32%	4.03%	3.53%	15.64%
LIFE BELOW WATER	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
LIFE ON LAND	0.00%	0.47%	1.05%	0.93%	0.00%	2.83%	0.34%
PEACE AND JUSTICE	0.00%	0.54%	0.38%	0.00%	0.00%	0.00%	0.00%
PARTNERSHIP FOR THE GOALS	7.62%	2.34%	5.05%	12.38%	17.20%	0.38%	0.31%

Table 2. Contribution per SDGs in %.

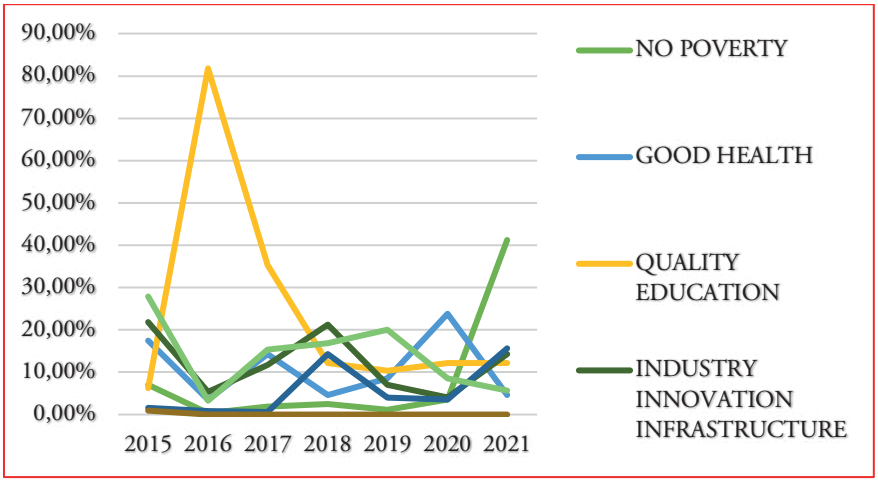


Figure 1.

5. Conclusions

Concluding from the above, we can mention that:

- Incorporating ESG has a positive effect on the efficiency, stability, and reputation, but may create negative effects in small sized banks.
- Incorporating ESG has different effects between developed and in development countries, as such it needs an in–depth understanding of the surrounding factors.
- ESG application needs to account for gender diversity and ICT development.
- Considering the above and the particular characteristics in the case of Albania there is a need for a cautious plan in ESG implementation to balance the cost effects with the benefits of increased performance.

So the answer to all questions may sustainability, nevertheless we need to move towards it with cautiousness.

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EQUITY AND FAMILY POLICIES FOR SUSTAINABLE DEVELOPMENT: THE E–FAMILY PROGRAMME (2021–2025)

LUANA LA BARA[1], GLORIA FIORANI[1], GIOIA MAURIZI[1], RIBANA A. CHIPER[1], CHIARA DI GERIO[1]

Abstract

The present study aims to analyze the E–family Program (2021–2025) – Nursery Vouchers in the Lazio region, financed by the European Social Fund Plus (ESF+), as an example of Italian policies supporting families to promote the reconciliation of work and private life — a central theme in social and labor policies aimed at ensuring a balance between professional commitments and family responsibilities (EU Directive 2019/1158, Legislative Decree n. 105/2022).

The main objectives are:

1. Evaluating the program's impact on work–life balance: nursery vouchers provide financial support to reduce the family burden and encourage female participation in the labor market, in line with SDGs 5 and 8 of the 2030 Agenda for promoting sustainable development.
2. Analyzing equity in fund distribution: assess how resources are allocated among different families and territories, highlighting structural and territorial inequalities.
3. Linking the initiative to Italy's demographic decline: integrate ISTAT data on birth rates in Italy and Lazio between 2020 and 2024 to understand the demographic and social context in which the program operates.

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The broader aim is to explore the extent to which the E–family Program contributes to building a sustainable and inclusive welfare state, in line with the European Union's strategic priorities (EU Regulation 2021/1057) and the 2030 Agenda (UN, 2015).

Keywords: welfare state, equity, sustainable development, european social fund plus, social inclusion.

1. Theoretical background

The E–family program is part of European welfare policies, which promote social inclusion and territorial cohesion as pillars of sustainable development (Esping–Andersen, 1990). Through the ESF+, the European Union sets specific targets to reduce inequalities, increase access to education services, and improve gender equality. These goals are directly linked to the SDGs 4 (Quality Education), 5 (Gender Equality), and 8 (Decent Work and Economic Growth).

Welfare State and Equity

According to Esping–Andersen (1990), an effective welfare state must ensure universal access to essential services by reducing gender and territorial disparities. Andrews *et al.* (2019) expands on this view, underlining the importance of measuring equity (CEPIKU *et al.*, 2021) in terms of:

- Input: Equitable access to services (Boyne, 2006; Wang *et al.*, 2018; Miller *et al.*, 2008).
- Output: Proportional distribution of resources (Smith *et al.*, 2013).
- Outcome: Improvement of living conditions (Charbonneau *et al.*, 2008; Osman *et al.*, 2018).

Territorial convergence and human capital

Territorial equity is a fundamental principle of European welfare. However, Bywaters *et al.* (2015) highlight the "inverse intervention

law", according to which the most disadvantaged areas often receive fewer resources than their real needs.

This aggravates inequalities and reduces the effectiveness of social policies. Policies such as E–family aim to overcome these barriers by investing in human capital and promoting participation in work.

2. Methodology

This study employs a mixed–methods approach, combining quantitative and qualitative analyses to comprehensively evaluate the E–family program (2022–2025) within the context of declining demographic trends and social equity. The methodology is structured as follows:

A) Quantitative Analysis
Data Sources: the quantitative data were derived from official documentation of the E–family program, demographic statistics published by ISTAT, and reports from the Regione Lazio. These sources provided detailed insights into:
- Birth Trends: Annual birth rates in Italy and Lazio from 2020 to 2024, highlighting the demographic decline.
- Program Resources: The financial allocations for each call for proposals and the number of applications received.
- Geographical Distribution: The territorial allocation of funds, emphasizing disparities between urban and rural areas.

B) Data Visualization: to present the findings effectively:
A trend chart was constructed to illustrate the declining natality rates in Italy and Lazio, emphasizing regional variations over the period 2020–2024 (Natality Trend in Italy and Lazio).
A comparative graph displayed the relationship between the funds allocated and the number of applications received for each year of the E–family program (Funding and Requests Chart).

C) Qualitative Analysis
Document Review: Program guidelines, policy frameworks, and regional implementation reports were analyzed to identify patterns in resource allocation and implementation bottlenecks. Special attention was given to the criteria for selecting beneficiaries, such as the reliance on the ISEE (Indicatore della Situazione Economica Equivalente), which determines eligibility based on household income.
Stakeholder Perspectives: Insights were gathered from beneficiaries and program implementers to assess the program's perceived effectiveness. Families' experiences were used to evaluate the accessibility and adequacy of the support provided, particularly among socioeconomically vulnerable groups.

D) Analytical Framework – The analysis was guided by theoretical frameworks on equity and social justice. Key principles include:
Distributive Equity: Evaluating whether resources are allocated proportionally to needs, as suggested by Boyne (2006).
Territorial Cohesion: Assessing the program's capacity to reduce regional disparities, in line with EU objectives (Regolamento UE 2021/1057).
Outcome Measurement: Using indicators such as coverage rates, unmet demand, and inclusion of vulnerable groups to measure the program's impact on social equity.

E) Limitations – While the study relies on robust data sources and established frameworks, some limitations exist:
1. Data Gaps: Detailed household–level data on beneficiaries were not accessible, limiting the granularity of the analysis.
2. Temporal Scope: The analysis focuses on the 2020–2024 period, which may not capture longer–term program impacts.
3. By integrating these methods, this study offers a comprehensive assessment of the E–family program, providing actionable insights into its design and implementation.

4. Findings

The analysis of the E–family program (2022–2025) highlights important results concerning support for families, equity in the distribution of resources, and the context of demographic challenges, responding to the three main objectives of the study.

4.1. *Objective 1: Impact on work–life balance and social inclusion*

The E–family program shows a partial ability to support work–life balance, especially for women, thanks to vouchers for nurseries that help reduce the costs of childcare. The amount of funding banned has decreased dramatically in the last year (Figure 1).

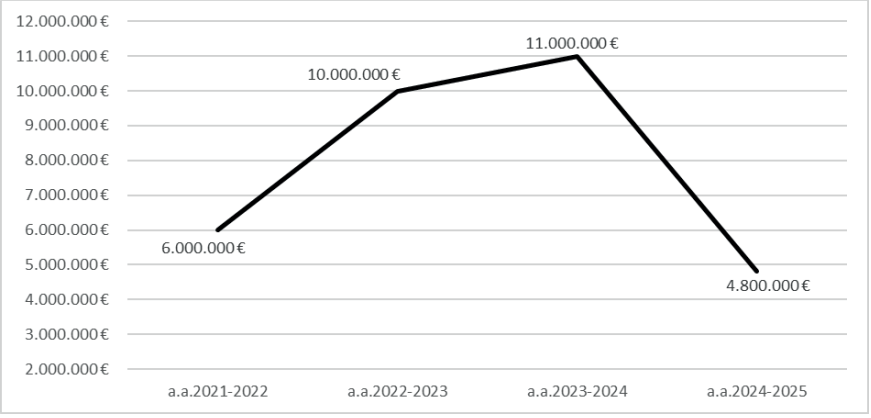


Figure 1. Funding for the call, Authors' elaboration, 2024.

In addition, the overall impact is limited by the rapid depletion of available resources. In the 2023 cycle, funds were exhausted within ten days of the opening of the call, covering less than 70% of applications. In 2024 the funds were exhausted in the afternoon of the first day, among many participants, in a "fight for funds". This imbalance between demand and available resources reduces the potential of the program to stimulate female labor market participation and promote wider social inclusion. In addition, households in urban areas reported better access than those living in rural or peripheral areas, reflecting a disparity in the availability of services.

4.2. *Objective 2: Equity in resource allocation*

While aiming to ensure equitable access to childcare services, the program has significant distributional justice issues. The use of the ISEE (Equivalent Economic Situation Indicator) as a selection criterion has created unexpected barriers for some vulnerable households, particularly those with unstable or undocumented incomes.

From a territorial point of view, urban areas, like the main centers of Lazio, have received a larger share of funds than rural areas, aggravating territorial inequalities. This phenomenon is in line with the so–called "inverse intervention law" (Bywaters *et al.*, 2015), which highlights that regions with greater structural disadvantages tend to benefit less in proportion to their actual needs.

4.3. *Objective 3: Tackling demographic challenges*

The program is set against a background of persistent demographic decline. Between 2020 and 2023, births in Italy decreased from 404,000 to 379,000, with a similar trend in Lazio, where the numbers fell from 35,000 to 33,000.

Although the program provides crucial support to families with young children, its scope and financial impact are insufficient to significantly influence demographic trends. The limited coverage capacity and exclusion of a significant part of the population reduce the potential of the program as a strategic tool to counter the decline in birth rates in Italy.

5. Conclusions

The E–family program is an important initiative to support families and promote social inclusion. However, to maximize its impact, several changes are needed:

Increase of available resources: increasing funds to meet growing demand and reduce the time to run out (Blessett, 2019).

Reducing territorial inequalities: ensuring an equitable distribution of resources, with a focus on rural and marginalized areas.

Optimization of selection criteria: favoring the most vulnerable families through criteria that consider economic and social factors (Frederickson, 2015).

Greater coordination between actors: improving collaboration between the EU, Regions, Local Authorities, and Third Sector to ensure effective implementation of the program (UNDP, 2012).

Such interventions could contribute to a sustainable state of well–being and align the E–family program with EU strategic objectives.

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CONSUMER UNDER THE MAGNIFYING GLASS: A LITERATURE REVIEW ON CONSUMER BEHAVIOUR OF SUSTAINABLE MEAT PRODUCTS

ANDRÉS LILLO–PRADILLO[1], MARÍA CORDENTE–RODRÍGUEZ[1], JUAN ANTONIO MONDÉJAR–JIMÉNEZ[1]

1. Objectives

The demand for sustainably produced agrifood products has increased in recent years due to the increase in the population and its awareness of the need for environmentally responsible consumption. Currently, different organizations around the world are developing regulations and strategies to meet the objective of achieving this sustainable production and consumption through regulations, which increases the importance for companies to know how consumers behave in the face of sustainability, seeing those attributes that are most important to them (Mondé–jar–Jiménez *et al.*, 2022).

One of the most important foods in the world is meat, being an important source of proteins, vitamins, and minerals necessary for the human body (Leroy & Cofnas, 2020). However, meat consumption in recent years has been questioned both ethically and health–wise, as well as in relation to aspects related to sustainability. In relation to the latter, some of the aspects that have aroused the greatest interest in consumers are those related to animal welfare throughout the production process (Wiedemann, 2023; Font–i–Furnols & Guerrero, 2022). Despite this, the interest of academic research in relation to consumer behaviour of sustainable meat products, and more specifically, pork products, has not been very high. Therefore, the objective of the researchers in this work is to carry out a systematic review of the literature, which allows

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to know the state of research in this field of study, in order to encourage and facilitate future research.

2. Methodology

To form the database used in this research, the authors have carried out a search in the Web of Science and Scopus repositories, in order to be able to carry out an exhaustive and suitable analysis in this type of research (Paul & Criado, 2020). The search carried out in both repositories was based on the three axes of this research. The first of them would refer to the marketing load present in the work, the terms used being behaviour* and consumer*, both terms being truncated to be able to include the English derivation. The second of the axes would be related to pork, with the words "meat", "meat products", "meat–based product" and "pork" being added. The last of the axes used would be the axis related to sustainability, including "green" or "sustainab*" or "ethical behaviour" OR "fair trade" OR "environment*" OR "organic" OR "animal welfare" OR "corporate social" OR "animal friendly" OR "ethic*" OR "ecol*" OR "social responsibility", with the words "sustainability", "environment", "ethical" and "ecological" being truncated to include the derivations and plurals.

Therefore, the search carried out was as follows:

> "consumer* behavio*r" AND "Meat" OR "Meat product*" OR "meat–based product*" OR "Pork" AND "green" or "sustainab*" or "ethical behaviour" OR "fair trade" OR "environment*" OR "organic" OR "animal welfare" OR "corporate social" OR "animal friendly" OR "ethic*" OR "ecol*" OR "social responsability"

The keywords were searched in the supply in both repositories.

The initial search showed a total of 224 unique papers in the Web of Science repository and 152 papers in the Scopus repository (both accessed on October 30, 2024). After obtaining these data, the authors proceeded to combine both databases in order to obtain more accurate results regarding the scope of research in this field of study. Once the

database used has been obtained, the authors have proceeded to carry out an analysis of the journals that have at least 3 articles in this field of study published in recent years.

A second analysis carried out by the authors has been the bibliometric study, in which the free software VOSviewer has been used, which allows the construction and visualization of bibliometric maps (Van Eck & Waltman, 2010). To correctly perform the aforementioned analysis, the Official VOSviewer Manual in its version 1.6.20 (van Eck & Waltman; 2023) has been used.

3. Results

Regarding the descriptive analysis of the results obtained, it has been identified that this field of study began in the 1990s, with the Web of Science repository being the first to publish a study in this field. However, despite the antiquity of research in this field, it was not until 2008 that an increase in the number of works published in this repository began to be seen, an increase that would not be seen in the Scopus repository until 2015.

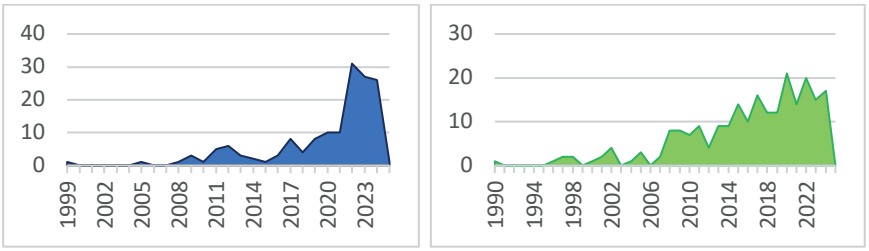


Figure 1. Evolution of the number of articles published in WoS (left) and Scopus (right).

Regarding the bibliometric analysis, the most used keywords in this field of study have been identified, highlighting "consumer behaviour", "sustainability", "consumer", "attitute", "animal welfare", "segmentation", "quality" and "meat" among others.

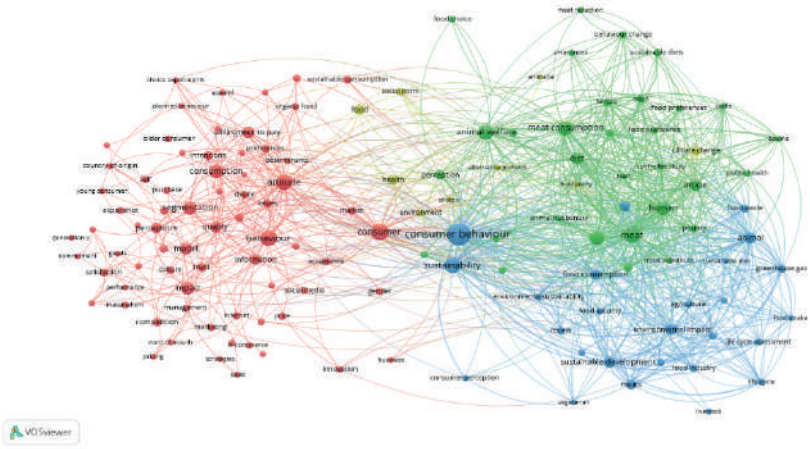


Figure 2. Keyword cluster, with at least 5 citations, in sustainable meat product research.

Regarding the temporal evolution of the keywords used in this field of study during the last decade, a clear evolution of the concepts used can be identified (see Figure 3). At the beginning of research in this field, the use of keywords related to the basic concepts of marketing such as "satisfaction", "segmentation", "strategies", "pricing" among others can be identified. These keywords, in about half of the period studied, were replaced in their use by the words "consumer behaviour", "consumer", "sustainability", "animal welfare" among others related to sustainability. Finally, in recent years, the evolution of these keywords has leaned towards more ethical aspects related to the nutritional value of food, with terms such as "alternative proteins", "consumer perception", "food policy", "life circle" and "social norm" among others.

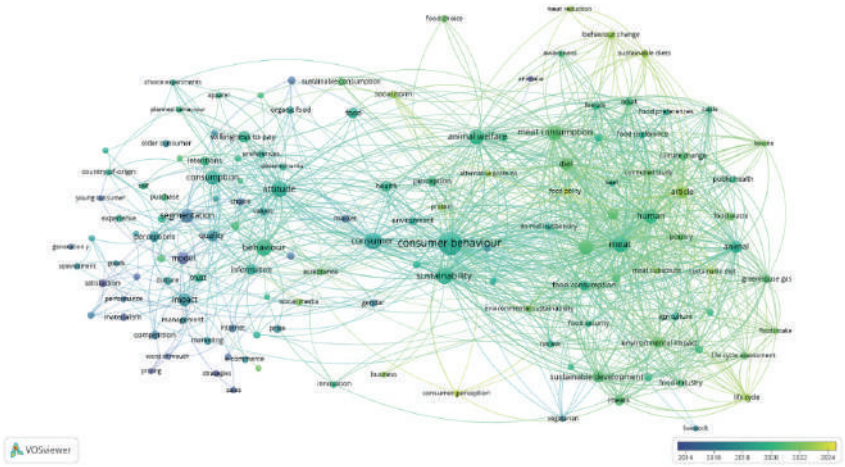


Figure 2. Evolución de palabras clave, con al menos 5 citas, en la investigación de productos cárnicos sostenibles.

4. Conclusion

With this research, the authors have been able to identify the lack of academic studies related to consumer behaviour of sustainable pork products. However, it has been possible to identify that in recent years research in this field of study has intensified, with most of the scientific studies being published in the last 10 years.

For the analysis carried out, the researchers have used the Scopus and Web of Science repositories to be able to carry out an exhaustive investigation of the state of research in this field. The results show a total of 376 unique works published between both repositories.

Regarding the evolution of keywords, there has been a clear evolution of the terms used in this area, with the most used terms initially being those related to the purest marketing variables such as price. These terms were replaced by those related to sustainability such as "animal welfare", while in recent years, the most used terms are those related to the most ethical aspects of consumption and the nutritional value of products.

Given this casuistry, the authors consider that research in this field of study has a very significant margin for growth, being a very relevant topic at present.

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REGULATORY AND LEGISLATIVE FRAMEWORK GOVERNING CONCESSION: KEY CONSIDERATIONS AND IMPACTS

GABRIELE SAPONARO[1]

1. Objectives

The paper delves into the regulatory and legislative aspects of concessions within the public sector and public–private partnerships. The primary objective is to provide empirically a qualitative in–depth examination of the concept of concessions, tracing the journey from the initial entrepreneurial idea through to the awarding process.

Keywords: concessions, regulatory aspects, legislative aspects, private public partnerships, italian public sector.

2. Theoretical background

Concessions, as an economic policy tool aimed at developing public interest works in partnership with the private sector, find specific application in the electricity, airport, railway, and highway sectors (Duffield *et al*., 2008). These sectors facilitate the transfer of their entrepreneurial component from the state to the private sector, characterized by the fact that they are all public services, for which price control by the Grantor appears justified, thus avoiding complete market–driven logic that, while promoting competitiveness, could on the other hand create restrictive usage conditions for certain user categories (e.g., excessively high prices) (Cruz & Marques, 2013). Furthermore, they are all comparable to natural monopolies, where market logic does not always

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seem to ensure the equity and solidarity criteria that mustbe guaranteed by public goods and are all "capital intensive" sectors, requiring significant initial investments and rather long payback periods. However, they do not involve particularly complex production technologies, qualifying them as investments that can be developed by a wide range of market operators who, either individually or grouped in purpose–specific companies/associations, can gather all the necessary competencies for project development.

For these reasons, the specialization and dimensional growth of companies have increasingly favored, over time, the entry of private capital into the public goods sectors and, correspondingly, the state's position as a market Regulator and Supervisor rather than a direct producer of the goods (Helm, 2009).

3. Methodology

The analysis encompasses the detailed "rules of engagement" for concessionaires, formed by the extensive regulatory framework and public procurement legislation, highlighting the evolutionary changes within this legal domain. Methodologically, the study conducts empirically a qualitative in–depth examination of the current legislative system, complemented by interviews with top level managers from market–leading companies offering practical insights and real–world perspectives.

4. Findings

The results present a clear yet thorough understanding of the concession framework, clarifying the complexities of regulatory requirements and legislative provisions to identify a valid Public Private Partnership contract able to transfer the risk from the public sphere to the private side. Furthemore throughout the paper the practical application of the concession framework has been analysed with a critical analysis derived from managerial practice.

This research contributes valuable knowledge to both academic and professional spheres in the analysis of Concessions, Regulatory Aspects, Legislative Aspects, Private Public Partnerships and Italian Public Sector, aiding stakeholders in navigating the intricate landscape of public concessions and fostering more effective public–private collaborations. In fact, this analysis and paper can be helpful, to scholars, from an academic perspective, to set the baseline for a future developed consolidated theory, very weak at the moment, and to newly hired professionals in companies operating in regulated sectors, who, thanks to the paper, gain a normative and legislative regulatory overview.

5. Conclusions

The work, which aimed to simplify the main regulatory and legislative principles of state concessions, could develop into a comprehensive and concise overview that also includes the financial and evaluative elements essential for a complete understanding of the reference context. Gaining familiarity with these factors facilitates the comprehension of the still untapped potential of the concession system in terms of both fiscal capacity and development through the mechanism of cross–financing. Increased involvement of the private sector in public interest projects indeed has significant scope not only in the development of new infrastructure but also in the transformation of public companies into private organizations following the public–private partnership logic. This could lead to more efficient management as well as the deconsolidation of the public sector's resources required for the maintenance and development of existing works.

For literature, in fact, this work could serve as a foundational text, enriching academic discourse on state concessions by integrating financial and evaluative perspectives. It may stimulate further research into the economic impacts and efficiencies introduced by private sector involvement in public projects, particularly in the context of public–private partner–ships. Additionally, it could encourage scholars to explore

the potential of cross–financing mechanisms in optimizing public resource management and infrastructure development (Caselli *et al.*, 2018).

On the other hand, from a policy standpoint, the findings suggest a need for policymakers to reconsider and potentially expand the role of private entities in the public sector. This could involve creating more robust frameworks for public–private partnerships that ensure transparency, accountability, and equitable resource allocation. Policies that facilitate and regulate the transition of public companies into private hands could lead to more dynamic and sustainable public service delivery models (Mazzola *et al.*, 2018). Moreover, emphasizing cross–financing could unlock new avenues for funding public infrastructure, reducing the fiscal burden on the state while promoting economic growth and development (Vecchi *et al.*, 2015).

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IMPACT OF MISINFORMATION ON SCHOOL–AGE CHILDREN

TINATIN TCHARKHALASHVILI[1]

In the age of 21st century technology, social media has become one of the fastest ways to get information and news. Social media has greatly accelerated the search cycle for information, as anyone with access to the Internet can quickly receive or disseminate facts as well as rumors and so–called "fake" news on any topic or matter without any time limit. That is why fake news spread on social networks is one of the main challenges in the fight against propaganda.

The spread of the pandemic accelerated the transition of the educational process to the online mode, which brought the actors/educators of general education institutions, including schools, closer to the Internet and made it even easier to obtain any kind of information. That is why the aim of our research is to determine the impact of different types of information spread on social media on school–age students.

100 students aged 15 to 18 in Georgian public schools participated in the study. Our research has shown that almost 100% of students use gadgets and therefore have access to different types of information, and that this information and this unverified information often has some kind of impact on students.

Keywords: misinformation, social media, fake news, school, student, digital technologies, media and information literacy.

[1] Georgian Technical University.

1. Introduction

Excerpt from the account "Children in the Digital World"

According to the National Goals of General Education and the modern paradigms of education, the aim of teaching is to develop a thoughtful, inquisitive, literate, informed and responsible citizen who can think critically and make decisions independently. Digital technologies are having an increasingly powerful impact on the lives of millions of children around the world and, consequently, on different aspects of each of our lives. As the impact of digital technology — especially the Internet — has grown significantly, we need to discuss its impact more often: Is it useful for mankind because it creates unlimited opportunities for communication or trade, learning or free self–expression? What if it poses a greater threat to us, disrupts the fabric of society, undermines political order, and threatens human well–being?

Like globalization and urbanization, "digitalization" has changed the world. It is impossible to stop the rapid spread of information and communication technologies. This force applies to all areas of human life, including economics or social and cultural life, and it irreversibly changes our daily lives. Childhood is no exception. Because hundreds of millions of children use the Internet, they live in a continuous stream of digital communication, and the digital world encompasses all aspects of their existence: be it health issues or online photos of important life moments. As a child grows, so do the digital possibilities that affect his or her life and give him or her endless opportunities for learning and socialization, the omission of which is completely unacceptable. Digital technologies and innovations can open the door to a better future for children living in hard–to–reach areas or those fleeing poverty, exclusion, or emergencies. Cycle breakdown. But millions of children do not have access to the Internet, or if they do have access to it, with unstable or low–quality connections, and often this is the problem of the poorest and most vulnerable children. This further increases their exclusion, does not allow them to acquire skills and knowledge, realize their own potential and break the intergenerational cycle of poverty. Digital technologies and online interactivity pose a serious risk to children's safety,

privacy and well–being as technology further increases the potential threat to children even without the internet. In this way, technology makes even more vulnerable children even more vulnerable. Information and communication technologies facilitate knowledge sharing and collaboration, but also facilitate[2] the creation, dissemination and dissemination of material of sexual or other illicit content for the purpose of violence against children and their exploitation.

2. Definition of information

2.1. *Information*

Information has become a scientific term since the middle of the twentieth century, which refers to the exchange of information between humans, humans and automatons, as well as the exchange of signals in the plant and animal world, the transmission of properties from cell to cell, organism to organism. Information is one of the basic concepts of cybernetics.

The primary meaning of information is a message, something (information in Latin means "explanation, transmission"), which is transmitted by a person orally, in writing, or by other means (conditional signals, technical means, etc.).

Information is a broad concept that, depending on the context, can mean:

1. Acquired knowledge about any specific fact or event (news: political, criminal, household);
2. Knowledge acquired through conversation, study, or research;
3. the act or fact of the transmission of the certificate;
4. Collection and transmission of special (secret) information;
5. The value of the data or the content of the transmitted message.

[2] https://www.unicef.org/media/48601/file.

Information on how a set of facts and their sequence of events should meet the following three *criteria*:

I. Accuracy,
II. Perfection,
III. Balance.

2.2. *What does media literacy and information literacy mean for our generation of children?*

Today's generation of children and young people, have a special ability to find and use media for entertainment and recreational purposes. Yet do they just as successfully use the same media for purposes such as answering an interesting question, conducting evidence–based research, initiating debate, or receiving news?

All content materials are available to children and young people and it is therefore essential that they possess the ability to distinguish between valuable and non–valuable information; True information and false and false information. However, this ability does not only mean distinguishing true information from false information, but also the ability to process and interpret information.

3. Research Methodology

We conducted a survey within the framework of a qualitative sociological survey, in which 100 students aged 15 to 18 in Georgian public schools participated in the survey.

The study looked at the extent to which information disseminated through social media and networks has an impact on school–age adolescents. This study was conducted using a focus group method that best suited the specifics of the study.

The focus group allows us not only to study in depth this important or difficult issue, but also to create a clear idea of the diversity of opinions in the community around this issue. Focus group discussions re-

veal the respondents' attitudes towards the social problem, their psychological attitudes and emotional assessments, which are often not even realized by the respondent.

One of the advantages of the focus group is that this method allows us to keep an eye on the thought formation process, and at the same time, try to determine why people think the way they think. This happens during an exchange of views between group members. No less important is the fact that conducting a focus group often helps to take a fresh look at this or that issue, highlighting its important aspects that may not have been revealed during a formal interview. Therefore, as David Morgan (who is he?) Believes, one of the most important virtues of a focus group is the ability of this method to discover new topics and come up with new hypotheses. The economic side can also be considered as a positive side. Focus groups are less expensive than other types of research.

As a result of the focus group, the researcher only draws conclusions based on the verbal information of the respondents, which of course somewhat reduces the reliability of the results, because this information is not always completely complete. Which can be considered to some extent as a negative side of the focus group.

Within the framework of the research, the sample included 100 students from different public schools of Georgia. In order to collect data, 10 focus groups were conducted, the total duration of which was 15 hours. The research questionnaire included 20 open–ended questions. We observed the process and wrote down the words and sentences used by the participants on the audio tape. We have pointed out some interesting and useful points and specific details for our research.

4. Research results

Analyzing the collected data, we grouped the data collected by them according to the general theme, which we titled: what students know about misinformation, how often they use and how much time they devote to digital technologies, how often they are informed about social media, check the authenticity of information received.

5. Conclusion

In conclusion, after analyzing the data, it was found that the almost complete composition of students spends a large part of their time using digital technologies. Each of them owns at least two social networks and receives dozens of different types of information on a daily basis, hence the high risk that they become victims of misinformation. Especially when none of them check how correct the information they read or heard is. They unanimously note that in the future it would be good to conduct classroom work in the educational space and discuss problems related to disinformation.

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SUSTAINABILITY AND ARTIFICIAL INTELLIGENCE IN CORPORATE PERFORMANCE EVALUATION: INVESTIGATING THROUGH LOSS AVERSION

RICCARDO CAMILLI[1], LORENZO CORONELLA[1], ALESSANDRO MECHELLI[1]

1. Objectives

This paper seeks to investigate the role of sustainability and Artificial Intelligence (AI) in corporate performance evaluation, specifically aiming to answer the following research questions:

Rq1: Does loss aversion affect firms' financial performance evaluation more than firms' sustainability performance evaluation?
Rq2: How does the use of Artificial Intelligence (AI)–powered software mitigate loss aversion in firms' performance evaluation?

2. Theoretical background

The growing recognition of sustainability issues in the current socio–economic context is changing the view on firms' overall performances (Zharfpeykan and Akroyd, 2022), thus putting sustainability performances at the center of contemporary performance evaluation (Hristov *et al.*, 2022). Despite the media centrality and the significant impact on the long–term performance of companies (Mishra *et al.*, 2024), it is still in doubt whether sustainability indicators are sufficiently integrated into the performance evaluation of firms, especially medium–small ones (Cristofaro *et al.*, 2023). In this vein, we want to first investigate whether the sustainability indicators are undervalued with respect to

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the financial indicators, which are instead central in traditional performance evaluation (Franco–Santos *et al.*, 2012) through loss aversion[2], which is able to provide a measure of sensitivity to a certain event rather than another (Khaneman (2011:381).

In addition, the performance evaluation approach in the contemporary age is less driven by human professionals and more by AI–powered software (Sutton *et al.*, 2016). This can especially compare a firm's performance to a vast amount of data describing the performances of other firms, thus enabling a comprehensive evaluation of our standing relative to industry standards and fostering informed strategic decisions (Zhang *et al.*, 2023). AI–powered software employs algorithms that analyze data objectively, ensuring fair weighting among performance indicators, including financial and sustainability ones, to provide professionals with reliable information to guide the corporate decision–making process (Jarrahi, 2018). Such extended possibilities debias firms' performance evaluations by systematically identifying and mitigating inherent biases, such as loss aversion, in human judgment (Camilli and Salah ud din Khan, 2023). In this view, we aim to investigate, through loss aversion, whether artificial intelligence could mitigate loss aversion in firms' performance evaluation.

3. Methodology

We employ a 2 x 2 between–subject experimental design. The two independent variables are information provider and information type. The information provider is manipulated as either an AI–powered software or a physical internal analyst. The information type is manipulated as either financial performance indicators or sustainability performance indicators. The experimental design is synthesized in Figure 1.

[2] The Prospect Theory (Kahneman and Tversky, 1979) highlights some cognitive characteristics that bias individuals' evaluation of financial results. In particular, individuals are more sensitive to losses than corresponding gains, therefore demonstrating loss aversion. This likely stems from a primal survival instinct, indeed the organisms that prioritize avoiding threats over seeking opportunities are more likely to survive (Kahneman, 2011:379).

	Information Type	
Information Provider	Condition 1: **Financial performance indicators** *AI–powered software*	Condition 2: **Sustainability performance indicators** *AI–powered software*
	Condition 3: **Financial performance indicators** *Physical internal analyst*	Condition 4: **Sustainability performance indicators** *Physical internal analyst*

Figure 1. Experimental design.

We divide participants intro four different groups (C1, C2, C3, C4) corresponding to the four conditions.

For groups C1 and C3 are given as comparison values of the financial indicators with the sector average, while for groups C2 and C4 are given as comparison values of the sustainability indicators with the sector average. For each group, 11 scenarios are given, five in which the target firm is supposed to have achieved better performances (X_α) compared to those of the sector average ($\overline{X_n}$) (respectively 20%, 40%, 60%, 80%, and 100% better); one in which the target firm is supposed to have achieved the same performance as the sector average; five in which the target firm is supposed to have achieved worse performances (X_α) compared to those of the sector average ($\overline{X_n}$) (respectively 20%, 40%, 60%, 80%, and 100% worse).

The choice of performance indicators, both financial and sustainability ones, follows what most authoritative experiments did in the field. In particular, adapting Wong–On–Wing *et al.* (2007), Johnson (1983), and Rozenbaum (2019), we select and present to participants the following financial indicators: Sales margin (%), Sales growth (%), Equity to debt (%), EBITDA (€). While adapting Arena and Azzone (2012), which deepened on the use of KSIs (Key Sustainability Indicators), we select and present to participants the following sustainability indicators: CO_2 total emissions (tons), Efficiency in the use of water resources (%), Training time per employee (hours), Frequency of workplace accidents (times).

After having showed the information provider (i.e., AI–powered software or physical internal analyst) and information type (i.e., financial performance indicators or sustainability performance indicators) regarding the firm's performance, the final section of the experiment has the aim of recording the participants' evaluation as a Chief Financial Officer (CFO) of the firm for the performances achieved. With this aim, participants' responses are limited to a seven–point Likert–type scale, where 1 indicates "Fully dissatisfied of the firm performances" and 7 "Fully satisfied of the firm performances". Data emerging from the experiment are analysed through descriptive statistics.

4. Expected findings

The results of the experiment lead to the formulation of four functions (Figure 2), namely one for each of the conditions of the experiment. Generally, it is expected that all four functions follow those of the original Prospect Theory, therefore characterized by: negative values on the left of the ordinate axis, positive values to the right of the ordinate axis, with a greater slope in the domain of negative values compared to that of positive values.

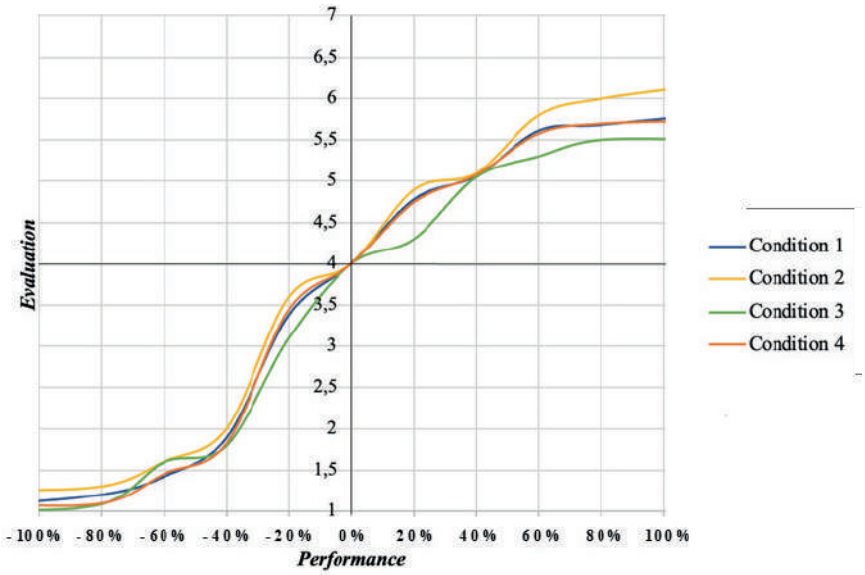


Figure 2. Findings for the four conditions (expected).

In particular, C3 participants are expected to give the most loss averse evaluations. C2 participants are expected to give the least loss averse evaluations. The difference in loss averse evaluations between C1 and C2 is expected to be lower than the difference in loss averse evaluations between C3 and C4.

These findings would imply that individuals are more loss averse to financial rather than sustainability performances (Rq1) and that the use of AI–powered software mitigates such asymmetry (Rq2).

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IS SUPPLY CHAIN SERVITISATION ALIGNED WITH SUSTAINABILITY? A HISTORICAL OVERVIEW

NURIA RODRÍGUEZ LÓPEZ[1], SARA ALONSO[1]

1. Objectives

Institutional incentives towards sustainability have been led to an increasing development of academic literature in this field from a descriptive point of view, depicting the strategies that the firms have been developed, but also from a normative perspective, proposing analytical tools and management methods that allow a better adjustment to the new reality. The rapid growth of the literature and its diversity, make it necessary to pay attention to it in order to identify what are the main lines of research and what are the topics that are being neglected.

The purpose of the present work is to fill this gap through a systematic review of papers on sustainable servitisation of supply chains. The objectives are the following: (1) to explore which are the most influencial journals, authors and papers; (2) to understand the intellectual structure of this field; (3) to raise awareness of what is the research agenda that should be addressed in the future

Keywords: servitisation, sustainability, supply chain.

2. Theoretical background

Offering services as a part of the product is a strategy commonly used by some manufacturers to add a new way of obtaining resources. This strategy requires the firm to generate new capabilities that allow it to

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offer an integrated range of goods and services. In addition, it shows the firm's commitment to the new value proposition offered (Shah *et al.*, 2020).

In the academic literature, servitisation has been highlighted as an alternative to strengthen relationships with customers and to increase the outcomes from products. On the other hand, several studies show the existence of a link between sustainability and servitisation, and how technologies help to orient servitisation towards a sustainable purpose (Paiola *et al.*, 2021).

Despite the fact that this is a topic with multiple perspectives that have evolved over time to adapt to the changing needs of the environment, there are almost no works that aim to structure and sistematise the different lines of knowledge. In this sense, the works of Mishra *et al.* (2023) and Xing and Liu (2023) stand out, but they focus on specific issues (circular supply chains and product–service innovation, respectively), different from the impact of the servitisation on the sustainability of supply chains.

3. Methodology

A bibliometric analysis method, aligned to the PRISMA protocol, has been used to study the contributions in the area of sustainable supply chain servitisation. This methodology allows to rigorous identification of the main lines of research. A content analysis was then performed in order to determine the intensity with which the different topics have been addressed and what are the main research gaps.

Bibliographic data were obtained from Web of Science and Scopus, given their reputation and coverage of academic literature. The search string was (("supply chain*" OR "value chain*" OR "supply network*") AND (green OR Sustainab* OR circular* OR "circular economy" OR "circular value chain") AND serviti*ation), and the period of analysis isfrom January 2013 to April 2024. After screening, 118 full–text documents were included for analysis.

Citespace software was used to analyse the data and present the results. This software is particularly useful in assisting the researcher in

the screening process, developing an in–deep analysis and presenting the results through static and temporal maps.

4. Findings

A first descriptive analysis of the records shows that the impact of servitisation on sustainable supply chains has been studied more extensively in the United States and the United Kingdom. As regards the scientific areas, Green & Sustainable Sciences & Technology dominante, followed by Engineering, Industrial and Manufacturing, and Computer Science. The most common topics are related to innovative business and the influence of Industry 4.0, and circular economy.

In a second step, a more detailed analysis using the Citespace software, shows that four groups can be identified. These groups include papers dealing with the following topics: service operations, product–service system and supply chain, circular economy and digitalisation. The first one, related to service operations deals with the benefits and issues of basing the companies' value proposition on services. The main papers are Vendrell–Herrero *et al.* (2017) and Baines *et al.* (2017). The second cluster delves deeper into the product–service system (PSS), its key success factors and its relationship with sustainable business models; this cluster includes the works of Baines *et al.* (2017), Tukker (2015) and Reim *et al.* (2015).

The third cluster contains studies analysing tools and guidelines to achieve circular supply chains (Geissdoerfer *et al.*, 2018), and also systematic reviews on this topic, servitisation and technologies (see, for example, Atif, 2023). The fourth, and more recent cluster, addresses new topics such as the impact of servitisation in terms of sustainability (Doni *et al.*, 2019), and the influence of digitalisation in enabling servitisation (Coreynen *et al.*, 2017).

From this analysis, several points related to dynamic capabilities and social issues stand out as research gaps that deserve greater attention. Regarding the former, dynamic and innovative capabilities are associated with a firm's ability to adapt to new environments and thus ensuring its competitiveness. In terms of social issues, aspects such as safe

working conditions, employee's rights and job satisfaction throughout the supply chain are beginning to attract attention in order to build a fairer and more inclusive society.

5. Conclusions

The impact of servitisation on sustainable supply chains has been studied mainly from the perspective of the scientific area of Green & Sustainable Sciences & Technology. The United States and the United Kingdom appear to be the drivers of research in this field.

A detailed analysis of the records shows the existence of four thematic groups of papers, starting with the oldest, related to service operations and supply chain management, and ending with the study of product–service systems, the circular economy and digitalisation in the most recent years.

According to our findings, servitisation should be more oriented towards the design of sustainable supply chains, focusing on objectives such as the achievement of an innovative business model, the coordination of the different stakeholders, and the joint use of the capabilities and resources throughout the supply chain to offer and integrated product–service package resilience, source of flexible, inclusive and sustainable operations.

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AGEING FACULTY AND SUSTAINABLE HRM IN HIGHER EDUCATION

ERIONA SHTËMBARI[1]

1. Objectives

Albania, as many other european countries is receintly facing considerable labor market challenges, especially related to demographic changes. The main encounter is the declining population, referring to projections made by national and international instituions (United Nations, 2020; INSTAT, 2019; Worldometer, 2024), for the 2050. Such decline in population brings profound conseguences for Albania's small labor market, in addition to existing challenges related to aging, youth unemployment, high emigration rates, and gender inequality.

Many studies redflag the retirement of babyboomers, which is becoming another concern along the aging population fenomena. As the workforce ages, this may create unique challenges for the management of a faculty workforce (McChesney, J., & Bichsel, J., 2020).

Murillo–Ramos, L., *et al*. (2023) put an emphasise that human resource strategies are key to managing challenges such as aging workforce. Furthermore, they identify a lack of sustainability–related HRM studies in higher education.

To address these challenges, organizations in Albania need to implement sustainable human resources policies and strategies. These can help organizations retain their employees, reduce turnover, and ensure a stable and productive workforce. This paper aims to shed light at Albania's labor market challenges, especially demographic preasure, with a focus on older faculty and explores the role of a sustainable HRM as a need to address such pressing issues. Despite its strategic importance to national and regional development, very few previous contributions

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have investigated this intersection. Hence, this study intends to answer the following research question: What are the implications of aging faculty and the sustainable HRM strategies in Albania?

2. Theoretical Background

The labor market in Albania is facing considerable challenges such as demographic pressure, the high youth unemployment rate, emigration, gender issues, the digitalization skils gap, etc. According to statistics the population of Albania is expected to decline from 2.8 mln in 2024 to 2.7 mln in 2031 and 2,2 mln in 2050 (Worldometer, 2024; INSTAT, 2019). The SLR provided by Liboni L. B. et.al (2019), points out that most of the papers analyzed highlight changes in the way of working. While Anlesya, A., Susomrith, P. (2020) suggest that sustainable HRM can influence organisations to become more competitive, effective and better contribute to social wellbeing.

Aiming for a quality teaching (SDG 4), faculty require long periods of training but often work beyond typical retirement ages. In Albania, the labor supply for new hires is fundamentally limited and competition is locally. As pointed out by McChesney, J., & Bichsel, J. (2020), dramatic headlines aside, even gradual changes in workforce demographics will affect hiring, budgeting, training, and more. Tenure–track positions in higher education might be exclusively affected by these demographic trends. To fill this critical gap, this study tries to analyze demographic changes and their implications for the labor market, particularly of older educators in Albanian universities. Most of the studies (including this one) consider older workers (educators) those that are 50 years old and above.

3. Methodology

The research methodology of this study consists of analyses of secondary data from the Institute of National Statistics (INSTAT) in Albania, as well as other national and international sources of information and

databases such as Eurostat and Balkan Barometer to triangulate the data. Descriptive statistics related to demographic changes and predictive analyses related to projections of demographic indicators are used to generate results. Furthermore, an interpretative framework is used to interpret the findings and propose recommendations.

4. Findings

Based on an analysis of the secondary data (United Nations, 2020; INSTAT, 2019; Worldometer, 2024), a declining population to 2.2 mln in 2050 will create major concerns for the labor market in Albania, since there will be a smaller pool of active workingforce available to fill job vacancies. This finging is reinforced with data from the Balkan Barometer (2024), showing that the major obstackle for doing business in the country, is considered the shortage in labor force. Albania scores 2.2 in a scale of 1–4 with the score of 1 being the most important, graph 1 below.

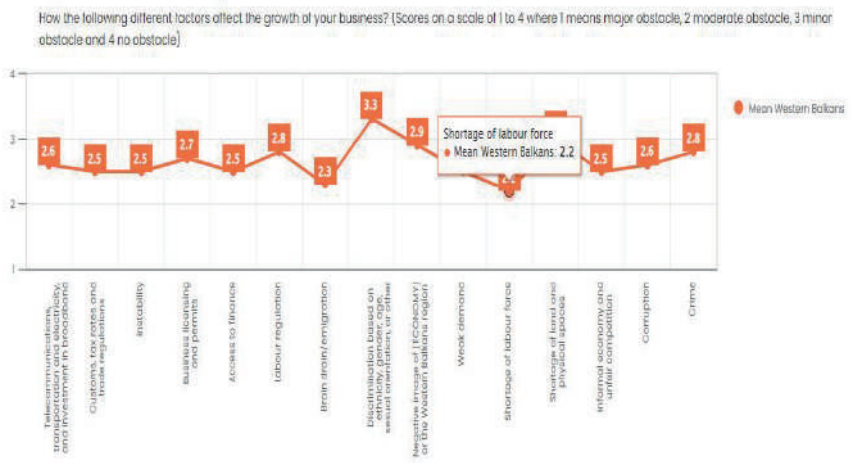


Figure 1. Obstackle for doing business; Balkan barometer (2024).

The conseguences will be a shortage of skilled workers, labor shortages in certain sectors like education, making it more difficult for organizations to attract and retain talent.

Moreover, the median age of 38 years in 2021 will increase at 42 years in 2031 (INSTAT, 2022), raising concerns for immediate HRM solutions. In addition, refering to national statistics, the segment of aging population of 65 years old and above, and its share in the total population will increase from 14% to 21.8% in 2019–2031 (INSTAT 2022), meaning that social care plans need to be reflected, while the labor force participation rate is 68% (INSTAT, 2022).

Albania's aging index in 2020 was 23.8, similar to neighboring countries such as Greece (23.6), but lower than countries such as Italy (34.8) and Croatia (27.4), according to the World Bank (2021). Data are depicted in the graph below.

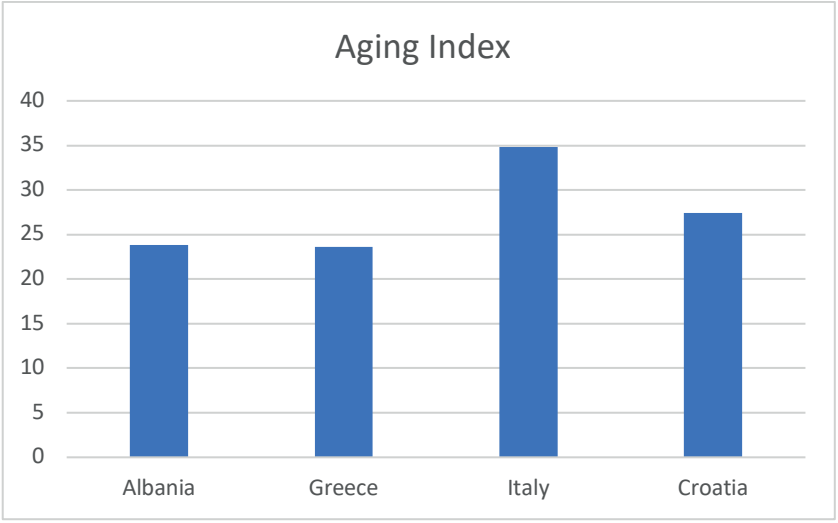


Figure 2. Aging index of neighboring countries.

This suggests that Albania's population is aging, but not as rapidly as some other countries in the region.

Graph 3 below shows Age distribution of faculty in higher education sector in Albania. It can be observed that older faculty (50+) count 30% in 2021 with a slight increase of 1% in 2022, from the total academic staff in Albania (Eurostat, 2022).

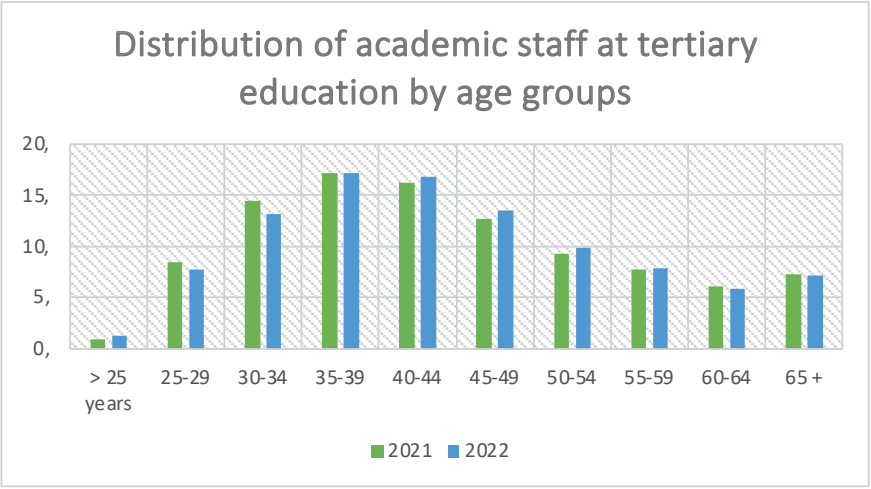


Figure 3. Age distribution of faculty in Albania.

5. Conclusions

The study points out that although Albania currently has a relatively lower proportion of older people in the population compared to some neighboring countries, it is aging rapidly and will face similar demographic challenges in the coming years. Factors that lead to aging workforce are considered the following:

- Lower birthrate: the fertility rate has been declining steadily from 2.6 children/ woman to 1.5 (1990–2020);
- Estimated over 3.000 deaths more than the total births for the first time in 2021, due to the Covid–19;
- Emigration of reproductive age population and families with young children;
- Changing lifestyle.

In higher education sector, data show that ages of 40+ faculty has started to increase, although with slow progression.

Summarizing the above, Albania will need to plan for an aging population and organizations should implement sustainable HR strategies to improve employee retention, engagement and overcome labor market challenges. Considering demographic groups' specific needs and expectations would help design effective retention policies. For example, older faculty may value fair treatment and recognition, trainings on enhancing or acquairing digital skills, while youngers may prioritize opportunities for career growth and development.

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DIGITAL LITERACY OF ALBANIAN STUDENTS AS A COMPETITIVE ADVANTAGE IN THE DIGITAL AGE

ERIONA SHTËMBARI[1]

1. Objectives

Latest technological advancements and Covid–19, enhanced the need and use of technology significantly. As a conseguence, the way of work as well learning has changed in this digital age. Most of the companies all around the world have implemented cloud technologies (Taylor, 2023). But Covid–19 had a huge impact on the education–technology relationship too. (Babacan & Yuvarlakbas, 2022). Overall, it has become clear that the digitalization of education might be the future of learning as it may afford some individuals with greater opportunity and easier access to education (Børm, 2021).

This changes imply not only workers but also students to become proficient with modern technologies in order to become competitive and productive in the job market.

The purpose of this paper is to outline the digital competencies among students required for academic success in higher education and that will help them be prepared for what is expected in the job market afterwards.

2. Theoretical Background

According to Lee, & Foong, M. (2018), digital skills are assets to enhance the ability of a graduate as it is the gate skill that the employers will ask for and that will make them thrive in the future.

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Digital skills are defined as the ability to find, evaluate, use, share, and create content using digital devices, such as computers and smartphones (UNLV, 2022). However, the digital skills and competencies required for success in higher education are not always well–defined or well–understood. This is particularly true in Albania, where the adoption and use of digital technologies in higher education is still in its early stages.

Due to the online education during the pandemic, many students developed their digital skills. One of the benefits of using digital literacy is that it offers time–saving advantages, allows for participation in lessons from any location, permits the replaying of recorded lessons, and enables missed lectures to be viewed again through the recordings (Babacan & Yuvarlakbas, 2022). The ongoing digitalization of education requires us to prioritize inclusive transformation and address inequality, as it holds the key to continuous development of the digital economy and the empowerment of individuals through digital skills education (Jackman, Gentile, Cho, & Park, 2021).

As per the Ministry of Education and Sports, there was one computer for every 32 students in 2009 (MASR, 2009). By 2017, this ratio improved to 1:27 in pre–university schools, but still lagged behind EU norms where 3–7 students share a computer (MASR, 2021).

Given the importance of the research topic and lack of empirical evidence about different kinds of digital skills, which are nowadays crucial for the students, this study aspires to better understand which are the skills poseesed by Albania students and which of them need to be enhanced or acquired.

3. Methodology

A survey is used as the research intrument to gather empirical data, sent out online to bachelor and master students of Albanian universities, both private and public. The questions were adopted from Lee, Ming Foong's (2018) framework, which includes five categories: Operational Skills Measurement, Information Navigation Skills Measurement,

Social Skills Measurement, Creative Skills Measurement and Mobile Skills Measurement. Descriptive and inferencial statistics are used to analyse the data and generate results.

4. Findings

The results of the study revealed that students generally excel in operational tasks, social skills and mobile skills, while creative skills and information navigation skills exhibit more variability.

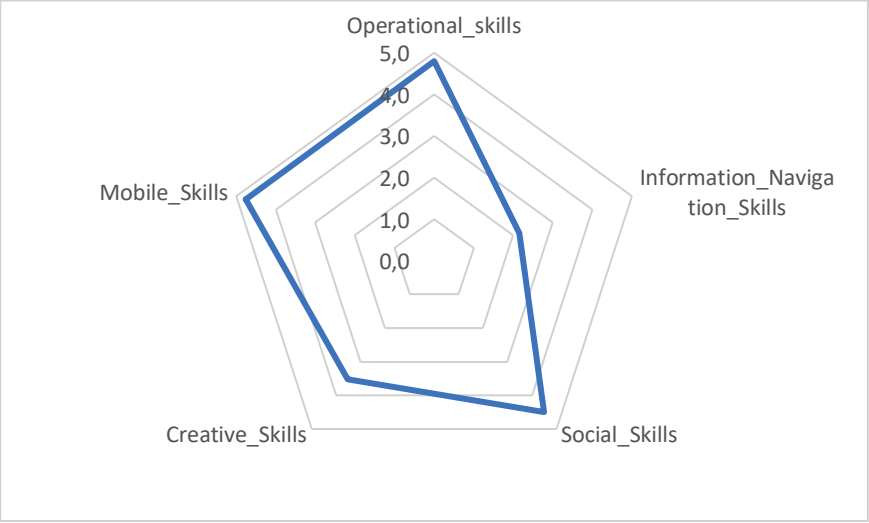


Figure 1. Digital skills (mean).

The majority of the students involved in the study have a high GPA which can explain the high digital skills Albanian students have.

5. Conclusions

The study identified that Albanian students possess a commendable level of digital literacy and are actively engaged in leveraging digital tools and technologies for learning purposes. The findings show that

students have a strong digital skill bases although further improvement in regards to information navigation skills and creative skills is needed.

The findings reveal more diverse results and a lower mean for information navigation skills. This shows that educational programs need to improve the way these skills are used and how often they are used. High level of the digital skills contributes to a better performance in both academic and professional settings, indicating good chances of success for a bright future career of our students.

Finally, it can be concluded that Albanian students have the same standards, background and knowledge of digital skills as EU students, since the framework used to measure their digital literacy was DigComp that comprise international standarts.

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SOFTWARE IN HUMAN RESOURCE MANAGEMENT SYSTEMATIZED MAPPING WITH THE 4 E'S: BIBLIOMETRIC ANALYSIS

HEMANT SHINDE

Abstract

This study examines the path of human resource management software (HRMS) research undertaken by researchers. The objective of this study is to learn about: (a) The distribution and research links concerning HRMS (human resource management software) in the last 11 years (2012–2023); (b) The degree of efficiency, effectiveness, ethics, and environmental constraint of HRMS systems in the current scenario; and (c) The distribution map and international publishing of HRMS research based on keywords. Data is gathered by running a data search on Dimensions using the keywords "HR Software" OR "Human resource software" OR "HRMS" OR "EHRM" with the category, paper title, abstracts, and keywords over the last eleven years' (2012–2023). The data selection is exclusively based on published studies in the fields of Commerce, Management, Tourism and Services, Strategy, Management and Organizational Behaviors, Information and Computing Sciences, Human Resources and Industrial Relations, Business Systems in Context, Information. After that, the data is exported in CSV (comma–separated values) format.

The trend of the progress of international publications in the HRMS field is analyzed using VosViewer software. The research results show that the development of the efficiency and effectiveness of the software system field in 2012–2023 indexed by Dimensions has the highest occurrence in 2021, which reached publications (20%). The International publication of the HRMS field is mostly published by The International Journal of Human resource management, while the most productive & most cited author in HRMS is Marler, Janet H.

(University at Albany, State University of New York); Fisher, Sandra L. (Clarkson University)

Introduction

A healthy organization's human resource management software (HRMS) element is one of its most crucial components. Organizations encountered several issues that compelled them to upgrade their human resource management practices. Among these problems is the requirement to respond to and adapt to changes in both the internal and external work environments. The human resources department has the ability to impact individual employee performance, attitude, and behavior.

Development, as well as the organization's complete ability to attain the required degree of quality and excellence As a result, creating HRMS practice to handle these issues is a vital step that should be accomplished by taking into account strategic factors that influence the work environment on both an external (Environmental constraint) and internal level (Ethical) (Asfahani, 2021; Suharti *et al.*, 2018; Köchling & Wehner, 2020).

Hamilton and Sodeman (2019; Das & Singh, 2016; Yadiati *et al.*, 2019; Wagner, 2013; Bondarouk *et al.*, 2017) carried out a study that focused on the importance of the HRD (Human Resource Department), notably in addressing competitiveness in the external environment by developing appropriate policies, as well as their crucial role in ensuring coherence in the organizational strategy connected to HRM (HRMS). Although the application of HRM remains a point of contention among practitioners due to the numerous challenges that businesses confront (Zhu, 2021, Muafi & Uyun, 2021a; 2021b; Hacioglu & Aksoy, 2021). It is realized because some businesses are still dealing with uncertainties.

On the one hand, they must chase profits, but on the other hand, they must also address stakeholder demands and concerns about the ethics and social issues. (Arqawi *et al.*, 2019; Mehta & Chugan, 2015) suggested that in order for firms to successfully execute ethical behavior, they need integrate HRMS practices into HR strategies, with the goal of improving business sustainability later on (Epstein *et al.*, 2015; Muafi & Uyun, 2021a; 2021b; Arqawi, *et al.*, 2019; Yong *et al.*, 2019).

HRMS is an HR practice that covers employee orientation, training and development, staffing, performance appraisal, remuneration awards, and other environmental and ethical–friendly HR activities (Arqawi *et al.*, 2019; Mehta & Chugan, 2015; Arulrajah *et al.*, 2015). HRMS has a certain considerable impact on enterprise sustainability (Muafi & Uyun, 2021a;2021b; Alt & Spitzeck, 2016) and employee ethical behavior (Fawehinmi *et al.*, 2020; Aboramadan *et al.*, 2020; Unsworth, 2020; Köchling & Wehner, 2020).

The objective of this study is to learn about: (a) The distribution and research links concerning HRMS in the last 11 years; (b) The degree of efficiency, effectiveness, ethics, and environmental constraint of HRMS systems in the current scenario; and (c) The distribution map and international publishing of HRMS research based on keywords.

1. Literature Review

Bibliometrics

Bibliometrics is a statistical tool of a publishing aimed at determining a specific sort of phenomenon. (Van Eck and Waltman, 2018; Yulianingsih *et al.*, 2020; Haryani *et al.*, 2020; Rohanda & Winoto, 2019). The bibliometric approach has numerous advantages, including neutrality and variety, as well as the ability to prevent subjectivity. (Muritala, Sánchez–Rebull and Hernández–Lara, 2020). There are two types of bibliometric analysis techniques: performance analysis and research mapping. (Donthu *et al.*, 2021). Performance analysis, in essence, adds to the accomplishments of research audiences, whereas technology is also known focuses on the interaction between research constituencies. Bibliometrics is useful because it provides statistics that policymakers, researchers, and other users can utilize to enhance the effectiveness of research. (Bayu *et al.*, 2020). Bibliometric is the study of analyzing the literature of scientific activities that is predicated on the notion that a scientist does study and must transmit the findings to his colleagues. If researchers work together to investigate certain study issues, they will make progress and increase their expertise.

Bibliometrics with VOSViewer

For the analysis, VOSViewer software is utilized although it can examine the relationship among the most cited academics, collaboration between multiple writers, coordination within nations, keywords, and expertise connected to the topic. (Helena, Hoppen and Filippo, 2016). VOSviewer is a program that enables you to create maps using network data, as well as visualize and explore these mappings. (Van Eck and Waltman, 2018). VOS in VOSViewer refers for Visualisation of Comparisons. VOSViewer tool can also be utilized to carry out data mining, segmentation, and classification on articles retrieved from databases. Visualization of Similarities is the abbreviation for VOS in VOSViewer. Articles retrieved from database sources can also be classified, mapped, and mined for data using the VOSViewer software. (Xie *et al.*, 2020).

VOSViewer also generate publication images, nation mappings, or network–based journal maps (co–citation), as well as keyword layouts based on common networks. VOSViewer–generated clusters are automatically colored and presented on the image. (Van Eck and Waltman, 2018).

Methods and methodology

The systematic literature review method was used to gain in–depth knowledge of the EHRM in decision support systems. It utilized a more analytical view to relevant articles, sample selection, and research methodology. To select the research articles and make the conclusion of relevant articles related to the research topic, a PRISMA flow diagram was used. (Liberati *et al.*, 2009, Malik *et al.*, 2020). Please check Fig. 3 to understand the sequence of steps followed in the article selection process. ("Identification", "screening", and "included"). Identifying the search terms, search criteria, databases, and data extraction process is part of the identification stage. Key term for research "HR Software" OR "Human resource software" OR " HRMS" OR "EHRM". They were entered into the Dimensions database using the "OR" operator to separate each phrase. This search yielded 702 documents in the free data set, as shown in Figure 1.

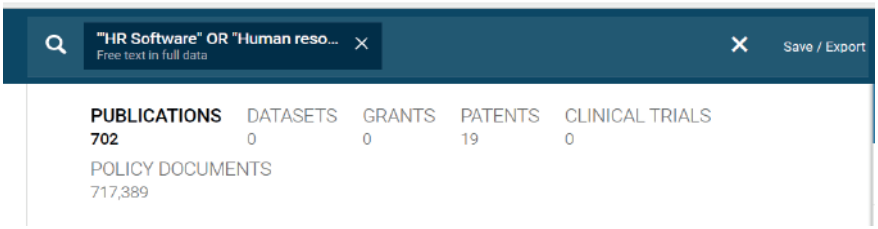


Figure 1.

The identified articles must be screened, according to the PRISMA 2020 flow diagram. (M. J., McKenzie *et al.*, 2020) The screening tasks included screening, retrieval, and determining the eligibility of each article. Articles that did not meet the inclusion requirements were removed from each task. (Meline, 2006; Priyashantha *et al.*, 2021a, b, c). The "empirical research" published in "English" in "journals" from "2012 to 2023" was the inclusion criteria for screening the articles. The final empirical journal papers were chosen since they are suggested for SLRs (Tranfield *et al.*, 2003; Ziebell, 2019), and they contain adequate consistency in quality assessment to produce meaningful conclusions that satisfy internal consistency (Okoli and Schabram, 2010; Adamovic, 2018; Petticrew and Roberts, 2006).

This screening was conducted both automatically and manually. Using Dimensions' automatic article screening tools, we included articles meeting the eligibility criteria for "empirical studies" published in "English" "journals" in publication years from "2012 to 2023" by field of research type, language, report type, and article access. Other forms of publications (such as study notes, editors' comments, books, book chapters, book reviews, conference proceedings, and unpublished data), non–English papers, and works published outside of the year range under consideration were removed. The complete versions of the selected articles were then obtained for the following stage of screening, the eligibility evaluation. Figure 2

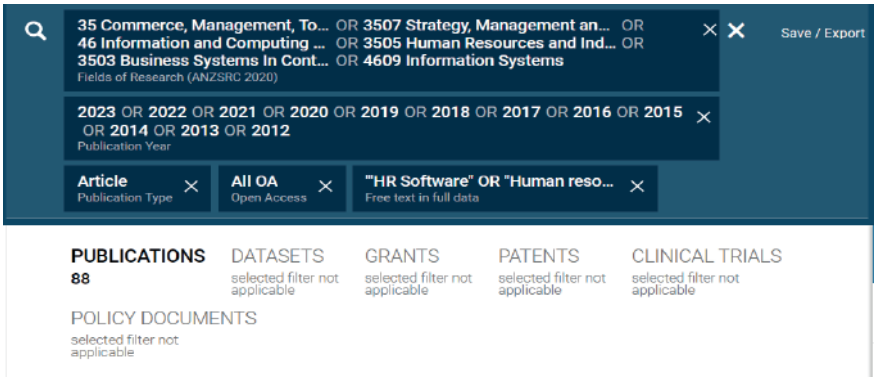


Figure 2.

The author performed the eligibility assessments by manually. It is necessary to measure methodological quality by establishing a minimum, adequate standard (Meijerink *et al.*, 2021; Meline, 2006). Articles that satisfy the minimum acceptable standard are included; those that do not reach the minimum acceptable standard are removed (Meline, 2006). As a result, "the empirical investigations that applied quantitative approaches" were deemed to be at the minimum acceptable level.

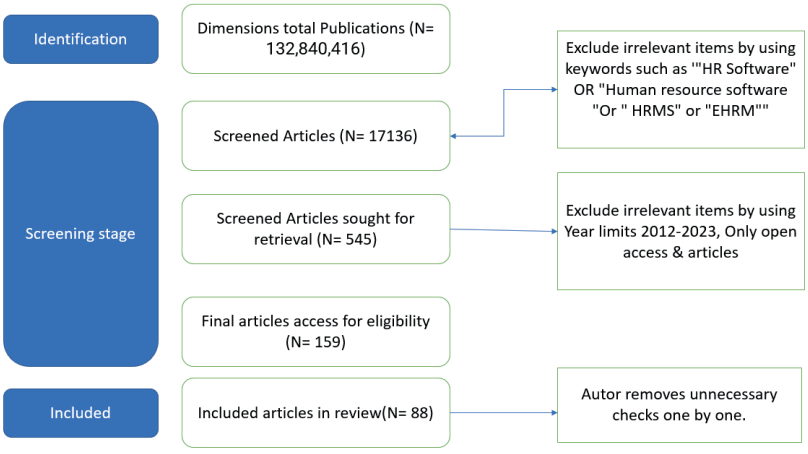


Figure 3. Prisma Framework.

2. Results

Analysis of HRM software in decision support system Publications
The expansion of the HRM software research sector has increased significantly between 2017 and 2021. In 2021, the highest rate of growth in the field of E–HRM indexed by Dimensions was 20 publications (29,66%). The full number of international publications in the field of human resource management from year to year is shown in Figure 4.

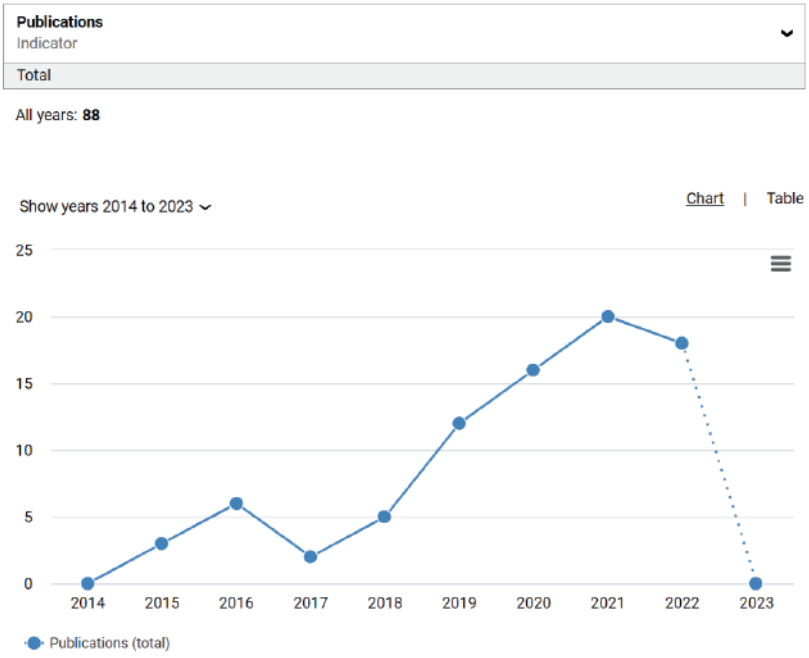


Figure 4.

Journal Analysis in the HRM software in decision support Field

Dimensions search results for the term 'EHRM' with the subject area focusing on business, management, and human resource yielded 88 publications. According to this figure, The International Journal of Human resources management publishes the most EHRM articles (11 publications) with highest citation record. Table 1 lists ten notable journals that publish developments in the EHRM discipline. Table 1

Name	↓ Publications	Citations	Citations mean
The International Journal of Human Resource ...	11	421	38.27
International Journal of Data and Network Sci...	4	24	6.00
Sustainability	2	70	35.00
Employee Relations	2	25	12.50
German Journal of Human Resource Manage...	2	53	26.50
KnE Social Sciences	2	0	-
Kelaniya Journal of Human Resource Manage...	2	2	1.00
Australian Journal of Information Systems	2	18	9.00
International Journal of Heritage Tourism and ...	2	2	1.00
Human Resource Management Journal	2	28	14.00

Table 1. Eleven Major Journals that Published HRMS topics.

Analysis of Author and Number of Research

The development of publications as a result of author collaboration is also covered in this study. The data filter for this study is restricted to two, meaning that only writers whose work appears in this analysis are those who have collaborated on at least two documents together. Figure 5.

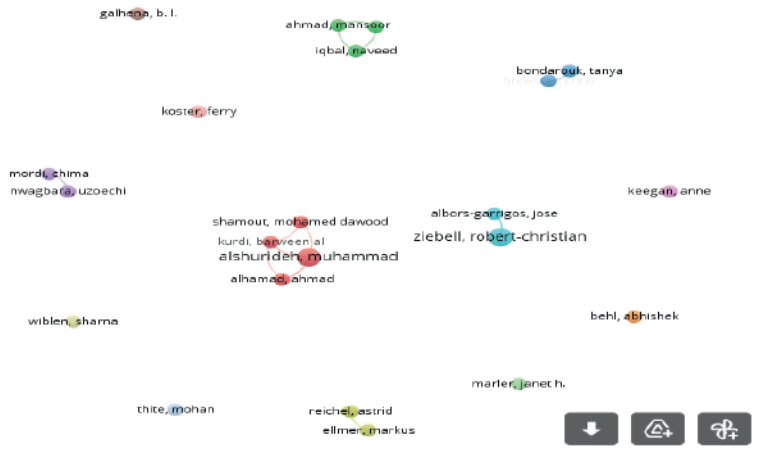


Figure 5.

According to co–authorship, there are 13 clusters of HRMS research, as shown in Figure 5. The two clusters with the highest cooperation are cluster 1 (red) and cluster 2. (green color). Based on this study, it can be concluded that Alshurideh, Muhammad with 3 papers, Ziebell, Robert–christian with 3 articles, and Bondarouk, tanya with 2 papers, are the writers who created the most works. Furthermore, this study examines the total amount of citations from all works pertaining to HRMS shows in Table 2. As can be seen, Bondarouk, tanya paper had 249 total citations, which is the highest number. Additionally, Figure 6 shows that the most–cited paper's title had something to do with HRMS.

Author	documents	citations	total link strength
Bondar Ouk, Tanya	2	249	1
Marled, Janet h.	2	176	0
Brewster, Chris	2	106	1
wile, Sharna	2	52	0
Mardi, chime	2	37	2
Niagara, Uzoechi	2	37	2
Ahmad, Mansoor	2	30	2
Allen, Matthew m.c.	2	30	2
Iqbal, Naveed	2	30	2
Keegan, Anne	2	26	0
alcaide, Muhammad	3	24	3
Kurdi, Barween al	2	24	2
Elmer, Markus	2	22	2
Reichel, Astrid	2	22	2
Al–Hamad, Ahmad	2	19	2
trite, Mohan	2	19	0
bell, Abhishek	2	15	0
sham out, Mohamed Dawood	2	10	1
Albors–garrigos, Jose	2	9	2
kosher, ferry	2	9	0
Siebel, Robert Christian	3	9	2
galena, b. l.	2	2	0

Table 2. Author citation total link strength.

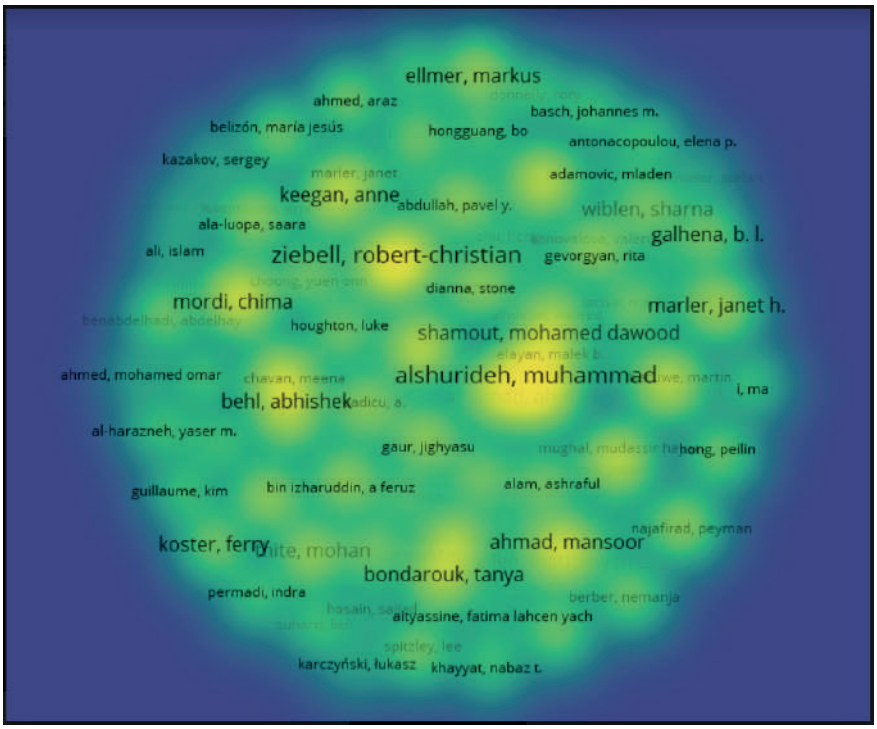


Figure 6.

Bondarouk, Tanya; (2016) paper titled " Electronic HRM: four decades of research on adoption and consequences & "Conceptualizing the future of HRM and technology research": Linking Two Emerging Agendas" has received 249 citations, making it the most cited study on HRMS. We demonstrate how quickly advancing technology provides a new, intelligent, digital environment for HRM activities, allowing for stronger HRM ownership by all stakeholders and better–quality HRM data. performance.

The second paper is about the effect of HRMS practices on An evidence–based review of e–HRM and strategic human resource management, which is written by Marler, Janet H. (2013) with 176 citations. The relationship between strategic HRM and e–HRM appears to be context–dependent, and there is evidence to support this. However, research designs are insufficient to determine causal direction. Our review

emphasizes the need for greater empirical research on the macro–level effects of e–HRM and strategic HRM.

Analysis of Country Statistics with HRMS Publications

United Kingdom has contributed the most articles to the HRMS research that are included in Dimensions, followed by Australia, China, United states, and Germany. Figure 7 and Table 3 present the analysis' findings.

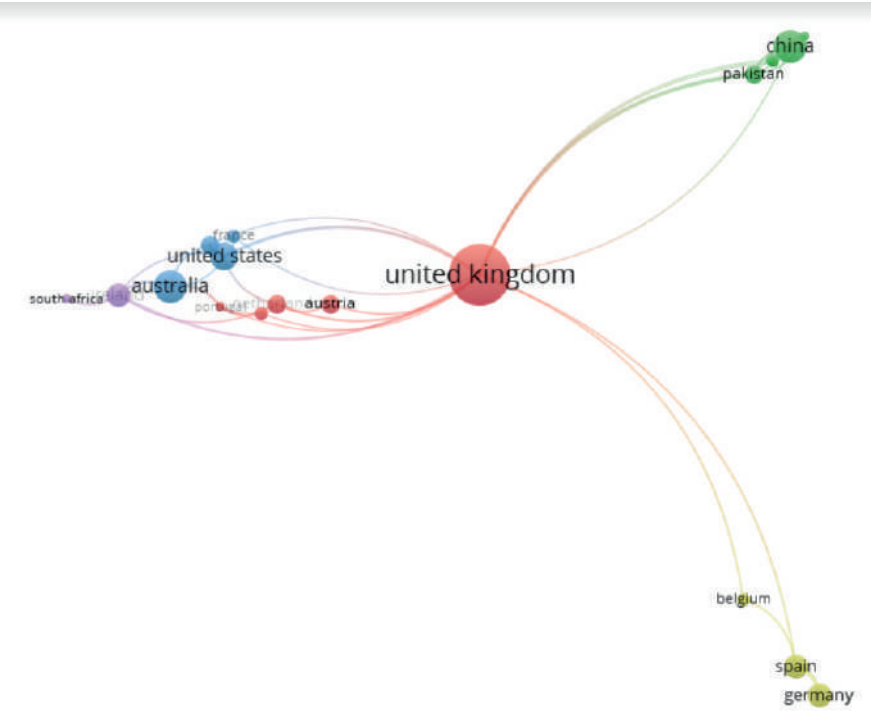


Figure 7.

Country	Documents	Citations	Total link strength
United Kingdom	13	388	9
Australia	7	134	4
China	7	116	2
united states	6	204	4
Germany	5	62	2
Ireland	5	67	4
Spain	5	25	4
Austria	4	179	1
India	4	25	2
Netherlands	4	271	3
Pakistan	4	100	4
Belgium	3	6	1
Finland	3	109	1
France	3	16	2
Russia	3	7	1
Indonesia	2	5	0
Malaysia	2	68	1
Portugal	2	107	2
south Africa	2	17	1
Sri Lanka	2	2	0
Sweden	2	23	1
Bangladesh	1	1	0
Cyprus	1	13	1
Ecuador	1	15	1
Iraq	1	0	0
Israel	1	2	1
Italy	1	4	0
Latvia	1	7	0
Lebanon	1	1	1
Morocco	1	0	0
Nepal	1	0	0
New Zealand	1	0	1
Saudi Arabia	1	64	1

Table 3. Country list that produced paper in.

3. Conclusion

According to the study and findings, 2021 saw the highest growth development of the HRMS sector over the last 10 years (2012–2023) that is indexed by Dimensions, with 88 articles (29.66%). The Journal of Human resource management is the source of the most worldwide publications in the subject of HRM, having published 11 pieces.

United kingdom is the nation with the most contributors to the HRMS context/theme. The two authors who provide the most content in the area of HRMS are Alshurideh, Muhammad and Ziebell, Robert–christian. The co–authors are organized into 6 groups, while the development of the HRMS. According to the authors' suggestions based on the bibliometric analysis that was done, there are a number of topics that are rarely written about in relation to HRMS, such as HRMS with Ethical surroundings, HRMS with Environmental context information management, HRM with retention, HRM with innovation, and HRM with supply chain management.

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ARE PERFORMANCE AND LONGEVITY OPPOSING POLES? EVALUATION THROUGH FIRM SIZE, FAMILY OWNERSHIP AND INTERNATIONAL PRESENCE

LUIS ANTONIO MILLÁN TUDELA[1]

1. Objectives

A fundamental question that emerges from organizational science is whether the actions of companies oriented towards value creation can, in turn, contribute to the sustainability of organizations; whether, on the contrary, they represent an impediment; or if, ultimately, they have no influence between them. Based on the last possibility, and by virtue of the need to provide an answer to this question, we have developed a study on the relationship that different variables, traditionally assessed from the value creation perspective, have with business longevity. Thus, we establish as the main objective of the paper to assess if those variables addressed at value creation have similar or different behavior when related to firm longevity as a way of sustainability.

Keywords: management, survival, sustainability

2. Theoretical background

One of the main theoretical bases applied in the field of strategic management is the resource–based view of the firm (RBV), which has as starting point the work of Penrose (1959). This perspective conceives the firm as a heterogeneous set of resources and capabilities that work in a coordinated manner towards a common goal, so the most powerful

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firms, from a strategic point of view, are those with a broad range of resources and capabilities.

One of the most common variables used to study business performance that can be judged through the RBV is organizational size. In this sense, the main result obtained by researchers is that a larger firm size is linked to superior performance (Kuncová *et al.*, 2016; Lundvall & Battese, 2000; Wagner, 1995), which may present very diverse reasons (economies of scale and scope, possession of redundant resources, etc.). Consequently, the following hypothesis is put forward:

H1a: firm size is positively related to firm performance.

As with performance, the main streams in the field of business survival and longevity indicate that larger organizational size is associated with a higher probability of survival (Dimara *et al.*, 2008; Fackler *et al.*, 2013; Talay *et al.*, 2014). Thus, the following hypothesis is presented:

H1b: firm size is positively related to firm longevity.

The other variable studied through this theoretical perspective is internationalization. Pangarkar (2008) and Hsu & Pereira (2008) defend the existence of a positive relationship between internationalization and performance, which together with reasons such as scalability of processes, exploitation of potential, and achievement of optimal operating thresholds, allow us to pose the following hypothesis:

H2a: internationalization is positively related to firm performance.

The logic applied to the prior hypothesis is also used for the internationalization–longevity binomial. We stress the presence beyond national borders, if properly developed, can promote the stability of results in the organization. This proposition is supported by the results of Fariborzi & Keyhani (2018) and Lee *et al.* (2012). Considering all the above–mentioned, the following hypothesis is postulated:

H2b: internationalization is positively related to firm longevity.

As with the RBV, other theories attempt to provide answers to certain research questions, being the agency and stewardship theories two opposing proposals for the same problem: business results as a consequence of information symmetry, risk–aversion and prioritization of self–objectives (or the lack of them). The circumstances described by these theories can be used to explain, respectively, the behaviors of non–family and family firms, justifying this approach the results of multiple empirical works that reflect superior results in the case of family firms (Chu, 2011; Anderson & Reeb, 2003) if conceived as a stewardship theory application. In view of the above, the following hypothesis is put forward:

H3a: the degree of family ownership is positively related to firm performance.

In a similar way, it is expected that the degree of family ownership and organizational longevity are related, then the pretensions of family businesses being aligned to a greater extent with long–term subsistence as opposed to the main economic–rational objective of non–family businesses, as indicated by Morikawa (2013) and Wilson *et al.* (2013). Consequently, the following hypothesis is proposed:

H3b: the degree of family ownership is positively related to firm longevity.

Although organizational ecology may not seem applicable in this research due to its aggregate and deterministic nature, its precepts do bear some relation to the latest trends in firm behavior. Essentially, it holds that certain organizational configurations allow for a better fit with the environment, leading to a stronger position to survive. Thus, it can be concluded that the elements that determine firm survival and, consequently, firm longevity, transcend from the mere achievement of good economic results, what results in the following hypothesis:

H4: organizational performance is not related to firm longevity.

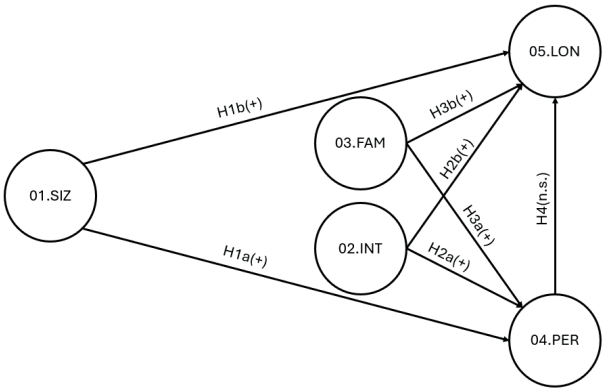


Figure 1. Conceptual model resulting from hypothesis, own elaboration.

3. Methodology

We have resorted to a structural equation model based on partial least squares (PLS–SEM) by using the SmartPLS 4.0.9.5 software, being the reasons its robustness to small sample sizes, the maximization of variance as its main objective, the possibility of representing latent variables through patent ones, and the application of an explanatory approach (Hair *et al.*, 2022).

Regarding the validation of the proposed model, we have used both primary and secondary data from companies with their own legal personality and linked to the Spanish food and beverage (F&B) industry. The sample resulting from it was subjected to multiple goodness–of–fit tests ($\chi 2$ and independent binomial tests) with respect to different variables.

4. Findings

All necessary requirements emerging from the PLS–SEM methodology have been met.

Exposing the results of the hypotheses, Table 1 shows the outcomes obtained. Regarding the testing of the multi–item measurement models, the internal consistency reliability was assessed by means of

Cronbach's α (Cronbach, 1951) and the composite reliability ρ_c (Werts *et al.*, 1974), both exceeding the minimum threshold of 0.7 (Nunnally & Bernstein, 1994). Convergent validity is also achieved as the average variance extracted (AVE) value of 0.5 is exceeded, complying with the stated by Hair *et al.* (2022). Finally, discriminant validity is confirmed as the HTMT ratio obtained by PLS–SEM does not exceed 0.9 (Gold *et al.*, 2001) and is different from 1 in the Bootstrap intervals (Hair *et al.*, 2022).

Hypothesis	1–tailed Percentile Bootstrap C.I. [5%–95%] Hypothesis result	Hypothesis result
H1a	[0.306, 0.544]	Accepted
H1b	[0.252, 0.456]	Accepted
H2a	[–0.313, 0.134]	Rejected
H2b	[0.049, 0.464]	Accepted
H3a	[0.002, 0.197]	Accepted
H3b	[0.077, 0.263]	Accepted
H4	[–0.050, 0.127]	Accepted

Table 3. Path coefficients and consequent hypothesis results, own elaboration.

As can be seen, all hypotheses except H2a are accepted.

5. Conclusions

We have corroborated that, in the context of the F&B industry, the results of previous studies are partially valid. Larger organizations have shown higher performance and a higher average age, happening the same as the degree of family ownership increases. In the case of internationalization, it is observed that companies with presence abroad are, in turn, longer–lived, although their performance is not significantly different from their non–internationalized counterparts. Additionally, the non–significant relationship between performance and longevity shows a disconnect between both variables. Thus, and contrary to what some research may defend under the precept of the rational decision–

maker, it seems that achieving longevity is not based solely on econometric measures but requires a broader vision.

In the context of the F&B industry, it is confirmed that some of the actions developed by organizations at the strategic level may not only not offer synergistic effects, but even contradictory ones, since there could be decisions that favor longevity but not performance, or vice versa.

As limitations, it should be noted that this study has focused on the Spanish F&B industry, so it is necessary to replicate it in other contexts to corroborate the possible generalization of results. In addition, there are variables such as organizational agglomeration, innovation or sustainability that could offer different relationships that would complement the results of this proposal.

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THE SUCCESSFUL STRATEGY OF DISTRIBUTORS IN THE ITALIAN CONSTRUCTION INDUSTRY. FIRST INSIGHTS FROM THE 2007–2020 RECESSION

FRANCESCA MANDANICI[1], FABRIZIO BERTI[1]

1. Objectives

The research is focused on the Italian building distributors as a specific segment of the larger construction industry in Italy and examines their strategic responses to the economic downturn that began in 2007 and continued until 2020. The objective is to identify any clear evidence of the adoption and success of a reactive or proactive strategy and ascertain the components of superior economic and financial performance that have enabled some companies to mitigate the adverse effects experienced by the sector.

Since 2008, the European construction industry has suffered a prolonged recession as a result of the global financial crisis. This has had a detrimental impact on public and private investment, employment and profitability (Horta *et al.*, 2013; Kapelko *et al.*, 2015).

Italy was more severely affected than many other European countries. As indicated by the Italian National Association of Building Contractors (Associazione Nazionale Costruttori Edili, 2015), the growth of the construction industry would have enabled Italy to recuperate half a point of GDP annually, thereby facilitating a swift return to growth in line with other EU countries. Nevertheless, public investment in the construction industry declined as a consequence of EU–wide austerity measures designed to stimulate economic growth by reducing expenditure. The economic crisis resulted in a contraction of the construction industry between 2007 and 2018. The impact was more pronounced

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than that of the pandemic caused by the SARS–CoV–2 virus pandemic.

The construction industry began to recover in 2020 and continued to grow in 2021, 2022 and 2023. This recovery was supported by a series of tax deductions for expenditure on both the renovation of residential buildings and the improvement of their energy efficiency (Associazione Nazionale Costruttori Edili, 2024, 2022, 2021; MEF–Dipartimento delle Finanze–Agenzia delle Entrate, 2024, 2023, 2021, 2019, 2017).

In particular, 2007 marked the conclusion of a prolonged period of growth in this industry, with total production at its highest level since 1970. The upward trend was reversed in 2008 and continued until 2017, when the recovery began. It became more decisive from 2018 onwards. The year 2020 was selected as the conclusion of the analysis, as it marks the end of the recession in the sector and the beginning of a period of record growth, with construction investment reaching 20% in 2021, 12% in 2022 and 5% in 2023. In just three years, the sector has managed to recuperate a significant portion of the production deficit incurred during the decade–long crisis, which resulted in a loss of approximately 92 billion in construction. (Associazione Nazionale Costruttori Edili, 2024, 2022).

In the context of the prevailing economic downturn, the construction industry demonstrated resilience, maintaining a dominant position at the national level. It accounted for over 10% of the national output of goods and services, as well as a significant proportion of employment.

In examining the construction supply chain, this study focuses on distributors. These are typically trading companies that act as an intermediary between the manufacturers of building materials and their consumers on construction sites. They create value by ensuring the availability of construction products and services in the requisite quantities and qualities at the construction site, thereby addressing the inherent discrepancy between the location, timing and mode of production and consumption.

The disparate sales dynamics within the traditional segments of the construction industry provide the rationale for our focus on distributors. While there has been a notable decline in *non–residential construction*, both in the private and public sectors, the situation was somewhat

different with regard to *residential construction*. In this sector, *new construction* has declined the most, partly as a consequence of the severe credit restrictions imposed by financial institutions. Conversely, the *renovation of the existing housing stock* has increased. In Italy, this is the sole segment to have demonstrated growth over the period in question. Consequently, building distributors were directly and immediately affected by the contraction of their core market, namely new residential and non–residential construction. However, the decline in sales could be partially offset by exploiting and developing a new market segment, namely the renovation of the existing housing stock. This enabled them to proactively adapt to a changing environment.

Figures 1 and 2 illustrate the revenue of this sector. Figure 1 depicts the revenue for the period 2007–2020 on a fixed basis in 2007 ($Rev_{(2007)}$), whereas Figure 2 presents the same revenue on a moving basis (Δ%Rev).

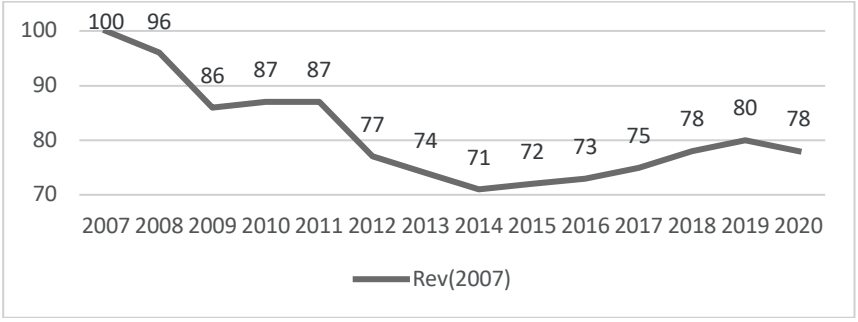


Figure 1. 2007–2020 revenue on a fixed 2007 base. Source: our elaboration based on AIDA database.

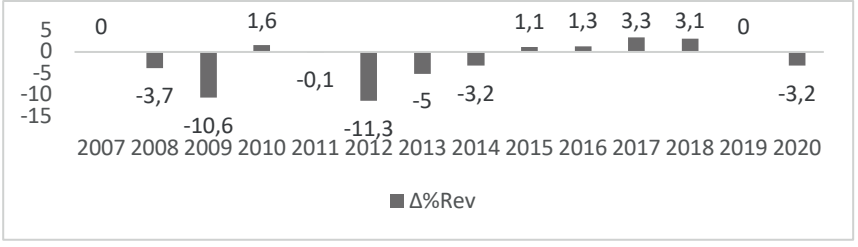


Figure 2. 2007–2020 revenue on a moving basis. Source: our elaboration based on AIDA database.

In Italy, building distributors are widely dispersed throughout the country and can be classified as smaller commercial enterprises. They are typically micro or small in size and are often family–owned and managed. Rather than pursuing strategies of market development and growth, these firms adopt a strategy of remaining in the market (Baccarani, 2001; Davies and Harris, 1990; Mele and Sicca, 1998; Musso, 2005, 2000).

Their small size is often associated with a number of factors, including:

- the inability to benefit from the economies of scale and scope inherent in dimensional growth (Di Bernardo, 1999; Ive and Gruneberg, 2000);
- reduced bargaining power in supplier relationships (Baron, Berman and Wu, 2015; Crook and Combs, 2006);
- limited access to financial resources, either internally generated or provided by third parties (Becchetti and Trovato, 2002; Carpenter and Petersen, 2002; Donati, 2016; Oliveira and Fortunato, 2006; Pace, 2013).

Their family governance structure is typically associated with a leadership style that is individualistic in nature. Such businesses are characterised by a lack of adherence to organised commercial circuits and a dearth of cooperation and/or association with other companies, both at the strategic and operational levels (Berti, Ciaponi and Mandanici, 2019). In addition, family businesses tend to adopt relatively simple structures and organisational forms. Despite their potential flexibility and adaptability, they frequently exhibit a top management characterised by:

- inadequate managerial skills,
- limited ability to interpret and respond to economic and social changes and their impact on purchasing behaviour,
- a low propensity to take risk,
- reluctance to innovate and update the business.

These characteristics inevitably constrain the investment capacity of building distributors and their ability to survive in a period of severe recession.

In a prosperous economy, when consumers are willing to spend, it is reasonable for managers to prioritise non–price strategies over price strategies. However, during a recession, the rapid decline in market share due to insufficient demand may prompt managers to consider a predatory pricing strategy (Chou and Chen, 2004; Cunningham and Hornby, 1993), which has a detrimental impact on the commercial margin. In order to restore liquidity in the context of declining sales, prices and margins, it is also advisable to implement cost–cutting strategies in the areas of administration, technology, human resources, research and development, production and logistics. This is a common reactive response employed during periods of economic downturn, as it is perceived to be less risky and to yield more predictable outcomes (Michael and Robbins, 1998; Pun, 2015; Sternad, 2012). Conversely, other researchers posit that cost–cutting strategies engender a vicious cycle, whereby companies that reduce investment and marketing expenditure are likely to jeopardise current and future sales and profits. These studies demonstrate that a proactive response to recession, based on investment in new market segments and/or operational efficiency, leads to superior performance during and after a recession (Kamber, 2002; Pearce II and Steven, 1997; Roberts, 2003; Srinivasan, Arvind and Lilien, 2005).

It is therefore of interest to examine how the sector has responded strategically to the recession and identify the strategy adopted by some organisations to outperform their competitors and become a benchmark for all players in the sector.

Having defined this objective, the second section presents a review of the literature on crisis management. This is undertaken to evaluate the current state of the art and identify processes, tools and strategies that can assist the construction industry in coping with a recession. The third section presents the methodology employed. This entails an analysis of published financial data from the period between 2007 and 2020. This analysis measures the economic and financial dynamics of a set of building distributors and a subset of these, classified as "excellent" building distributors. The fourth section presents the results and offers a comparative analysis, divided into four perspectives of analysis (growth, net profitability, operating profitability, investments and financial structure). This is done with the aim of identifying the reactive

or proactive strategies and key variables that drive the success of "excellent" distributors. The conclusions summarise the value drivers of the strategy adopted to outperform during the recession and explain why this study is considered of interest among the sector and the literature.

2. Literature review

2.1. *Crisis management processes and tools in the construction industry*

It is widely accepted that a recession is an unexpected and immeasurable event that lacks pre–established contingency plans and may cause performance to deteriorate and businesses to fail (Pearce and Michael, 2006). A recession can affect a vast geographical area and numerous sectors of the economy, and the construction industry is no exception to this. The construction industry is particularly susceptible to the adverse effects of a recession due to the long–term nature of construction projects and the significant initial investment costs involved, which can result in substantial financial losses (Loosermore, 2000; Sahin, Ulubeyli and Kazaza, 2015). Furthermore, the literature indicates that the construction industry is relatively slow to adapt to environmental changes and faces challenges in maintaining competitiveness and ensuring its long–term viability (Abu Bakar *et al.*, 2011).

Although recessions can have a negative and significant impact on the construction industry, an examination of the relevant literature reveals no evidence of crisis management applications by construction companies. Öcal, Oral and Erdis (2006) conducted a questionnaire survey of the top management of 120 Turkish construction companies with the objective of investigating the extent of crisis management applications across the industry, with a particular focus on the 2001 recession. The findings indicated that a limited number of companies employed systematic crisis management techniques, with the degree of utilisation varying according to the size and structure of the organisations in question. As a result, feelings of panic and helplessness were pervasive throughout the Turkish industry during the 2001 recession.

In Australia, Loosermore and Teo (2000) conducted a survey and concluded that the corporate philosophies of construction companies do not support crisis management activities. This is evidenced by the fact that crisis planning is rudimentary and conducted in an insular, informal, fragmented manner, supported by few resources and little strategic guidance. Consequently, many construction companies will have an inadequate understanding of their exposure to crises, how to deal with crises when they occur, and of how to learn and recover from the aftermath.

In light of the dearth of crisis management systems within the construction industry, Sahin, Ulubeyli and Kazaza (2015) highlight the actions that construction companies should pursue to effectively navigate a crisis. The authors adapted the crisis management process proposed by Mitroff and Pearson (1993) to the construction industry, dividing the process into five steps, which can be listed as follows: (1) Prediction, that is to say, the identification of early warning signals of recession from macroeconomic data, including foreign exchange, interest rates, unemployment, and political regulations, in a timely manner in order to prevent potential damage; (2) Prevention and preparation, which involves the development of scenarios, the identification of risks, the improvement of policies, and the formation of a crisis management team to deal with crises; (3) Control, which requires monitoring the action plan to ascertain risks and refine strategies; (4) Recovery, that is to say, acting in accordance with the determined strategies to facilitate a return to normal routines; and (5) Learning and evaluation, which implicates determining the successful elements of the process and recording the lessons learned. Ulubeyli *et al.* (2015) further delineated the process by defining the actions that should be taken before, during, and after a crisis. They emphasised the importance of establishing warm–up procedures, action plans, and comprehensive communication with all stakeholders, including employees, customers, partners, and suppliers.

This systematic process, designed for construction companies, aims to effectively identify potential crises and plan how to manage them to avoid or minimise their negative impact. Nevertheless, this process has remained largely theoretical in construction companies, with many organisations continuing to approach crisis management in an intuitive

and ad hoc manner (Iftikhar, Majeed and Drouin, 2023). Indeed, subsequent research on crisis management has focused on general organisations and on exogenous phenomena, including the antecedents and consequences of recession (Elliott and Macpherson, 2010; Hällgren and Wilson, 2011, 2008; Jaques, 2009; Wang, 2022; Wang and Pitsis, 2020; Wilson, 2013). Moreover, the majority of this research employs the term "risk" in a manner that is synonymous with "crisis". As Meyer, Loch and Pich (2002) posit, risk is an identifiable, measurable and manageable phenomenon. Every risk is characterised by a probability of occurrence, and the potential outcome is largely predictable. Accordingly, contingencies can be formulated to address the potential occurrence of different risks, thus enabling the company to take the planned appropriate actions in the event of their materialisation. Conversely, a crisis is an unpredictable and ambiguous occurrence that poses a significant threat and necessitates prompt decision–making within a limited timeframe (Pearson and Clair, 1998).

As Iftikhar, Majeed and Drouin (2023) observe, the element of surprise represents a fundamental aspect of crisis management. However, they note that this element has not been sufficiently considered in previous research in a diverse range of project–based organisations (PBOs), including construction companies. They conducted a systematic review of the literature on crisis management, which revealed that research in this field is still in its infancy. By emphasising the element of surprise, they propose a crisis management process based on the principles of dynamic capability theory (Eisenhardt, Martin, 2000; Helfat *et al.*, 2007; Teece, Pisano and Shuen, 1997). Specifically, they regard crises as environments characterised by turbulence, in which organisations must develop the flexibility and adaptability needed to compete. It is imperative that organisations integrate and reconfigure their internal and external resources on an ongoing basis, continuously monitoring and adjusting people, structures and processes to meet the changing requirements of the external environment. The ability to make sense of the situation, to make decisions in a timely manner, to respond strategically in a rapid and appropriate manner, and to learn from the experience are fundamental to effective crisis management (Killen and Hunt, 2010). This is because in a crisis that is wholly unexpected,

organisations are unable to ascertain in advance the source of the crisis, the form it will take and which stakeholders it may involve. The specific crisis situation, as interpreted by the organisation, will determine the strategic response. The appropriateness of the response will be determined during the crisis by examining the situation in question. As Pearson and Clair (1998) suggested, no organisation will respond in a way that is completely effective or completely ineffective, and strategies will lead to both successful and unsuccessful outcomes. Regardless of the outcome of a strategy, organisations improve their practices, enhance their prospects in a dynamic environment and strengthen their ability to manage crises themselves.

2.2. *Strategic responses to recession*

From the perspective of crisis outcome shaping, some researchers (Bundy *et al.*, 2017; Claeys and Cauberghe, 2014, 2012) have put forth the argument that the strategy adopted by the company is of pivotal importance. Although the development of a successful strategy is the determining factor between survival and insolvency, it would appear that no previous research has either theoretically or empirically analysed the use of strategy and its subsequent impact on the profitability of construction companies during a recession. The extant literature has developed strategies that can only be implemented in mega or complex projects (Iftikhar, Muller and Ahola, 2021; Iftikhar, Momeni and Ahola, 2022; Locatelli and Mancini, 2010; Williams *et al.*, 2012; Wang, 2022; Wang and Pitsis, 2020), or specific segments, as the housing project (Patil, Desai and Gupta, 2016), the infrastructure project (Van Os *et al.*, 2015), and software projects (Sangaiah *et al.*, 2018).

Therefore, in this study, in order to specify the possible strategic responses of building distributors to the recession, it is necessary to refer to the findings of strategy researchers such as Barber and Warn (2005), Miles *et al.* (1978), Miles and Snow (1978), and Porter (1985), who have identified several strategic typologies of behaviours used by organisations to adapt to their environment.

In general, organisations may adopt either a proactive or a reactive strategy. Even during a recession, strategic responses may be either

proactive or reactive (Iftikhar, Majeed and Drouin, 2023; Saraç, 2019; Sternad, 2012).

In the context of proactive behaviours, the extant literature classifies companies whose generic strategy is low–cost oriented as defenders. In times of crisis, these companies prioritise internal attention and efficiency improvements. In contrast, the prospectors are defined as companies whose generic strategy emphasises a differentiated position. In times of crisis, these companies adopt a more proactive stance towards the environment, identifying and exploiting new product and market opportunities, and promoting R&S and innovation. The analysers represent a synthesis of the defender and prospector typologies. These companies seek to minimise risk by reducing costs, while simultaneously pursuing the creation of new market opportunities for the purpose of increasing profits.

In the context of reactive behaviours, the literature includes strategies such as importing technology, horizontal integration, divestment and retrenchment through layoffs, salary freezing, service reductions, cost cutting or inventory realisation (Bigelow and Chan, 1992; DeDee and Vorhies, 1998; Geroski and Gregg, 1997; Kamoche, 2003; Pun, 2005; Zatzick, Marks and Iverson, 2009).

While Miles *et al.* (1978) in their seminal study considered the reactive strategies to be inconsistent and unstable (p. 557), Iftikhar, Majeed and Drouin (2023) in their conceptual paper argue that "since a crisis is a low probability and high–impact event, it is not possible to plan contingencies for it, hence only a reactive response can be taken" during recession (p. 112). This is also the case in the study by Iftikhar, Momeni and Ahola (2022).

Empirical research on strategic behaviour during recessions is limited to individual countries and industries, with the majority of studies focusing on the hospitality sector. The findings are inconclusive regarding the effectiveness of proactive and reactive strategies (Alonso–Almeida, Bremser and Llach, 2015; Bigelow and Chan,1992; Deans, 2009; DeDee and Vorhies, 1998; Kamoche, 2003; Laitinen, 2000; Michael and Robbins, 1998; Roberts, 2003; Saraç, 2019; Sternad, 2012; Okumus and Karamustafa, 2005; Pun, 2005; Whittington, 1991).

In a considerable number of these empirical cases, reactive responses are the first choice during recessions. These are designed to defend the status quo by providing immediate relief through either cost or asset reductions. This is because the main purpose of divestment and retrenchment is to provide the company with the liquidity it needs to survive the crisis (Pearce and Michael, 2006).

However, the other empirical studies posit that reactive responses create a vicious circle in which the company reduces the cost of products and services, customers perceive their lower quality, the company's image and revenues decline, and further cost cutting is required to the point of bankruptcy (Alonso–Almeida, Bremser and Llach, 2015; Pearce and Michael, 1997). The aforementioned studies demonstrate that certain companies have opted for proactive strategies, with a particular emphasis on the prospector typology, which encompasses the promotion of marketing strategies, customer retention, the exploitation of novel products and markets, and an international orientation. Alternatively, the defender typology, which emphasises the reinforcement of internal efficiency and the enhancement of business processes, has also been employed. These strategies are referred to as counter–cyclical investment strategies by researchers, who posit that they can potentially lead to a higher chance of success both during and after the crisis (Roberts, 2003; Sternad, 2012; Whittington, 1991).

Laitinen (2000) conducted an analysis of the efficacy of Finnish firms' response strategies during the 1989–1993 recession. The results of a questionnaire completed by 750 firms indicated that the most successful medium–term strategies were the introduction of new products, marketing activities and the development of new customers. In contrast, a strategy based heavily on financial contract negotiations and restructuring was the least successful. To evaluate the long–term consequences of the implemented strategies, Laitinen examined the financial statements of 644 companies in 1994 and 1997. The results corroborate those obtained in the medium term. Consequently, Laitinen concluded that proactive strategies outperformed passive strategies during the crisis.

In 2009, one year after the onset of the global financial crisis, Alonso–Almeida, Bremser and Llach (2015) conducted a face–to–face survey of a small sample of restaurants in the city of Madrid to assess

the impact of proactive and reactive strategies on competitive advantage. The researchers found that restaurants had adopted either proactive or reactive strategies. Both had helped to reduce costs, but only proactive strategies had developed dynamic capabilities. They concluded that managers need to use proactive strategies in times of crisis to improve the company's competitive position. However, given that Madrid enjoys a higher standard of living and higher spending than other cities, they warn that these results cannot be generalised to the rest of the country or to other European capitals.

Saraç (2019) investigated the strategic behaviour of Turkish organisations operating within the metal products and machinery industry during the global financial crisis of 2008. The aim was to ascertain which strategy type demonstrated superior performance in terms of return on assets (ROA). The findings indicated that organisations retained their strategic approach throughout the crisis, underscoring the generic lowest cost, or differentiated position, or their mix strategy. The two approach were equally effective in the early stages of the crisis. However, the proactive strategy, based on the identification and exploitation of new product and market opportunities, helped organisations to cope with uncertainty more effectively than the other strategy, as it had a positive impact on post–crisis performance.

Tubbs (2007) posited that firms may gain a competitive advantage by increasing R&D expenditures at the onset of a recession, when competitors may be reducing such expenditures. The study demonstrated that numerous companies experienced an increase in both sales and market capitalisation during the subsequent upturn.

The findings of O'Malley, Story and O'Sullivan (2011), Naidoo (2010) and Kamber (2002) indicate that marketing can assume a heightened significance for a company during a recessionary period, exceeding its importance at any other time. The first authors argued that marketing budgets are cut due to the short–term focus of top management and its lack of market orientation. The results demonstrated that companies which reduced their marketing expenditure were more likely to jeopardise future sales and profits. Among the proactive strategies, Naidoo (2010) showed that during the 2008 recession, marketing innovation enabled Chinese manufacturing SMEs to develop and

maintain competitive advantages, whether based on differentiation or cost leadership strategies. Kamber (2002) found a positive measurable relationship between sales and the amount spent on advertising during the 1990–91 recession.

The literature review demonstrates that reactive responses based on cost reduction and retrenchment are prevalent during periods of economic downturn. This is because they are perceived as a more straightforward and secure method of restoring liquidity and margins in the short term. Nevertheless, if the sole objective is to achieve immediate savings, regardless of the impact on the quality and services provided, the long–term consequences may prove to be less advantageous. It is our opinion that reactive strategies are appropriate if they result in a reduction of time and resources spent on unprofitable products, market segments or assets, and on bureaucratic activities that do not affect competitive advantage. It can be posited that the selection of reactive strategies may be attributed to the fact that, during periods of financial stability, organisations are less inclined to pursue the reduction of resource wastage, given that demand often outpaces supply. Conversely, during periods of economic downturn, the focus shifts towards the restoration of efficiency and liquidity, with the objective of maintaining a competitive position within the market. Thus, reactive strategies can assist companies in reducing their cost position and establishing a highly competitive price in the market.

2.3. *Strategic options for Italian building distributors*

In this context, the aim of this research is to investigate whether Italian building distributors have adopted a reactive or proactive strategy to cope with the recession and the falling demand for building materials and related services. In other words, did they adopt a defensive stance towards the recession, following the price sensitivity of consumers with the aim of protecting the company and surviving in the short term, or did they prefer proactive strategies aimed at reorganising their structure, innovating processes, and developing new markets and business segments?

The set of contextual factors within the Italian building distribution sector appears to favour the adoption of reactive strategies. As

previously stated in the initial section of this paper, they are micro or small commercial enterprises, frequently family–owned and managed. These characteristics are traditionally associated with individualistic leadership, with a limited appetite for risk, innovation, and growth. Conversely, proactive strategies entail a significant degree of risk, particularly in periods of economic turbulence. Furthermore, the ability to be flexible and adaptable to changing needs is essential. This encompasses the capacity to gather information about the crisis and interpret its causes, the speed and consistency of the decision–making process, and the ability to integrate and reconfigure knowledge and competences in the shortest possible time. Such skills and abilities are often lacking in small family businesses. In a large company, for instance, strategic activities like market analysis, strategic planning, strategy implementation, and control are frequently conducted by multiple teams or dedicated organisational structures. In contrast, in a small business, a single individual, typically the entrepreneur, is responsible for all strategic activities, often in an informal and heuristic manner. This approach inevitably entails limitations on ideas and timing, which can have a significant impact on the ability to be proactive.

It is similarly well documented that smaller companies have fewer financial resources than their larger counterparts. This further limit their capacity to implement proactive strategies, which frequently necessitate substantial financial resources in a prompt manner. This situation can be exacerbated during a crisis when financial resources are even more limited. It is often the case that investment results in a deterioration of short–term performance and financial statements. Moreover, during a crisis, companies tend to avoid increasing their debt, given the high interest rates and the drastic reduction in lending by banks.

However, the cited literature provides examples of small companies that have been able to overcome financial difficulties and adopt proactive strategies. In the following sections, we aim to investigate whether such behaviour has also been observed among Italian building distributors during the most recent severe crisis.

3. Data and method of the analysis

3.1. *Methodology*

In order to examine the strategic responses of building distributors to the recession, an analysis of their published financial statements over the period from 2007 to 2020 is conducted. We favour a financial statement analysis for several reasons, including:

1) it is not dependent on the assumptions of researchers, managers or consultants. In contrast, other typologies, such as personal interviews with managers and surveys, rely on perceptions and judgements,
2) it allows for the analysis of large, heterogeneous samples and database data,
3) it captures realized strategies rather than intended strategies.

The performances are evaluated using objective financial ratios that reflect different yet related aspects of the firm's equilibrium.

A considerable body of scholarship (Bernstein, 1999; Drake and Fabozzi, 2008; Fraser and Ormiston, 2023; Foster, 1986; Joshua, 2006; Wahlen, Baginski and Bradshow, 2015) has identified the comparison of financial ratios over time and space as the most widely used cross–sectional technique for analysing performance.

In general, by examining a single sector within an industry, competition, risk factors, input and output market conditions are almost identical for all companies analysed. Beyond that, as previously indicated, the building distributors are allocated homogenously across Italy, assuming a small size and family management structure. Consequently, discrepancies in performance outcomes are more likely attributable to differences in strategy and efficiency than to a lack of comparability.

Furthermore, academics and practitioners establish a set of target performance indicators for inefficient companies by analysing the performance of the efficient benchmark group. The advantage of these targets is that, since they are derived from the recorded performance of a combination of comparable firms, they should be achievable, or at least the reasons for not achieving them should be readily discernible.

For this reason, the use of financial data to identify the drivers of success is a common approach in several studies that assess the performance of an industry, and in particular its strategic groups, over time. This approach has been employed in studies of various industries, including the pharmaceutical industry (Cook and Schendel, 1987), food retailing (Lewis and Thomas, 1990), savings and loans (Rudolph and Topping, 1991), insurance (Fiegenbaum and Thomas, 1993, 1990), brewing (Houthoofd and Heene, 1997), and building societies (Hammond and Thwaites, 2000).

The majority of these studies have been conducted with the objective of analysing the manner in which firms within a given industry have responded to a fundamental alteration in the competitive landscape. In particular, Hammond and Thwaites (2000) have examined the strategic responses of a group of UK building societies to the partial deregulation of their industry following the 1986 Building Societies Act. They evaluated, with the benefit of hindsight, which strategy resulted in superior financial performance up to 1993. In their study, Rudolph and Topping (1991) examined the thrift industry in the period following the deregulation, from 1979 to 1987. The authors divided the thrifts into groups based on the strategies they pursued and compared these groups in order to relate performance to strategy.

In the context of our research, it is therefore essential to define a criterion for identifying the group of "excellent" distributors within the building distribution sector, to select the samples, and to decide which and how many performance indicators to focus on.

The following section outlines the methodology employed for the selection of the sample and the specific performance indicators utilized.

3.2. *"Excellent" building distributors: definition and assumptions*

In this study, the term "excellent" s defined as the generation of income that exceeds the remuneration expected by all stakeholders, including shareholders. The remuneration of these individuals, even if not explicitly or contractually defined, constitutes a cost that the company is obliged to bear, even in a recessionary environment.

Consequently, the term "excellent" is applied to distributors who demonstrate the capacity to surpass all anticipated remuneration. This is the ability to generate value.

In order to assess value creation, a variety of methods are employed, with the most prevalent being the calculation of Economic Value Added (EVA). This is a straightforward measure that has gained significant acceptance in both academic and practical literature (Bennett Stewart, 2013; Dodd and Chen, 1997). In accordance with this model:

$$EVA = NOPAT - (WACC * NOC).$$

Net Operating Profit After Taxes (NOPAT) represents the profit generated by a company after accounting for taxes. It incorporates the tax benefit derived from the deductibility of interest expense. If t is equal to the direct tax rate, the equation becomes:

$$NOPAT = \text{EBIT} - (\text{Tax} + t * \text{Interest expense}).$$

Net Operating Capital (NOC) represents the cash invested in the business, less depreciation. It is calculated as the sum of net assets less current liabilities.

The Weighted Average Cost of Capital (WACC) is defined as the sum of the cost of debt and the cost of equity, as illustrated by the following formula:

$$WACC = Ke * E / (E + D) + Kd * D / (E + D).$$

In this context, E represents equity, D financial debt, Kd the cost of debt (the ratio between interest expense and financial debt, or ROD), and Ke the cost of equity. The latter is determined by the following formula:

The following assumptions have been made during this study:
rf = return on risk–free investments, equal to the return on 10–year German government bonds;
rm = expected return on risky assets, equal to rf plus the risk premium on an equity investment (rp);

(rm – rf) = risk premium, equal to Aswath Damodaran's estimate, which is 8.6% for Italy;
ß = coefficient by which the risk premium (non–diversifiable risk) must be corrected to account for the risk associated with the specific company under analysis (diversifiable risk). This is also consistent with the estimates put forth by Aswath Damodaran, which indicate a ß of 0.88 for the construction industry.

In light of the fact that the period under examination encompasses the initial stages of the negative business cycle, the subsequent maturity, and finally, the slow recovery from a severe recession, distributors with a positive EVA in each year are to be considered "excellent".

3.3. *Sample selection*

The sample of building distributors was selected based on the following criteria:

- the Ateco 2007 code: the sample includes distributors operating as wholesalers of timber, semi–finished wood and artificial wood (code: 46.73.1) and as wholesalers of construction materials — including sanitary equipment (code: 46.73.2);
- the presence of the following words in the business purpose: distribution, materials, building, but not production;
- the presence of the word building materials in the company name.

The resulting sample was augmented with the inclusion of members from the Federcomated (National Federation of Cement, Brick and Building Materials Dealers) and Sercomated (Service Centre for Building Distribution Companies) lists, with the exclusion of companies classified with an Ateco 2007 code other than those indicated above.

The financial statements of the sample were derived from the AIDA database and subsequently examined to exclude those with a value of total assets that differed from total liabilities and those with a value of revenues (item A1 of the Income Statement) of less than € 500,000.

Moreover, enterprises undergoing liquidation were excluded from the analysis, beginning with the year in which the liquidation procedure is initiated.

This process allows for the creation of an open sample for the sector on an annual basis.

The EVA was calculated for each distributor and for each year. Thereafter, a subset of distributors was identified as "excellent", defined as distributors that recorded a positive EVA in each year of the period under analysis. Table 1 presents a summary of the total number of cases.

This allows for the isolation of a small cohort of building distributors, thus enabling an investigation of the strategies employed by these distributors during the recession period in comparison to those of the wider sector.

YEAR	SECTOR	EXCELLENT	% OF EXCELLENT
2007	1.170	396	34%
2008	1.336	388	29%
2009	1.369	291	21%
2010	1.400	276	20%
2011	1.422	284	20%
2012	1.452	315	22%
2013	1.465	312	21%
2014	1.446	317	22%
2015	1.436	384	27%
2016	1.386	302	22%
2017	1.325	293	22%
2018	1.386	465	34%
2019	1.277	306	24%
2020	1.105	266	24%

Table 1. The sample of the sector and the subset of the "excellent" distributors.

3.4. *Choice of indicators and reclassification of the Financial Statements*

In determining the number of financial ratios to focus on and which ratios to prioritize, we considered:

1. the national and international literature and practice on financial statement analysis (Giunta and Pisani, 2016; Wahlen, Baginski and Bradshow, 2015; Penman, 2013; Tutino, 2012; Galeotti, 2006; Friedlob and Schleifer, 2003; Graham, Meredith and Price, 1998; Samuels, Wilkes and Brayshaw, 1998),
2. the purpose of this research, which is to ascertain the informative value of certain specific ratios in relation to the research question.

The selection of financial ratios was primarily informed by the work of Ittner *et al.* (1997), Bentley, Omer and Sharp (2013) and Saraç (2019). The authors identified six measures that capture the characteristics of Miles and Snow's strategy typologies. However, since the financial statements of small companies do not present all the data in a sufficiently disaggregated form to select the specific items identified by these authors, we considered broader aggregates and increased the number of selected measures. These measures have been analysed both individually and collectively, as their systemic perspective can facilitate a more comprehensive assessment of performance. Table 2 shows these measures summarised in four perspectives.

GROWTH - Gross Operating Margin on Revenues (EBITDA%) - Net Operating Margin on Revenues (EBIT%) - Value Added on Revenues (VA%)	NET PROFITABILITY - Net Result on Revenues (NR%) - ROE
OPERATING PROFITABILITY - ROI - ROS - Commercial Margin on Revenues (CM%) - Cost of Services on Revenues (Services%) - Labour Cost on Revenues (Labour%) - Capital Turnover (CT) - Average duration of receivables (GGrec) - Average duration of payables (GGpay) - Average stock time (GGinv)	INVESTMENTS AND FINANCIAL STRUCTURE - Annual rate of change in Investment (Δ%Inv) - Debt–to–Equity Ratio - Leverage

Table 2. Perspectives and set of indicators. Source: our elaboration.

The Financial Statements have been extracted from the AIDA database and reclassified in accordance with the logic of managerial relevance, as set forth in Tables 3 and 4. The tables differentiate between investments and financing, and costs and revenues, respectively, in relation to the distinct management areas that typify business operations.

(a) ACTIVITIES OF THE OPERATING CYCLE
(b) LIABILITIES FROM THE OPERATING CYCLE
(c) **NET WORKING CAPITAL (NWC)** (a–b)
(d) STRUCTURAL ASSETS
(e) **NET OPERATING CAPITAL (NOC)** (c + d)
(f) FINANCIAL ASSETS
(g) **NET INVESTED CAPITAL (NIC)** (e + f)
Covered by:
(h) EQUITY
(i) FINANCIAL DEBTS
(l) **RAISED CAPITAL (RC)** (h + i)

Table 3. Balance Sheet – Invested Capital and Raised Capital.

PRODUCTION VALUE
– EXTERNAL COSTS
= VALUE ADDED (VA)
– STAFF
= GROSS OPERATING MARGIN (EBITDA)
– DEPRECIATION AND WRITE–DOWN
– PROVISIONS
= NET OPERATING MARGIN (EBIT)
± INCOME AND EXPENSES FROM ACTIVE FINANCIAL OPERATIONS
= RESULT BEFORE FINANCIAL EXPENSES (RBFE)
– FINANCIAL EXPENSES (FE)
= ORDINARY RESULT (OR)
+ EXTRAORDINARY INCOME AND EXPENSES
= EARNINGS BEFORE TAXES (EBT)
– TAXES
= NET RESULT (NR)

Table 4. Income Statement – Added Value.

4. Findings

In order to facilitate a comparative analysis of performance, a median value is calculated for each indicator, as this is not affected by extreme outliers and does not suffer from sign problems.

In consideration of the multi–year temporal scope, the revenue indicators are deflated with reference to the initial year of the historical series, 2007, based on sectoral data from the Italian National Institute of Statistics (https://seriestoriche.istat.it/).

4.1. *Growth*

Table 5 presents the findings for the growth perspective indicators.

Indicator	Sample	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EBITDA %	Excellent	6.9	6.5	6.3	6	5.7	6	5.6	5.5	5.7	5.9	5.7	5.6	5.9	6.8
	Sector	6	5.5	5.1	5	4.7	4.2	4.4	4.3	4.5	4.4	4.3	4.4	4.7	5.1
EBIT%	Excellent	5.2	5	4.6	4.4	4.1	4.5	4.1	4.1	4.3	4.2	4.3	4.2	4.4	5
	Sector	4	3.7	3	3	2.8	2.3	2.5	2.6	2.7	2.7	2.6	2.7	3	3.4
AV%	Excellent	14.8	15.1	15.1	14.9	15.2	15.9	15.4	16.4	16.9	17.2	17	17.1	17.6	17.4
	Sector	14.6	14.7	15.3	15.3	15.2	15.4	15.4	15.7	15.8	16.3	16.2	16.2	16.7	16.2

Table 5. Growth results. Source: our elaboration based on AIDA database.

The decline in revenues, as illustrated in the initial section, exerted an influence on EBITDA and EBIT, which are calculated here as a percentage of revenues (EBITDA% and EBIT%). This is particularly the case for the sector, whose EBITDA% of 6% in 2007 gradually declined to its lowest value of 4.2% in 2012 (representing a 30% reduction). The "excellent" distributors, whose EBITDA% of 6.9% in 2007 reached its lowest value of 5.5% in 2014, experienced a smaller decline than the sector as a whole (20.29%).

The discrepancies between the sector and the "excellent" distributors are more evident when examining the EBIT% results. For the sector, there was a 42.50% decrease, from 4% in 2007 to 2.3% in 2012. In

contrast, the lowest value for the "excellent" distributors was 4%, occurring in 2011, 2013 and 2014. The decline was limited to 21.15% in comparison to the value of 5.2% in 2007.

A contrasting trend is observed in the Value Added (VA), expressed here as a percentage of revenues (VA%). As the difference between Production Value and external costs, it indicates the value added by capital and labour in the production of a given output. This value was increasing, indicating that the sector, and in particular the "excellent" distributors, had the capacity to make savings in the acquisition of external factors. This partially compensated for the effects of unfavourable revenue trends.

This finding necessitates an in–depth analysis of the other perspectives. The aim is to identify the reasons for a growing VA% and, ultimately, the drivers that allow "excellent" distributors to limit the negative consequences of the crisis.

4.2. *Net profitability*

Table 6 presents the results for the net profitability indicators.

Indicator	Sample	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NR%	Excellent	2.1	2.2	2.2	2	1.8	1.5	1.1	1	1.2	1.6	1.9	2	2.4	3.2
	Sector	1.3	1	0.7	0.8	0.6	0.5	0.5	0.5	0.7	0.7	0.9	0.9	1.1	1.8
ROE	Excellent	19.4	17.1	16.3	13.9	13.7	11.3	10.5	9.5	9.8	9.8	11.9	12	11.6	11.8
	Sector	9.6	6.7	4.5	4.5	3.8	2.7	2.4	2.2	3.1	3.4	3.7	3.8	4.7	5.8

Table 6. Net profitability results. Source: our elaboration based on AIDA database.

The first indicator under examination is the Net Result of the year (NR), which is calculated here as a percentage of revenues (NR%). For the sector as a whole, there was a notable decline from 1.3% in 2007 to 0.5% in 2014, representing a 61.54% reduction. Conversely, for the subset of "excellent" distributors, there was an encouraging increase observed in the years 2008 and 2009, then a decrease in the years 2010–2014 (where the minimum value of 1% was recorded, with a decrease

of 54.54%), followed by a return to growth, reaching 2.4% in 2019 and the maximum value of 3.2% in 2020. In 2020, the sector exceeded the 2007 value of 1.8%.

The analysis proceeds with the consideration of the ROE, which provides insight into the capacity of building distributors to transform equity investment into profits. This is a valuable tool for comparing companies within the same sector. Although it has certain limitations, it is relatively straightforward to interpret as it measures a company's Net Result in relation to its Equity. Both the sector and the "excellent" distributors demonstrate a decline in ROE. In 2007, the sector's ROE was 9.6%, while that of the "excellent" distributors was 19.4%. The value subsequently declines until 2014, reaching 2.2% for the sector and 9.5% for the "excellent" distributors, representing a decrease of 77.08% and 51.03%, respectively. From 2015 onwards, the ROE demonstrates an upward trajectory, although it fails to attain the level observed prior to the economic downturn. In 2020, the sector ROE reached 5.8%, while the figure for the "excellent" distributors was 11.8%.

It is noteworthy that the lowest point was reached in 2014, with the "excellent" distributors consistently exhibiting a higher NR% and ROE than the sector.

4.3. *Operating profitability*

Summarizing the core business results, this perspective requires a considerable degree of consideration, with many indicators subjected to analysis. The results are presented in Table 7.

Indicator	Sample	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ROI	Excellent	20.1	17.1	15.3	14.7	14.2	12	12	11.2	10.2	10.5	10.7	10.5	10.3	10.2
	Sector	12	9.3	6.8	6.5	6.3	4.8	5.2	4.9	5.5	5.1	5	5.2	5.6	5.6
ROS	Excellent	5.4	5.1	5	4.6	4.2	4.6	4.4	4.4	4.4	4.4	4.5	4.3	4.7	5.3
	Sector	4.1	3.8	3.1	3.1	3	2.5	2.8	2.7	2.9	2.9	2.8	2.8	3.1	3.6
CM%	Excellent	25.4	26.8	26.7	27.2	26.8	28.4	28.4	29.5	30.1	30.1	30.6	29.7	30.7	30.1
	Sector	25.9	26.9	28.4	28.6	28.1	29.3	29.2	29.6	29.9	30.2	30.1	29.9	30	30.1
Services %	Excellent	6.7	7	6.8	6.9	7.2	7.8	7.9	7.9	8.6	8.1	8.4	7.9	8.2	8.2
	Sector	7.4	7.6	8.2	8.3	8.1	8.8	8.7	8.8	9	9	8.9	9	8.6	8.9
Labour %	Excellent	7.5	8.1	8.2	8.9	9.3	9.4	9.4	10.1	10.5	10.9	11	11.2	10.9	10.5
	Sector	8.1	8.9	10	10.4	10.3	11	11.1	11.3	11.4	11.8	11.7	11.5	11.7	11
CT	Excellent	3.59	3.38	3.14	3.43	3.43	2.79	2.81	2.62	2.41	2.40	2.34	2.44	2.36	2.03
	Sector	2.91	2.63	2.30	2.09	2.07	1.88	1.85	1.82	1.87	1.76	1.79	1.75	1.79	1.60
GGrec	Excellent	76	78	93	85	86	91	93	97	98	91	88	84	86	91
	Sector	81	81	94	96	96	99	102	101	100	100	98	94	90	93
GGpay	Excellent	126	123	133	132	139	135	139	136	134	139	141	129	127	133
	Sector	124	122	132	130	136	130	134	131	133	135	140	129	125	132
GGinv	Excellent	50	54	56	60	64	79	78	89	77	85	79	76	83	84
	Sector	65	68	77	83	86	91	90	94	98	101	100	98	100	98

Table 7. Operating profitability results. Source: our elaboration based on AIDA database.

ROI is calculated by dividing the Result Before Financial Expenses (RBFE) by the Net Invested Capital (NIC) to assess the efficiency of an investment over a one–year period. The results of our survey indicate a declining trend in ROI for both the sector and the "excellent" distributors until 2012. For the sector as a whole, the ROI declined from 12% in 2007 to 4.8% in 2012, representing a 60% reduction. For the subset of "excellent" distributors, the ROI fell from 20.10% in 2007 to 12% in 2012, representing a more moderate 40.50% reduction. In the subsequent years, there was a stabilization of the sector at approximately 5%, while the "excellent" distributors exhibit a value of approximately 10%. In each year under consideration, the value observed for the "excellent" distributors is markedly higher than that observed for the sector

as a whole. It is noteworthy that in 2007, the ROI for the "excellent" distributors was 8.1% higher than the sector median (12%). The discrepancy between the two groups widened in 2009 and 2010, with the former exhibiting an 8.5% and the latter a 8.2% differential, respectively. In the period between 2009 and 2014, the ROI of the "excellent" distributors was more than double that of the sector. Since 2014, the discrepancy remains at approximately 5%. It seems reasonable to posit that, at least until 2014, the "excellent" distributors have consolidated the additional resources they enjoyed in 2007, which is a period of peak growth.

In order to gain insight into the underlying causes of this phenomenon, we employ a decomposition of the ROI in accordance with the Du Pont triangle:

$$\text{ROI} = \text{ROS} * \text{Capital Turnover}.$$

The ratio of net operating margin (EBIT) to revenues, known as ROS, gauges the profitability of a company's sales. Capital Turnover (CT), on the other hand, assesses the effectiveness with which a company utilizes its assets to drive sales.

In 2007, the sector's ROS was 4.1%, indicating that building distributors generated an operating margin of € 4.1 for every € 100 of revenue. In the same year, the subset of "excellent" distributors achieved an operating margin of € 5.4. Despite the decline in margins over time, there are notable discrepancies in the trajectory of the sector in comparison with the "excellent" distributors. In particular, the sector has already experienced a significant decline in ROS, reaching 3.1% in 2009. The lowest recorded value was in 2012, when ROS fell to 2.5%, representing a decrease of 39.02% compared to the value observed in 2007. The decline was less pronounced for "excellent" distributors. The lowest ROS value was reached in 2011 (4.2%), representing a decrease of 22.22% compared to 2007.

Furthermore, the discrepancy between the ROS of the "excellent" distributors and the ROS of the sector has consistently exceeded the 2007 figure (1.3%) in every year except 2008 and 2011. In 2009, the discrepancy reached 1.9%. The highest value was observed in 2012, at

2.1%. This result offers a preliminary insight into the higher ROI achieved by the "excellent" distributors in comparison to the sector. Further investigation is required to elucidate the managerial strategies employed by these distributors to mitigate the adverse effects of the recession.

Consequently, the Commercial Margin (CM), calculated as the difference between revenue and the consumption of goods, expressed as a percentage of revenue (CM%), becomes the focus of the analysis. This reveals an unexpected finding: while the "excellent" distributors consistently exhibited a higher ROS than the sector, they also demonstrated a consistently lower CM%. There were exceptions to this trend in 2015, 2017, and 2019. However, the CM% advantage for the "excellent" distributors was 0.2%, 0.5%, and 0.7%, respectively. Both samples reached their lowest value in 2007. Thereafter, the results exhibit an upward trend, which was most pronounced for the sector during the most severe economic downturn.

It is worthy of further consideration that the CM of the "excellent" distributors is lower than that of the sector. This phenomenon may be explained by the hypothesis that the "excellent" distributors have accepted a lower margin on sales through very competitive pricing in the face of the unfavorable economic situation. This indicates that price strategies are also a priority for these distributors in order to maintain customer loyalty during the recession.

In consideration of the CM% dynamic and the necessity to restore liquidity, our attention is drawn to cost items that are characterized by a considerable degree of rigidity in the short term with regard to fluctuations in business volumes. These are the costs of services and labor as a percentage of revenues (Services% and Labor%), which may be subject to cost–cutting strategies.

Conversely, the results demonstrate a discernible upward trajectory for these variables. With regard to the costs of services, both the sector and the "excellent" distributors exhibited the lowest value in 2007 (7.4% and 6.7%, respectively), and both reached the highest value in 2015 (9% and 8.6%, respectively). The sector sustained this figure in both 2016 and 2018, while the proportion held by the "excellent" distributors was reduced to 8.2% in 2020. In each year, the value of the

sector is found to exceed that of the subset. The difference reached its peak in 2009 and 2010, at 1.4%. Despite the growth of Services% over the years, the sector experienced a strong increase already in 2009 and 2012.

Similarly, labor costs demonstrated a growth trajectory, that was more pronounced than that of services. The lowest recorded values for both the sector and its subset were observed in 2007, at 8.1% and 7.5%, respectively. The sector reached its highest value in 2016 (11.8%), while the peak for "excellent" distributors was in 2018 (11.2%). Furthermore, the proportion of labor costs incurred by the sector consistently exceeded that of the "excellent" distributors. The disparity reached its maximum in 2009, at 1.8%, followed by 1.7% in 2013 and 1.6% in 2012. Despite an increase in labor costs over time, it is notable that the sector already experienced a significant rise in 2009 and 2012.

It would be erroneous to view the elevated labor costs as a negative factor. It is challenging to replenish the skilled human resources that have departed in response to the market downturn. However, the "excellent" distributors have sustained and even augmented their ROS by limiting the increase to a level below the sector median. Consequently, the comparatively lower CM% was effectively offset by the containment of both service and labor costs.

These findings indicate that the strategy pursued by the "excellent" distributors can be summarized as follows:

- the acceptance of lower trading margins in comparison to the sector mitigated their loss of revenue;
- the management of elevated and inflexible operating costs in the short term to a level below that of the sector ensured a higher ROI.

As previously stated, ROI is also contingent upon Capital Turnover. The findings indicate that, on an annual basis, the "excellent" distributors consistently demonstrated a higher CT than the sector median. The values exhibited a gradual decline for both the sector and the "excellent" distributors. The discrepancy between the sector median and the median of the "excellent" distributors (0.68 in 2007) increased annually until 2011, when it reached 1.36. This indicates that in 2011,

the revenues of "excellent" distributors have renewed total business investment 1.36 times more than the sector. Thereafter, the discrepancy diminished and gradually reverted to the 2007 value in 2018. Once more, the sector experienced its most severe decline in 2009.

It can be inferred that during the economic downturn, the "excellent" distributors were able to maintain their performance in terms of ROI by effectively balancing trade margins and capital turnover.

In order to identify the factors that contribute to the higher CT, our attention is directed towards Net Commercial Working Capital (NCWC). Given the commercial nature of building distributors, it is of interest to examine the average duration of trade receivables and payables, as well as inventories, which represent a more significant asset class than fixed assets (Banos–Caballero, Gracia–Teruel and Martinez–Solano, 2014; Habib and Huang, 2016; Riccio, 2014).

The analysis demonstrates that the average duration of trade receivables was extended for both the "excellent" distributors and the sector. The sector reached its highest point in 2013, with an average extension of 102 days, while the "excellent" distributors reached their highest point in 2015, with 88 days. In 2009, both experience the greatest variation in the lengthening of the collection period from customers (13 days for the sector and 15 days for the "excellent" distributors). It can be posited that an extension of the collection period is a natural consequence of a general economic downturn. However, it is surprising that the "excellent" distributors consistently demonstrated a faster collection rate than the sector median, despite the minimal time delay. In particular, the maximum delay is 11 days in 2010 and 10 days in 2011, 2017 and 2018. It seems reasonable to posit that the customers of the "excellent" distributors have welcomed the shorter payment terms in return for the cheaper prices that they offer.

Regarding the average duration of payment to suppliers, the results demonstrate a high degree of homogeneity between the "excellent" distributors and the sector. In 2019, both exhibited the most pronounced increase in the deferrals granted by suppliers (10 days). Although the average duration of the former was consistently higher than the median for the sector (with the exception of 2018, when the median was identical at 129 days), the discrepancy between the two values was so

minimal that it is reasonable to conclude that the payment terms granted by suppliers to "excellent" distributors are essentially indistinguishable from those offered to the whole sector.

Regarding the warehousing, the results are particularly meritorious of examination. For building distributors, this is a necessary class of investment that cannot be compressed beyond a certain level. However, the "excellent" distributors attempted to restrict the level to the greatest extent possible. Their storage days consistently fell below the sector median, and the discrepancy between their medians exhibited an upward trajectory, particularly between 2009 and 2011 (reaching 23 days in 2010 and 22 days in both 2011 and 2018). Furthermore, while the sector's stock increased gradually, reaching a maximum of 101 days in 2018, the stock of the "excellent" distributors exhibited a more volatile trend, exceeding 89 days only once, in 2014.

Therefore, it is possible to posit that additional factors have contributed to the higher ROI of the "excellent" distributors in comparison to the sector. These appear to be, on the one hand, more effective stock management and, on the other hand, more stringent payment terms granted to customers. This has resulted in the release of cash from the NCWC.

4.4. *Investments and financial structure*

Table 8 presents the findings regarding investments and financial structure.

Indicator	Sample	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Δ%Inv	Excellent	—	18.2	17.5	17	12.6	8.6	9.2	6.7	9	11.6	12.3	9.6	12.7	12.5
	Sector	—	19.5	9.7	9.4	8.3	5.4	4.1	4.6	4.8	5.4	6.4	7.1	7.3	7.4
D/E	Excellent	1.43	1.53	1.54	1.6	1.58	1.51	1.91	2.32	1.82	1.48	1.35	1.38	1.14	0.95
	Sector	1.08	1	1	1.07	0.98	0.97	0.98	0.91	0.9	0.8	0.77	0.77	0.68	0.66
Leverage	Excellent	10.5	7.8	8.1	8.4	8.2	4.5	5.1	3.5	4	4.5	4.9	5.4	5.3	6.2
	Sector	4.6	1.8	1.6	1.7	1.3	−0.2	0.1	−0.1	0.2	0.7	1	1.2	1.4	2

Table 8. Investments and financial structure results. Source: our elaboration based on AIDA database.

The first line of the table illustrates the rate of change in investments on an annual basis, prior to the application of reductive depreciation. The results demonstrate a significant decline in the investment process within the sector. While investment grew by 19.5% in 2008, it subsequently decreased to 9.4% in 2009 and reached its lowest point of 4.1% in 2013. These figures indicate that the sector's investment activity was largely limited to replacement investments, which may be viewed as a natural reactive response in an economic environment characterised by unfavourable conditions.

In contrast, the results for "excellent" distributors demonstrate a heightened responsiveness to investment. In light of the considerable level of investment, it may be posited that the objective was developmental rather than merely replacement–oriented. This would suggest that the intention was to create a more favorable environment for operational efficiency, particularly with regard to the containment of specific categories of operating costs, such as the aforementioned services and personnel. This can be regarded as an example of a proactive response to the economic crisis, based on a defensive strategy. Indeed, their investment levels were consistently higher than the sector median throughout the period under review. The figure subsequently declined to 6.7% in 2014. Subsequently, a modest recovery was evidenced.

In order to analyze the financial structure, the ratio of Debt–to–Equity is calculated. The results demonstrate that in each year under examination, "excellent" distributors exhibited a ratio that exceeded the sector median, indicating that they secured a greater proportion of their financing through borrowing. The ratio exhibited an upward trajectory until 2014, reaching a peak of 2.32. Subsequently, the ratio declined, reaching a level below that of 2007 from 2017 onwards. The ratio tends to increase until 2014, when it peaks at 2.32. Thereafter, the ratio declines and from 2017 it falls to a level below that of 2007. In 2020, the ratio was 0.95. Conversely, the sector ratio demonstrates a declining trend, reaching 0.66 in 2020. The discrepancy between the medians reached a maximum of 1.41 in 2014, when the sector attained a debt–equity ratio of 0.91.

It appears that the sector was progressively achieving greater financial autonomy. This dynamic was not contingent on the expansion of

equity among building distributors. This was due to a reduction in financial indebtedness, caused by a decrease in reliance on traditional forms of commercial financing and the banking sector's tendency to reduce credit lines during a period of economic downturn. The construction sector has been significantly impacted by banking restrictions. As evidenced by data from the Bank of Italy, loans for investment in construction constituted 12% of total loans disbursed in 2007, but only 4% in 2017 (Associazione Nazionale Costruttori Edili, 2019).

The growing indebtedness of "excellent" distributors should not be viewed as a negative phenomenon. It is widely acknowledged that debt can facilitate investment and business development, thereby enhancing ROE. This is the case when the difference between ROI and ROD (Return On Debt) is positive. Therefore, the appropriateness of debt must be evaluated in accordance with the sign of Leverage (Ehrhardt, 1994; Lang, Ofek and Stulz, 1996).

The difference between ROI and ROD is worthy of note. While the difference for the sector declined gradually until it reached a negative value in 2012 and 2014, the difference for the "excellent" distributors, although also declining, never became negative and reached a minimum value of 3.5% in 2014. This indicates that the elevated debt levels of the "excellent" distributors consistently enhanced profitability. Conversely, in 2012 and 2014, the debt levels within the sector exerted a detrimental influence, eroding value and profits.

5. Conclusions

This study examines the strategic responses of Italian building distributors to the economic downturn, with the aim of identifying any clear evidence of the adoption and success of a reactive or proactive strategy. In particular, the objective is to ascertain the components of superior economic and financial performance that have enabled the subset of "excellent" distributors to mitigate the adverse effects experienced by the sector.

The performance drivers of the "excellent" building distributors were identified by examining their published financial data over an

extended period, from 2007 to 2020, and comparing the dynamics of key variables with those of the building distributor sector as a whole.

The findings indicate that the most severe years of the recession were 2009–2014 for both the sector and the "excellent" distributors. During this period, the net and operating profitability, as well as growth, of the latter exceeded those of the sector. Notably, the ROI achieved by the "excellent" distributors was more than double the median value observed in their sector. This can be attributed to the efficiency with which sales were converted into profits, as indicated by ROS, and the efficiency with which capital supported sales and growth, as indicated by CT. In all years under analysis, both the ROS and CT ratios exhibited superior performance for the "excellent" distributors in comparison to the sector.

In order to identify the determinants of these results and the correlated strategy typology, we focus on the following factors: CM, the cost of labor and services, the NCWC, the level of investment and debt.

In contrast to the set of contextual factors that characterize the building distributors — including micro or small size, family governance and management, individualistic leadership, a limited appetite for risk and innovation, and limited access to financial resources — the subset of "excellent" ones demonstrated an ability to navigate the complex interplay of these variables with a high degree of conscious management.

It can be observed that the elevated profitability of sales among the "excellent" distributors is not attributable to the sales margin. A comparative analysis of the data reveals that their CM is consistently lower than that of the sector. Moreover, during the most challenging years of the recession, the sector's CM increased at a rate that exceeded the median of the "excellent" distributors. It may be hypothesized that the "excellent" distributors adopted a lower pricing policy in response to consumer price sensitivity. However, this pricing strategy was not accompanied by the indiscriminate cost–cutting and retrenchment typically associated with the necessity to restore liquidity, as observed by numerous researchers. This represents a conventional, reactive strategy during a recessionary period, with a focus on immediate savings in order to provide relief in the short term, maintain market presence and

avoid an increase in debt. Conversely, the results demonstrate that the costs associated with the provision of services and labor increased over time. Nevertheless, to generate liquidity, the "excellent" distributors have managed their inventory in a manner that restricts both the level and the duration. In particular, inventories were kept to a minimum and maintained at this level for as long as possible, principally during the most severe years of the recession, when the sector experienced the highest rates of inventory growth.

Furthermore, the systemic interpretation of the results indicates that the "excellent" distributors were able to achieve efficiencies in the primary and support activities of their value chain through a more robust investment process than that realized by the sector. With investment levels significantly above the sector median, "excellent" distributors promoted more favorable conditions for operational efficiency, benefiting from a level of service and labor costs below the sector median. It can thus be proposed that the "excellent" distributors have employed a counter–cyclical investment strategy, which is typical of a proactive response to recession. In particular, their response appears to be based on a defender approach, with a primary focus on internal matters, and an emphasis on structural reorganization and process innovation. The enhanced efficiency is evidenced by the value of Services% and Labor% achieved by the "excellent" distributors in comparison to the sector.

It seems reasonable to posit that the "excellent" building distributors have also exploited and developed a new business segment, namely the renovation of the existing housing stock. As previously stated in the initial section of this paper, this is the sole segment in Italy that demonstrated growth during the recessionary period. In contrast to the non–residential construction and new construction segments, which experienced a significant decline, the existing housing renovation segment emerged as a viable alternative to traditional investment and market choices for all the building distributors. This proved to be a particularly advantageous market segment, especially in light of the tax incentives introduced by the Italian government, which have shaped the general economic recovery and the growth of the specific construction sector since 2020.

A limitation of this analysis is the lack of disaggregated revenue and costs of services data in the income statements of the companies under

review. Had such data been available, a more detailed examination of the factors influenced by prospector behavior could have been conducted. It is not possible to ascertain the proportion of revenue derived from the traditional segments of non–residential construction and new construction, as well as the new segment of renovation of the built environment. As a result, the analysis is unable to examine changes in sales volumes and prices over time or the repositioning of the building distributors within the different segments in response to the crisis. Similarly, it is not possible to ascertain the proportion of expenditure on marketing and promotions in comparison to the total costs of services. Nevertheless, it can be concluded that the successful proactive strategy employed by the "excellent" distributors to cope with the economic downturn was to tap new market segments, retain loyal clients and improve efficiency through the necessary investment.

Ultimately, their consistently positive leverage supported the liquidity and the investment process, which benefited from higher debt levels than the sector.

This study offers valuable insights for a diverse range of audiences.

For building distributors, this study reveals the managerial strategies deployed by the benchmark group to mitigate the adverse effects of the economic downturn. The status of retailers may lead us to posit that the predominant strategy employed is to maintain and reinforce the commercial margin (CM), which serves as the primary conduit for profitability. Conversely, the "excellent" distributors have reduced their commercial margin in order to prioritize customer loyalty policies, thereby recovering profitability through a consistent investment policy that has resulted in improved operational efficiency. Rather than implementing cost–cutting measures indiscriminately, they were able to identify the processes that were indispensable for customer satisfaction and that needed reorganization or innovation. They were also able to improve their efficiency.

Awareness of the optimal strategy enables building distributors to respond effectively to the challenges of a new adverse situation in the industry. This is of significant importance, as in 2024, there is a notable reduction in tax benefits, which is once again leading the construction industry to experience a decline in turnover and performance. The findings of this study may serve as a source of inspiration for managers

and entrepreneurs in the field, prompting them to explore alternative strategies for navigating a crisis beyond merely strengthening trade margins, a tactic often favored by distributors.

This study is relevant also to distributors in other industries facing similar environmental conditions. The insights gained from "excellent" building distributors may enable managers and entrepreneurs of commercial enterprises to incorporate an additional set of key variables when evaluating strategic alternatives and management control.

Results of this study are also useful to policymakers. They can gain insight into which economic policy measures may assist managers and entrepreneurs to navigate the crisis and safeguard the sustainability of their businesses. Since investments are essential during a crisis in order to redesign processes and improve efficiency, as well as to enable the development of new products and markets, policymakers should identify instruments that help companies to have sufficient liquidity to realize them. For instance, they may consider interest subsidies or a state guarantee system to assist companies in addressing and overcoming the crisis. In addition, this study also offers a valuable contribution to the ongoing debate about the value of public investment in the construction industry.

For researchers, this study contributes to the development of the debate on strategy management in times of crisis, highlighting the strategy typology that has generated a superior financial performance for Italian building distributors up to 2020. In particular, this study can be used to reinforce the implementation of proactive strategies. Most of the prior research has demonstrated that the adoption of prospector behavior, with regard to marketing and new products or services, helps companies to resist economic downturns more effectively and to seize opportunities in the recovery phase. This study proves that other areas, such as a broad perspective on operations and their efficiency, should be the focus of companies and researchers in the future. Even in periods of economic downturn, it is crucial for companies to rethink their operational procedures, implement new practices, and revise activities to maintain their position in the market.

Finally, it should be noted that this study is geographically limited to Italian building distributors. The results may serve as a basis for international comparison, with the aim of understanding whether in

different geographical and cultural contexts and in different political and institutional situations building distributors have the same attitudes and the same strategic behavior as their Italian colleagues.

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THE EVA CURVE MODEL: AN ANALYTICAL AND ECONOMETRIC APPROACH

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1. Objectives

The research aims to develop an analytical model for examining the behavior of EVA in relation to a value driver, identified as turnover. The choice of turnover is justified by the straightforward process of obtaining data from annual reports and its relevance as a metric for evaluating the operating income structure within the EVA model.

The following research questions will be addressed:

1. Does a linear relationship exist between the level of EVA and the turnover, which is acceptable according to the assumptions of the statistical regression model?
2. Can this linear equation determine the break–even point of EVA (ZEP) beyond which the value creation can be assessed?
3. Do the results of the proposed model align with those obtained with the traditional EVA approach?

Keywords: EVA, EVA curve model, Zero EVA Point, multidimensional analyses.

2. Theoretical background

The EVA model, developed by Bennett Steward III (1991, 2013), is defined by NOPAT, net of the cost of invested capital. The latter can

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be identified through the product of the WACC (i_A) and the Net Invested Capital (NIC):

$$EVA = NOPAT - CC = NOPAT - (i_A \cdot NIC) \qquad [3.1]$$

The generation of value is contingent upon the existence of a spread between a positive NOPAT and the cost of capital.

The rationale for focusing on the EVA model is twofold. Firstly, it is capable of overcoming the well–known limitations of traditional accounting–based indicators (Guatri, 2000; Melis *et al.*, 2014). Secondly, it is straightforward to implement and provides timely insights that can inform managerial decision–making. Furthermore, the utilisation of EVA mitigates the issue of agency between shareholders and management (Jensen and Meckling, 1976; Hundal, 2015). Additionally, it represents a shift towards the utilisation of a management system that is oriented to the maximisation of the company's value, as opposed to the mere generation of profits. (Ittner and Larcker, 2001; Stern and Willett, 2019).

3. The EVA curve model

Starting from the original EVA model, our analytical model can be derived from the difference between the NOPAT curve and the cost of capital curve, both of which are correlated with turnover trends. This approach allows for the analysis of the behaviour of EVA in relation to the same independent variable:

$$EVA = -[N_F + (i_A \cdot NIC_F)] + [N_V - (i_A \cdot NIC_V)] \cdot T_T \qquad [3.2]$$

The $N_F = (1 - t) \cdot K$ and $N_V = (1 - t) \cdot \left(1 - \frac{v}{p}\right)$ represent respectively the fixed and the variable components of the NOPAT, v is the variable unit cost, K is the total fixed costs, p is the unit price, t is the average tax rate, and T_T is the turnover. The fixed and variable components of the NIC are represented by NIC_F and NIC_V, respectively.

The level of turnover that yields zero EVA (Zero EVA Point, ZEP) can be determined. This is the level of turnover above which value is created.

$$T_T^{ZEP} = \frac{[N_F + (i_A \cdot NIC_F)]}{[N_V - (i_A \cdot NIC_V)]} \quad [3.3]$$

The linear regression line utilized to assess the validity of this analytical model is as follows:

$$EVA_i = \hat{a} + \hat{b} \cdot T_{Ti} + \varepsilon_i \quad [3.4]$$

Hence:

$$ZEP = \frac{-\hat{a}}{\hat{b}} \quad [3.5]$$

EVA_i, dependent variable
$\hat{a}$, vertical intercept of the regression line
$\hat{b}$, regression line angle coefficient
T_{Ti}, independent variable
ε_i, regression error.

4. The application of the EVA curve model

In order to test the validity of the proposed model, the construction sector in Italy was selected as a case study. The construction sector is widely regarded as a key driver of national economic growth (Giand and Pheng, 2011). At the same time, it is subject to significant external influences, particularly in the form of government investment and fiscal policies. In light of these circumstances, testing the model may prove challenging; however, a favourable result would serve to corroborate its reliability.

In the initial years of the period under examination, the construction sector experienced a prolonged recessionary period as a consequence of the global financial crisis (Horta *et al.*, 2013). The European Commission (2012) recommended that investment in sustainable buildings and vital infrastructure be regarded as a strategic contributor to future economic growth and job creation, rather than as a mere form of public spending. Nevertheless, public investment in the construction sector in Italy declined as a consequence of EU–wide austerity measures designed to stimulate economic growth by reducing expenditure. Indeed, Federcostruzioni (2014) estimated that output would return to the same level as half a century earlier.

In the subsequent years under examination, in particular 2020 and 2021, the entire economy was shaped by the impact of the global pandemic caused by the SARS–CoV–2 virus, which resulted in significant shifts in the performance of all economic sectors.

In the most recent years under examination, specifically 2022 and 2023, the construction sector has undergone a robust recovery, largely attributable to a series of tax deductions for expenditures on both the renovation of residential buildings and the enhancement of their energy efficiency (Associazione Nazionale Costruttori Edili, 2024, 2022, 2021; MEF–Dipartimento delle Finanze–Agenzia delle Entrate, 2024, 2023, 2021).

The survey was conducted on a sample of 88 medium–sized and large unlisted enterprises in the NACE Rev. 2 41 – 'construction of buildings' sector. The size thresholds employed to extract the data from the AIDA database (for the entire ten–year period) are in accordance with the last EU Directive 2023/2775, issued by the European Commission on 17 October 2023.

The additional industry–specific data, including beta, the debt–to–equity ratio, the equity risk premium, and risk–free rates, which are useful for calculating betas and WACCs, were derived from the Damodaran's surveys.

The survey enables us to ascertain an average level of R^2 of 59.68% across the entire sample, which rises to 74.78% when we consider only those regressions that present p–value levels of less than 5% for both the intercept and the angular coefficient (i.e. 61.36% of cases). This suggests that the proposed model has a high degree of applicability. Indeed, the average R^2 value indicates that the reference driver of the model (the so–called independent variable), represented by the level of turnover, can explain, on average, approximately 60% of the variations in the level of EVA (the so–called dependent variable).

At the 95% confidence level, the p–values on the regression parameters indicate that the model finds statistical significance on the vertical intercept (p–value < 5%) in 62.5% of cases. Of greater significance, however, is the finding of statistical significance on the angular coefficient (p–value < 5%) in 71.59% of cases.

The statistically significant relationship between the EVA curve and turnover trends (question 1) allows for the estimation of a ZEP, beyond which the EVA curve identifies a positive value (question 2).

In regard to the third research question, a consistency is observed in 76.14% of cases between the values obtained through the application of the traditional model and the results yielded by the proposed model. This provides evidence supporting the validity of the EVA curve model.

5. Conclusions

Unlike the original EVA model, the EVA curve model enables the formulation of useful forecasts for planning strategies. This is achieved through the application of econometric estimation.

This model allows for the assessment of the impact of different managerial policies on the EVA curve, thus facilitating an understanding of the evolution of value created or destroyed as a result of changes in internal business variables within a specific area of significance. Furthermore, the model allows for the assessment of external factors influencing the EVA curve, with a specific emphasis on the impact of fiscal and monetary policies on the WACC and beta.

Additionally, the EVA curve model facilitates multidimensional analyses, enabling the examination of cost and revenue structure, financial structure, investment structure, and risk.

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FINANCIAL TRANSFORMATIONS IN THE PIIGS COUNTRIES: THE INFLUENCE OF FIRM SIZE ON ACCESS TO CREDIT

JAVIER MANSO-LASO[1], ISMAEL MOYA-CLEMENTE[1], GABRIELA RIBES-GINER[1]

1. Objectives

Our objective in this research work is to analyze how firm size influences access to various sources of financing across different European economies.

Keywords: corporate finance, alternative financing, loans, debt.

2. Theoretical background

Corporate Financing in the PIIGS Countries (Portugal, Italy, Ireland, Greece, and Spain) has undergone significant transformations since the 2008 financial crisis, characterized by credit restrictions and austerity measures, leading to an uneven economic recovery. Between 2008 and 2012, the sovereign debt crisis severely impacted these economies, particularly Greece and Spain, where the weakness of the banking system and high levels of debt constrained access to credit (Castro, 2013; Monastiriotis *et al.*, 2013).

During this period, firms faced substantial difficulties in financing their economic cycle, which hindered their growth and internationalization. The European Central Bank's policies, including interest rate reductions and asset purchase programs, helped stabilize markets, gradually easing access to credit (Angeloni & Wolff, 2012).

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The improvement in access to financing is evident in Figure 1. While Germany maintained a stable credit access index, the PIIGS countries managed to reduce barriers to financing (1 being very little difficulty and 10 being significant difficulty). Specifically, Ireland surpassed Germany in this regard, showing a notable improvement in its access to corporate credit.

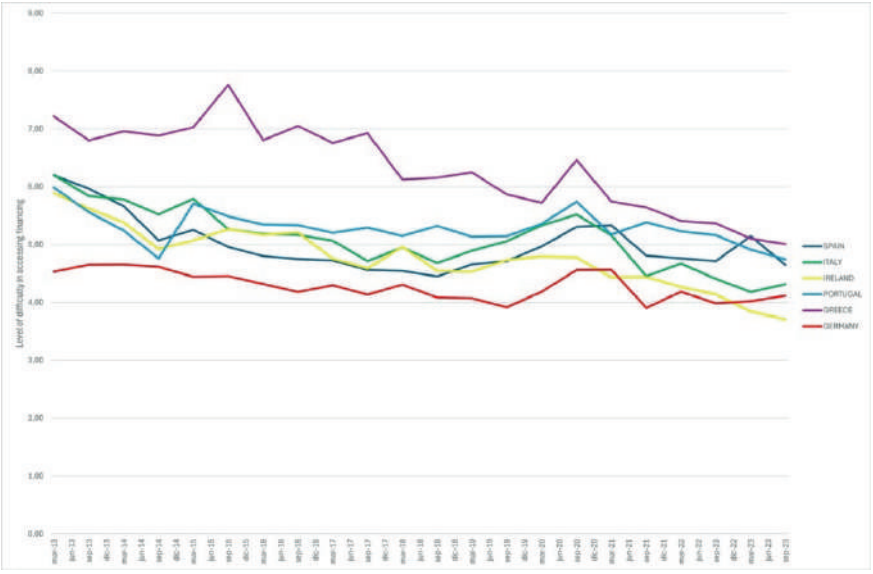


Figure 1. Perception of the Difficulty in Accessing Financial Sources: PIIGS Countries and Germany. SOURCE: Own elaboration based on data published by the European Central Bank.

Access to financing faces multiple obstacles, especially for small firms and startups (Berger & Udell, 1998). Information asymmetries between investors and entrepreneurs limit the supply of credit, as small firms are often perceived as higher risk due to their uncertain growth prospects and the difficulty of monitoring their recovery (Chavis *et al.*, 2011). Consequently, these firms frequently rely on alternative channels such as support from family and friends (Allen *et al.*, 2013).

Firm size, associated with better credit quality, viability, and solvency, improves access to credit and provides greater bargaining power (Brancati, 2015; Cenni *et al.*, 2015). As firms grow, their credibility increases, facilitating greater access to financial markets (Ferri &

Murro, 2015). However, microenterprises face greater restrictions due to their higher opacity and credit risk, with bankruptcy probabilities higher than those of larger companies (Farinha & Félix, 2015).

Several studies corroborate this relationship between size and financing. Casey & O'Toole (2014) highlighted that larger companies tend to rely more on alternative financing. Rahman *et al.* (2017) found that this positive relationship is limited to SMEs, while microenterprises show a negative coefficient.

Thus, our research hypothesis is: Larger firm size facilitates better access to sources of financing.

3. Methodology

The data source used in our research is the Survey on the Access to Finance of Enterprises (SAFE), conducted jointly by the European Central Bank and the European Commission since 2009. The data for the period September 2023 consists of 15,855 observations, from both European Union countries and non–EU countries. The survey includes more observations from larger economies to ensure sufficient representation of these countries.

This research, similar to the approach taken by Casey & O'Toole (2014), is focused on those financing sources related to alternative financing for businesses, independent of the use of banking instruments. However, we also include traditional banking financing through bank loans to assess its impact across different economies. The alternative financing sources studied are: informal loans or other business loans, debt securities issued, grants or subsidized loans, equity capital, and other types of financing.

4. Findings

The evolution of alternative financing in European countries has followed a varied implementation. Not all companies in the analyzed countries incorporated alternative financing sources into their financial

structures as complements to bank credit, thus enabling financial resources to reach those businesses, primarily newly established ones, that lacked collateral or equity to scale their operations.

The financing sources analyzed are based on data from the SAFE survey for the period of September 2023, as shown in Figure 2.

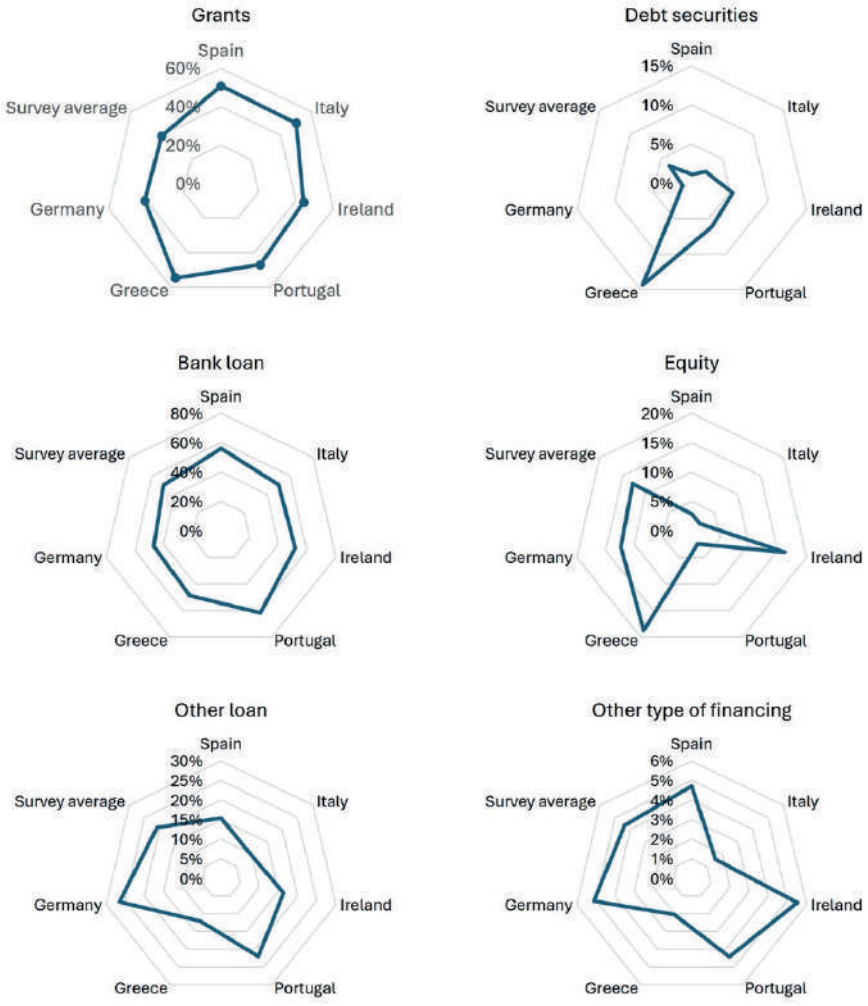


Figure 2. Financing Sources by Country. SOURCE: Own elaboration based on data published by the European Central Bank

The different financial instruments employed in each country show varying patterns depending on the selected business ecosystem. For example, the use of bank loans, as the most commonly used traditional financing instrument in these European countries, ranges from 49 percentage points in Greece to 62 percentage points in Portugal. In terms of alternative financing, grants are more frequently used by companies in Greece, accounting for 55 percent of cases, and to a lesser extent by Germany and Ireland, with 41 and 44 percent, respectively. Regarding financing through other non–financial institutional loans, Germany and Portugal lead in this type of instrument, with Italy showing the lowest implementation. As for financing through debt securities issued, Greece stands out as particularly favorable to this form of financing. Equity also shows notable differences between countries. Greece, Ireland, and Germany report greater ease of access to equity financing compared to Spain, Italy, and Portugal. Finally, alternative financing sources, such as peer–to–peer loans, collaborative financing/crowdfunding, show a similar situation across the countries studied, although Italy and Greece might still be in the early stages of adoption compared to the others.

The following table analyzes the factors that increase the probability of accessing each of the financing sources studied. The independent variable, firm size, will be individually related to each selected financing source. Differences in parameters between groups will be evaluated using the non–parametric Pearson Chi–Square test, with a significance level of 5% ($\alpha = 0.05$).

		GRANTS		BANK LOAN		OTHER LOAN		DEBT SECURITIES ISSUED		EQUITY CAPITAL		OTHER TYPES OF FINANCING	
	EMPLOYEES	Sí	No	Sí	No	Sí	No	Sí	No	Sí	No	Sí	No
SPAIN	1–9		(0,003)		(0,000)	(0,019)							
	10–49	(0,010)		(0,030)			(0,030)						
	50–249			(0,002)									
	+249			(0,017)						(0,027)			
ITALY	1–9		(0,003)		(0,000)	(0,026)			(0,018)		(0,000)		
	10–49	(0,001)											(0,030)
	50–249	(0,049)		(0,000)									
	+249		(0,002)					(0,000)		(0,000)			
IRELAND	1–9		(0,003)		(0,004)						(0,013)		
	10–49												
	50–249	(0,000)		(0,004)									
	+249												
PORTUGAL	1–9		(0,005)		(0,000)								
	10–49												
	50–249	(0,014)		(0,000)									
	+249							(0,000)					
GREECE	1–9		(0,000)		(0,000)				(0,016)				
	10–49	(0,001)		(0,032)									
	50–249			(0,001)				(0,003)					
	+249			(0,001)									
GERMANY	1–9		(0,000)		(0,000)		(0,001)						
	10–49						(0,040)						
	50–249	(0,000)		(0,000)		(0,000)							
	+249			(0,005)				(0,000)					

Table 1. Comparison of Financing Sources and Firm Size by Country. Source: Own elaboration based on data published by the European Central Bank.

5. Conclusions

The size of a firm shows a positive correlation with the acquisition of financing across almost all analyzed funding sources, except in the case of other loans. In the significant relationships, a p–value lower than 0.05 is observed, reinforcing the statistical robustness of the results. This indicates that as the size of the firm increases, so does the probability of accessing financial resources. This finding is consistent with conclusions from previous studies, such as those conducted by Brancati (2015) and Casey & O'Toole (2014).

However, for smaller firms, alternative financing sources, such as loans from family and friends, related businesses, or shareholders, play a crucial role in securing the necessary resources. These sources complement the access limitations posed by other traditional financial instruments. Specifically, these alternative avenues tend to be more flexible in terms of requirements and costs, making them a viable option for small businesses facing significant barriers in formal financial markets.

In this context, the analysis underscores the importance of understanding how firm size impacts both access to traditional financial resources and the use of informal or alternative financing mechanisms. These interactions are vital for the design of public policies aimed at fostering financial inclusion for small and medium–sized enterprises, thereby promoting their development, sustainability, and competitiveness in the market.

Future lines of research will incorporate additional independent variables, such as the business sector, firm age, or innovation level, which impact the access to various financing sources in the countries analyzed.

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FINANCING STARTUPS: PATHWAYS AND PARADIGMS

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1. Objectives

The financing of startups is a critical component of their development and long–term success. This paper explores the diverse financing options available to startups, analyzing their advantages and limitations, while providing insights into how startups can strategically choose the most suitable funding mechanisms. Specifically, the study aims to provide a comprehensive overview of financing pathways, identify theoretical frameworks underpinning startup financing decisions, examine preliminary findings on the efficacy of different financing models, and propose a decision–making framework for startups in selecting financing options. These objectives are integral to advancing the understanding of how financial strategies can impact entrepreneurial growth and sustainability.

Keywords: startup financing, venture capital, crowdfunding, hybrid models, entrepreneurial funding strategies.

2. Theoretical background

Startup financing has been extensively studied through the lenses of financial theory, entrepreneurship, and innovation management. Several theoretical frameworks underpin this research.

1. Pecking Order Theory, developed by Myers and Majluf (1984), posits that firms prioritize internal financing over external

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sources due to asymmetric information. For startups, this means a preference for bootstrapping or reinvesting profits before seeking external funds.
2. Resource–Based View (RBV) offers another perspective, emphasizing how the choice of financing affects a startup's ability to build and sustain competitive advantages. Equity financing, for example, may bring strategic investors with valuable expertise, while debt financing may foster fiscal discipline (Barney, 1991).

Additional theoretical contributions include agency theory, which highlights the risks of misaligned incentives between founders and investors, and lifecycle theory, which examines how financing needs and options evolve as startups mature (Hall & Lerner, 2010). Together, these frameworks provide a robust foundation for analyzing the complex decisions involved in startup financing.

3. Methodology

This research employs a mixed–methods approach to comprehensively explore startup financing strategies. As the analysis is ongoing, the findings presented are preliminary but highlight significant trends. The study integrates qualitative and quantitative methodologies, beginning with an exhaustive literature review of peer–reviewed articles, books, and industry reports to identify key financing options and their theoretical underpinnings. Case studies form a pivotal component of the analysis. Startups from diverse industries, including technology, healthcare, consumer goods, renewable energy, and education, are being examined to illustrate the practical application of different financing methods. These cases showcase examples of startups utilizing venture capital, crowdfunding, and government grants. To complement this, a survey of 200 startup founders was conducted to assess their preferences, experiences, and challenges with various financing options. Quantitative data analysis, including regression techniques, is employed to identify patterns and correlations between financing choices and performance metrics, offering deeper insights into the effectiveness of these strategies.

4. Findings

Preliminary findings reveal a complex and nuanced landscape of startup financing, shaped by factors such as industry, stage of development, and geographic location. Early–stage startups frequently rely on self–financing and bootstrapping, wherein founders utilize personal savings or reinvest profits. This approach minimizes ownership dilution but often restricts the scale of growth due to limited resources. As startups grow, they increasingly turn to external funding sources. Angel investors and venture capitalists emerge as prominent options for high–growth startups, offering not only capital but also mentorship and strategic connections. However, these forms of equity financing often come at the cost of significant ownership dilution and potential loss of strategic control (Gompers & Lerner, 2001). Crowdfunding has gained prominence as an alternative financing model, democratizing access to capital. Platforms such as Kickstarter and Indiegogo allow startups to raise funds from a broad audience while simultaneously validating their product–market fit. Despite these advantages, crowdfunding campaigns demand substantial effort in planning and management, and they may not be suitable for all business models (Cumming & Johan, 2019). Debt financing is another critical avenue, particularly for startups with predictable revenue streams. Bank loans and lines of credit enable these companies to access funds while retaining ownership. However, debt introduces financial obligations that can be burdensome, especially for startups with limited credit histories. Government grants and subsidies play an essential role in supporting startups, particularly those in innovative or socially impactful sectors. These non–dilutive funding sources often come with strict eligibility criteria and detailed reporting requirements. Emerging hybrid financing models, such as revenue–based financing and convertible notes, blend elements of debt and equity to offer more flexible solutions tailored to the needs of modern startups. These models allow founders to maintain greater control while accessing the necessary capital to scale their businesses. The findings illustrate that financing decisions are influenced not only by immediate capital needs but also by long–term strategic considerations, such as preserving control and fostering sustainable growth.

5. Conclusions

This study underscores the importance of aligning financing choices with a startup's strategic objectives and operational context. Founders must evaluate how different financing options align with their long–term vision, risk tolerance, and growth trajectory. A diversified approach to financing, combining multiple sources of capital, can help startups mitigate risks and enhance resilience in an unpredictable market environment. Furthermore, selecting the right investors who share the founders' values and bring complementary expertise can be pivotal in driving both financial and operational success. As this research progresses, future studies could focus on emerging trends in startup financing, such as fintech solutions, decentralized finance, and the impact of economic conditions on investor behavior. These evolving dynamics hold the potential to reshape the startup financing ecosystem, offering new opportunities and challenges for entrepreneurs. By advancing the understanding of these complex decisions, this study aims to provide actionable insights that empower startups to navigate their financial journeys more effectively.

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SYSTEMATIC ASSET RISK AND CAPITAL STRUCTURE

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1. Objectives

The relationship between systematic risk and capital structure has been a central topic in financial research. Systematic risk, quantified through beta, plays a critical role in shaping firms' financial decisions and their subsequent market performance. Existing literature highlights the intriguing beta anomaly, where lower–beta assets yield higher returns compared to their higher–beta counterparts (Frazzini and Pedersen, 2014; Baker *et al.*, 2020). This anomaly challenges traditional asset pricing models and introduces a nuanced perspective on risk–return dynamics.

Our primary objective is to examine the relationship between leverage and systematic asset risk, measured as asset beta. We aim to understand how capital structure decisions shape firms' exposure to systematic risks, particularly in the context of Eurozone companies.

Keywords: corporate finance, asset pricing, systematic risk.

2. Theoretical background

The relationship between leverage and systematic risk has been widely explored in the literature. Schwert & Strebulaev (2014) provides a perspective emphasizing the dynamic interplay between firms' capital structure choices and their exposure to systematic risk. His work highlights how leverage decisions affect negative to systematic risk.

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More recent studies, such as Chen *et al.* (2020) and Heinze *et al.* (2020), further build on this relationship, further build on this relationship, finding consistent evidence of a negative relationship between leverage and systematic asset risk.

3. Methodology

Having presented the aim of our study, we use several techniques to develop the model. To start with, we need to obtain the market value of book assets applying the Merton (1974) pricing model. This model assumes that the total value of firms follows a geometric Brownian method. Can be expressed as:

$$E=V\ N\ (d_1)-e^{-r\ T}F\ N\ (d_2) \tag{1}$$

where E is the equity value, V is the market value of the firm's assets, F is the face value of debt, r is the risk–free rate and N( ) is the cumulative standard normal distribution function. The definition of d1 and d2 would be:

$$d_1 = \frac{\ln\left(\frac{V}{F}\right)+\left(r+0.5\sigma_V^2\right)T}{\sigma_V\sqrt{T}};\ d_2 = d_1 - \sigma_V\sqrt{T} \tag{2}$$

Moreover, we set up some adjustments to the variables of the procedure to ensure the quality of the method. Once we have every asset market value (V) for all firms, we continue the procedure calculating betas, as our measure of systematic asset risk. Before calculating the betas, and once the market value of the assets was obtained, we were able to construct stock indices representative of market–weighted portfolios for both assets and equity:

We obtain daily betas with 365–days observations applying a rolling window method for all firms. To ensure the quality of our betas, we adjust for the non–synchronous trading issue following Dimson (1979) and weighting the more recent observations Boons (2016):

$$\underset{\{a_j,\beta_j\}}{argmin} \sum_{\tau=1}^{t} \omega(\tau)\left(R_{x,j,t} - a_j - \sum_{k=0}^{K} \beta_{x.m,j,k} R_{m,t-k}\right)^2$$

$$\omega(\tau) = \frac{exp(-|t-\tau|h)}{\sum_{\tau=1}^{t} exp(-|t-\tau|h)}$$

$$h = \frac{ln(2)}{T}$$

$$\hat{\beta}_{x,m,j} = \sum_{k=0}^{K} \hat{\beta}_{x,m,j,k} \qquad (3)$$

where (x) can be the continuous returns of the assets RA,j,t or the equity RE,j,t, and (m) the continuous returns of both market indexes too, $R_{A,t-k}$ and $R_{E,t-k}$. Thus, we can calculate four different types of betas: asset betas regressed on the equity market portfolio $\beta_{A,E,j}$; asset beta regressed on the asset market portfolio $\beta_{A,A,j}$; equity betas regressed on the equity portfolio $\beta_{E,E,j}$; equity betas regressed on the asset portfolio $\beta_{E,A,j}$. Our principal measure of systematic risk will be the asset beta regressed on the equity market portfolio ($\beta_{A,E,j}$).



Figure 1. Asset value–weighted index vs Equity value–weighted index. This figure shows both asset value–weighted index and equity value–weighted index built for all firms in Eurozone between 205 and 2023. Due to rolling window procedure and the Merton model used to estimate asset market values, both market portfolios start in 2007 (base year = 2007). We weight asset value–weighted index and equity value–weighted index by asset market values and market capitalization, respectively.

Finally, we set a model trying to understand the relationship between capital structure and systematic risk:

$$L_{Y,j,t} = \beta_0 + \beta_1 \hat{\beta}_{A,E\,j,t} + \beta_2 \sigma_{RA\,j,t-1} + \Sigma \beta_l CC_{j,t-1} + f_{i,t} + \varepsilon_{i,t} \quad (4)$$

where $L\,Y,j,t$ is our measure of leverage, which Y can represent either market leverage or book leverage. $\beta A,E,j.$ is the asset beta as a proxy of systematic risk. $\sigma RAj,t-1$ is the standard deviation of asset returns, lagged by one period. $CCj,t-1$ are our control variables: profitability (prof), tobin–Q (tobinq), size (size), tangibility (tang), operating leverage (olev) and non–debt tax shield (ndts), all lagged by one period as Chen *et al.* (2021). We have merged market data with accounting data with a flexibility of five days in order to avoid the loss of market observations on non–trading days. All variables are winsorized at the 1% level and 99% level. Moreover, we set fixed effects based on the industry and, in different models, also based on year or recession. We have clustered the standard errors by year (or recession in the different estimation) and industry (Peterson, 2009). We also have adjusted for heteroscedasticity (Chen *et al.*, 2021).

4. Findings

When we look at our first models (Table 1) with fixed effects in industry and year, respect to the market leverage, we can see that firms with high asset beta have, on average, lower leverage. The asset beta has a coefficient of –0.09, being statistically significant. The other risk measure, asset´s standard deviation, understood as total asset risk, also shows a negative coefficient of –10.86 being statistically significant. Similar results and interpretations can be obtained when we look at book leverage, as the asset beta also shows a negative and significant coefficient, with a value of –0.09 too. Asset risk likewise has a negative and significant relationship, with a value of –10.12. Both models are in line and consistent with prior studies, reporting r–squared of 41% and 22%, for market and book leverage, respectively. When we include fixed effects

for industry and recession variables, we obtain similar and robust results.

Table 1. Relationship between leverage and systematic risk.

This table reports the regression following:

$$L_{Y,j,t} = \beta_0 + \beta_1 \hat{\beta}_{A,E\,j,t} + \beta_2 \sigma_{RA\,j,t-1} + \Sigma \beta_l CC_{j,t-1} + f_{i,t} + \varepsilon_{i,t}$$

´ Statistical significance at the 10% level. *Statistical significance at the 5% level. **Statistical significance at the 1% level. ***Statistical significance at the 0.1% level.

	$L_{M_{j,t}}$	$L_{B_{j,t}}$	$L_{M_{j,t}}$	$L_{B_{j,t}}$
$\hat{\beta}_{A,E\,j,t}$	- 0.09***	- 0.09***	-0.09***	-0.09***
	(-14.35)	(-10.49)	(-12.07)	(-13.99)
$\sigma_{RA\,j,t-1}$	-10.86***	-10.12***	-10.31***	-9.50***
	(-28.62)	(-18.40)	(-19.12)	(-12.52)
$prof_{j,t-1}$	- 0.76***	-1.15***	-0.74***	-1.15***
	(-21.17)	(-18.25)	(-10.73)	(-17.00)
$tobinq_{j,t-1}$	- 0.06***	0.05***	-0.06***	0.05**
	(-15.31)	(7.54)	(-7.87)	(8.26)
$size_{j,t-1}$	0.01***	0.01***	0.01**	0.01***
	(6.24)	(9.73)	(3.04)	(6.02)
$tang_{j,t-1}$	0.12***	0.08***	0.12***	0.08*
	(12.01)	(5.42)	(6.37)	(2.26)
$olev_{j,t-1}$	-0.03***	-0.03**	-0.03	-0.03
	(-3.36)	(-2.07)	(-1.61)	(-0.80)
$ndts_{j,t-1}$	0.64***	1.66***	0.67***	1.70***
	(9.16)	(13.04)	(5.99)	(5.09)
R^2	0.41	0.22	0.40	0.22
Year Dummy	Yes	Yes	No	No
Recession Dummy	No	No	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes

5. Conclusions

We examine how systematic risk can affects to the capital structure of firms based on the Euro zone. It is well known that lower–betas (Frazzini and Pedersen, 2014) provide higher returns than higher–betas. Baker *et al*. (2020) point out that the negative relationship between leverage and asset beta is due to this beta anomaly mentioned before. In our preliminary analysis we can conclude that, in line with the principal studies in the field, there is a negative and strong relationship between leverage and asset systematic risk. For this reason, firms with higher leverage in their capital structure, tend to have less systematic risk.

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NGOS PERFORMANCE FOR SUSTAINABLE DEVELOPMENT IN AFRICAN COUNTRIES. A CASE STUDY

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1. Objectives

African countries suffer from the world's highest levels of poverty, low life expectancy, diseases, and poor economic growth (Bhorat & Naidoo, 2019). Against such a background, some non–governmental organizations (NGOs) and agencies are providing services, such as healthcare, water supplies, and sanitation and do often useful jobs in this regard (Murray, 2011). They play a critical role in addressing global challenges, particularly in developing countries, where resource constraints and infrastructural deficiencies are prevalent. With a commitment to fostering sustainable development, NGOs bridge gaps among communities, governments and international entities.

The United Nations Sustainable Goals (SDGs) underscore the necessity of equitable growth, sustainable resource use, and environmental protection (SDG report, 2023). In this context, NGOs serve as catalysts in all sectors. This paper presents the preliminary results of a still ongoing research project aimed at highlighting the transformative potential of NGOS in shaping communities. In particular, we focus on governance and accountability practices in an ongoing case study.

Keywords: NGO, sustainability, developing countries.

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2. Theoretical background

There is still an extensive debate on finding a generalized definition of non–governmental organization. Indeed, these organisations are part of the Third Sector, that is part of all those groups and organizations (e.g.: voluntary organisations, non–profit organisations, associations, social cooperatives, civil society organisations) encompassed in what has been defined 'loose and baggy monster' (Kendall and Knapp, 1995) and is still looking for a complete accepted conceptualisation (Salamon and Sokolowski, 2016). The term "NGO" can be applied in principle to a broad range of actors, from tiny coalitions to more mature, well–funded and technically expert organizations, but historically it became commonly used through the United Nations Charted at the end of the Second World War (Manji & O'Coill, 2022). The UN defined NGOs in 1950 with resolution n. 288 as "*any international organization that is not founded by any international treaty" and goes on saying that the "vital role is sustainable development*". However, NGOs have common characteristics such as the fact that are not part of a government or directly tied to a business for profit (Antonucci, 2011). Still, they receive fundings in an assortment of ways, such as grants or donations by individuals, companies or federal agencies. They engage in suffering relief activities; they protect the environment, or people needs and provide social services (Salomon–Aneheir, 2009). Some of the key approaches of NGOs to sustainable development in developing countries regard are the following (Baccaro, 2001): Environmental Conservation; Economic Empowerment (Korten,1990); Access to Clean Energy; Community Development; Education and Capacity Building; Health and Sanitation (Anbazhagan,2016).

2.1. *Challenges and opportunities*

In general, it is difficult to know how to weigh up the positive and possible negatives effects of NGOs activities in Africa. There is indeed an extensive debate pertaining to their ability of to improve sustainability in developing countries (e.g. Bawa, 2013; Contu & Girei, 2014;

Osiobe, *et al*. 2019; Abiddin *et al*., 2022). Whitin positive contributions, we have:

1. *Filling Gaps in Service Delivery*: NGOs often step in to provide essential services where government infrastructure is lacking or insufficient.
2. *Advocating for Change and Accountability:* NGOs play a crucial role in advocating for human rights, promoting good governance, and holding governments accountable for their actions. They often raise awareness about issues such as corruption, gender inequality, and injustice.
3. *Building Local Capacity and Empowerment:* By strengthening local capacity, NGOs contribute to sustainable development and self–reliance.
4. *Promoting Environmental Sustainability:* Environmental NGOs work to protect natural resources, conserve biodiversity, and promote sustainable practices.

Anyway, they are not away from having also limitations such as:

1. *Dependency and Sustainability:* NGOs can create dependency among communities, especially if their interventions are short–term or not integrated into broader development strategies.
2. *Coordination and Fragmentation:* The proliferation of NGOs in some regions can lead to fragmented efforts and duplication of services. NGOs must navigate complex relationships with governments and international entities. While partnerships can amplify their impact, misaligned priorities or bureaucratic hurdles may impede progress. Coordination among NGOs, governments, and other stakeholders is essential to maximize impact and avoid inefficiencies.
3. *Funding and Accountability:* NGOs often rely on donor funding, which can be unstable or tied to specific projects. Securing long–term funding and diversifying income sources are critical.
4. *Balancing Local and External Priorities* NGOs must navigate cultural contexts and local priorities sensitively to ensure that interventions

are culturally appropriate and respectful of community values (Peachey *et al.*,2018; Aprilia & Widodo, 2021).

3. Case study

Africa is the region with countries of the worst standards in diseases leading to morbidity and mortality. Wars, political instability and economic vulnerabilities often exacerbate problems and further complicate the assessment process, rendering it challenging to pursue development outcomes. While challenges exist, evidence suggests that strategic partnerships and innovative approaches can enhance the effectiveness and sustainability of NGO initiatives in Africa.

In this respect, the country of Ethiopia is facing multiple humanitarian emergencies due to conflict, disease, outbreaks, poor macroeconomic conditions and high commodity and food prices due to inflation (International Centre for no profit Law data, 2018). As stated, this situation is located within a project of sanitary sustainability (ECU project) whose goal is the development of an extended core facility which includes a clinical and molecular diagnostic center for predictive medicine and a Unit of Obstetrics and Gynecology for the needs of the surrounding communities. The initiative has been sponsored by the NGO Hemsley Foundation and the USAID Agency. At the moment the Clinic Lab has already been constructed. One of the objectives is the improvement of women health and a project for automated treatment of biological waste to avoid spreading hazardous waste.

Starting from the above reported considerations, and having the possibility to explore the ongoing mentioned project, we decided to investigate the principal aspects regarding its planning, developing, and accountability techniques within such a peculiar governance scheme. We intend to fill a gap in the ongoing investigation upon NGOs in developing countries. Indeed, while, as reported above, there is a great line of research upon NGOs impact, positive or not, at aggregated level, the research is not at the same level for what regards their governance.

4. Methodology

Having the possibility of assisting directly to the ongoing management of the project in its real implementation phase, after the realization of the Clinic Lab, we decided to set our investigation within participant observation frameworks. Particularly we consider observation as "the systematic description of events, behaviours, and artifacts in the social setting chosen for. Study" (Marshall & Rossman, 1989: 79). We intend to do it within the specific setting of both the daily work within the Clinic Lab and the management and monitoring by the Hemsley Foundation. We thus research upon the ongoing situation using the five senses (Erlandson *et al.*, 1993).

Therefore, our research activity involves "active looking, improving memory, informal interviewing, writing detailed field notes" (De Walt & De Walt, 2002, p.vii).

5. Findings and conclusions

The research is still going on, so, at the moment, we can report only preliminary findings, which are anyway interesting. We indeed concluded a first analysis of the documentation in use, and we already had a preliminary observation test. Our first attempt was indeed to define the principles of the Foundation operativity to discussion on the benefits and challenges to their impact and operations. First of all, being in line with the low available literature (Kapoor, 2004) a first relevant aspect regards the best intentions within which they approach an activity in a developing country. Yet an aspect on which we are finding some aspect to be clarified, regards the coordination among donors, as already detected by Moyo (1996) but we found it especially as a "distance" between the intention reporting and the actual implementation phase. It is indeed easier to present a project and ask for donations; it is again easy to report about final results; while it is very difficult to report about ongoing development and implementation, that is the phase in which one has to deal with daily unforeseen happenings and thus problems to be solved. This is why African countries should focus

on "realization" of investments rather than simply claim for support. It is like if they stop at the first phase rather the monitoring the most important following ones. Indeed the ECU project, team strongly believe that their initiative could represent an unlimited tool to promote sustainability also in the most remote areas. Indeed, considering the implementation, it has been clear that the USAID grant partially covers items like durable commodities, lab analytic equipment and so on. The goal for the first three years of activity is to bring the laboratory to a complete economic sustainability, with a productivity target of 1–1.5 million clinical pathology tests per year. In addition to the provision of advanced diagnostic services and the activation of screening campaigns of the population. Moreover, it is foreseen another stage dedicated to the creation of a National Center for Predictive Medicine, capable of providing services for the whole country. The Centre will support the implementation of public health programs for the dissemination of good health practices, in terms of disease prevention and treatment. Such contest demonstrates the idea of a positive impact in terms of long–lasting outcomes coming from the work done by the Helmsley Foundation to meet the main objective of the project which is to create better future for people, enhancing access to healthcare for all. The planning phase foresaw different phases, with a specific forecast budgeting able to consider the different items in detail. The point is that an actual realization in such a complex environment is not so easy and that is why the daily practices deal with continue arraingments.

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FINANCIAL OVERVIEW OF WINERIES IN EXTREMADURA: IMPLICATIONS FOR THE DEVELOPMENT OF WINE TOURISM

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1. Objectives

This study analyses the current financial situation of wineries in Extremadura (Spain) during the financial years 2021, 2022, and 2023. Additionally, it aims to determine whether there are significant differences in the financial performance between wineries that belong to the Wine Route or have the Ribera del Guadiana Designation of Origin certification and those that do not participate in the pioneering wine tourism project or are not covered by the most common quality certification in our country.

Keywords: financial analysis, business management, wine tourism, wineries.

2. Theoretical background

Vine cultivation in Spain has a long history, with archaeological evidence dating back to 1100 BC when the Phoenicians introduced it (MAPA, n.d.). Over the years, this fruit has provided the ability to generate wealth in three different sectors of activity: primary, industrial, and services (Millán–Vázquez De La Torre, 2012).

Wine tourism, a key sector in the Spanish tourism industry, attracts millions of tourists annually (Marco–Lajara, Ubeda–Garcia *et al.*,

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2023; Martínez–Falcó *et al.*, 2024). This type of tourism includes visits to vineyards, wineries, museums, or shows, motivated by an interest in wine tasting and enjoying the attributes of their regions (Charters & Ali–Knight, 2002; Hall & Macionis, 1998).

Wine tourism has established itself as a key strategy for rural development, highlighting the economic, social, and cultural values of wine regions (Charters & Ali–Knight, 2002). Furthermore, it enables sustainable income for wineries, by diversifying their sources of income, generating employment, and promoting environmental sustainability (Martínez–Falcó *et al.*, 2024).

Wine routes and designations of origin have been and are two key pillars for the development of wine regions. The routes connect tourism and wine culture, creating a beneficial synergy (Bruwer, 2003; Zamarreño–Aramendia *et al.*, 2021). On the other hand, designations of origin act as a seal of quality and authenticity and influence the brand value of the wines and the wine tourism destinations themselves (Gómez *et al.*, 2015).

In Spain, some studies have identified a positive relationship between wine tourism and the sustainable performance of wineries (Marco–Lajara, Ubeda–Garcia *et al.*, 2023). Specifically, there is research showing that wineries that are part of a wine route and have a designation of origin show better financial indicators than those without these qualifications (Marco–Lajara, Martínez–Falcó *et al.*, 2023).

3. Methodology

To select the wineries for the study, the SABI (Sistema de Análisis de Balances Ibéricos) database was used with the CNAE code 1102, "Elaboración de vinos", located in Extremadura, obtaining a total of 40 wineries with financial information available for the years 2021, 2022 and 2023.

As regards the methodologies used, firstly, a descriptive analysis of a series of financial variables was carried out to characterize the sample and establish an initial profile of the Extremadura wineries. In addition, a K–means cluster analysis was carried out to group the data according to the

variations observed in the level of indebtedness, total assets, net turnover, and economic profitability. This approach allowed homogeneous groups to be identified, which facilitated the observation of characteristics and the definition of different profiles of wineries in Extremadura.

Additionally, after evaluating the normality of the data using the Shapiro–Wilk test and the homogeneity of variances using the Levene test, it was concluded that the assumptions for carrying out a parametric analysis were not met. Therefore, the Mann–Whitney U test was used to compare the profitability between wineries located on the wine route and those that are not, as well as between wineries that sell wines included in the designation of origin and those that do not. SPSS v26 software was used for data analysis.

4. Findings

First, the descriptive results of the analysis of the economic–financial variables of the group of wineries located in Extremadura are shown in Table 1. These descriptive data provide a first view of the heterogeneity and complexity of the Extremadura wine sector.

Table 1. Descriptive statistics of the financial variables of the wine sector in Extremadura (2021–2023). Source: Own elaboration based on SABI (2024).

	Average	Median	Maximum	Minimum
Operating income*	2,893.1	349.4	65,551.1	0.8
Ordinary results before taxes*	67.5	7.3	2.123,7	–1,286.7
Exercise Result*	54.6	5.5	1,844.3	–965.0
Total assets*	4,680.8	1,220.7	72,535.4	35.6
Equity*	1,739.7	355.1	23.224,5	–665.5
Economic profitability (%)	0.1	0.8	24.0	–23.1
Financial profitability (%)	–0.5	3.7	193.4	–258.3
General liquidity	2.8	1.3	24.5	0.3
Debt (%)	66.7	68.7	118.7	1.4
Number of employees	10	3	130	1

*Note: figures in thousands of euros (€)

As can be seen in Table 1, wineries in Extremadura show significant variations in their financial and structural performance. The average operating income is 2,893,100 euros, with large differences between maximum and minimum levels. The result of the year shows general profits, with an average of 54.6 thousand euros, although the values vary from profits of 1,844 thousand euros to losses of 965 thousand euros. Likewise, a wide disparity in total assets and equity is highlighted. The average economic profitability is slightly positive (0.1%), and the number of employees ranges between 1 and 130, with an average of 10 workers and a median of 3, evidencing small–sized wineries.

Secondly, a K–means cluster analysis was performed. Using Ward's method, a dendrogram was constructed to visualize the relationships between observations and determine the optimal cut–off point that defined the clusters. Table 2 presents the cluster centers, which reflect the midpoint of each group and facilitate the interpretation of the characteristics of each one.

Table 2. Final cluster groups of Extremadura wineries. Source: Own elaboration based on SABI (2024).

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Number of wineries	1	2	25	11
Indebtedness	69.34%	51.46%	69.37%	60.28%
Total assets	70664,62	19032,20	826.82	5221.19
Net Imp. turnover	60416,86	8730.58	433.33	2101.51
Economic profitability	2.10%	1.88%	–0.79%	1.60%

*Note: figures in thousands of euros (€)

According to the results obtained, group 1, made up of a single company, presents atypical values in all variables. Its high debt, large total assets, and high sales clearly distinguish it from the rest. Group 2 (5% of the sample) also presents relatively high values in all variables. As for group 3 (63% of the sample), it presents the smallest wineries, higher debt, and lower economic profitability. Group 4 (28%) is in an intermediate position between groups 2 and 3. Chart 1 illustrates this distribution:

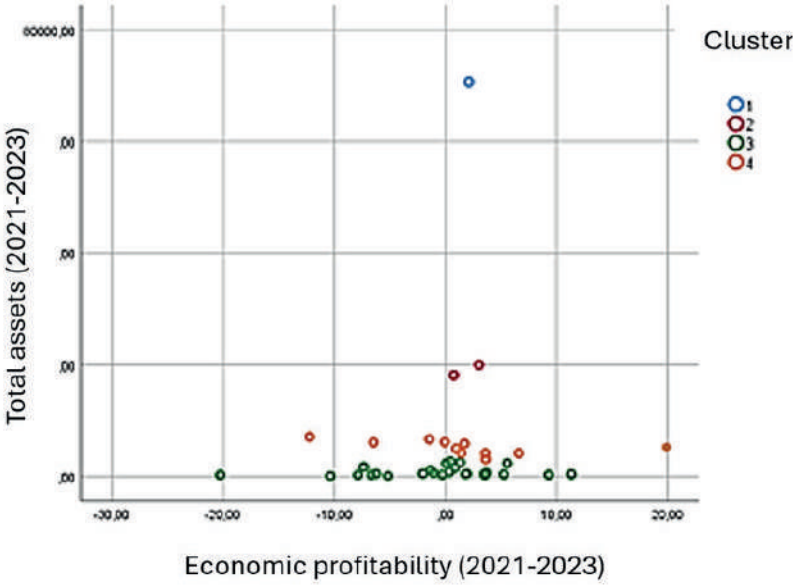


Figure 1 Scatter plot of winery groups. Source: Own elaboration.

Secondly, the differences in means in the variable economic profitability were analyzed depending on whether or not the company was part of the wine route and whether it was certified by the designation of origin. Figures 2 and 3 show the mean profitability values for both categories.

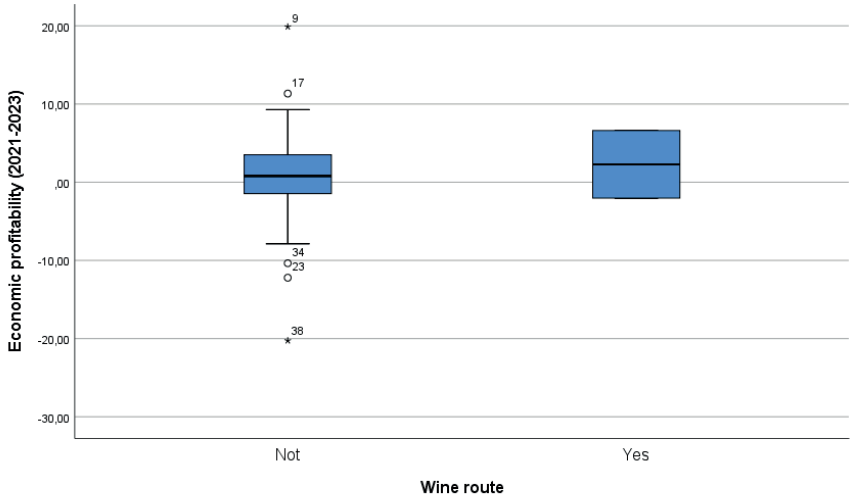


Figure 2 Economic profitability of wineries according to their membership in the wine route. Source: Own elaboration.

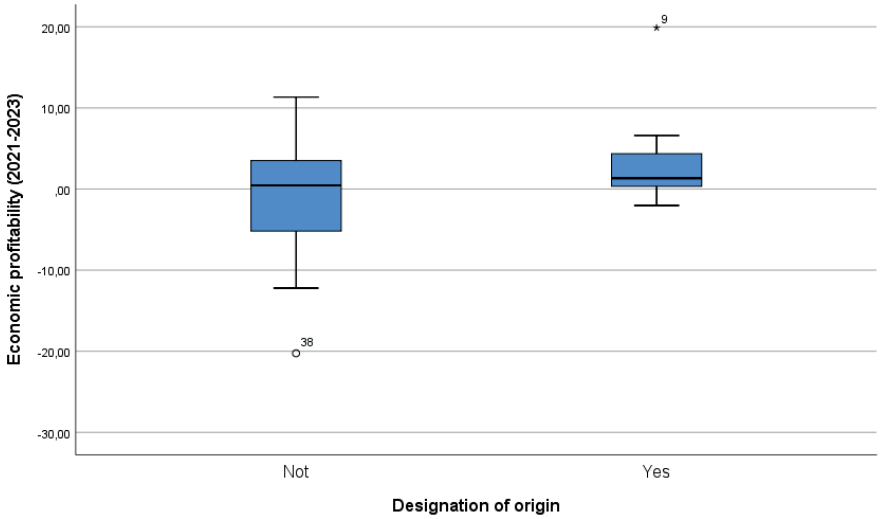


Figure 3. Economic profitability of wineries according to designation of origin. Source: Own elaboration.

Additionally, the results of the nonparametric Mann–Whitney U test are presented in Table 3.

Table 3. Summary of Mann–Whitney U test results. Source: Own elaboration.

Economic profitability	Wine route		
	Belonging (2)	Non–belonging (38)	Sig.
	2.28%	–0.06%	0.741
	Denomination of origin		
	Belonging (7)	Non–belonging (33)	Sig.
	4.08%	–0.80	0.293

Although the Extremadura wineries located on the Wine Route and those with the Ribera del Guadiana Designation of Origin Certification show higher returns on total assets, the analysis did not show significant differences between these and those that do not have these distinctions, since the significance value is greater than 0.05.

5. Conclusions

This study analyses the economic and financial situation of Extremadura wineries, based on SABI accounting data for the years 2021, 2022, and 2023. Cluster analysis identified four distinct groups of wineries in Extremadura, the largest (63%) being characterized by low assets, negative economic profitability, and high indebtedness. Comparing the profitability of the assets of Extremadura wineries on the Ribera del Guadiana Wine Route with those that are not on the same route, and wineries that sell wines certified with the Ribera del Guadiana Designation of Origin and those that do not, no significant differences were found. In conclusion, properly managed wine tourism could revitalize the winery sector, increasing visits to wineries and promoting the sale of local products.

One limitation of this study is that only individual financial data were analyzed, without considering whether the wineries belong to a business group, which could impact their annual accounts. Future research could include this variable and cover a more detailed analysis of each cluster, extending the time range and applying other more sophisticated statistical methodologies. It would also be interesting to extend the study to a national level to understand the panorama of the Spanish wine sector, considering factors such as the type of wine, awards, or recognitions obtained, among others.

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FRUGAL INNOVATION VS. REVERSE INNOVATION: A BIBLIOMETRIC ANALYSIS AND A PROPOSAL OF COMPARATIVE FRAMEWORK

GUSTAVO MORALES-ALONSO[1], YULISSA NAVARRO-CASTILLO[1]

1. Objectives

The primary objective of this article is to examine the key differences and similarities, or connections, between frugal innovation and reverse innovation. Innovation is an integral component of societal development across various sectors, such as business and medicine. This article focuses specifically on corporations, which leverage innovation and allocate resources to enhance their processes and achieve greater economic gains. To accomplish this goal, companies can employ diverse types of innovation that are prevalent in literature.

Keywords: frugal innovation, reverse innovation, business.

2. Theoretical background

Innovation has been an integral part of human evolution and our transition to societal existence. While technology accompanies innovation as an indispensable component of its development (Govindan, 2024), it is not the sole driver of innovation, as various types of innovation exist (Pérez & Balbinot, 2021). Therefore, the following sections will delve into two innovation models that are prevalent in contemporary business development.

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2.1. *Frugal Innovation*

Frugal Innovation centers on developing simple processes to enhance the efficiency of problem–solving within organizations (Qin, 2024). It prioritizes maintaining product quality while reducing unnecessary materials or processes, making new products more affordable (Iqbal *et al.*, 2024). By focusing on simplicity, affordability, and sustainability, Frugal Innovation empowers businesses to address complex challenges with limited resources to attend massive markets.

2.2. *Reverse innovation*

Conversely, reverse innovation involves developing products in developing countries initially, followed by exporting them to developed countries with necessary adaptations (Wang & Wang, 2024). By starting in emerging markets with more affordable components, companies can establish a competitive advantage and subsequently scale up to developed markets by refining their product offerings (Jack *et al.*, 2024).

3. Methodology

The methodology employed in this article involves a comparative bibliometric analysis to comprehend the evolution of concepts over time, drawing on information published in major research databases such as Scopus. As a first step, a total of 554 journal articles were selected, distributed as follows: {frugal innovation} – 411; {reverse innovation} – 119; and ({frugal innovation} AND {reverse innovation}) – 24. At this point, the overall bibliometric results were obtained, describing the development of the topics from 2010 to 2024, inclusive. A second step involved a document cleaning process to remove duplicates, retracted articles, and those unrelated to business applications. This resulted in a final dataset of 506 documents. The purpose of this step was to delve deeply into the application of frugal and reverse innovation within the business context.

And, as a final step, a comparative analysis of the top five cited documents for each innovation formula was conducted to explore the nuances of different innovation types and identify shared characteristics.

4. Findings

The initial finding, as depicted in Figure 1, reveals a significant disparity in the scholarly output on Frugal Innovation and Reverse Innovation. The data clearly indicate a growing interest in Frugal Innovation within academia, suggesting a decline in the scholarly attention given to Reverse Innovation in recent years.

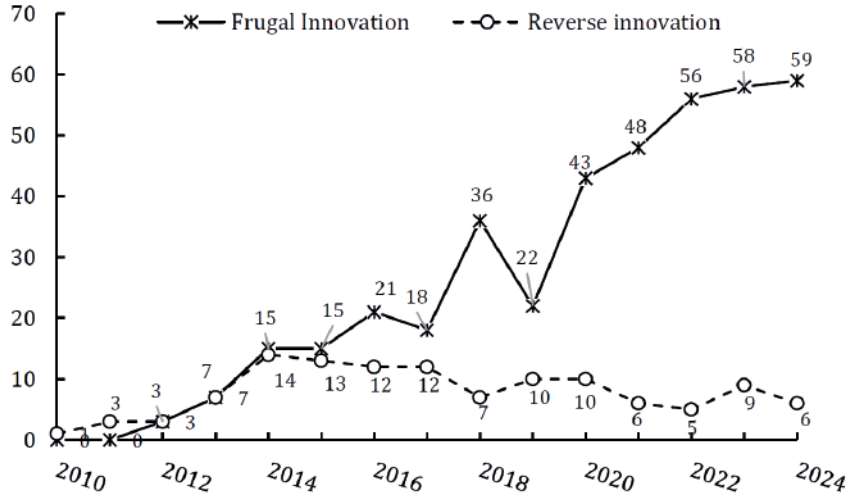


Figure 1. Frugal and reverse innovation production over years. Source: our elaboration.

Figure 2 offers a comparative overview of the research areas associated with frugal and reverse innovation. Both innovation types exhibit a similar distribution across academic disciplines, with the business sector emerging as the dominant area of inquiry, followed closely by engineering, economics, and medicine.

The top 10 most productive authors in each innovation category are presented in Table 1. Hossain, M., with 16 publications, is identified as the most prolific researcher in Frugal Innovation, while also contributing to the Reverse Innovation literature. Conversely, Harris, M., the leading author in Reverse Innovation (9 publications), has a substantial

publication record in Frugal Innovation as well. These findings underscore the interconnected and complementary nature of frugal and reverse innovation.

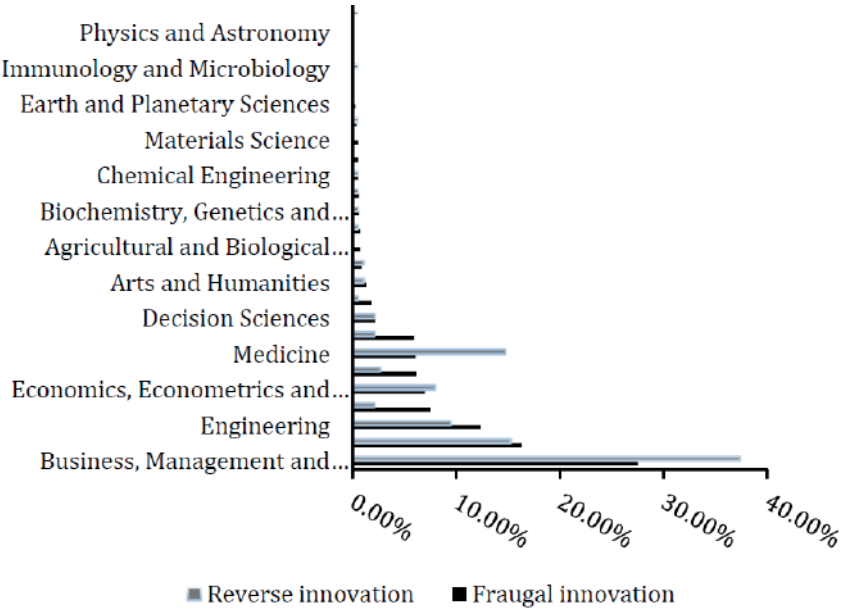


Figure 2. Innovation development in different areas. Source: our elaboration.

Table 1. Most productive authors. Source: our elaboration.

Frugal Innovation		Reverse Innovation	
Author	Documents	Author	Documents
Hossain, M.	16	**Harris, M.**	9
Brem, A.	12	Borini, F.M.	5
Agarwal, N.	8	Corsi, S.	4
Iqbal, Q.	7	Darzi, A.	3
Le, P.B.	7	**Hossain, M.**	3
Harris, M.	6	Macinko, J.	3
Knorringa, P.	6	Prime, M.	3
Le Bas, C.	6	Bhatti, Y.	2
Yousaf, Z.	6	Brem, A.	2
Baekelandt, J.	5	Burger-Helmchen, T.	2

While the most prolific authors can provide a more comprehensive overview of a subject's development, highly cited documents (excluding bibliometric studies and literature reviews, which do not delve into specific themes but rather synthesize existing knowledge) also contribute to a deeper understanding of the research questions that are most intriguing to scholars. Tables 2 and 3 present the top five most–cited documents in the fields of Frugal Innovation and Reverse Innovation, respectively. These tables provide a deeper understanding of the research that has had the greatest impact and has shaped the conceptual and applied development of both disciplines.

Table 2. Most cited documents for Frugal Innovation. Source: our elaboration.

Document	Author	Cites	Doc
Towards a sufficiency-driven business model: Experiences and opportunities	Bocken, N.M.P.; Short, S.W.	347	2016
Frugal innovation: Aligning theory, practice, and public policy	Soni, Pavan; Krishnan, Rishikesha T.	162	2014
How frugal innovation promotes social sustainability	Khan, Rakhshanda	141	2016
Crafting sustainable development solutions: Frugal innovations of grassroots entrepreneurs	Pansera, Mario; Sarkar, Soumodip	139	2016
Business Models for Frugal Innovation in Emerging Markets: The Case of the Medical Device and Laboratory Equipment Industry	Winterhalter, Stephan; Zeschky, Marco B.; Neumann, Lukas; Gassmann, Oliver	125	2017

As can be seen, the most cited documents that solely develop the concept of Frugal Innovation are connected to the study of sustainability and organizational efficiency as a business strategy. On the other hand, when analyzing the most cited documents on reverse innovation, they are more closely linked to cost reduction and production as business strategies, particularly for companies located in emerging markets. On the other hand, when analyzing the most cited documents on reverse innovation, they are more closely linked to cost reduction and production as business strategies, particularly for companies located in emerging markets.

Table 3. Most cited documents for Reverse Innovation. Source: our elaboration.

Document	Author	Cites	Doc
A typology of reverse innovation	Von Zedtwitz, Max; Corsi, Simone; Søberg, Peder Veng; Frega, Romeo	165	2015
Low-cost innovation in emerging markets	Agnihotri, Arpita	111	2015
Disruptive innovation and dynamic capabilities in emerging economies: Evidence from the Indian automotive sector	Pandit, Deepak; Joshi, Maheshkumar P.; Sahay, Arun; Gupta, Rajen K.	80	2018
Institutional entrepreneurship in the platform economy: How Uber tried (and failed) to change the Dutch taxi law	Pelzer, Peter; Frenken, Koen; Boon, Wouter	80	2019
A model for 'reverse innovation' in health care	DePasse, Jacqueline W.; Lee, Patrick T.	75	2013

5. Conclusions

While innovation is a pervasive concept across all industries and company types, our bibliometric study reveals that each organization, based on its specific needs, prioritizes the most suitable strategies to foster growth, reduce costs, and sustain its market presence. Consequently, companies seeking to serve emerging markets with limited economic resources often turn to frugal innovation to offer high–quality, functional products at an affordable cost. Conversely, for companies aspiring to conquer markets with higher purchasing power, reverse innovation is essential, as it allows them to develop and test a product in an emerging market before exporting it to a more demanding market, thus saving the costs of adaptation in a more expensive economy.

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STOCK MARKET SENSITIVITIES TO EUROPEAN MONETARY POLICY

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1. Objectives

The European Monetary Union (EMU) has faced numerous economic and political challenges, including the heterogeneity in how member countries' economies respond to the common monetary policy implemented by the European Central Bank (ECB). Prior to the euro's adoption and the establishment of a unified monetary policy in 1999, authors such as Carlino and DeFina (1998, 2000) predicted that differences in monetary policy responses would likely arise among sovereign nations. Mihov (2001) later noted that a common monetary policy might struggle to stabilize macroeconomic fluctuations across member countries due to such heterogeneity, even when national business cycles are highly integrated. Despite these challenges, these differences did not prevent the creation of the EMU nor have they severely hampered its operation to date.

This paper explores the heterogeneity in the transmission of ECB monetary policy shocks within major Eurozone regional stock markets. Following Carlino and DeFina (1998), it hypothesizes that differences in industry composition explain these variations.

To test this hypothesis, the paper employs global Structural Vector Autoregressive (SVAR) models that incorporate Eurozone aggregate variables and U.S. macroeconomic indicators. These models treat Eurozone member countries as small open economies and include stock market returns. The findings suggest that while heterogeneities in monetary policy transmission are evident, they cannot be attributed solely to sectoral differences. The study is structured into sections covering

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data, methodology, results, and conclusions, providing a comprehensive analysis of the topic.

Keywords: ECB Monetary Policy, sectoral composition, heterogeneity, financial markets.

2. Theoretical background

Empirical analyses on differences in monetary policy responses only gained traction more than a decade after the euro's introduction. Studies by Cavallo and Ribba (2015) shed light on the varying effects of ECB monetary policy across Eurozone countries. Cavallo and Ribba (2015) highlight the lack of sufficient data in earlier years to analyze ECB policy impacts. These studies, using post–1999 data, often focus on modeling monetary policy reactions and shocks to control for variations in national monetary policy responses.

Different methodologies have revealed disparities in the responses to ECB monetary policy shocks. For example, Ciccarelli *et al.* (2013) identified significant differences between stressed and non–stressed countries during the financial crisis. Barigozzi *et al.* (2014) found North–South divergences in price and unemployment responses, while Georgiadis (2015) demonstrated that economies with higher shares of interest rate–sensitive sectors exhibit stronger policy transmission effects.

Stock market responses to monetary policy have also been extensively studied. Early works, including Angeloni and Ehrmann (2003), utilized high–frequency data and methodologies such as event studies. More recent studies, Haitsma *et al.* (2016), focused on simultaneous stock market reactions to policy shocks. VAR methodologies, requiring longer time series, have been employed to analyze long–term and cumulative responses, as in Chatziantoniou *et al.* (2013) and Ruiz (2015).

3. Methodology

This analysis employs Structural Vector Autoregressive (SVAR) models to examine the interactions between monetary policy and stock markets. SVAR models, grounded in Sims' foundational work (1980), have a rich history of application in analyzing financial dynamics. Notable studies, such as those by D'Amico and Farka (2011) and Fernández–Amador *et al.* (2013), highlight their relevance in both U.S. and European contexts.

The study adopts a recursive identification scheme using Cholesky decomposition, enabling Eurozone monetary policy to respond to global shocks while country–specific factors adjust to both global and Eurozone shocks. Financial variables are consistently positioned last. Impulse–response functions (IRF) are used to present empirical findings, incorporating 68% confidence intervals and normalizing shocks to a standard deviation of the leverage variable. While the Schwarz–Bayesian Information Criterion suggested one lag, three lags were chosen to minimize autocorrelation, following the Final Prediction Error (FPE) and Akaike Information Criteria.

The study explores both country–specific and industry–specific responses to monetary policy. First, a nine–factor SVAR model is used for Eurozone and individual country indices, integrating global and Eurozone indicators. Then, an eight–factor model examines sectoral responses, weighted by sectoral composition to reveal market–specific impacts. These analyses deepen understanding of monetary policy transmission heterogeneity across the Eurozone.

4. Findings

The analysis investigates the effects of monetary policy shocks on Eurozone stock markets, focusing on the heterogeneity of responses among countries. The Eurozone benchmark index shows a significant negative cumulative response to contractionary monetary policy within 24 months, aligning with prior studies like Carlino and DeFina (1999). However, disparities arise when examining country–specific indices, with Ireland

exhibiting the strongest response (–3569 bps) and Luxembourg the weakest (–1229 bps). This wide variation highlights the need to explore potential drivers of this heterogeneity, such as industry composition.

Sectoral responses to monetary policy shocks reveal that industries like Information Technology, Utilities, Financials, and Materials are more sensitive, while Telecommunications, Consumer Staples, and Energy exhibit lower sensitivity. These sectoral dynamics suggest that differences in industry composition across countries could explain variations in market responses.

However, further analysis reveals that sectoral composition accounts for only a small portion of the observed heterogeneity in country–specific responses. Direct market reactions differ significantly, while responses attributed to industry composition show much smaller variation. Moreover, the probability that sectoral composition fully explains a country's response varies across countries, being lower in those that deviate most from the Eurozone average. This evidence suggests that factors beyond industry composition drive the heterogeneous market reactions to monetary policy shocks.

5. Conclusions

Since Carlino and DeFina's seminal work (1998), numerous studies have explored the impact of monetary policy shocks on stock markets, often focusing on sectoral composition. These studies predominantly examine the U.S. or individual markets and typically emphasize prominent sectors, neglecting portions of a country's productive structure. The Euro Area, with its unique configuration of country–specific stock exchanges and a unified monetary policy, provides an ideal setting to address this gap.

This paper examines the transmission of Euro Area monetary policy shocks across regional stock markets and investigates the extent to which industry composition explains the observed heterogeneity. Using global SVAR models, we model common monetary policy as a function of Eurozone aggregate variables and U.S. global monetary policy shocks. This approach enables us to estimate the responses of the

overall Eurozone stock market, individual country–specific stock markets, and Eurozone industry indices. For the first time, we compute the expected country–specific stock market response based on industry structure and compare it with actual responses.

Our findings reveal significant heterogeneity in stock market responses across countries, driven by differences in listed firms' characteristics. However, industry composition fails to account for this variation, as sectoral responses are nearly identical across markets. Further research is needed to pinpoint firm–specific factors driving this heterogeneity.

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FACTORS THAT INFLUENCE ACCESS TO FINANCE FOR THE AGRICULTURE SECTOR IN ALBANIA

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1. Objectives

The issue of the future development of Agriculture through new development policies and financial support opportunities has been raised by fellow researchers in Albania, but very few have studied the factors that can help agribusinesses get more credit. This study focuses on the analysis of relevant factors that help agribusinesses have access to financial products at the microeconomic level and not by analyzing macroeconomic factors as fellow researchers have done. Since the latter also depend on individual behavior and choices, we wish to limit our study under the business perspective.

The information and results from this paper can benefit policy makers and government authorities to better prepare long–term objectives and policies that will help in agricultural development and their successful implementation. Assessing the factors affecting access to finance can help to better allocate grant opportunities (especially large funding opportunities such as the IPARD program or similar). On the other hand, the study can also be useful for individual agribusinesses that can pre–access their potential to get a loan from banking institutions and how to better present their application.

Finally, this study can be of great importance to the operators of the banking industry. As the banking industry and other non–banking financial institutions have begun to pay special attention to the agricultural sector, the results of this study may help the design of new approaches and credit assessment models adapted to the this sector.

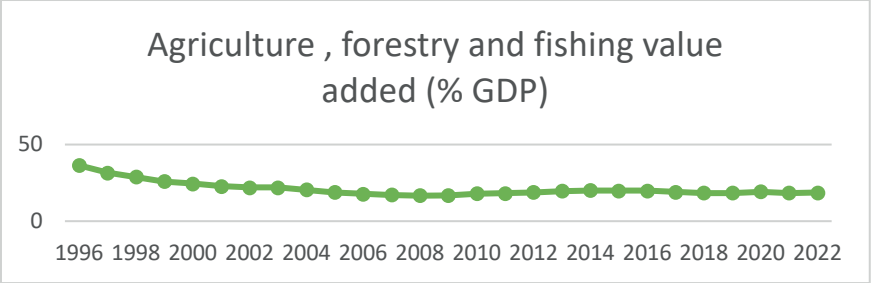
Keywords: agriculture, loans, banks, Albanian economy.

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2. Theoretical background

Agriculture has historically been a sector of great importance for the Albanian economy. Going back to the end of World War II, 87% of the Albanian population was in rural areas and 60% of the workforce was engaged in agricultural activities (Pata & Osmani, 1994).

After the fall of communism, Albanian economy has shown remarkable progress. However, this trend has not been followed by the sector of agriculture. While transitioning to a market economy, the value added of the sector of agriculture in the Albanian economy started to decline sharply from 36.441% of GDP in 1996 to 16.794% of GDP in 2009, the lowest contribution of agriculture to GDP that the country has ever experienced (WorldBank, 2019). Agriculture sector started to recover after the year 2009 and as of 2022, it accounted for 18.62% of the GDP, contributing by 0.06% in the increase of GDP from the previous year (INSTAT 2023).



Despite the unsatisfactory performance of the sector in recent years and the significant decline in the contribution to the GDP value added, agriculture continues to be a dominant sector, employing 33.9% of the workforce and remaining a priority on the policy agenda of the government for the following years (INSTAT 2022).

An important sub–sector of agriculture that carries the potential to increase production, while having strong ties to agriculture, is agro–processing. This sector constitutes 24.4% of the total turnover of the sector and 4.5% of the Albanian GDP and has expanded rapidly as a sector in the last decade.

Among several factors that have hindered the development of the agricultural sector, lack of access to financing opportunities remains a critical factor. Financial institutions are reluctant to offer financial products to operators in the agricultural sector due to the high perceived risk and lack of development over the past decades.

3. Methodology

The data was extracted from a loan owner referral system that connects Albanian agribusinesses who wish to receive a loan, with various banking institutions. The loan referral system hosts a total of 468 loan applications referred to all banks operating in Albania, of which 158 loans have been successfully disbursed by the end of the first quarter of 2021. For this study, all the 158 successful credits applications are considered and included in the sample. The loan referral system has a built–in application form that needs to be filled in with various important information about each applicant, including all the independent and dependent variables integrated in this paper.

The purpose of the study is to identify the relationship between various factors and access to finance for the agribusiness sector. Since, the amount of the loan taken represents the dependent variable. The factors believed to influence access to finance are considered as independent variables.

The first factor studied is the income value (RV), which is expected to be an important variable positively related to access to finance.

The second factor considered is the collateral (CL) treated as a discrete variable to indicate whether the loan applicant has provided collateral in exchange for the loan amount or not.

The third explanatory factor is the number of employees (EM) to show whether a higher number of employees affects the success rate of a loan application.

Given the fact that during this period a global pandemic happened, a macroeconomic factor was included in the model, as a discrete variable to indicate whether the loan was taken before or after the COVID situation (CO).

Another important variable included in the study is the region (RE) / The classification is made according to official data published by INSTAT, dividing into three variables to represent the northern region RE(N), the central region RE(C) and the southern region RE(S) with the central region being the comparing benchmark.

The Investment Type (IN) factor is also included as a dummy variable divided into three types of investments indicating whether the loan being applied for would be used for investments in fixed assets and buildings IN(B), machinery and production lines IN(M) or working capital IN(WC).

Next, the grant application (GR) factor is included, to consider whether the loan application is supported by a government grant scheme.

The export–related market access (EX) factor was included in the analysis as a dummy variable to state whether the agribusiness exports its products or sells them locally.

The year (YR) in which the loan was obtained is also an important factor for the analysis. The period considered is five full years and three quarters, starting from the second quarter of 2015 to the first quarter of 2021.

To describe the impact of factors on access to credit for agribusinesses, the hypothesis is built on the independent variables that respond to the hypothesis as follows:

Alternative hypothesis (H_1): EM, RV, CL, GR, EX, RES, REN, YR, INB, INWC, CO impact the access to finance

The regression method used in this paper is multivariate linear regression that tests the significance of multiple factors simultaneously, performed through the following equation:

$$LnLoan = \beta_1 + \beta_2 CL + \beta_3 LnRV + \beta_4 CO + \beta_5 EM + \beta_6 EX + \beta_7 GR + \beta_8 RE(S) + \beta_9 RE(N) + \beta_{10} IN(B) + \beta_{11} IN(WC) + \beta_{12} YR + \varepsilon$$

4. Findings

After a descriptive analysis of all variables, this section focuses on the regression model and the specific results for each variable. A multiple

linear regression was performed through SPSS software and the summary of the model is given below:

Table 1. Model Summary.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.868[a]	.753	.735	.57626

a. Predictors: (Constant), Year, region1 (jug), Collateral, Invest Building, Employees, Grant, Export, region2 (veri), LnRevenues, COVID, Invest WC

R square has a value of 75.3% which means that 75.3% of the disbursed loan amount is explained by the factors considered in this regression.
If the p–value of the regression is less than the 0.1 significance level, then the model built using the independent factors considered has a significant impact on the amount of loan disbursed.
The following table illustrate the results from the regression for each considered factor and the rationale behind the results.

Table 2. Regression Coefficients. SOURCE: Author's elaboration.

Model		Coefficients	P–Value
1	(Constant)	–152.544	0.045
	LnRevenues	0.289**	0
	Region1 (South)	–0.302**	0.04
	Region2 (North)	–0.317*	0.09
	Invest 1 (Building)	0.41**	0.042
	Invest 2 (WC)	–0.08	0.66
	Collateral	1.155**	0
	Export	–0.391*	0.072
	Employees	0.026**	0
	COVID	–0.294*	0.098
	Grant	0.122	0.358
	Year	0.081**	0.033

a Dependent Variable: LnLoan
*p < 0.1, **p < 0.05

Considering the 90% confidence interval, all factors are determinants of the amount of credit received by the agribusiness, except for the grant.

5. Conclusions

This study highlights the importance of regions in obtaining a loan in the agricultural sector. This paper and further studies on the same topic would be of great importance to the government and policy makers to design their agricultural policies factoring in the regions as well.

This study was conducted immediately after the emergence of the pandemic situation; therefore, it would be recommended that other researchers conduct other similar studies and include more post–pandemic data. Economists from around the world state that the true effects of the pandemic will become more visible in the coming years, so an expanded study with more post–pandemic data would give a clearer picture of the impact that COVID–19 had in the agriculture sector.

Another recommendation would be for banking and financial institutions that can use this study as a basis to devote more time and resources to agriculture and the development of products dedicated to this sector. Also, with the growing importance of the sector, it would be recommended to develop a new credit scoring model, adapted to the sector.

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STRENGTHENING THE ROLE OF WOMEN ENTREPRENEURS IN THE SERBIAN ECONOMY: A COMPARISON WITH THEIR MALE COUNTERPARTS

KOSOVKA OGNJENOVIĆ[1]

There are numerous factors that influence the unequal economic opportunities of women and men. This problem is not only characteristic of Serbia's economy, nor of the countries that have focused much of the reform processes on creating conditions for equal opportunities for all, but is intrinsic to all societies (Atoyan & Rahman, 2017; Bennedsen *et al.*, 2023). When it comes to improving women's economic opportunities, at least two research directions can be observed in Serbia so far. Part of the literature deals with gender gaps in wages of employees and key indicators of labor market participation, the promotion of the right to equal pay for work of equal value and the reduction of gender gaps in activity and employment (Vladisavljević *et al.*, 2015; Ognjenović, 2021, 2024), while the second part of the research deals with the analysis of the economic status of women who have chosen an entrepreneurial career (Ognjenović *et al.*, 2022; Babović & Kočović De Santo, 2023). All previous public policy frameworks, especially in the areas of labor and employment, focused on empowering women and improving their position in the labor market (Government of the Republic of Serbia, 2021a, 2021b). However, we have not moved far from the original goals. Women continue to have poorer prospects on the labor market, as evidenced by statistical indicators. Women are more affected by in–work poverty, regardless of whether they work for wages or are entrepreneurs (Ognjenović & Pavlović, 2021). The gender gap in employment initially widened slightly in 2021 and amounted to 15.2 percentage points, before falling to 14.7 percentage points in 2022, while the difference in the employment rate between men and women

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was 15.9 and 15.7 percentage points in 2021 and 2022 respectively (Statistical Office of RoS, 2024). At the same time, the uncorrected gender pay gap for employees (full–time and part–time workers), excluding employees in companies with fewer than ten employees and excluding employees in agriculture, forestry and water management, amounted to 8.8% in 2018 and has increased slightly compared to the previous period (Statistical Office of RoS, 2020). The uncorrected pay gap rises to 9.6% if state administration, defense and compulsory social security activities are excluded, making Serbia one of the countries with a relatively constant pay gap, which is higher than in Albania (6.8%) and Slovenia (3.8%), for example, but also lower than in Croatia (11.1%) (Eurostat, 2024).

Given the low participation of women in the labor market and to ensure their greater participation, the fundamental question is how to optimally allocate time between household responsibilities and investment in human capital, which would raise women's market income to a level that would be acceptable if they chose to participate in the labor market in greater numbers (Mincer & Polachek, 1974). The basic theoretical concept to which empirical research refers is based on the assumption that gender inequalities are the result of differences in the individual characteristics of men and women and that addressing these differences would lead to the correction of the wage gap, which is one of the central issues of gender equality (Blau & Kahn, 2003). Therefore, gender equality policies were mainly based on improving the female labor supply with the aim of comparing it with the male labor supply so that the differences could be attributed to the differences in the observed characteristics of these two demographic groups (Rubery *et al.*, 2005). Research in Eastern European countries shows that men and women perceive their roles in the home and outside the home differently, with women valuing a more equitable distribution of household tasks more than men. In other words, there are no significant differences in women's attitudes regarding the understanding of their role in public life and the role of men in private life. They advocate an equal presence of both in both areas of life (Fodor & Balogh, 2010). The paper therefore focuses on female entrepreneurs and how they compare in terms of maintaining status and the pay gap compared to their male

counterparts. For Serbia, there are no such studies that examine the wage gap between men and women in self–employment and its development over time. The importance of studying this practice arises from the fact that both men and women entrepreneurs have a smaller share of total employment than at the beginning of the transitional reforms, when a significant part of the labour force found earning opportunities in self–employment.

The primary data source for this paper is the microdata from the Serbian Survey on Income and Living Conditions (SILC), which is available on an annual basis from 2013. Regarding the sectoral structure of self–employment, the distribution of sample units may be skewed, i.e. tending towards a higher share of self–employed in agriculture, which may affect the results of the analysis of self–employment by gender structure (women in agriculture are underestimated both in terms of ownership structure and number of employees, as they are usually considered as contributing household members without monetary remuneration for work). Therefore, to check the robustness of the estimation results, a similar methodology will be applied to a completely independent sample of respondents from the Life in Transition Survey–LITS (joint research by EBRD and World Bank, data are available in a 5–year interval since 2006, then 2010, 2016 and 2022). This will allow us to analyze the wage gap and the gap in women's and men's participation in self–employment using the same time–limited sample and a similar methodology. In wage gap studies, based on the theoretical concept indicating the correlation between the labor force participation rate and the average wage, the assumption is made that the inclusion of women in the low–wage labor market reduces the average wage of women, assuming that men's and women's work are perfect substitutes, so that the inclusion of women with low wages on average reduces women's earnings at the economy/sector level, while men's work remains unchanged, which, with similar average earnings for men, increases the wage gap and makes the policy of equal opportunities and equal pay for work of equal value ineffective in the long run. Since there are no studies for the Serbian labor market that deal with the wage gap in the earnings of self–employed and the gap in the career choice of self–employed, this paper will be dedicated to this topic. The

main research question of the paper is to identify the factors for choosing an entrepreneurial occupation and to determine the gap in pay between self–employed men and women. Heckman's methodological approach will be applied to determine the effect of self–selection on the earnings gap between men and women in the entrepreneurial profession, as well as standard Oaxaca decomposition procedures. As the data allows for an examination of the pay gap over time, decomposition methods such as the Juhn–Murphy–Pierce method will be applied due to the availability of historical data from the two sources mentioned to determine whether the pay gap is decreasing or increasing over time. Observing the development of the number of self–employed men and women in recent decades shows that the share of self–employed in total employment is gradually decreasing. And this is an important starting assumption that can influence the explanation of the lower base pay gap, the retention in employment and career development as an entrepreneur as well as the importance of the sense of self–efficacy of male and female entrepreneurs.

Similar to the wage gap between workers in main employment, the low labor force participation rate is expected to "reduce" the wage gap and make it lower in Serbia in international comparison, which is due to the positive selection of women in the wage sector, including those with higher levels of education and better employability skills (observable factors) and higher levels of motivation (unobservable factors). On the other hand, similar selection can be expected in the choice of self–employment occupational status, with occupation, economic sector, as well as other unobservable factors, such as propensity to compete, being one's own boss, which gives one a certain freedom and independence, and greater decision–making power, playing a more important role and thus influencing the wage gap between self–employed men and women.

Keywords: decomposition methods, differences in self–employment gender pay gap over time, female entrepreneurs, micro–level data, pay structure of self–employed male and female.

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ANALYSIS OF ESG WASTE MANAGEMENT AND CIRCULARITY POLICIES OF LEADING FASHION COMPANIES IN SPAIN

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1. Objectives

The primary aim of this study is to identify the leading companies in Spain's fashion industry and examine their Environmental, Social, and Governance (ESG) strategies. The focus will be on conducting a comparative analysis of their environmental initiatives, particularly those related to Waste management and Circularity.

Keywords: ESG, circular economy, waste management, fashion industry.

2. Background

The production and consumption of textile products continues to grow and so does the impact on climate, on water and energy consumption and on the environment. Global textiles production almost doubled between 2000 and 2015, and the consumption of clothing and footwear is expected to increase by 63%, from 62 million tonnes in 2020 to 102 million tonnes in 2030 (EU Commission, 2022).

The European Union's Strategy for Sustainable and Circular Textiles (EU Commission, 2023) aims to transform the textile sector, focusing on sustainability and circularity and envisions that all textile products in the EU market shall be durable, repairable, recyclable, free from hazardous substances, and produced in a manner that respects both social rights and the environment. In this context it also aspires to

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make "fast fashion" obsolete, offering consumers high–quality, affordable textiles that have longer lifespans (Huygens *et al.*, 2023).

After many decades of voluntary policies within the CSR framework, the European Union is progressively setting up specific regulations that are forcing fashion companies to finally adopt their Extended Producer Responsibility. This responsibility involves a multidimensional approach and this paper will specially address the dimensions related to Waste management and Circularity.

3. Methodology

The steps for this comparative study were the following:

1. *Diagnosis of post–consumer textile waste management* in Spain, also reviewing the legal framework at both the national and European levels, and the current waste management models through a bibliographic review and certain key documents. Due to the limit of space, this review is eluded in this extended abstract.
2. *Identification of companies.* After this review, the search engine of *Monitor Empresarial de Responsabilidad COrporativa* (MERCO, 2023), a reputational evaluation tool based on a multi–stakeholder methodology, is used to filter the Spanish fashion companies with best ranking on Corporate Reputation and ESG Responibility, revealing the same top 5 companies:

1	INDITEX	1	INDITEX
2	MANGO	2	ECOALF
3	ECOALF	3	MANGO
4	PATAGONIA	4	PATAGONIA
5	BIMBA Y LOLA	5	BIMBA Y LOLA
6	NIKE	6	ADIDAS
7	ADIDAS	7	ADOLFO DOMINGUEZ
8	TENDAM - GRUPO CORTE	8	CAMPER
9	LVMH	9	H&M
10	CAMPER	10	NIKE

Table 1. dentification of companies using MERCO 2023.

3. *Preliminay review of Sustainability reports&practices.* Prior to the study of the indicators, a qualitative review of the companies' Materiality Analysis was conducted to understand the context of their key areas, in order to have a global perspective on their best practices and initiatives, which are properly clustered.
4. *Selection of indicators for comparison.* Sustainability frameworks have evolved significantly over the last years, but still have not reached a complete consensus on the way the companies should report, not only in the fashion industry but in many other sectors. In any case, the Global Reporting Initiative (GRI, 2023) provides a minimum basis for comparison, as four out of these five top companies use this standard for their annual report, including detailed indicatrors on Waste management and Circularity. The only exception is Patagonia, which has developed its own methods to communicate its initiatives and impacts that do not adhere to the GRI Standards, and therefore was excluded from the research.
   Thus, the GRI reports of these four companies (Inditex, Mango, Ecoalf and Bimba y Lola) were analysed, selecting the best indicators for comparison from this initial set:

	Relation with the topic
GRI 301: Materials	**Directly related**
GRI 302: Energy	Indirectly related
GRI 303: Water and Effluents	Indirectly related
GRI 304: Biodiversity	Slightly related
GRI 305: Emisions: greenhouse gasses	Indirectly related
GRI 306: Waste	**Directly related**
GRI 308: environmental assessment of suppliers	Slightly related

Table 2. Classification of key indicators in subgroup GRI 3

   Where GRI 301 and GRI 306 were identified as the key factors central to our research on Waste management and Circularity, with the remaining indicators being analyzed indirectly.
5. *Comparative analysis* that was conducted using two approaches: a standalone evaluation of each individual indicator, and a comparative assessment of the key indicators selected.

4. Findings

Due to the limit space of this Anstract, the good practices identified and clustered are not described. In relation to the Materiality Analysis, also included in step 3, it is remarkable that in all cases Circularity and Sustainable design were identified as key impacts:

Materiality Analysis – Key impacts			
INDITEX	*MANGO*	*ECOALF*	*BIMBA Y LOLA*
– Minimisation of the environmental footprint – Product sustainability – Circularity	– Sustainable use of resources – Sustainable product design	– Circularity – Use of recycled materials – Promotion of circular economy – Waste reduction and waste management	– Management of samples and out–of–season items – Use, reuse and recycling of raw materials

Table 3. Summary of the Materiality Analysis for the studied companies.

It should be noted that the selected key indicators posed significant challenges for fair comparison due to inconsistencies in the data gathered, with some indicators expressed in percentages and others as absolute figures or requiring certain preprocessing. Thus, the study includes individual and comparative tables for each area but, for the sake of brevity, only a concise selection of comparative tables for key indicators and a few brief remarks are provided here.

GRI 301 – MATERIALS. *Content: 301–2 Recycled input materials used*		
Company	*Key Information*	*Additional Information*
INDITEX	78,675 tonnes of recycled material (+90% compared to 2021).	Estimated percentage: 13% of total raw materials used (621,245 tonnes).
MANGO	11% recycled fibers (no data available for 2021).	Estimated breakdown: 8% recycled synthetic fibers and 3% recycled fibers of natural origin.
ECOALF	77% recycled materials (43% per collection?).	Lack of clarity on how the 77% figure was calculated.
BIMBA Y LOLA	No information available.	–

Table 4. Compartive table of Indicator GRI 301: Materials.

In the report of (Inditex, 2023), the commitment to the use of recyclable materials is significant (13%) compared to the previous year, although the recycled inputs still represent a small part of the total of the materials.

As Mango´s report (Mango, 2023) does not include the data for the recycled materials in 2021, the evolution of the indicator is unknown; in relation to 2022 data, recycled fibres represent a small percentage of the total (11%).

In the case of Ecoalf the analysis revealed discrepancies in the data for recycled inputs (Ecoalf, 2023), as the reported figures did not always align with the estimated percentages. In any case, the recycled materials account for a significant proportion of the total (43%–77%).

IINDICATOR 306 – WASTE. Contents: 306–3 Waste generated/ 306–4 Waste diverted from disposal / 306–5 Waste directed to disposal		
Company	*Key Information*	*Additional Information*
INDITEX	Waste generation and waste management: at the facilities (headquarters, logistics centres and factories): tonnes of textile waste. Waste generation data available classified according to total waste, non–hazardous waste, hazardous waste and management (disposed or non–disposed)	Initiatives to optimise the management of materials used (Zero Waste): containers, packaging and other elements. Waste management system implemented in shops.
MANGO	Waste generation at Mango´s Headquarters Waste generation data available classified according to total waste, packagin waste, electrical and electronic waste, others	Waste prevention and circularity policies (Circular Economy strategy).
ECOALF	No information available.	Initiatives for selective waste separation in shops and offices. Initiatives to estimate Ecoalf´s Textile Footprint.
BIMBA Y LOLA	Information on total waste per year (2022, 2021).	Managed 22 Tn. of textile waste. Awareness–raising programme in offices and warehouses – waste management.

Table 4. Compartive table of Indicator GRI 306: Waste

Regarding the waste treatment methods reported by Mango, it is noteworthy that most of the waste collected is managed through sorting and recycling operations, with no waste reported as destined for disposal or recovery. This approach is challenging to comprehend, particularly for 'special' waste as, according to GRI guidelines, such waste should be classified as either hazardous or non–hazardous, especially when it involves non–recoverable materials.

In the case of the information provided by Inditex on Waste management (GR 306–4, GR 306–5), it would be interesting to have a breakdown of the management for each type of waste. In the same way, Ecoalf did not disclose any information on waste, despite waste management being identified as a material topic; whereas Bimba y Lola do not report specific details on the Waste management operations (Bimba y Lola, 2023).

It should be noted that, in those case where data was scarce or incomplete, additional information from reports — such as initiatives, policies, and commitments — proved valuable for assessing the company's engagement with the evaluated issues. For instance, Inditex stands out as the only company reporting waste information across its entire value chain. In contrast, Mango and Bimba y Lola need to improve data collection throughout their production processes.

5. Conclusions

From the whole study developed after the analysis carried out regarding the selected GRI indicators, we can summarize the following overall conclussions:

- Fashion companies demonstrated a quite strong commitment with sustainable development as a fundamental pillar of growth, evidenced by their thorough analysis of material topics such as material selection, use of recycled inputs, and waste management.
- A joint analysis of the indicator groups provided deeper insights into ESG strategies. The inclusion of contextual information from reports, such as initiatives and best practices, significantly enriched the understanding of ESG efforts.

– Examining GRI indicators individually proved to be insufficient for measuring the Circularity of these companies. Developing more specific guidelines tailored to the fashion sector would enhance the consistency of fair comparative studies.
– Companies should also be encouraged to provide the original data that have been included within the estimations. In the case of waste management and waste production, ideally companies should specify the stage of the value chain where waste is generated and use standard terms of type of waste and waste operations.

As further research, tracking the evolution of these indicators over time could offer valuable insights into the sector's progress toward sustainability and circularity.

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THE FINTECH REVOLUTION: ASSESSING ITS IMPACT ON BANKING PROFITABILITY IN ALBANIA

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1. Objectives

Fintech is critical in transforming financial services by leveraging technology advancements that enhance accessibility, efficiency, and security in global transactions. It fosters competition, boosts financial inclusion, and encourages traditional institutions to innovate, thereby reshaping the modern financial landscape. This report begins by providing an overview of Albania's fintech ecosystem, detailing key players, regulatory frameworks, and adoption patterns. It then explores the impact of fintech on traditional banking in areas such as customer experience, product offerings, operational efficiency, and risk management. Variables analyzed include the number of POS terminals, cards issued, mobile banking adoption, and the number of outlets, with secondary data obtained from the Bank of Albania, United Nations database, AAB, NBC, and INSTAT for the period 2012–2022. By employing a panel data approach, the results indicate that all variables, such as POS systems, mobile banking, and card issuance, significantly affect Return on Equity (ROE), except for ATMs, which were found to be insignificant. Embracing digital transformation, encouraging innovation, and establishing supportive regulatory frameworks can enable Albania's banking sector to fully leverage fintech. This approach promises to create a more dynamic, inclusive, and efficient financial environment that benefits all stakeholders.

Keywords: return on equity, FinTech, panel data, and banks.

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2. Introduction

Economic development is a broad process aimed at improving the overall quality of life for citizens, rather than just boosting economic growth. The objective is to foster innovation, enhance productivity, and support sustainable practices that benefit both current and future generations. This necessitates the transfer of resources into the construction of infrastructure, the provision of education and healthcare, and the advancement of technology, which will set up a firm base that can usher in growth over the long term. In addition, economic development seeks to eradicate inequality through enhancing the scope of opportunities and resources to the disadvantaged in the economy. Developing links between government, businesses and community organizations is important for economic development because it addresses the needs of the community as well as the strength of the region. Lastly, economic growth is not just about statistics or pure numbers, but about the modernization of communities, enhanced level of order in society, and equitable distribution of achievements (Puci, 2024).

Every region's economy is closely related to the companies that operate there. They propel advancement and reshape the financial landscape by acting as the catalysts for innovation, economic expansion, and the creation of jobs. Beyond simple financial transactions, companies have a profound effect on the economy because they weave a complex web of interdependencies that affect trade dynamics, fiscal policies, and general economic stability. Understanding the place of companies in economic systems allows us to better understand how to promote sustainable economic growth and enhance societal well–being.

The contemporary economy depends heavily on the banking industry. It serves as the main source of credit, enabling consumers to purchase houses and vehicles as well as companies to grow, add new equipment, and pay employees. In addition to earning income on deposits, banks provide their customers with a secure location to store their money, which protects many accounts up to specific levels. Banks provide a variety of checking accounts, credit cards, and debit cards that help with daily transactions. They also support e–commerce, which is largely cashless. Another significant employment is in the financial industry.

Terchnology advancement is becoming more and more prevalent in Albania, but little is known about how it may affect established banking institutions. The degree to which FinTech is being embraced by Albanians, the difficulties traditional banks are having adjusting to this new environment, and the regulatory actions required to promote a sound financial ecosystem are some of the major concerns. By offering a thorough examination of the relationships between FinTech and traditional banking in Albania, this study seeks to close these gaps.

This paper aims to investigate the impact of the rise of fintech on the financial performance of banks in Albania? Thus, because of navigating the complex and multifaceted role of fintech innovations for achieving the goal of increasing financial inclusion, the primary research question of this study will focus on examining the transformatory potential of these technologies for the business models and service delivery processes in the context of the traditional financial institutions of the nation.

In addition, the study attempts to evaluate the regulatory framework that oversees Albania's fintech and traditional banking industries critically, highlighting important issues and suggesting areas for policy development. The study aims to offer insights into how regulatory structures might be adjusted to promote innovation while preserving consumer protection and financial stability by comparing regulatory frameworks and practices. The goal of this research is to further the academic understanding of fintech's impact on Albania's financial landscape by providing suggestions on how to use cutting–edge financial technologies to promote sustainable economic growth and financial inclusion.

3. Background and Literature Review

The following stage involves synthesizing the data, which is usually done in a methodical or thematic manner and identifying any gaps that require more study. Nawaz, T., & Usman, M. (2018) emphasized that with the use of technology, one is more effective in managing both old and new endeavors. Technology has not only transformed the means in which commerce is conducted but also every aspect of living. They take it a step

further and states that technology not only influences the kind of economic activities undertaken but also the extent to which they are sustained. It is impossible for a given individual to go a day without using one or two gadgets designed and made by fellow human beings. These products have made performing tasks that were very cumbersome and unproductive eas ier and much more efficient and accurate.

Le and Ngo (2020) uses GMM technique to explore the factors that affected bank profitability in 23 different nations between 2002 and 2016. The findings underscore the importance of IT–driven approaches to service and product delivery, like bank card issuance, ATM accessibility, and POS terminal presence, in augmenting bank profitability. These results highlight the significance of retail banking as a bank's main source of income, which is supported by the conclusion that bank overhead expenses and profitability have an inverse relationship. Another study made in Lahore Leads University for impact of cashless banking on profitability in banking industry of Pakistan concludes that Pakistan's banking sector's banks' profitability is greatly impacted by cashless banking. Customers are becoming more knowledgeable about online banking and other cashless financial services due to the increased use of the internet (Kamboh and Leghari, 2016). Moudud–Ul–Huq and Hossain (2020) evaluated how Bangladesh's commercial and government banks performed in relation to cashless banking. In particular, the research sought to determine whether ATM usage is associated with the profitability of commercial and government banks; mobile and internet banking (MOB and IB) impact commercial bank profitability; point–of–sale (POS) system and check usage impact commercial bank profitability; andElectronic Funds Transfer (EFT) impact commercial bank profitability. The two main indicators of commercial bank profitability were return on equity (ROE) and return on assets (ROA). Gakure and Ngumi (2013) pointed out that the possibility of reducing operating expenses and increasing operating income is what drives mobile banking. Comparing mobile banking in developed and emerging markets emphasizes how common decreased costs are. The prevalence of lower costs and higher revenues in developed markets is further highlighted by comparing mobile banking in developed and emerging markets.

Gakure and Ngumi (2013) highlight the importance and efficiency of automated teller machines (ATMs), emphasizing that the discussion should not center on whether or not these devices are desirable, but rather on how new technologies can be used to improve trade, growth, productivity, modernization, banking record–keeping, and living standards in the country. The existence of ATMs has aided in the development of the banking sector by giving investors and bank management important information about strategies used by overseas competitors to gain a competitive edge. However, difficulties in implementing and using ATMs have been noted; these difficulties have an effect on trade systems, national income, financial performance, and the welfare of the general public.

Sudirman, Epin, and Amalia (2023) assess banks incorporated in the Indonesia Stock Exchange and find that mobile banking has a positive and significant contribution to profitability measured using ROA. Similar results were established in another study from Kenya mobile banking and profitability had a positive relationship albeit a very weak one (Chipeta and Muthinja 2018). As far as the empirical studies which correlate the profitability and point–of–sale terminals (POS) are concerned, Le & Ngo (2020), focused on banks in 23 countries. The finding was that there exists a positive association between POS and the profitability of banks. Itah and Emmanuel (2014) reinforce these findings in Nigeria, stating that point–of–sale terminals impact profitability positively as measured by the ROE metric.

Customers are becoming more knowledgeable about online banking and other cashless financial services due to the increased use of the internet. They benefit greatly from this trend, which also increases branch worker productivity and lowers the cost of hiring and onboarding new hires all of which support economic expansion. Almost all banks are actively seeking ways to gain a competitive edge by pushing cashless banking through awareness and education programs. A study of Datta and Ahmed (2021) aims to investigate the connection between Bangladesh's cashless banking and the industry's profitability by using ROE and ROA. It reveals that a cashless bank, measured by the number of cards issued, has a positive impact on profitability. The same direction was emphasized by Sarkar and Rakshit (2023). Rretail banking is more

than a business dependent on a network of branches. Since the seventy's decade, the very first of such technologies that enabled financial customers to perform operations away from the bank branch were introduced. Gul and Khan (2017) reveal a liear relationship between the two variables considered in Pakistan. Fruther, this relationship was stressed by guyen and Nguyen (2020).

4. Methodology

This section outlines the systematic approach used to address research questions and meet the study's goals. Data for this research was collected from the Bank of Albania and ROE for 8 banks in Albania from their annually published financial reports. The study covers the period 2012–2022. The data used are secondary data, obtained from the Bank of Albania, United Nations database, NBC, INSTAT, and AAB.

In this paper we aim to investigate the potential claim that Fintech has a positive impact on the profitability of banks in Albania, as expressed by ROE. The appropriate model to test this relationship is:

$$ROE = f(lnPoses, lnCI, MB, outlets, and ATM)$$

where:

lnPoses is the log of the number of poses
LnCI is the log of Cards Issued
MB is a dummy variable for the mobile banking app (0–no app, 1–app)
Outlets is the number of branches
ATM is the number of ATM

To analyze the possible relationship between the variables multiple regression will be used. The dependent variable of the model is ROE, while the independent variables are the number of poses, cards issued, mobile banking, number of outlets, and ATM. The EViews 10 statistical package will be used to analyze these data.

The fixed effects model is used since each bank can hold its unique intercept for management style, operation strategy, and the like, which could be different across banks but would remain stable over the time.

Those intercepts have been considered stable during the study by the fixed effects model, which claimed that such factors are constant. Before conducting regression analyses, certain assumptions have to be checked to ensure that the model and results are valid. Linearity, which states that there should be a straight–line relationship between the independent and dependent variables. Another assumption is multicollinearity, whereby the independent variable should not be too related between them. Serial correlation or autocorrelation occurs when the residuals are correlated among different observations, usually found in time series data. The last thing is checking heteroscedasticity to ensure accurate and correct results–the change in the variance of the residuals at different levels of an independent variable requires adjustment.

A few limitations cropped up in this research, the first being that a relatively small sample size was the basis of the research study; this may have implications on the extent to which findings can be generalized. Moreover, because of time constraints, the findings are really focused on a specific geographical area; hence, they are difficult to generalize to other areas. Lastly, the study was done within the confines of available resources and knowledge, which might have also affected the depth and scope of the analysis. In spite of these limitations, efforts have been made to mitigate their impact and quite clearly explain the study's methodology and results.

5. Findings and Discussions

Displays the results of the Ramsey RESET test, which indicate that the model with its predictors explains the data well enough to not require adding more non–linear components or correcting for potential bias due to omitted variables. The model is linear since the p value is higher than 0.05. A high p–value suggests that the model with missing variables does not statistically outperform the current one. The Breusch–Pagan–Godfrey test, which is shown which confirms that the residuals of the regression model are homoscedastic. All test statistics produce big p–values, which are significantly higher than the usual significance criteria. Because of this homoskedasticity, it is possible that the

standard errors of the regression coefficients are true, hence supporting legitimate conclusions. The Durbin–Watson statistic indicates that there is no substantial autocorrelation in the residuals.

In this panel regression with ROE as the dependent variable, the model explores how certain characteristics such as the number of poses, cards issued, mobile banking, and outlet count impact ROE between 2012 and 2022.

Table 1. Table captions should be placed above the tables. SOURCE: Regression output.

Dependend Variable: ROE.
Method: Panel Least Squares
Sample: 2012 2022
Periods included: 11
Cross–sections included: 8
Total panel (balanced) observations: 88

Variable	Coeffi-cient	Std. Error	t–Statistics	Prob
Poses	0.001991	0.000799	2.490763	0.0147
Cards issued	–285E–05	1.42E–05	–2.006101	0.0481
Mobile banking	5.112875	1.961537	2.606566	0.0108
Outlets	0.213176	0.068332	3.119700	0.0025
C	–7.070003	2.685992	–2.632176	0.0101
	Effect	Specification		
Cross–section fixed				
Period fixed				
R–squared	0.581121	Mean dependent var	6.120909	
Adjusted R–squared	0.447842	S.D. dependent var	10.41170	
S.E. of regression	7.736659	Akaike info criterion	7.142135	
Sum squared resid	3950.489	Schwarz criterion	7.761469	
Log likelihood	–292.2539	Hannan–Quinn criter.	7.391649	
F–statistic	4.360171	Durbin–Watson stat	1.896690	
P–value	0.000002			

Given that the model accounts for 58.11% of the variation in Return on Equity (ROE), the R–squared value of 0.5811 indicates a decent fit.

The adjusted R–squared is 0.4478 once the number of predictors has been considered. A p–value of 0.000002 and an F–statistic of 4.36 indicate that the model is statistically significant.

No. of Poses: While the research hypothesis was right in suggesting a positive correlation between the number of poses and ROE, it maintained that more customer–interaction activities presumably reflected in the "poses" measure are associated with greater returns. Financial performance in this research is driven by active client engagements or service points, which may be of transactional nature or touchpoints. This may suggest that customer engagement is a blessing for financial services' providers; it can result in more customer satisfaction, higher transaction rates, and consumer loyalty–all beneficially impacting ROE.

Cards issued: The literature study revealed that earlier research has shown the beneficial effects of card issuing. With respect to this variable, however, the hypothesis had also predicted a positive impact. The results obtained during the study, on the other hand, had a negative impact from the cards issued, depicting a different relationship than predicted and thus acted against such assumptions. Fin–tech card issuance may negatively impact ROE because of the high costs attributed to designing, distributing, and maintaining cards. Intense competition within the industry might compress fees and interest rates, thereby shrinking margins and profitability. The increased operations cost due to regenerative requirements and compliance costs has an impact on overall profitability. Economic variables and challenges of risk management, including credit risk and customer acquisition, also raise the possibility of a negative effect on ROE in the fin–tech industry. Although the hypothesis went for a positive relationship, the significant and negative relationship discovered implies that there is some complexity in the dynamics of card issuance. The negative impact is that expenses, be they administrative, risk management, or operational, perhaps outweigh income as more cards are issued. This could indicate potential inefficiencies or increased running costs associated with managing a larger cardholder base. Especially, in the process of achieving profitability by increasing card issuance, the financial institutions may need to enhance their skills in managing cards or reduce costs.

Mobile banking: While digital transformation initiatives effectively contribute to profitability, mobile banking's positive effect, in turn, is impressive on ROE. Mobile banking is more convenient and has fewer operating expenses than conventional branch services, thus increasing customer activity and happiness. Since consumer tastes are moving to digital channels, this strong positive relation would mean any financial institution looking to improve profitability may strategically benefit from investments in mobile banking infrastructure.

No. of Outlets: The number of outlets again significantly and positively affects ROE, which means that access and physical presence are still part of financial performance. On the other hand, a large network of outlets may provide certain advantages: an increase in accessibility, customer trust, and visibility of a brand name, notwithstanding the growth of internet banking. This would, however, imply that physical sites remain relevant for markets or niches, in those instances where physical contact is valued, or in cases where the adoption of digital has been slower. In such a case, striking a balance between digital and physical channels would be an important factor for financial institutions in boosting their reach and satisfaction in customer service.

Table 2. Results.

	Variables	*Literature*	*Hypothesis*	*Results*
No. of Poses	+	+	+	Significant
Cards issued	–	+	–	Significant
Mobile banking	+	+	+	Significant
No. of outlets	+	+	+	Significant
ATM	+	+	+	Insignificant

5.1. *Further Analysis*

Descriptive statistics is necessary for illustrating and assessing data sets, and it provides important insights into the distribution, variability, and central tendency of data. Beyond measures of central tendency and dispersion, we can also use skewness and kurtosis to describe how a given distribution of data is formed. Some other important measures associated with dispersion are variance and standard deviation; they help compare variability, or the spread of data.

Desciptive Statistics	ROE %	No. of Poses	Cards issued	ATM	Mobile banking	No. of outlets	Cashier Transaction	Transactions with card	Electronic credit transfers
Mean	6.121	1,292.420	124,855.841	80.159	0.830	46.591	9,936,240.391	18,266,595.920	2,283,189.151
Standard Error	1.110	189.019	11,856.634	5.401	0.040	2.557	408,285.500	1,810,143.893	558,395.421
Median	7.665	626.500	80,534.000	61.000	1.000	37.000	10,304,690.000	16,908,214.000	1,791,988.000
Mode	11.600	300.000	80,944.000	49.000	1.000	35.000	-	-	-
Standard Deviation	10.412	1,773.156	111,225.083	50.665	0.378	23.983	1,472,094.38	6,526,566.62	2,013,323.32
Sample Variance	108.404	3,144,081.281	12,371,019,008.158	2,566.963	0.143	575.187	2.17E+12	4.26E+13	4.05E+12
Kurtosis	1.368	5.577	0.355	0.877	1.207	(0.331)	(0.793)	(0.156)	(0.495)
Skewness	(0.906)	2.401	1.216	1.318	(1.783)	0.589	(0.812)	0.773	0.712
Range	59.780	8,440.000	420,078.000	230.000	1.000	98.000	4,189,689.428	21,397,986.000	6,117,085.000
Minimum	(26.390)	10.000	9,850.000	16.000	-	5.000	7,292,626.000	10,406,955.000	162,385.000
Maximum	33.390	8,450.000	429,928.000	246.000	1.000	103.000	11,482,315.430	31,804,941.000	6,279,470.000
Sum	538.640	113,733.000	10,987,314.000	7,054.000	73.000	4,100.000	1,291,711,125.100	237,465,747.000	29,681,458.960
Count	88.000	88.000	88.000	88.000	88.000	88.000	13.000	13.000	13.000

The statistical mean of ROE (Return on Equity) stands at 6.121%, indicating that the companies or investments represented had reasonable returns on average. The standard deviation is relatively high at 10.412, suggesting a wide variation in return on equity across the sample. The skewness is –0.906, slightly negative, indicating that the distribution is somewhat tilted to the left, meaning many of the ROE values are relatively low. The kurtosis is 1.368, which suggests a distribution with lighter tails than a normal distribution, meaning extreme values (both high and low) are less frequent. The maximum value of 33.390 and the minimum of –26.390 give a range of 59.780, reflecting significant disparities in earnings, with some companies or units experiencing large losses while others saw substantial profits.

The descriptive statistics for the 'Number of Poses' show significant skewness and variability. The large standard deviation of 1773.16 indicates a wide spread of values around the average of 1292.42, with a few high values likely elevating the mean. The positive skewness of 2.40 suggests a long right tail, where some observations have much higher values. The range of 8,440, from 10 to 8,450 poses, indicates the presence of outliers. These extreme values distort the central tendency, as most data points cluster near the lower end of the distribution.

The average number of cards issued is 124,855.84, with a high standard deviation of 111,225.08, indicating significant variation across observations. The wide range suggests potential discrepancies in card issuance. The skewness score of 1.22 points to a right–skewed distribution, likely caused by a few instances of very high card issuances, possibly due to institutional mandates, targeted efforts, or advertising campaigns. The kurtosis value of 0.35 indicates a flatter distribution, with fewer extreme values than expected.

The "ATM" data has an average of 80.16, with a standard deviation of 50.67, indicating moderate variability. While the number of ATMs tends to be fairly stable, there are still notable differences between observations. The skewness of 1.32 suggests a right–skewed distribution, with a few locations having significantly more ATMs, likely due to large cities or areas with high demand. The kurtosis value of 0.88 indicates a distribution that is more peaked than a normal distribution, with fewer extreme values. The range of 230, from 16 to 246 ATMs, highlights the significant variability across regions, influenced by factors like population size, demand, and geographic location.

The "Number of Outlets" data has an average of 46.59, with a standard deviation of 23.98, indicating moderate variability. The skewness of 0.59 suggests a slight right skew, with a few higher values stretching the tail. The kurtosis of –0.33 indicates a platykurtic distribution, meaning fewer extreme outliers than a normal distribution. The range of 98 outlets, from 5 to 103, shows notable variation, but no outliers.

6. Conclusions

The speedily growing Fin–Tech industry is changing the traditional banking modalities not only in Albania but throughout the world. This paper studies various aspects of the impacts of FinTech on the Albanian financial sector, such as what were the main drivers that fueled its uptake, what are the current threats from such innovations for the traditional banks, and what projections case bring further innovation and opening up new avenues for growth.

The paper examined the critical role of fintech in transforming financial services through technological advancements, increasing accessibility, efficiency, and security in global transactions. It highlighted how fintech promotes competition, enhances financial inclusion, and motivates traditional institutions to innovate, thereby transforming the landscape of modern finance. The study provided an overview of Albania's fintech ecosystem, including key participants, regulatory frameworks, and adoption patterns. It then explored how fintech had transformed traditional banking in areas such as customer experience,

product offerings, operational efficiency, and risk management. Board variables analyzed included size, gender diversity, age diversity, nationality diversity, and board meetings. Secondary data, obtained from the Bank of Albania, United Nations database, AAB, NBC, and INSTAT for the period 2012–2022, were used. Using a panel data approach, the results showed that all selected variables, such as the number of poses, cards issued, mobile banking, and the number of outlets, affected Return on Equity, except for ATM, which was found to be insignificant. The paper concluded that embracing digital change, encouraging innovation, and providing supportive regulatory frameworks could help Albania's banking sector fully leverage fintech, creating a more dynamic, inclusive, and efficient financial environment that benefits all stakeholders.

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Appendices

Table A1. Ramsey Reset Test

Ramsey RESET Test
Equation: UNTITLED
Specification: ROE NO__OF_POSES NO__OF_OUTLETS MOBILE_BANKING CARDS_ISSUED ATM C
Omitted Variables: Squares of fitted values

	Value	df	Probability
t–statistic	0.734076	81	0.4650
F–statistic	0.538868	(1, 81)	0.4650
Likelihood ratio	0.583498	1	0.4449

Table A2. Multicollinearity.

Variance Inflation Factors
Date: 10/29/24 Time: 12:06
Sample: 1 88
Included observations: 88

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
NO__OF_POSES	1.83E–06	9.312298	6.057272
NO__OF_OUTLETS	0.011322	33.02333	6.855148
MOBILE_BANKING	7.584323	6.698939	1.141865
CARDS_ISSUED	1.01E–09	29.85462	10.00219
ATM	0.002906	27.73617	7.853007
C	9.875514	10.51499	NA

Table A3. Heteroskedasticity Test.

Heteroskedasticity Test: Breusch–Pagan–Godfrey
Null hypothesis: Homoskedasticity

F–statistic	0.567279	Prob. F(5,82)	0.7248
Obs*R–squared	2.942167	Prob. Chi–Square(5)	0.7089
Scaled explained SS	4.563650	Prob. Chi–Square(5)	0.4714

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HOW CAN THE FISCAL SUSTAINABILITY OF THE NATIONAL PENSION FUND BE ENSURED?

MOHAMMED RAFA[1], SAKINA MERAD BOUDIA[2]

1. Objectives

This study aims to build simulation scenarios for real solutions to reduce the problem of pension fund deficits. The Fund's deficit, which plays an important role in the Algerian social protection system, has recently worsened. The main reason for the growing deficit gap is the high life expectancy of retirees, with the category of workers unable to finance the Fund's resources owing to the decrease in the size of this group compared to the huge backlog of retirees. The sample study in the community of non–performing workers and retirees based on local databases of social security funds, where changes were made in the pension calculation format by proposing reform scenarios. The results of the study concluded that raising the retirement age from 60 to 65 years is the best solution to restoring the financial balance of the pension fund and with the least possible damage to generational well–being.

Keywords: Balance deficit, pension fund, social protection, financial balance, life hope.

2. Background

The pension and social insurance systems that allow protection against the risks associated with death, disability and old age faced by all families are an integral part of the social protection system. The dual

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objective of these systems is to protect against poverty and predict sudden loss of incomes in the event of one of its known causes in life events. Algeria's social security system is based on the principle of distribution and is administered by the National Pension Fund of the Public Sector. Algeria's system for the protection of older persons is based more on the principle of insurance (than on the principle of justice).

It had recently identified a significant deficit that could worsen for future generations. To date, the State was still looking for an optimal solution to that deficit, even if those reforms were very modest.

In this paper, we will address the Algerian pension system so that we can determine its characteristics and financial position, and we will analyze in parallel all the variables associated with the national pension system in order to evaluate the reform process at the level of the national pension system.

The main objective will be to impose an interim reform that will ensure the Fund's financial balance over the 2047 horizon.

Problem Research

In the light of the above, our problem will include asking the following question: What is the optimal modelling of the national pension system that will enable us to achieve financial efficiency without compromising social justice and the well–being of members of society?

In this context and in the light of the foregoing, the following issues arise:

– How can expenditure on the National Pension Fund's allocation be efficient? Will this negatively or positively affect macroeconomic variables and society's well–being?
– How can the fiscal sustainability of the National Pension Fund be ensured? Will this negatively or positively affect macroeconomic variables and society's well–being?

Study variables

Dependent variable: effectiveness of the national pension system.

Independent variables:

Factors affecting pension effectiveness are:

– The ageing of society;
– High Life Hope;
– The system's active category of contributions is reduced.

These factors were selected through the study's studies and research, and were taken to see how they affected the financial position of the pension fund.

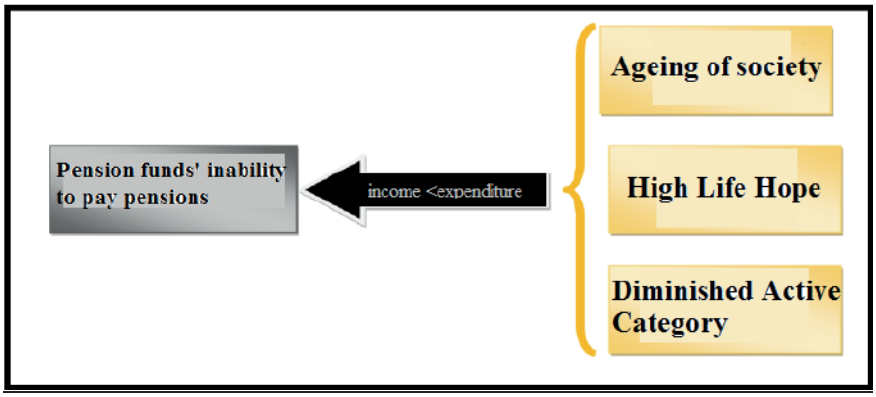


Figure 1. Relationship between study variables. Source: our elaboration.

3. Methodology

The study hypotheses:
In order to answer the questions raised, we have formulated two main hypotheses that change should be made either by decrease or in excess of the Fund's expenditure and income, they are the following:

– Or, on the expenditure side: is to reduce the Fund's burden as little as possible.
– The second aspect of funding resources is to maximize the Fund's income as far as possible.

Previous studies

There have been no exciting previous standard studies at the Algerian level showing the impact of reform on pension funds except for one (Flici Farid, 2016), while there are studies I have dealt only with the legal aspect of this reform (Madani Abdelkader, 2016), and in addition, recent demographic outlooks indicate the need to look for a resource New funds (Hamza Sharif Ali, 2006).

Global experiments have shown that standard reforms tend to reduce the lifting of the stomach, suspension and reduction of the replacement rate.

The share of the capitalization column in the financing of pensions varies from country to country, for example, France, which has introduced a one–year savings scheme2003 is only a supplementary column, whereas in Germany the share of this column is above the distribution–based column, whereas in America Latin and Chilean capitalization included an important portion of the retirement pension, and the distribution–based column constituted only the lowest retirement.

In this discussion, we felt that we should address the reform of the National Pension System, since the 2017 Retirement Act cannot be dealt with without mentioning the reforms that precede it as an extension of these laws and updates.

4. Findings

4.1. Answer to study hypotheses

Before proceeding to answer the research hypothesis, we need to clarify that the pension fund's budget is twofold: splitting expenditures and splitting revenues.

Expenditures consist of all the Fund's burdens: allowances, pensions, financial and in–kind performance.

Income consists of all the Funds resources of various kinds: contributions, petroleum collections, taxes, fees and State assistance.

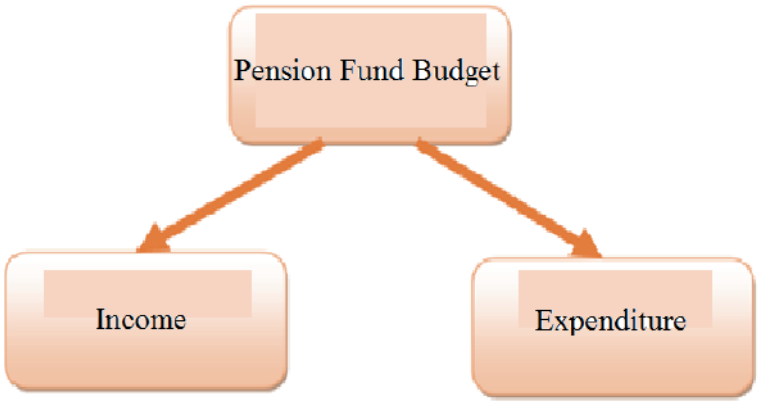


Figure 2. Pension Fund Budget. Source: our elaboration.

The first hypothesis is that pension fund expenditures should be reduced to the least extent possible.

In order to address this hypothesis, the variables of pension fund expenditures, consisting mainly of pension allowances for retirees and the elderly, which change depending on the number of beneficiaries and the duration of their previous pensions and salaries, must first be defined, as follows:

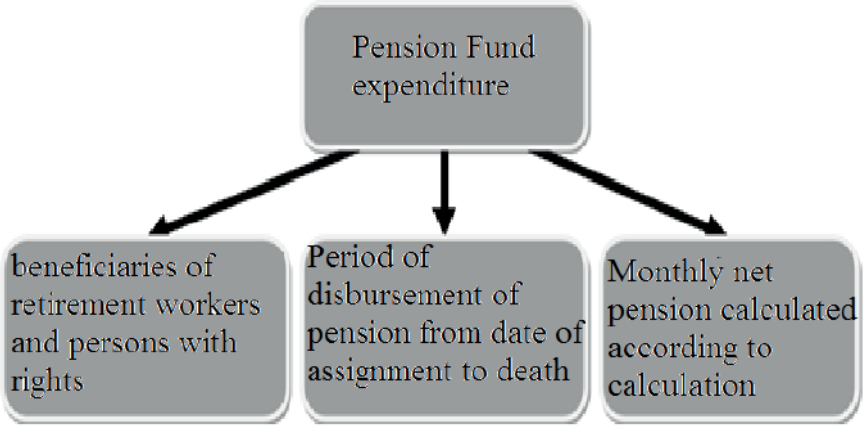


Figure 3. Reduction of pension fundexpenditure. Source: our elaboration.

Accordingly, a change shouldbe made by decreasing the elements indicated in the figure in order to reduce expenditures:

A) Reduction of monthly net pension: the pension is subject to several criteria and calculations that enable us to reach the net amount of the employee's pensionable remuneration. The pension is calculated through the subsequent calculation within the 80% of his or her salary during the last five years:

Pension = 2.5% * Insurance period * Reference pay * Annual revaluation ratio

For example, a 32–year employee who was receiving a salary of 20000.00 per month during the last 5 years, his pension will be as follows:

Pension = 2.5% * 32 * (20000 + 20000 + 20000 + 20000 + 2000)/5 = 16000 DZD

Therefore, after the abovewording has been fragmented, we conclude that the aforementioned ingredients must be changed, so that the sub–hypotheses are as follows:

- 2.5%: The rate of adoption of the years of insurance (contribution), which is the proportion on which retirement is calculated, is equal to the pension. The lower the value of the pension, the lower the value of the pension, the lower the expenditure and vice versa, the lower the proportion on which retirement is calculated.
- Annual reassessment rate: estimated at 1.05 pursuant to the 2015 decision.

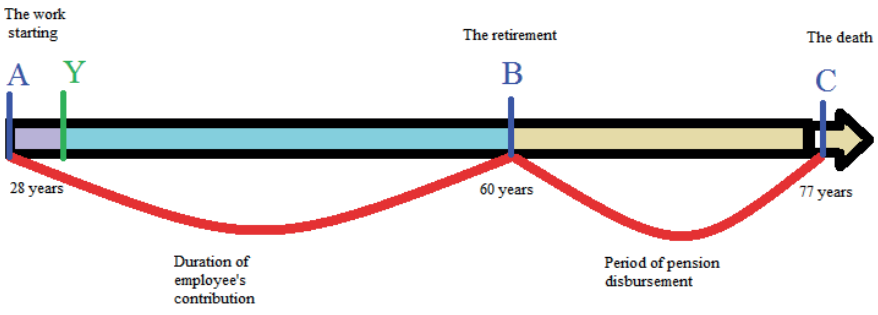


Figure 4. Socially Insured Worker's Life Cycle. Source: our elaboration.

- 32: The period of contribution, which represents the number of years' service spent contributing to social security contributions. The lower the cost, and vice versa, the higher the pension' s income is also affected by the number of years of service but in the opposite direction the lower the number of years of service the lower the expenditure as well as the benefit of contributions.
- 20,000: Reference pay, representing the employee's average wage over the last five years, is equal to the pension the lower the expenditure and vice versa, so it should be reduced by calculating retirement on the basis of base pay only (i.e. base pay + professional experience–grants and compensation), i.e. without calculating grants and compensation for each wire and sector contrary to what is now happening as the first proposal. The second proposal is to reduce wages by reviewing the consolidation of the wage system and its compensatory systems for each wire as long as the employee goes about his or herwork, but this solution will also reduce the Fund's contributions.
- 5: The number of years of work on the basis of which the pension and sports reference pay is calculated is inversely commensurate with the value of the pension. The lower the value and the higher the value of the pension, the higher the number of years of work on which the average wage is calculated.
- Reduce the estimated 80% compensation rate to a maximum: For mutual benefit, raising the private insurance rate and reducing the insurance rate in the public system is the best solution to overcome the fund deficit crisis with the aim of alleviating the burden on the fund (currently 80% of the expenses incurred by social security when presenting the performance to the socially insured and 20% is the responsibility of the private optional insurance contributing to the supplementary retirement finance).
- Reduce the annualr eassessment ratio to 1.

B) Reduction in the period of pension disbursement: from the date of the worker's retirement to the end of hisdeath, they are expressly commensurate with the expenses of the Fund. The longer the pension isaccrued, the higher the expenses and vice versa, as shown in the figure above.

We note from the form that represents the worker's life cycle that whenever point "V", which represents the retirement referral, is removed from the point "and" which represents the death of the retiree. The longer the pension is paid and the lower the employee's contribution period, Thus, the Fund's expenditures are increasing and its revenues are decreasing, and vice versa, if point V approaches the point "and" what needs to bedone to reduce expenditures and increase income.
Accordingly, in order to reduce the pension's duration,

- Extension of Retirement Referral Age
- Extended years of service
- Eliminate early retirement, but these solutions may increase unemployment rates.
- Raise the legalage of employment (currently 16 years, possibly up to 21 years).

C) Reduction in the number of beneficiaries: The number of beneficiaries of retirement pensions is the number of workers transferred to retirement during the period of pension disbursement and is strictly commensurate with the Fund's expenses. The more beneficiaries of retirement pensions the higher the expenses and vice versa. Therefore, in order to reduce the number of beneficiaries:

- Review of employment policies, as the majority of retirement beneficiaries are public servants (permanent) in office whether they are employed in public institutions of an administrative or economic nature, but workers employed under certain types of fixed–term contracts (temporarily) they often do not benefit from retirement, and in this case the optimal solution would be to switch from the (permanent) operating system to the (temporary) operating system that ends with the termination of the worker's duties.
- The second hypothesis is that funding resources (income) should be maximized as much as possible. To address this hypothesis, the pension fund's income variables, consisting mainly of three basic components, primarily shareholder contributions, must first be defined by 03% of petroleum levies and taxes. (e.g. Tobacco Tax and Pharmaceutical Import Tax), however, the most important source of pension funding has been highlighted,

namely shareholder contributions, which change depending on the proportion of contributions and their dependency, the number of shareholders and the duration of the contribution, according to the following format:

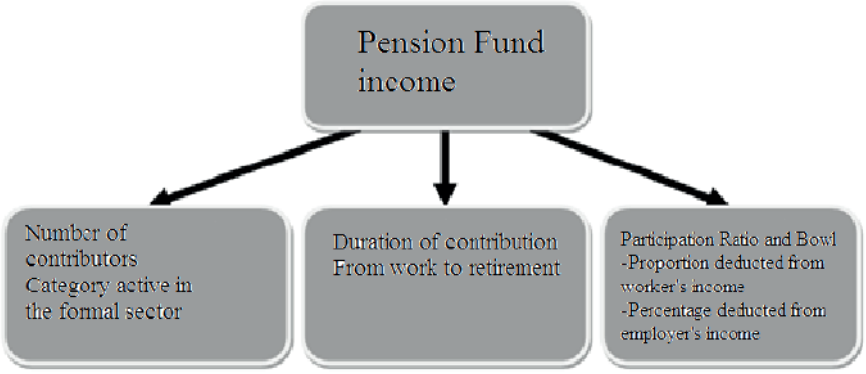


Figure 5. Maximizing funding resources (income). Source: our elaboration.

Therefore, after the breakdown of the Pension Fund's funding resources above, we conclude that a change must be made in excess of the above components.

From the above data, the following sub–hypotheses can be derived:

A) Participation Ratio and Bowl:
- Increase the proportion of social security deductions (currently estimated at 09% for the worker and 25% for the employer in public institutions, noting that private sector contributions are not reliable much due to the expansion of informal activity).

B) Duration of contribution:
- Increased retirement age to extend contribution period (currently estimated at 60 years);
- Increase in the number of years of service to extend the contribution period (currently estimated at 32).

C) Number of contributors:

Attracting the category that is active in the informal sector by tightening its control and devising new mechanisms for collecting its contributions, such as moving onsite and checking unauthorized

incomes, but this process requires additional operating expenses that may burden the Fund.

Re–launch of births and immigration (by granting concessions to encourage marriage and childbirth).

Create new positions of employment (but provided that manpower is attracted to deliver productive projects that create added value in the national economy).

D) The establishment of a solidarity fund between the various branches of social security: to allow internal and external transfers to these bodies in order to close any of them, especially the pension fund.

E) A final proposal is to invest social security funds' assets to obtain returns through which surpluses are achieved to covercurrent deficits, sustainable development and intergenerational solidarity.

4.1.1. Actors in the reform process

The previous analysis leads us to the fact that there are several factors to be taken into account in assessing the pension system and reform options, including:

– Demographic
– Economic
– Policy Options/Pension System Characteristics
– Individuals' behaviour

Pension system analysis requires long–term projections (from 10 to 75 years), where modeling has proven effective in diagnosing and evaluating pension reforms, itis a department to regulate the thinking of pension systems.

The reform process will also affect three key economic clients: the State, consumer and enterprise.

The state

The State is responsible for the formulation of public, economic and social policies.

Economic policy is based on market machinery and aims to achieve economic growth.

State policy provides public enterprises covering market deficits, providing education and education to members of society and serving the interest of the enterprise (productivity) and providing social welfare to society.

Social policy targets only the most disadvantaged groups in society, especially those who have been excluded from inclusion granted by economic and political policy.

The consumer

Change will affect individuals' and families' income and behaviour and hence their consumption.

Family income

Consists of all income received by the household or household members, in cash, in kind or services, annually or on closer crumbs, but excludes emergency profits and other such irregular and usually incidental revenues. Household income is available for current consumption:

– Income from work, whether paid or private.
– Income from ownership, i.e. profits that are revenue from investing in an enterprise where the investor does not work. This includes pensions and premiums.

  Annual in the form of profits from voluntary private insurance schemes.

– Income from household production, whichis the estimated value of housing services from owner–occupied housing, unpaid household services and household consumer durable goods services.
– Income from social transfers, benefits and social security allowances, for example, unemployment insurance.

Institutions

Enterprises are producers who produce goods and services for consumers in the market, where the production process includes the following factors: work, head, technology. Inputs are converted into outputs within the investment process.

4.1.1.1. The econometric study

In this model, the role of the State is limited to the conduct of the pension system, which deduct contributions from the active generation and pay pensions to the retired generation, The State's budgetary constraint is also the financial balance of the pension system. s economic policies, such as operational, fiscal and banking policies, as they require a process to assess their overall effectiveness, They will also not include consumers and producers because they need to measure their consumption, distribute their incomes and measure their well–being. In this research, I elaborated on the financial, demographic and temporal variables of the Pension Fundonly, that the reform process would take place at its level.

So that we can apply the study dialogues we have to form different conciliations between at least one sub–variable and several variables among the above reform proposals.

We can preparere mediationc ombinations from the following variables:

A. Current system–specific demographic and financial data (Mohammed Khaled al–Zu 'abi, 2013):
   - Contributing population by age and sex;
   - Retirees with direct rights by age and sex;
   - Average working years (determined by sample of new retirees by age and sex);
   - Average base pay by age and sex;
   - Pensions including: basic pension, increases, family grants by age and sex;
   - Year of Evaluation.

B. Macroeconomic data:
   - Real PIB growth rate
   - Inflation Ratio
   - Nominal wagegrowth rate

C. Financial indicators:
   - Distribution of pensions by nature
   - Value of annual contributions
   - Annual balance

4.1.1.2. Reform Indicators

We have dropped the variables preceding the reform process, taking 2015 as a reference. The State has passed a law extending the retirement age to resolve the problem of disability. We have also conducted this study for 32 years, assuming that a new generation will join the retirement system in 2015. The number of working years applicable in Algerian legislation (32 years) is estimated to be of life. We must therefore have the following indicators:

Variable	Indicator
Demografic variables	
Growth Rate of Socially Insured Workers in 2015	9.1 %
Pensioners' growth rate in 2015	5%
Number of workers as of 2015	6770299
Number of new workers as of 2015	187871
Number of retirees as of 2015	2773615
Number of new retirees as of 2015	204942
Number of new widows as of 2015	531359
Number of new orphans as of 2015	409513
Financial variables	
Workers' wage growth rate in 2015	5.62%
Annual reassessment rate for 2015	1.05%
Average pensions for 2015 as a ratio to total pensioners (DZD/PENSIONER)	334415.56
Average wages for 2015 as a ratio to total workers (DZD/WORKER)	731713
Expenditure growth rate in 2015	16.59%
Revenue growth rate in 2015	–0.46%
Deficit growth rate in 2015	79.22%
Deficit/expenditure ratio 215	27.92%
Revenue 2015 (MILLIARD DZD)	668
Expenditure 2015 (MILLIARD DZD)	927
Balance 2015 (MILLIARD DZD)	–258
Replacement rate	80%
Proportion of social security deductions	9%
Ratio of insurance years' accreditation	2.5%
Time dynamic variables	
Number of years' work based on which pension reference pay is calculated	5
Age of entry into the world of employment as the legalage of employmentis 16 years	16–60
Average age of entry into the world of employment in 2015	28
Minimum and maximum period of insurance required for retirement in 2015	15–32
Age of entry into retirement pursuant to the Relative and Ordinary Retirement Act 2015	45–60
Minimum and maximum retirement period 2015	45–77.1
Hope of life 2015	77.1
Probability of survivor before receiving retirement pension in 2015	0.4
Probability of survivor after receipt of retirement pension in 2015	0.09
Death rate in 2015	5.2%

Table 1. Reform Indicators. Source: our elaboration.

4.1.1.3. Modeling Reform Simulation

Dynamic modeling is defined as an applied and technical tool for the management of retirement systems, which ensures the accounting and solidarity balance of the pension fund, where the fund's assets and liabilities are updated, its accounting importance is to assess the evolution of these latest systems over time using digital analysis that will bring critical reforms and solutions. Modeling varies from one social protection system to another and from one retirement program to another. Accordingly, I modeled the national pension fund according to its structural characteristics, being based on the principle of distribution and also being the determinant of benefits.

Balance = Total Iranian expenditure – Total expenditure

4.1.1.1.1. Expenditure

Total expenditure = previous generation expenditure
+ new generation expenditure

The number of retirees of the previous generation will decrease due to death until they fade completely at the end of the repair period, and thus their pension will also decrease until they are nil at 2047 (total expenditure = 0).

Previous generation expenditure = one pensioner's pension * (number of former retirees – number of deceased retirees)
New Generation Expenditure = 2.5% * (Number of Years of Work) * Average 5 years' wages * Probability of survival

Hence:

Total expenditure = one pensioner's pension * (previous number of retirees–number of deceased retirees) + 2.5% * (new generation retirement year–year of remediation) * Average wage awarded for 5 years * Probability of survivor

Expenditure = $DEP_{t+1} + DEP_t$

$$\text{Expenditure} = PEN_x * (L_{t+1} - L_t * (1 - taux_m)^{32 - y_{t+1} + y_t}) + \frac{2.5\%}{5} \sum (y_{t+1} - y_t) * (1 + taux_s)^{r - a - y_{t+1} + y_t} * w * p_x$$

4.1.1.1.2. Income

Total revenues = previous generation revenues + new generation revenues

The number of first–generation workers will decrease due to death, abandonment of position, demobilization or retirement and thus contributions will decrease until the income becomes totally non–existent at the end of the repair period.

Previous Generation Income = One Worker's Contribution * (Previous Number of Workers–Number of Workers Who Left Work Due to Death, Demobilization or Retirement)
New Generation Revenue = 9% * New Generation Workers' Pay Mass Optimized * Survival Potential

Hence:

Total revenues = 1 worker's contribution * (number of previous workers–number of workers who have left work due to death, demobilization or retirement) + 9% * new generation workers' wage mass optimized * Survival probability
Income = $REC_{t+1} + REC_t$
Income = $COT_x *(B_{t+1}–B_t*(1–taux_m)^{32–y_{t+1}+y_t})+ 9\% *w *$
$(1+taux_s)^{r–a–y_{t+1}+y_t} *p_x$

Where:

DEP is expense
REC is revenue
PENx is an individual pension x
COTx are individual subscriptions x
L is the number of retirees
B Number of new workers
W, n Wage
Tauxm Wastewater Growth Rate
Tauxs wage growth rate
r Retirement Age
a Age of admission to work
y Year of Evaluation
px Probability of survival of individual x

4.1.1.4. Reform scenarios

Pursuant to Algerian financial legislation, it is illegal for an employee's salary to be subjected to a double accounting deduction, other wise this is considered arbitrary. Therefore, in applying the standard reform, it has prepared combinations aimed at changing the value of at least one financial variable to avoidbreach of the law (financial, not time or demographic).

The standard study included 7 combinations, as follows:

Scenarios	Variables	Observation
Balance 0	The real state of the Fund's balance in 2015 has not changed.	Deficit in balance
Balance 1	Change in retirement age from 60 to 65 years	Achieve surplus after 5 years of reform
Balance 2	Change the subscription ratio from 9 to 12 %	Achieve a slight decline of the deficit but remain negative
Balance 3	Change in retirement age from 60 to 65 years Change the subscription ratio from 9 to 12 %	Achieve surplus after 4 years of reform
Balance 4	Change the certification ratio of insurance years from 2.5 to 2 %	Achieve a slight decline of the deficit but remain negative
Balance 5	Change in retirement age from 60 to 65 years Change the subscription ratio from 9 to 12 % Change the certification ratio of insurance years from 2.5 to 2 %	Achieve surplus after 4 years of reform
Balance 6	Change in the number of years on the basis of which the average reference wage is calculated from 5 to 10 years	Achieve a slight decline of the deficit but remain negative
Balance 7	Change in retirement age from 60 to 65 years Change in the number of years on the basis of which the average reference wage is calculated from 5 to 10 years	Achieve surplus after 4 years of reform

Table 2. Repair Combinations. Source: our elaboration.

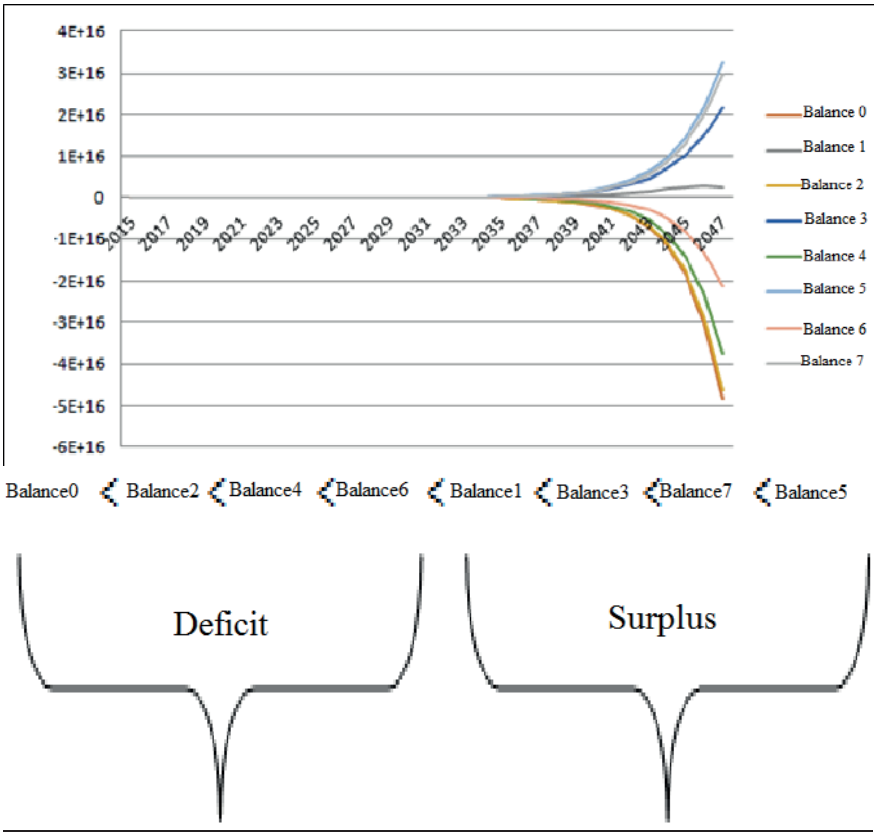


Figure 6. Pension fund balance evolves at various reform combinations (Unit DZD). Source: our elaboration.

5. Discussion

At the beginning of the 2015 reform, we began with a deficit in the balance of the National Pension Fund estimated at –258 billion DZD, the largest balance in the reform process was the fifth combination balance in which we raised the retirement age from 60 to 65 years old. Increase the contribution rate from 9 to 12% and reduce the insurance years credit rate from 2.5 to 2% in which the problem of deficits was eliminated within 4 years after the start of the reform process, achieving a surplus of 654 billion DZD. Thereafter comes the balance of the seventh combination in which we raised the retirement age from 60 to 65 years

and increased the number of years on the basis of which the average reference wage is calculated from 5 to 10 years. The problem of the deficit was eliminated within 4 years after the start of the reform process, achieving a surplus of 1 billion and 447 DZD. Next comes the third combination balance in which we raised the retirement age from 60 to 65 years and increased the contribution rate from 9 to 12%. The problem of the deficit was eliminated within 4 years after the start of the reform process, investigating a surplus of 603 billion DZD. Finally, the balance with the first combination in which we raised the retirement age from 60 to 65, where the problem of the deficit was eliminated within 5 years after the start of the reform process, investigating a surplus of 882 billion DZD. For the remainder of the combination (06, 04, 02), it only allowed the deficit to be reduced by very small proportions without being eliminated or a surplus at the pension fund level.

Extending the age of retirement referral may exacerbate the unemployment phenomenon of certified holders and delay their chances of obtaining permanent employment.

- The majority of those referred to prior retirement returned to temporary positions, which will result in youth unemployment.
- The proposals of the standard study may result in the loss of the rights of certain groups, which requires the adoption of a corrective policy by the State to disadvantage the welfare of the category not served by the reform, which always remains within the framework of social protection and itsorgans, such as the Youth's Unemployment Protection Organs.
- The new Retirement Act is effective in the short term in improving the Pension Fund's financial position, contributing to eliminating the problem of deficits and potentially achieving a surplus balance. In the medium and long term, measures to raise the retirement age will re–enter the disability cycle owing to the weak active group that funds the system with social contributions, which will be offset by a significant increase in the number of retirees.
- The weak complementary retirement base provided by social synergies.
- Saving on social security often affects a worker's well–being. He does not always receive amounts equal to those he has saved, as he may

receive less or more than he paid, and thus the social justice base is not achieved.

6. Conclusions and Recommendations

Efficiencies in expenditure on the National Pension Fund allocation need to be combined between the reduction of the insurance years' credit ratio (hence the estimated compensation ratio) currently, 80% (and raising the number of years on the basis of which the average reference wage is calculated from 1 to 14 while raising the retirement age from 24 to 21 years which will reduce from the gesture of benefiting from pensions. Ensuring the financial sustainability of the National Pension Fund requires raising the participation rate while raising the retirement age from 24 to 21.

A year that will increase the crumb of taking advantage of Uncle's complexes.

Of course such reforms require political will, as any change to social security laws will receive popular resistance because it is inconsistent with the interest.

The citizen, therefore, must change gradually rather than at once in order to be accepted by all actors.

It is obvious that these reforms will fill the current deficit at the pension fund level, as they aim to improve the Fund's financial pricing by making the balance.

Achieves a surplus of income over expenditure, but the question is: will these reforms have negative economic and social implications?

Recommendations

We therefore propose the following recommendations in order to improve the effectiveness of the pension system:

– Raising the participation rate to be offset by a new pension programme supplementary to the distribution system sothat the worker does not feel that he contributes to the contributions imposed on

him without payment or a fine. This new programme is usually in the capitalization column where the Fund's income is invested and earnings are obtained after being employed in the capital market.
– Reducing the rate of accreditation of insurance years is unfair to the worker, since it will reduce his pension and thus his well–being. It is therefore best offset by the transfer of part of the burden to the supplementary pension system of social mutual benefits to maintain the same level of consumption of retirees.
– Improving the effectiveness of the financialmarket in order to obtain a return on the employment of the Fund's contributions.
– Transforming from a renteconomy based on petroleum incomes, to a productive economy that creates added value and increases national income.
– Review the effectiveness of the social protection system, especially subsidies that go beyond their real destination to help the needy elderly, especially with the presence of the informal sector, where individuals earn unauthorized incomes and benefit from social benefits.
– Rationalize pension fund expenditures taking into account the expected performance and allocation objectives through the quality of social services provided to beneficiaries.

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COST MANAGEMENT RESTAURANT RESEARCH IN THE LAST FOUR DECADES: TRENDS, GAPS AND FUTURE DIRECTIONS

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1. Objectives

In many economies, the restaurant sector is a significant driver of economic growth and job creation. In 2023, the USA restaurant sector generates approximately $997 billion in sales and employed 15.5 million people (Riehl *et al.*, 2023). In the European Union, the food and beverage services sector accounts for a substantial portion of the economy, making up 80% of enterprises in the accommodation and food services sector, 78% of the workforce, and 69% of the sector's value added (Eurostat, 2024). Thus, the contributions of restaurants to economies are unquestionable, in some cases, exceeding the contributions of hotels in turnover and employment.

Despite these positive figures, the restaurant sector faces numerous challenges, including high vulnerability to economic fluctuations (Cabiedes–Miragaya, 2017), intense competition due to low entry barriers), and low margins and labor productivity (Riehl *et al.*, 2023). These issues are compounded by staffing shortages and high operational costs (Riehl *et al.*, 2023), resulting in lower survival rates for restaurants compared to other businesses (Cabiedes–Miragaya, 2017; Parsa *et al.*, 2021).

Restaurant failures have been attributed to macro factors related to the economic context, legal restrictions, changing cultural factors, and high competition as well as internal factors like a lack of financial

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resources, and inadequate planning and cost control mechanisms (Lee *et al.*, 2016). Effective cost management, which includes considering labor, utility, and occupancy costs along with capacity issues, is essential for improving profitability (Riehl *et al.*, 2023). Researchers suggest that a strategic use of cost and management information can better support restaurants in making informed decisions (Linassi *et al.*, 2016).

The relevance of the restaurant sector to national economies is reflected in the growing body of research that focuses on foodservice and restaurants management (Lee *et al.*, 2016; Dipietro, 2017), which is second only to research on the hotel sector (Rodríguez–López *et al.*, 2019). Although some researchers have recognized the importance of the restaurant sector and the scarce, although growing, literature in this field (Okumus *et al.*, 2018), few studies have made a systematic analysis of academic production and fewer still have used a business management approach.

This study aims to contribute to fill the research gap in cost management practices in the hospitality research field in general and, in particular, in restaurants. We develop a systematic analysis of the cost and management accounting research in the restaurant sector over a period of 40 years (1983 to 2022 inclusive).

Keywords: bibliometric, restaurant sector, cost accounting, management accounting.

2. Theoretical background

A bibliometric analysis evaluates and analyzes scientific production from an objective and quantitative perspective with the aim of providing useful information for researchers. Bibliometrics evaluate research performance, publications by author and institution, and their social, intellectual, or conceptual structure through science mapping techniques. The methodology applied in this research follows a co–word analysis. This is a content analysis method that allows building the conceptual structure of a domain based on words (representing topics) included in the documents.

The basic idea behind this technique is that two topics appearing simultaneously in a document means that those topics are related. Zupic and Čater (2015) highlight that this bibliometric technique is the only one that uses the actual contents of documents to construct a similarity measure. Other methods, like co–citation or bibliographic coupling, are based on the use of cited references, and the co–author technique is based on authorship information. A co–word analysis results in a map that contains all the topics in a scientific domain and the relationships between them.

3. Methodology

One of the most notably criticized aspects of co–word analysis is the source of the topics. Researchers often adopt the keywords suggested by authors as representative words for the topics in the article, which presents limitations as keywords can have different meanings and belong to different contexts (theoretical, observational, and methodological). To avoid keyword limitations, we developed a list of categories, and a list of topics within each of those categories. The process is explained below, including our criteria for selecting documents, codifying the topics, and building the network using an algorithm.

Documents were gathered from two curated databases: Web of Science (WOS) and Scopus. Both incorporate sophisticated search engines that allow the user to establish limits based on, for example, the type of document, the year of publication or the source. Moreover, they allow the bibliographic information of the documents to be downloaded, which eases the procedures in the following phases. The search protocol for this study is depicted in Table 1. Initially, WOS and Scopus were searched for the word 'restaurant' in combination with each of three terms: cost, model, and management accounting. After this preliminary search, several new keywords were added. The final selection of keywords used in the query was derived from an iterative process. Thus, we incorporated keywords like firm, business, menu, price, profit, plan, engineering, capacity, product, personn*, labor, manufactur*, food, service, purchase, supply, budget, operating expenses, and USALI.

Table 1. Choice of dataset. SOURCE: Own elaboration.

Data Bases:	WoS	Scopus	Google Scholar
Time period:	All year until February 2022		
Search terms:	Restaurant* AND (cost OR model OR accounting management OR firm OR business OR menu OR pric* OR profit OR plan* OR engineering OR capacit* OR product* OR personn* OR labor OR manufactur* OR food OR service OR purchase OR supply OR budget OR operating expenses OR USALI)		Snowball (WOS y Scopus)
Total number of documents:	135	280	1,264
Sources:	Academic journals, Books and Scholarly conferences		
Exclusion criteria:	Not related with the topic Duplicated No English language		
Final dataset (number of documents):	93		

The number of resulting documents following this approach was low. Therefore, the search was extended to incorporate documents extracted from Google Scholar, which is recognized as the most comprehensive bibliographic database. For each of the documents resulting from the search, the full text was examined. The cited references were analyzed to incorporate those that addressed our aimed topic. At the end of the process, our database contained 93 documents, distributed from 1983 till 2022, and published in 60 different sources.

Once we had a final database of documents, the next step was to assign a list of topics to each document. To do this, we built a scheme with the main topics grouped into categories (see table 2). The categories were defined as subjects extensively researched in the literature and that analyzed the level of adoption of cost and management accounting practices, from cost determination to more sophisticated techniques (Pavlatos and Kostakis 2015; Uyar and Kuzey 2016).

Table 2. Codification categories and topics. SOURCE: Own elaboration.

1.Costing systems and their attributes		
Costing systems:	Absorption costing	
	Variable costing	
	USAR	
	ABC	
	TDABC	
Cost classification:	Costs by nature:	Food Cost
		Labor Cost
		Other operating Cost
	Behavioral costing (fixed and variable costs)	
	Direct cost/Indirect cost	
	Manufacturing/non–manufacturing	
Cost Objects:	Product costing	
	Service costing/Experience costing	
	Customer costing	
	Departmental costing	
	Activity cost	
Overhead rates:	Cost drivers	
	Time driver	
	Plant driver	
	Departmental	

2.Traditional MAPs (management accounting practices)	
Planning and Budgeting:	Standard costing
	Budgeting
	Variance analysis
Cost information for decision making:	Product decisions (Menu Engineering)
	Customer decisions (CPA)
	Price decisions
	CVP analysis
	Use of capacity
	Activity decisions
	Capital investing
Performance evaluation:	Financial measures: Contribution margin
	Financial measures: Efficiency
	Financial measures: Financial ratios
	Financial measures: Margin
	Financial measures: Revenue
	Non–financial measures related to customers
	Non–financial measures related to employees
Strategic analysis:	Long range forecasting
	Industry analysis
	Analysis of competitive position

3. Recent Management accounting practices
Benchmarking
Balanced Scorecard (BSC)
Target costing
Quality cost management
Value chain analysis
EVA, residual income

4. Other topics
Knowledge of cost management
Revenue management
Sustainability practices

4. Findings

Research on cost and management accounting in the restaurant industry is minimal during the first twenty–four years analyzed, with only one or two papers per year in this field. After 2007, the number of documents increases significantly, although not consistently, with 2007 and 2020 being the most productive years (see Figure 1)

The results of the analysis allow us to present topics extracted from the literature into four clusters represented in the strategic diagram (see Figure 2), with the size of the sphere indicating the number of documents related to the topic included in the cluster. Figure 2 provides the co–word network containing the clusters in the strategic diagram.

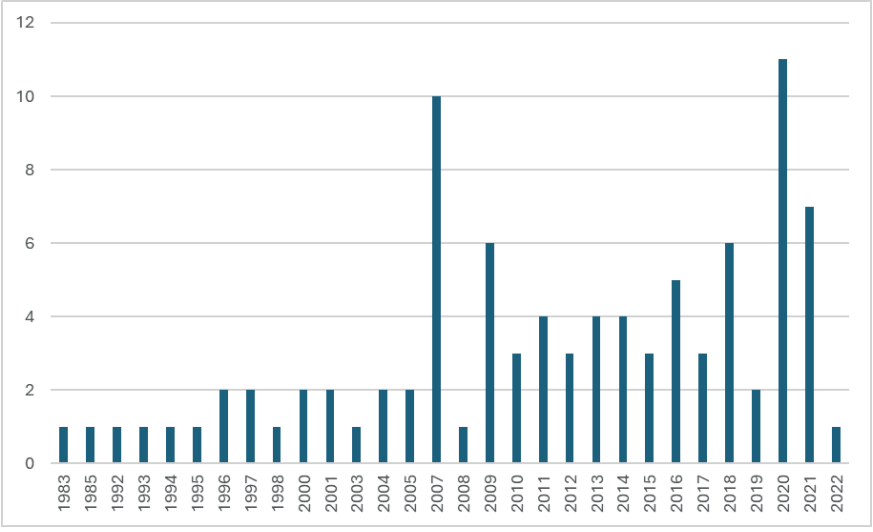


Figure 1. Document distribution by years. SOURCE: Own elaboration.

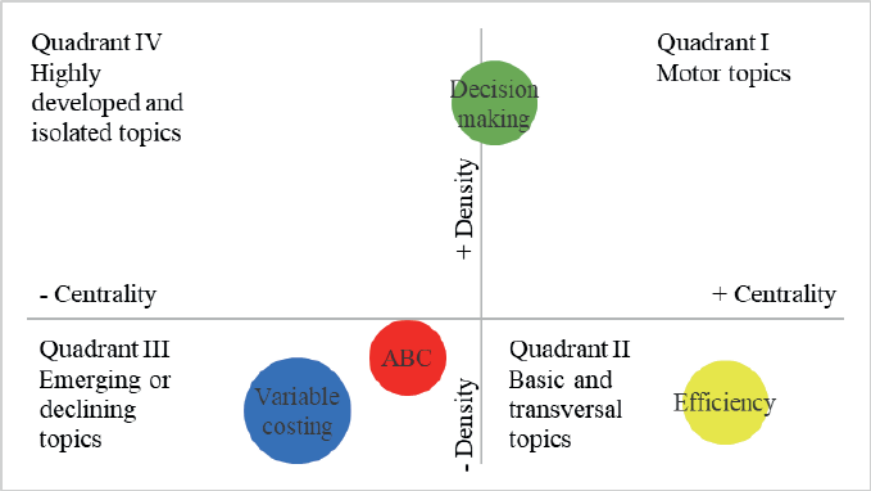


Figure 2. Strategic diagram: co–word network. SOURCE: Own elaboration.

5. Conclusions

Our results are consistent with those of earlier authors who highlighted that the topics of cost analysis, and cost planning and management in restaurants have not received the necessary attention from either the academic community or the professional world (Okumus *et al.*, 2018). Different works have analyzed different cost classifications, employed different methodologies, considered different types and sizes of restaurants, and so on; thus, the results obtained can not be generalizable.

Based on our findings, we consider that future research opportunities for the restaurant sector include considering restaurants operating in new geographical areas, analyzing the complete offer of a restaurant menu increasing sample sizes, and extending the data collection period to reflect different consumption moments.

This study has implications for researchers interested in developing a better understanding of the adoption of management accounting systems in the food service industry. Questions such as determining what practices are adopted, what information businesses need, how to encourage the adoption of good practices, what barriers the businesses face, and what training is needed, all highlight the reality of the sector and how under researched it has been to date.

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LEVERAGING SME INTERNATIONALIZATION STRATEGIES TO FOSTER INNOVATION AND COMPETITIVENESS IN ITALIAN HEALTHCARE ORGANIZATIONS

FIORELLA PIA SALVATORE[1], LIOR NAAMATI–SCHNEIDER[2]

1. Objectives

In an increasingly globalized world and considering the actual "New Normal" period, healthcare organizations face mounting pressure to innovate on an international scale. Italian healthcare organizations (IHOs), known for their high standards of care, often encounter challenges in adapting to rapidly changing global dynamics, including technological advancements, patient expectations, and international competition.

Lessons from the internationalization strategies of small and medium–sized enterprises (SMEs) offer a promising framework for overcoming these challenges. SMEs excel in navigating foreign markets through agility, innovation, and strategic collaborations, enabling them to compete effectively despite limited resources. Applying these strategies to IHOs may open new opportunities for global partnerships, technological adoption, and specialized service delivery.

The main objective of this work is to analyze how the SMEs internationalization strategies can be applied to IHOs to enhance their global competitiveness, innovation, and service delivery, paying particular attention on how to translate these strategies into actionable insights for IHOs, focusing on creating international partnerships, embracing digital technologies, and identifying areas of specialized expertise.

Keywords: healthcare organization, SME, internationalization strategies, innovation, strategic process.

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2. Theoretical background

The globalized nature of contemporary healthcare system necessitates innovation and competitiveness, particularly for IHOs. Drawing lessons from SMEs internationalization strategies can provide IHOs with a framework for navigating global markets, fostering innovation, and enhancing service delivery. In particular, the theoretical foundation for applying these strategies in the healthcare context is rooted in the resource–based view (RBV) and dynamic capabilities frameworks. RBV emphasizes that organizations gain competitive advantage by leveraging unique, valuable, and non–replicable internal resources (Barney, 1991). For SMEs, these resources often include niche knowledge, innovation, and networks, enabling them to thrive in global markets despite limited scale.

Similarly, IHOs can utilize their high–quality care standards, specialized expertise, and patient–centric approaches as their strategic resources. Dynamic capabilities theory extends this by focusing on how organizations adapt to changing external environments through innovation, resource reconfiguration, and strategic agility (Teece, 2018).

As conceptualized by Teece, the theory emphasizes an organization's ability to adapt to complex and rapidly changing environments by reconfiguring internal resources, fostering innovation, and enhancing learning mechanisms. In IHOs, this framework underscores the need to cultivate flexibility within traditionally rigid structures. IHOs, in a public context, can apply dynamic capabilities by integrating digital health technologies, such as AI and telemedicine, restructuring operational workflows to enhance efficiency, and fostering international research collaborations. These practices could allow IHOs to respond to global healthcare challenges and improve service delivery despite bureaucratic constraints (Eisenhardt and Martin, 2000; Teece, 2018; Helfat *et al.*, 2007).

Furthermore, SMEs excel by rapidly responding to market demands, leveraging digital technologies, and building international partnerships. These practices are crucial for IHOs, particularly in embracing telemedicine and AI–driven diagnostics.

To this end, recent literature highlights how digital transformation and strategic networking underpin SME success in internationalization. SMEs use technology to scale operations, enhance collaboration, and optimize efficiency (Au–Yong–Oliveira *et al.*, 2024). IHOs can apply these approaches by forming cross–border partnerships, adopting digital healthcare systems, and concentrating on niche specializations, such as rare disease treatment or advanced surgery. These strategies not only improve service delivery but also position IHOs as leaders in global healthcare innovation.

3. Methodology

In order to reach the main aim declared, a mix of methods, literature synthesis and logical deduction, was used (Petticrew & Roberts, 2006).

Specifically, the literature synthesis methodology draws on the knowledge of scientific literature in some fields such as international trade, health systems and public administration (Cooper, 1984). In particular, concepts from studies on SME internationalization, public–private partnerships and innovation in healthcare organization have been synthesized. The approach is similar to conducting a systematic literature review, where key ideas and findings relevant to the Italian healthcare context are combined. This method is applied to discuss how internationalization strategies adopted by SMEs could impact IHOs by combining theories on SME innovation with literature on public healthcare needs.

As regards the logical deduction (Popper, 1959), it was used to apply general principles of SMEs' advantages (such as innovation and flexibility) to the specific challenges and needs of the IHOs. This involves, first, an understanding of the characteristics of SMEs from the internationalization literature and, second, an inference of how they would manifest themselves if applied within a healthcare organization. This method allowed to logically arrive at the inference that if SMEs can rapidly adapt to new markets and provide niche services, they could improve patient–centered care within the IHOs.

4. Findings

In recent years, the healthcare organization (within the public context also) has increasingly recognized the value of internationalization to foster innovation, access new markets, and enhance service quality. To this end, the internationalization strategies of SMEs have been identified as key insights for healthcare organization.

SMEs often rely on specific strategies to succeed internationally, and their characteristics allow them to effectively enter foreign markets and respond to changing demands efficiently. Literature on SME internationalization highlights several strategic approaches that may benefit IHOs. SMEs often achieve success abroad by targeting specialized segments rather than competing broadly, allowing them to offer unique value (Cavusgil & Knight, 2015). IHOs, particularly those specializing in certain medical fields (e.g., cardiology, orthopedics), could adopt this strategy to improve competitiveness internationally. By focusing on centers of excellence, Italian healthcare providers could attract international patients seeking high–quality care in specific areas.

Regarding the partnership solution, SMEs frequently engage in strategic alliances, partnerships, and joint ventures to minimize risk and maximize local expertise (Johanson & Vahlne, 2009). For IHOs, similar partnerships with international hospitals, research institutions, or technology firms could enable knowledge sharing and create pathways for international patient referrals and telemedicine services. The flexibility of SMEs enables them to respond to changing market conditions quickly. At the same way, IHOs can benefit from adopting a similar approach, with streamlined decision–making and agile structures that allow rapid adaptation to technological and regulatory shifts in international healthcare markets (Zucchella & Scabini, 2007).

The Italian healthcare system is known for high–quality care and equitable access, but it faces challenges related to bureaucracy, limited resources, and slow technological adoption. Embracing internationalization strategies like those used by SMEs may help address these challenges. For example, the IHOs should enhance specialization and differentiation, strength collaborative networks and improve the adoption of a flexible, patient–centered approach.

Specifically, IHOs should focus on building more specialized centers of excellence in areas where they already demonstrate strengths, such as oncology, neurology, or cardiac care. This focus could attract international patients and research partnerships, positioning Italy as a leader in these fields. Also, the establishment of alliances with global healthcare providers and research institutions can accelerate innovation, particularly in areas such as telemedicine. IHOs could also collaborate with international SMEs specializing in medical devices and digital health to access cutting–edge solutions that improve patient care (Rugman & Verbeke, 2004). It is noteworthy to remember that IHOs should factively shift towards a more agile patient–centered model. This may involve reducing bureaucratic constraints, improving responsiveness to patient needs, and adopting technologies that facilitate remote care and international patient management (Dunning, 2000). Indeed, the highly regulated nature of Italy's healthcare sector can inhibit internationalization efforts. Loosening regulations related to cross–border care, data sharing, and technology adoption could facilitate partnerships and enable Italian providers to offer telemedicine services to international patients (Narula & Dunning, 2010).

Thus, to overcome barriers to internationalization in IHOs, they should not only invest in digital transformation to enhance interoperability and patient management, which would allow them to compete more effectively with international providers (Knight & Liesch, 2016), but also invest in training programs to prepare staff for international patient interactions and partnerships with foreign institutions (Lu & Beamish, 2001).

To this end, the strategic process to give to the healthcare organizations the possibility to expand their operations beyond domestic borders, is based not only on the benefits' identification of SME internationalization strategies for IHOs, but also on the challenges' identification in adapting SME strategies to IHOs. These recognitions have to be translated in necessary changes in the governance of IHOs, by enhancing organizational agility, streamlining regulations and laws, promoting digital literacy and building a global mindset based on the promotion of an innovation culture through rewards for implementing international healthcare solutions.

The following figure captures the main steps useful for adapting SME internationalization strategies for IHOs (Figure 1).

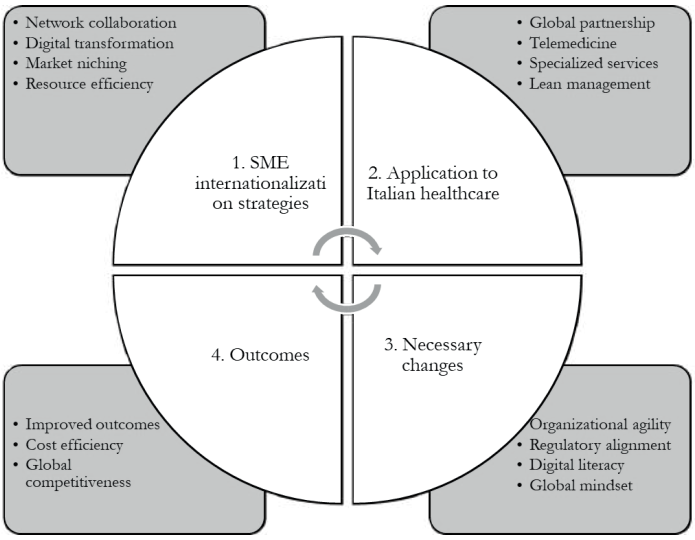


Figure 1. Adapting SME internationalization strategie for IHOs. SOURCE: Personal elaboration.

5. Conclusions

The Italian healthcare sector stands to gain significantly by adopting internationalization strategies akin to those used by SMEs. Specialization in specific medical fields, strategic partnerships, and an agile operational model can help IHOs overcome domestic limitations and tap into the global market.

In particular, by embracing network–based collaborations, healthcare providers can integrate into global ecosystems, benefiting from shared expertise, cutting–edge research, and co–developed innovations. This aligns with the findings of Rialp *et al.* (2005), who emphasize the critical role of cross–border networks in fostering competitive advantage. Furthermore, digital transformation, including telemedicine and AI–driven diagnostics, enables healthcare organizations to address resource constraints and reach underserved populations,

reflecting the transformative potential of digital tools highlighted by Mezger (2014).

Focusing on niche markets, such as geriatric care or rare diseases, allows IHOs to specialize in high–demand areas, establishing centers of excellence that attract international patients and funding. This approach mirrors the SME strategy of leveraging specific market gaps for competitive positioning (Covin & Miller, 2014). Moreover, the adoption of lean management and resource efficiency can significantly enhance operational sustainability, a priority in light of budget constraints and an aging population. Porter and Teisberg's (2006) work on value–based healthcare underscores the importance of efficiency and patient–centric models, which align well with these strategies.

Internationalization also fosters a global mindset, promoting cultural competence and enabling healthcare providers to adopt best practices from global peers. However, successful implementation necessitates structural changes, including regulatory harmonization, digital literacy training, and leadership development. As Kumar and Subramanian (2017) argue, aligning organizational practices with international standards is crucial for navigating the complexities of global markets. Overall, internationalization equips IHOs with enhanced innovation, competitiveness, and resilience, improving healthcare access and quality for domestic and international patients.

Definitively, to implement these strategies effectively, Italian healthcare organizations must invest and, by doing so, they will be better equipped to expand their reach and position themselves as leaders in the global healthcare arena.

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THE TELEVISIT SERVICE IN THE HEALTHCARE ORGANIZATION: A BUSINESS EFFICIENCY ANALYSIS

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1. Objectives

Televisit services, a component of telemedicine, have emerged as a transformative force in healthcare delivery, driven by advancements in digital technology and the need for more accessible, patient–centered care. These services allow patients to interact with healthcare providers through virtual platforms, enabling consultations, follow–ups, and chronic disease management without the need for in–person visits. The COVID–19 pandemic significantly accelerated the adoption of televisit services, highlighting their potential to mitigate barriers to care such as geographic limitations, mobility constraints, and time inefficiencies (Omboni *et al.*, 2022; Luo *et al.*, 2021).

Recent literature underscores the efficiency of televisit services in improving healthcare accessibility and operational workflows while reducing costs for both providers and patients. For instance, studies have shown that televisit services enhance resource utilization by reducing no–show rates and optimizing provider schedules (Fattirolli *et al.*, 2021; Costanza and Calzi, 2024). Moreover, they facilitate continuous patient engagement, particularly for those with chronic conditions, leading to improved health outcomes and patient satisfaction (Salman *et al.*, 2024). However, the effectiveness of televisit services is not uniform and depends on factors such as technological infrastructure, patient digital literacy, and regulatory environments.

This analysis evaluates the efficiency of a healthcare organization's televisit service by examining key performance indicators, patient

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outcomes, and operational metrics, informed by recent scientific findings. Such an analysis is critical to understanding how televisit services can be optimized to meet the demands of modern healthcare delivery while addressing challenges such as equity, data security, and integration with traditional care models.

By leveraging recent evidence, this paper aims to provide actionable insights into the efficiency and sustainability of televisit services.

Keywords: healthcare organization, telemedicine, business efficiency analysis, innovation.

2. Theoretical background

Televisit services have emerged as a transformative approach to healthcare delivery, significantly reshaping traditional paradigms of patient care. Grounded in the principles of telemedicine and digital health innovation, these services leverage information and communication technologies (ICTs) to facilitate remote interactions between healthcare providers and patients (Gagnon *et al.*, 2012; Berg, 2004). This theoretical foundation underscores three core dimensions, key performance indicators (KPIs), patient outcomes, and operational metrics, that collectively measure the efficiency and effectiveness of televisit systems.

KPI frameworks are rooted in organizational performance management theories, emphasizing metrics that reflect service quality, accessibility, and provider productivity (Uddin *et al.*, 2021; Hristov *et al.*, 2022). For televisit services, indicators such as patient volume, appointment adherence rates, and the optimization of provider schedules are critical. Theoretical models such as Donabedian's framework of healthcare quality — structure, process, and outcomes — support the evaluation of these indicators to assess both system inputs and service delivery efficiency (Tossaint–Schoenmakers *et al.*, 2021).

The impact of televisit services on patient outcomes aligns with patient–centered care theories, which prioritize health improvement, satisfaction, and equitable access. Studies informed by Andersen's Behavioral Model of Health Services Use highlight that accessibility to care (enabled

by televisit systems) correlates strongly with improved management of chronic diseases, adherence to treatment, and reduced healthcare disparities (Ayangunna *et al.*, 2022; Huang *et al.*, 2023). The efficacy of televisits, however, depends on their ability to meet clinical needs without compromising diagnostic accuracy or therapeutic effectiveness.

Efficiency theories in healthcare organization management, particularly those related to cost–benefit analysis and lean management principles, underpin the evaluation of operational metrics. Televisit systems reduce overhead expenses, optimize resource allocation, and enable scalability in care delivery (Tai–Seale *et al.*, 2019; Testa *et al.*, 2022). The resource–based view (RBV) of organizations further explains how technological investments in infrastructure, training, and digital tools create sustainable competitive advantages for healthcare organizations.

3. Methodology

The analysis of televisit services in healthcare organizations was developed using an integrative literature review approach, combining insights from theoretical frameworks, empirical research, and current industry reports. This methodology enabled a comprehensive evaluation of the efficiency of televisit services across the three core dimensions.

To ensure a robust foundation, relevant scientific literature from peer–reviewed journals and healthcare reports was reviewed. Keywords such as "telehealth efficiency", "KPIs in telemedicine", "patient outcomes", and "operational metrics in healthcare" guided the search. Studies were selected based on their focus on digital health innovations, telehealth implementation strategies, and systemic evaluations of virtual care services.

Furthermore, frameworks such as Donabedian's model of quality assessment and the RBV theory informed the conceptual underpinnings of the analysis. The synthesis process included categorizing findings into measurable domains. This categorization facilitated the identification of trends, gaps, and actionable insights.

The method used has allowed to generate recommendations, grounded in the reviewed evidence, ensured that the analysis not only

assessed existing practices but also provided forward–looking strategies for optimizing televisit services in diverse healthcare settings.

4. Findings

The efficiency of televisit services in healthcare organizations can be assessed by examining KPIs, patient outcomes, and operational metrics. These dimensions provide a comprehensive understanding of how virtual care integrates into existing systems and impacts both healthcare providers and patients.

As regards the KPIs, can be identified three main KPIs. Firstly, "Patient Volume and Accessibility". Televisits have demonstrated a substantial increase in patient access, particularly in rural and underserved areas. A study by Edmiston *et al.* (2022) estimates that extending telehealth services uniformly could convert more than 50 million in–person visits to virtual ones annually, reducing wait times and geographic barriers. Secondly, "Appointment Attendance Rates". Televisit services significantly reduce no–show rates compared to in–person visits. This is attributed to the convenience of remote access, eliminating travel constraints, and offering flexible scheduling options. Lastly, "Provider Productivity". Providers report improved efficiency through optimized scheduling and reduced administrative burdens in televisit systems. Automation, such as pre–visit check–ins and AI–driven triage, supports a higher patient throughput without compromising care quality (Cusack *et al.*, 2007).

Instead, for patient outcomes, the chronic disease management and, in general, for chronic conditions like diabetes and hypertension, televisits have been associated with improved adherence to treatment plans. Regular follow–ups and continuous monitoring via remote tools enhance long–term outcomes. In this context, patient satisfaction is a critical metric. Studies show that televisits improve satisfaction by providing timely care, privacy, and the ability to consult specialists irrespective of their location. Nonetheless, while televisits are effective for many conditions, they are not suitable for all. Clinical guidelines highlight their limitations in addressing acute or complex conditions requiring physical examination.

Concerning the operational metrics, should be considered that healthcare organizations report reduced overhead costs with televisits by generating cost efficiency. Savings stem from decreased facility usage, such as examination rooms and support staff for in–person visits. Additionally, patients save on travel and time. Also, the efficiency of televisit services is highly dependent on robust technological infrastructure. Organizations that invest in secure and user–friendly platforms benefit from smoother integration and higher adoption rates.

Despite its advantages, the efficiency of televisit services varies based on patient digital literacy, internet access, and regional disparities. Addressing these inequities is essential to maximize the benefits.

The following figure is a flowchart representing the analysis of the efficiency of televisit services in healthcare organizations (Figure 1).

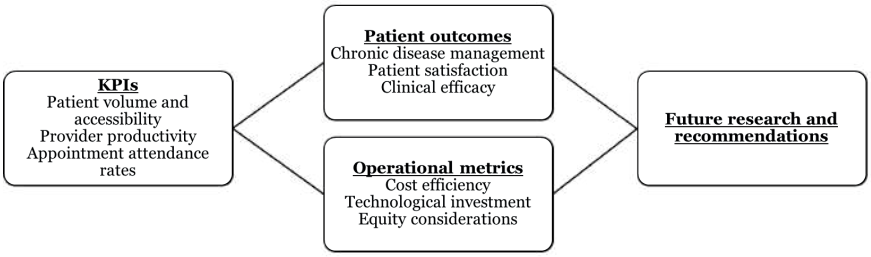


Figure 1. Efficiency of televisit services in healthcare organizations. SOURCE: Personal elaboration.

5. Conclusions

Optimizing televisit services within healthcare organizations requires a multifaceted approach to address technical, operational, and patient–centered challenges effectively (Savoldelli *et al.*, 2024; Marsilio and Mastrodascio, 2024). Investments in artificial intelligence (AI) and automation are pivotal, as AI–powered tools can streamline processes such as patient triage, appointment scheduling, and follow–up management, thereby reducing the workload on healthcare providers and enhancing system efficiency (Healthcare Dive, 2023). Simultaneously,

training and support programs are essential to ensure that healthcare professionals and patients can effectively utilize these technologies.

These initiatives not only improve digital literacy but also foster greater acceptance and comfort with virtual care modalities among diverse demographics (McKinsey & Company, 2023). Furthermore, the expansion of infrastructure is critical for equitable access to televisit services. Policymakers and healthcare organizations must prioritize the provision of high–speed internet in underserved areas, ensuring that connectivity issues do not exacerbate existing healthcare disparities (Mkuu, 2023). Finally, continuous monitoring and evaluation of televisit services through data analytics can help organizations identify performance gaps and areas for improvement. This data–driven approach allows for iterative refinements, ensuring that televisit platforms remain adaptive to evolving healthcare needs while delivering high–quality, efficient care (Advisory Board, 2023).

Such strategies, implemented cohesively, can significantly enhance the efficacy and sustainability of televisit systems in modern healthcare organization.

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ORGANIZATIONAL FACTORS TO IMPROVE DIGITAL CAPABILITIES THROUGH THE MITIGATION OF KNOWLEDGE HIDING

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1. Introduction

Companies must digitize to remain competitive in today's era (Liu, Cui, Han & Zhang, 2024). Digital capabilities range from basic digital literacy to deep understanding of emerging technologies such as automation, data analytics, and artificial intelligence (Liu *et al.*, 2024; Velázquez, Domínguez & Vallejo, 2015; Wang & Li, 2023). According to Formoso, Pinho, & Oliveira, 2023, organizations that effectively integrate technology into their operations and strategies can improve efficiency and decision–making. More specifically, digital capabilities are essential for survival and growth in an increasingly technological and connected world (Liu *et al.*, 2024).

Digital capabilities have been presented with great relevance in today's business world (Proksch *et al.*, 2024; Zhe & Hamid, 2021). These capabilities have become more prevalent in organizations that want to persevere in being competitive and adjust to a constantly changing environment (Zheng, 2024). Digital capabilities in companies entail the integration of digital technology in all areas of business. This goes beyond just acquiring digital tools; it is primarily about changing the way an organization operates and adds value to its customers (Liu *et al.*, 2024; Velázquez, Domínguez & Vallejo, 2015).

Previous research (Donate & Guadamillas, 2011; Sánchez–Ramírez *et al.*, 2022) provided a comprehensive view on how digitization and knowledge management were intertwined to drive innovation capabilities and business success. Knowledge has become one of the main assets

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of companies, due to the fact that its management generates wealth and creates added value, facilitating the achievement of competitive advantages and a favorable positioning in the market (Lahaba & Santos, 2001; Robledo, Arán & Pérez–Aranda, 2015). With this, research on the importance of attending to the intangible assets of companies, especially those that contribute economic value, has acquired greater relevance in recent years (Álvarez & Caballero, 2010; Guadamillas & Donate, 2008; Pernelle, Carron, Elkadiri, Bissay & Marty, 2014).

Knowledge management is key to improving business process efficiency and determining competitive advantage (Scarbrough & Swan, 2001; Wang & Hou, 2015). However, Chen, Chiang & Storey (2012), Eggert & Alberts (2020) and Wang and Wang (2008) insist on the importance of data analysis as a fundamental piece of knowledge management, since it not only helps to share knowledge, but also allows knowledge to be extended.

Likewise, knowledge has the qualities of informing, revealing, showing and proposing decisions to act favorably (Lahaba & Santos, 2001; Pernelle *et al.*, 2014). The knowledge available to each of the people in a company and its compilation not only creates value for the organization, but also in the new digital and information environment, constitutes the asset that determines the difference in the market (Robledo *et al.*, 2015). Therefore, the knowledge of a company belongs to a new capital of the organization. If properly used, it can become a powerful tool to achieve maximum business performance (Álvarez & Caballero, 2010; Balbón & Fernández, 2006). Proper knowledge management will allow a high degree of consolidation within the company, benefiting the organization's own culture (Robledo *et al.*, 2015).

In recent years, the approach to KM in enterprises has emerged as a central theoretical perspective to address adaptation to technological change (Mahmood, Khan & Khan, 2019; Sirisukha, 2020). Thus, digitization refers to the adoption and exploitation of digital technologies to support activities such as knowledge sharing, transfer, mapping, storage, application, protection, creation and codification. In this sense, digital capabilities, such as innovation and digital skills, are fundamental to the success of digital transformation in organizations (Robledo *et al.*, 2015).

Innovation reflects an essential driver for the growth and sustainability of organizations in a world of constant change (Iacovoiu, 2016; Muñoz & Espinosa, 2018; Nicolaides, 2014). Companies that prioritize innovation present a higher probability of achieving sustainable growth over time. The ability to adapt quickly to volatile market demands, as well as to create cutting–edge and valuable ideas, is essential to remain competitive (Dani & Gandhi, 2022; Muñoz & Espinosa, 2018). Likewise, leadership plays a crucial role in fostering a culture of innovation. Visionary leaders inspire their teams to think creatively, take risks and constantly seek opportunities for improvement (Coulson–Thomas, 2020; Groves, 2006). Organizations that can innovate have a competitive advantage over those that do not. The ability to develop new products, processes or business models allows them to differentiate themselves and offer unique solutions to customers (Dani & Gandhi, 2022; Iacovoiu, 2016).

Knowledge–oriented leadership (KOL) is useful for creating an organizational culture that values and promotes the acquisition, creation and transfer of knowledge (González–Mohíno, Donate, Guadamillas & Cabeza–Ramírez, 2024). Leaders who implement this approach not only have technical skills, but can also inspire and motivate their teams (Dani & Gandhi, 2022). These leaders create a favorable environment for innovation by fostering communication and teamwork (Rehman & Iqbal, 2020; Sadeghi & Rad, 2018). For example, a CEO who encourages his or her employees to share their knowledge and experiences can foster the creation of disruptive solutions (Rehman & Iqbal, 2020). In addition, KOL is also related to an organization's innovativeness. According to Donate and Sánchez de Pablo (2015) and Donate, González–Mohíno, Appio and Bernhard (2022), KOL has a significant impact on innovation. Leaders create the foundation for the successful introduction of new products, processes and business models by promoting experimentation, creativity and adaptability (Groves, 2006).

As mentioned earlier, human resource management (HRM) practices are critical to creating an environment conducive to innovation. These practices can include employee selection, training, performance evaluation, and development (Boon, Den Hartog & Lepak, 2019;

Wei, Liu, Zhang & Chiu, 2008). In addition, compensation and benefits policies can affect talent retention and employee motivation to innovate (Rasool, Samma, Wang, Zhao & Zhang, 2019; Wei *et al.*, 2008). Organizations that use human resource practices that focus on individual development and cohesive team building are more likely to maximize their innovation capabilities (Rasool *et al.*, 2019; Tortia, Sacchetti & Lopez–Arceiz, 2022).

HRM practices may influence employees' knowledge hiding behavior (Dodokh, 2020; González–Mohíno *et al.*, 2024), and the relationship may be mediated by factors such as innovation and characteristics of the organizational environment (Donate, Peña & Sánchez de Pablo, 2016). These findings provide a better understanding of how human resource practices affect workplace behavior (Kehoe & Wright, 2013) and may be useful for organizations in their management of knowledge as a strategic resource (Donate & Guadamillas, 2011; Guadamillas, 2001; Ode & Ayavoo, 2020).

2. Objectives

Therefore, considering all the premises, this study focuses on emphasizing the importance of a balanced knowledge–oriented leadership approach and providing guidance to companies to improve their organizational strategies. In this sense, the main objective of this research is to explore the effect of knowledge–oriented leadership and human resource practices on innovation capabilities. In doing so, this paper sets the following specific objectives to be addressed: (1) to study the impact of knowledge–oriented leadership on knowledge hiding; (2) to analyze how human resource management practices influence knowledge hiding; (3) to analyze the relationship between knowledge–based culture and knowledge hiding in organizations, and how this relationship influences knowledge–sharing behavior and organizational performance; (4) to examine the impact of knowledge hiding on digital capabilities; and, finally, (5) to analyze how digital capabilities influence firm's innovation capabilities.

In pursuing the research objectives, an important practical implication is envisaged. The aim is to provide tangible evidence of the linkages between knowledge–oriented leadership, human resource management practices and innovation capabilities; with the joint aim of achieving strategic objectives to drive innovation capabilities and business success (Donate & Guadamillas, 2011; Sánchez–Ramírez *et al.*, 2022), as well as improved value creation and environmental sustainability.

Keywords: knowledge hiding, knowledge–oriented leadership, human resource management practices, innovation capabilities, digital capabilities.

3. Theoretical background and hypotheses

Currently, research on KH and KOL has made significant progress. However, there are still areas that require further exploration. Both KOL and KH are fundamental concepts within the organizational context (Donate & Sánchez de Pablo, 2015; Wang & Noe, 2010). The interaction between both concepts is complex and can manifest in various ways. According to Xia, Yan, Zhang, and Chen (2019), organizations promote employees' psychological ownership, particularly in the collective identity that encourages them to view knowledge as "ours". Additionally, Usman, Ali, Soetan, Ayoko and Berber (2024) seek to explore the servant leadership perspective: understanding how and when service–oriented leadership influences employees' knowledge hiding behaviors.

However, the research by González–Mohíno *et al.* (2024) and Nguyen, Malik, and Budhwar (2022) will reveal the true importance of this relationship. In the former, it is demonstrated that, within the context of organizational crisis, knowledge–oriented leadership can moderate the relationship between antecedents of knowledge hiding and job performance. In the latter, knowledge–oriented leadership contributes to improved coordination and reduced conflicts in work relationships, subsequently positively affecting the organization's innovation capabil-

ities (Mera Macías & Alonso, 2019). Furthermore, studies have revealed a curvilinear correlation between KOL and KH (Wang & Noe, 2010). In other words, employees tend to conceal more information when leadership is at a moderate level. To this end, the first hypothesis of this research work can be formulated as follows:

H1: Knowledge–oriented leadership reduces the negative effects of knowledge hiding.

In the field of human resource management, there is a growing interest in understanding how HRM practices impact employee behavior within the realm of human resource management (Donate & Guadamillas, 2015). Consistent with the aforementioned, one of the relevant topics is the relationship between HRM practices and KH. One research paper has examined this relationship in the telecommunications and information technology sector in Jordan (Dodokh, 2020; Sinha, Surabhi & Kalyan, 2020). Other investigations (Amin & Rubel, 2020; Iqbal, Litvaj, Drbúl & Rasheed, 2023; Oubrich, Hakmaoui, Benhayoun, Söilen & Abdulkader, 2021) have been conducted on reducing knowledge hiding behavior in terms of recognition, fair rewards, skill development, and information exchange. In addition, it should be noted that employees with higher education tend to hide more information than their less educated counterparts (Dodokh, 2020).

Additionally, Donate and Sánchez de Pablo (2015) emphasize the importance of KOL as a key facilitator for the effective implementation of knowledge management practices and, ultimately, for driving innovation within organizations. Furthermore, another study (Martínez–del–Río, Céspedes–Lorente & Pérez–Vall, 2013) examined the interaction between high–performance HRM, innovation, and financial performance in geographical clusters. It has been observed that innovation plays an active role in the interaction between human resource areas and performance. However, the relationship between KH and HRM practices is a relevant area of research deserving greater attention in academic and business literature. Thus, the second research hypothesis can be formulated as follows:

H2: Human resource management practices reduces the negative effects of knowledge hiding.

The relationship between Knowledge–based culture and Knowledge Hiding is a topic of interest in knowledge management and organizational psychology (Ladan, Nordin & Belal, 2017). Knowledge–based culture refers to an organizational environment that values, promotes and facilitates the creation, sharing and utilization of knowledge. This type of culture fosters collaboration, innovation and continuous learning (Oubrich *et al.*, 2021; Schmitz, Rebelo, Gracia & Tomás, 2014).

Regarding the impact of Knowledge–based culture, an organizational culture that promotes knowledge sharing can significantly reduce knowledge hiding (Khaksar, Chu, Rozario & Slade, 2023). When employees perceive that sharing information is valued and rewarded, they are more willing to do so (Rodriguez–Ponce, Pedraja–Rejas, Munoz–Fritis & Araneda–Guirriman, 2022; Schmitz *et al.*, 2014). Thus, trust among employees and the perception of organizational justice are key factors that can influence this relationship. In an environment where trust is high and practices are fair, employees are less likely to withhold knowledge (Rebelo & Duarte, 2011; Schmitz *et al.*, 2014).

Several authors (Anand, Centobelli & Cerchione, 2020; Marulanda, Lopez & Lopez, 2016; Tian, Mao, Zhou & Cao, 2021) have shown that organizations with a strong knowledge culture tend to have lower levels of knowledge hiding. For example, a study conducted in Portuguese companies found that an organizational learning culture was positively related to effective knowledge management practices (Schmitz *et al.*, 2014). It will be crucial to favor the technology sector and bring innovative ideas that increase the stability and profitability of companies (Vukotić *et al.*, 2017). Thus, based on the above, the third hypothesis is formulated:

H3: Knowledge–based culture reduces the negative effects of knowledge hiding.

Digital capabilities relate to an organization's ability to leverage digital technology effectively (He, Jiang, Xu, & Shen, 2021). It refers to

technical skills, use of digital tools, versatility and the ability to transform data into valuable information (Chatterjee, Chaudhuri, Thrassou & Vrontis, 2021). Organizations that present strong digital capabilities could favor their efficiency, dynamism and competitiveness (Chen *et al.*, 2022; Selvi *et al.*, 2023).

The relationship between knowledge hiding and digital capabilities is a relevant topic in organizational research (Li *et al.*, 2021). On the one hand, knowledge hiding refers to behavior in which employees withhold or avoid sharing valuable information with peers or superiors (Donate *et al.*, 2022). In addition, it can manifest itself in a variety of ways, such as withholding ideas, experiences, or skills. Thus, hidden knowledge can negatively affect innovation, collaboration and organizational performance (Chen, Luo, Chen & Guo, 2022; Selvi, Rajan & Geetha, 2023).

A review of the literature shows a relationship from a variety of approaches. Knowledge hiding can negatively affect digital capabilities by hindering knowledge transfer and digital collaboration; whereas an organization with good digital capabilities might be better equipped to detect and address knowledge hiding (Donate *et al.*, 2022; Chatterjee *et al.*, 2021).

Several researches (Bari, Abrar, Shaheen, Bashir & Fanchen, 2019; Fong, Men, Luo & Jia, 2018; Gagné *et al.*, 2019; Oubrich *et al.*, 2021) show that knowledge hiding can affect digital capabilities and innovation in different organizational contexts. Thus, effective knowledge management is crucial to drive digital transformation and team success. Furthermore, Bari *et al.* (2019) explored how different knowledge hiding factors have a negative relationship with team creativity.

The relationship between KH and digital capabilities is an interesting area of research to understand how knowledge management practices affect digital transformation in organizations. Therefore, more research is needed on the relationship between the two variables. For all these reasons, the fourth hypothesis of this paper posits:

H4: Reducing knowledge hiding positively influences digital capabilities development

A recent study (Liu *et al.*, 2024) investigated the impact of digital capabilities on business model innovation. It emphasizes the crucial mediating role of dynamic capabilities, which include perception, acquisition, and resource reconfiguration, in translating digital strengths into innovative business models. Furthermore, it highlights how organizational inertia positively moderates the relationship between digital capabilities and business model innovation (Liu *et al.*, 2024; Quintero, Garzón & Escobar, 2022; Wang, Lin, Chen, Lyulyov & Pimonenko, 2023).

Digital capabilities and innovation capabilities could be closely related in the business context (Sinha, Surabhi & Kalyan, 2020). Reviewing the literature, there is a positive correlation between the synergy of digital capabilities and technological innovation capabilities with digital innovation in firms (Heredia *et al.*, 2022; Wang & Li, 2023; Zhang & Meng, 2023). Likewise, digital capabilities are critical for adaptation and effective competition in changing business environments (Peiyao & Benrui, 2024; Velázquez, Domínguez & Vallejo, 2015; Wang & Li, 2023).

On the other hand, social capital will also play a positive moderating role in the impact of these two synergistic influences on digital innovation (Lyu, Peng, Yang, Li & Gu, 2022). Thus, both capabilities could be essential for innovation and competitive advantage in a digital environment (Heredia *et al.*, 2022). Thus, based on the above, the fifth hypothesis is formulated:

H5: Digital capabilities have a positive impact on innovation capabilities.

Figure 1 depicts the pattern of relationships between the variables that bring together different hypotheses, making up the proposed research model.

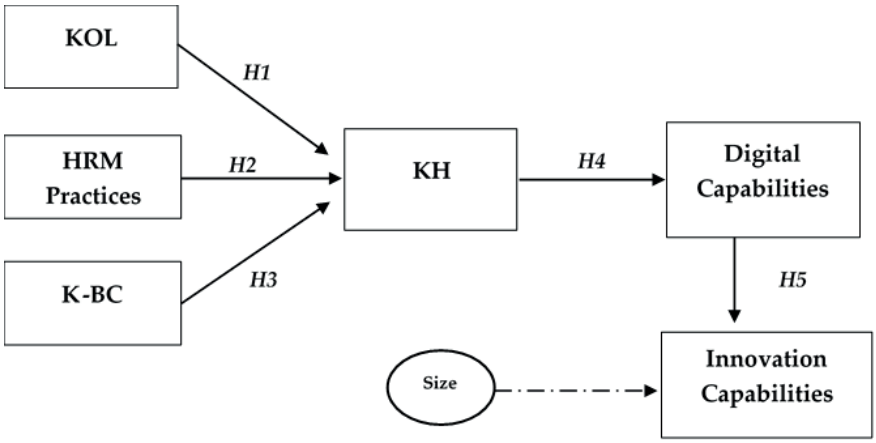


Figure 1. Proposed research model. SOURCE: Own elaboration.

4. Research methodology

First, the information technology sector is an important part of the knowledge economy of the 21st century (Mera Macías & Alonso, 2019). This industry mainly includes IT services, e–commerce, software and hard–ware products, etc. The industry also helps build the infrastructure for information storage, processing, and exchange for critical business operations (Sinha, Surabhi & Kalyan, 2020).

However, the present research is intended to be directed towards the electronics and components related sectors, among others (Kannan and Garad, 2021; Porcelli, 2020). The electronics industry is central to global technological and economic development, as it drives significant advances in diverse areas such as computing, communications, medicine, energy and automotive. This sector not only facilitates the creation of innovative devices such as smartphones and computers, but also improves the efficiency and functionality of industrial and consumer systems (Freitas, Maçada & Brinkhues, 2017).

In addition, industrial electronics enables the automation and optimization of production processes, resulting in increased competitiveness and cost reduction for companies (Kannan & Garad, 2021). The constant evolution of electronics technology also poses challenges in

terms of sustainability and professional training, underscoring the need for continuous updating in the sector (Porcelli, 2020).

5. Discussion

This paper aims to provide a comprehensive foundation on which to base future research efforts to assess the ways in which firms should address the dynamics of knowledge hiding and its effects on knowledge–oriented leadership, human resource management practices, and digital capabilities.

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WHICH LABOUR INDICATORS AFFECT EUROPEANS' HAPPINESS? THE ROLE OF PUBLIC POLICY FOR MANAGEMENT

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1. Objectives

Happiness is a universal aspiration for all humans, and it has been a subject of study for centuries. Thus, determining which factors contribute to achieving it — at least, to some extent — is a well–developed body of research among many sciences from a multidisciplinary approach. That includes economics and the study of the labour market, which play a critical role in shaping life satisfaction, especially in Europe, where welfare systems and employment policies are deeply intertwined with individual well–being.

The principal aim of this study is to analyses how specific labour indicators, such as income, net pay, decision power and contracted hours affect happiness, together with control variables. Moreover, it examines how public policy can mediate these effects, providing actionable insights for management practices and governance.

Keywords: labour conditions, happiness, public management, public policy, satisfaction.

2. Theoretical background

Modern societies — particularly, Western ones — are based on certain basic factors that are common among them and shape individuals' happiness. These social and economic factors, representing collective economic

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needs, include but are not limited to access for all citizens to education (Dijkstra *et al*., 2020), decent housing, health, or a job with sufficient conditions to be able to pay for a minimum standard of living and to have time to develop an entire personal life; which have been related to the exercise of public policies (Layard, 2021). In this way, the exercise of public actions can influence areas that affect the material and social sphere of citizenship, such as work, so that challenges such as automation and information technologies can be oriented towards freeing people from repetitive and monotonous work, reducing the working day, increasing free time and reducing stress (Mason, 2016), or the ability of the working class to have some decision–making power (Sánchez–Cubo *et al*., 2023).

Related to this point is the role played by household income — and therefore net pay. Although it is assumed to have a secondary and subjective role in human happiness, being placed at the same level as social and family relationships, public policies in this area can contribute to the overall happiness of the individual up to a certain level since reaching a specific threshold material achievement does not improve the levels of subjective well–being revealed, especially among people with reduced desires or expectations (Jaramillo, 2016). It should also be borne in mind that individuals establish their position concerning family income in relative terms, feeling aggrieved if they earn less than others for similar jobs if they perceive that the higher earner gets it undeservedly or the degree of general empathy they feel towards others (Clark & D'Ambrosio, 2015).

This document intends to obtain the main variables that affect this subjective happiness, which include aspects such as the European region of residence, their places of origin, their sex, their social relations, their health, their age, their vision of the future, and in the field of employment, their working conditions, including their personal fulfilment, responsibility and salary. In this way, it will be possible to present a general picture of subjective happiness for European citizens, but highlighting those factors considered to be of greater relevance according to geographical criteria, age or origin, and in this way to find out those aspects that may affect their dissatisfaction with the political system.

3. Methodology

This paper has chosen to study the determination of the degree of subjective happiness expressed by European citizens, as has been done in other recent studies on social well–being (Días and Cruz, 2024) and has therefore chosen a data source that studies and is concerned with determining the influence and factors included in happiness on this continent: the European Social Survey (ESS). This transnational survey has been carried out throughout Europe since 2001 to study the evolution of the social structure, living conditions and attitudes of European citizens and thus interpret the evolution of its social and political fabric through the citizens' perceptions. It has been chosen for its proven reliability, for its capacity to provide a large and diverse sample in terms of its personal, geographical and socio–economic composition, and for the inclusion of variables that are highly relevant to the object of study of this paper, subjective happiness, which, as indicated above, ends up influencing the vision of public policies and consequently electoral behaviour.

This study employs a multinomial logistic regression model to analyse the effects of labour indicators on happiness levels. The dependent variable is "Happiness", defined categorically as "unhappy", "somehow happy" and "happy", being the neutral category the base one. Apart from the specific labour indicators, such as income, net pay, decision power and contracted hours affect happiness, control variables such as sex, region, household size or general health status are included in the study.

4. Findings

The results obtained in this study allow us to know in greater detail the effect — positive or negative — that certain variables have on the happiness of individuals. Of particular interest are those variables that can be affected by public policies and, consequently, improve the happiness of European citizens. However, it is imperative to consider a holistic view of the phenomenon of happiness and to include in the variables

those that are inherent to individuals and that, although they cannot increase their happiness through a change in the variable, they can do so indirectly through the policies mentioned above, i.e. by improving the situation of the groups that are disadvantaged in the analysis.

Focusing on the statistically significant results, it stands out the highly positive effects found for Gender, increasing the likelihood of being happy by 15.2% for women, but which seems a paradox as women claim to be happier than men but are also more likely to suffer from depression (Becchetti & Conzo, 2022), be more likely to be unhappier and live shorter lives than their male counterparts in routine jobs (Lozano and Solé–Auró, 2021). Similarly, the European region where the individuals live also impact happiness. In fact, for Eastern Europe, the odds of being unhappy are 35% higher, in line with by Djankov *et al*. (2016).

About those labour–related variables that can be affected by public policies, the results obtained quantified the statement that the lower the income, the lower the probability — 29.3% — of Happiness. Similarly, having Power of Decision at work increases the probability of Happiness by 17.4% as income increases. It is also interesting to note that neither Net Wage nor Hired Hours affect Happiness. However, the source of income — Regime — does, which decreases the likelihood of being happy by 10.2% from worker to pensioner and from pensioner to benefit recipient. A robust labour system that promotes decent working conditions, with sufficient wages to support oneself and one's family, is essential to increase the birth rate.

5. Conclusions

The findings emphasize that public policies play a critical role in shaping the subjective happiness of European citizens by addressing both material and social dimensions of well–being. Economically, the study highlights the strong relationship between income and happiness, which suggests that labour and tax policies importance at ensuring equitable income distribution and access to essential services. Public policies that promote minimum living standards, health security, and

income stability emerge as key drivers of subjective happiness. Additionally, policies facilitating work–life balance, reduced working hours, and the right to disconnect from work enhance happiness by supporting familial and social relationships, which are vital to overall well–being.

Furthermore, the study reveals that expectations, opportunities, and the ability to plan for the future significantly influence happiness. Policies that enhance professional and personal decision–making power, improve job satisfaction, boosting individual happiness. Future research may delve into the nuanced effects of such policies and their different context of application.

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MICROBREWERIES, NEOLOCALISM AND ENTREPRENEURSHIP: STATE OF THE ARTS

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1. Objectives

Beer tourism is a tourism segment whose academic interest is steadily growing recently. While the body of literature is still scarce, there is substantial research on the craft–beer scene, including breweries and microbreweries. These studies have delved into many entrepreneurial and gastronomic aspects, relegating the tourist activities but addressing neolocalism, which emphasises a return to local culture and identity. Despite these two concepts together having received little attention, their connection is of the highest interest, as attracting tourists may involve developing the existing breweries and opening new markets.

Consequently, the objective of this study is to address such a relationship through a comprehensive literature review of the topic, highlighting the extant findings but also identifying the areas lacking research to provide a holistic overview of the current situation. Besides, comparisons between countries ought to be made, as much of the literature regarding craft beer is based on the United States of America, but most so–called beer tourists are — popularly — thought to travel to European countries such as Germany, Belgium or Czechia.

Keywords: beer tourism, craft–beer, entrepreneurship, microbreweries, neolocalism.

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2. Theoretical background

As previously stated, much of the current research on beer — apart from those concerning chemical or sensorial aspects, among other technical characteristics of the different types of beer and their ingredients — focuses on craft beer and its environment. That involves not only analysing the beverage itself but the businesses which sell them and also the producers — both industrial and artisanal —, their relationship between themselves and the territory, and the customers — both locals and tourists. In addition, the place where this activity takes place is of the highest interest, since it shapes the production process, the marketing strategy, and the imaginary that the brand evokes.

Moreover, the studies on beer and craft beer from a social science and multidisciplinary approach have barely started. It was not until 2005 that Plummer *et al.* (2005) studied for the first time the relationship of an Ale Trail and tourism. Similarly, in 2006, Clemons *et al.* (2006) addressed online reviews applied to the craft beer industry. Nevertheless, it is not until 2019 that beer studies start to grow noticeably (Durán–Sánchez *et al.*, 2022). Thus, the subsequent body of literature generated since then, together with the variety of topics under the umbrella of craft beer and beer tourism deserves detailed attention to identify potential gaps in the — still new and growing — literature.

3. Methodology

Considering the above, the methodology chosen to undertake this analysis is a classical literature review. This approach to the study question may help shed light on the topics not covered yet by scholars but also to group similar findings on relevant issues. In this vein, since the extant literature is still in its infancy, an overview of it showed that more in–depth literature review techniques as bibliometric analyses may retrieve biased or non relevant results, given that many authors and topics have been only addressed once. Consequently, Web of Science and Scopus scientific databases were consulted through several searches covering most existing scientific papers in relation to the topic. Plus, the snowball method for reaching further studies was also used.

4. Findings

The literature review results show significant relationships among the three topics mentioned, highlighting the role of local identity and place–based themes in the craft beer industry, which leads to entrepreneurship by means of opening microbreweries or taprooms. These links are supported by neolocalism which, in the craft beer scene, is a key driver in the marketing, branding, and consumer experience. More specifically, it helps to create rich, place–based narratives that resonate with local culture and heritage (Ikäheimo, 2021) and allows socialization (Nelson, 2020).

In this vein, neolocalism allows micro and small breweries to differentiate themselves through their branding, emphasizing such a sense of belonging and local identity, which can enhance brand equity (Brown, 2023) by creating memorable experiences to visitors (Nelson, 2020). However, these visitors are usually not differentiated between locals and other visitors, including consumers from nearby areas or tourists, and neither consider tourists' country of origin (Stone, 2023), which is still open for — and much needed — research (Xu *et al.*, 2024).

Related to the above, concerning the context in which the activity is developed, several issues arise. On the one hand, breweries — mostly including taprooms — may be likely to start developing their activity in central urban areas, as many consumers may find them. However, they might act as gentrification agents due to these neolocal practices (Mathews, 2022). On the other hand, the strong development of these breweries both in central and peripheral areas may lead to characterising the city or country as beer destination, as it is the case of countries such as Czechia (Hasman *et al.*, 2022). This expansion of the craft beer movement in certain zones incentivates entrepreneurship but should be handled carefully since neolocal malpractices may endanger the positive effects achieved, risking losing brand identity. That also applies to local brands exports or tourist promotion of the place (Brown, 2022), and may differ between countries and cultures (Soica, 2022).

5. Conclusions

The literature review carried out illustrates the existing relationships between neolocalism, entrepreneurship and microbreweries. In fact, neolocalism plays a crucial role in the craft beer industry by enhancing local identity and consumer experience through place–based themes and storytelling. While it offers significant marketing and branding advantages, it also presents challenges, especially when expanding beyond local markets. Additionally, the impact of neolocalism can vary based on regional and cultural contexts, highlighting the need for strategic planning and adaptation.

Research gaps were identified regarding differences between locals, visitors and tourists when visiting a brewery or taproom. Besides, comparisons between countries in terms of entrepreneurial opportunities but also about their local markets is still scarce. Moreover, neolocalism seems to contribute to gentrification and, at the very end, to losing brand equity for local beers. Therefore, further research may analyse the equilibrium between craft beer growth based on neolocalism and tourism, and the potential negative effects they may have.

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ENTREPRENEURSHIP: FROM KIRZNER'S ENTREPRENEURIAL ALERTNESS TO HUERTA DE SOTO'S EMPRESARIALITY

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1. Objectives

Entrepreneurship has long been recognized as a driving force for economic progress, as demonstrated by the seminal works of Schumpeter (1934), Kirzner (1973), and Drucker (1985). Schumpeter characterized entrepreneurship as a process of creative destruction, disrupting equilibria and fostering innovation. Kirzner emphasized entrepreneurial alertness in identifying and seizing market opportunities, while Drucker defined entrepreneurship as "the act of innovation involving endowing existing resources with new wealth–producing capacity". These foundational insights underline the transformative impact of entrepreneurship on growth, value creation, and economic restructuring.

In spite of its importance, the entrepreneur, understood as an agent of innovation, is notably absent from neoclassical economic models. In this latter framework conditions are assumed to be static and given and the entrepreneurial function is rendered unnecessary. However, the Austrian perspective highlights the importance of the use of knowledge and the dynamism of markets. In words of Rosen (1997) "entrepreneurial activities are only possible when the nature of the world is not fully known, when knowledge and information are incomplete and dispersed, precisely the conditions postulated by the Austrian approach. Entrepreneurship is a disequilibrium phenomenon. The entrepreneur is a person who exploits heretofore unrecognized opportunities. In equilibrium neoclassical economics, "given conditions" means that there is nothing for the entrepreneur to do".

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Therefore, within the Austrian School of Economics, entrepreneurship is seen as a cornerstone of economic progress. Entrepreneurs organize production processes, but their role is always subject to consumer sovereignty. Effective and efficient production is futile if the resulting goods are not demanded by consumers. This fundamental distinction sets Austrian economics apart from neoclassical models. In the latter, entrepreneurs are mere *homo oeconomicus*, utilizing predefined means to achieve predetermined ends. Conversely, Austrians regard the entrepreneur as a *homo agens*, who defines ends and selects means, dynamically creating both in a world where they are neither given nor universally known.

From a Misean perspective, entrepreneurship aligns with the broader concept of human action, encompassing purposeful activities aimed at altering the present to achieve future goals (Huerta de Soto, 1992). At its core, the entrepreneurial function involves identifying profit opportunities in uncertain environments and acting to exploit them. Entrepreneurs, as the architects of innovation and economic progress, thrive in markets characterized by disequilibrium, creating value where none previously existed.

The ultimate aim of this research is to bring the Austrian perspective on entrepreneurship to a wider audience, particularly those familiar with neoclassical economics but less acquainted with the Austrian contributions. To achieve this, the study focuses on the works of two prominent Austrian economists: Israel Kirzner and Jesús Huerta de Soto.

Keywords: entrepreneur, innovation, alertness, uncertainty, Austrian economics.

2. Theoretical background

Historical insights into entrepreneurship date back to the 17th and 18th centuries, with Richard Cantillon as a pioneering figure. As noted by Rothbard (1995), Cantillon was the first to use the term entrepreneur, applying it to farmers, merchants, and traders tasked with managing fixed payments amidst uncertain revenues. The entrepreneur, according to Cantillon, orchestrates production, takes on risk, and makes

decisions in a constantly changing market. While Cantillon focused on agricultural entrepreneurs, his conceptualization remains broadly applicable.

A considerable array of current economic thought on entrepreneurship can be attributed to the contributions of Joseph Alois Schumpeter. Who, in spite of being born in Autria, having studied at Vienna University under the auspices of de Eugen Böhm von Bawerk and Friedrich von Wieser, and being classmate of Ludwig von Mises, always declined to be part of the Austrian School of Economics. However, in the Schumpeterian tradition, an entrepreneur going through a process of creative destruction will disrupt market equilibrium through the use of innovation. Particularly, Schumpeter (1934) categorized entrepreneurial innovation into five distinct domains, namely (1) introducing novel products or improving the quality of existing ones; (2) developing new production methods, not necessarily based on scientific breakthroughs; (3) accessing previously untapped markets; (4) securing new sources of raw materials or semi–finished goods; and (5) implementing new organizational structures, such as monopolies or dismantling existing ones.

According to Schumpeter, innovation extends beyond technological advancements, requiring a hierarchical reevaluation of production factors (Baumol, 1990). Long (1983) further emphasized the role of uncertainty, risk management, and creative opportunism in defining entrepreneurship, highlighting its transformative impact on the use and organization of production factors.

The Austrian perspective, particularly as articulated by Mises (1949) and later developed by Kirzner (1973) and Huerta de Soto (1992), situates entrepreneurship within the broader framework of human action. Entrepreneurs identify and act upon subjective ends, utilizing means they deem necessary to achieve those ends. This inherently subjective process generates knowledge and coordinates market activity, as described by Hayek in his seminal works on spontaneous order (1973). Hayek emphasized the decentralized nature of market knowledge, arguing that prices serve as signals for scarcity and demand, enabling markets to adapt dynamically to changing conditions. As discussed in this research, the knowledge concept has been introduced in Huerta's empresariality definition, to enhance that of Kirzner's.

3. Methodology

Analyzing a complex system like entrepreneurship, with its volitional characteristic, the need of risk estimation, and the awareness of markets, consumers and financial means, demands a cautious approach. The sheer number of variables — ranging from monetary policy decisions to government fiscal actions — makes comprehensive empirical analysis a daunting, if not impossible, task. As Hayek (1988) warned, the "fatal conceit" of assuming omniscient analytical capability is a critical pitfall.

This research adopts praxeology, the distinctive methodological approach of the Austrian School (Mises, 1949; Huerta de Soto, 1994). Unlike empirical methodologies common in the physical sciences, praxeology relies on the logical deduction of human behavior. It posits that economic phenomena stem from purposeful human actions rather than immutable physical laws.

Praxeology aligns conceptually with contemporary methodologies like game theory, which examines strategic decision–making, and behavioral economics, which explores deviations from rational models. While these fields rely on different tools, they share a focus on human motives and actions, making them complementary to praxeological analysis.

4. Findings

Entrepreneurship operates at the intersection of equilibrium and disequilibrium theories. Neoclassical economics views entrepreneurial innovation as a disruptive force, breaking natural market equilibria and initiating cycles of disequilibrium. In contrast, Austrian economics highlights the equilibrating role of entrepreneurs, who leverage market uncertainty to anticipate and address imbalances.

Austrian entrepreneurs do not merely allocate resources efficiently; they actively create new ends and means, driving economic evolution. This contrasts sharply with the neoclassical view, which relegates entrepreneurs to a passive role within a predefined system in which they must

coordinate the factors of production. By embracing uncertainty and innovation, Austrian economics positions the entrepreneur as a pivotal agent in fostering economic development and societal well–being.

The assumption of an equilibrium condition, along with the view of the entrepreneur as a resource organizer, shapes the neoclassical perspective of the entrepreneur as a rational maximizer in an environment where costs, prices, and technology are treated as exogenous variables, often under the *ceteris paribus* assumption. In contrast, the Austrian entrepreneur is an agent of change who constantly influences all economic variables, making modeling impossible.

The neoclassical entrepreneur becomes a distortion for the determination of market equilibrium; is the one who provokes dynamism and volatility in the concept of equilibrium, making any result subject to constant change. This fact generates a difference between the two schools of thought, the neoclassical one has as a starting point the mathematical statics to assume the dynamic behavior of the economy as a condition to assimilate in the quality and utility of the models, while the Austrian starts from the dynamics as a fundamental condition of the economy.

The classical Austrian theory in regard to entrepreneurship was improved by the concept of entrepreneurial alertness described by Kirzner (1973). For this author, the entrepreneur is, first and foremost, "a decision–maker whose function is solely to perceive previously hidden opportunities". From this standpoint, Huerta introduces the Misean perspective of the human action in the sense that entrepreneurship is a type of action, willing to transform the present status quo on a better, more promising situation for the entrepreneur (Matarán, 2024). Moreover, Huerta enriches this definition of entrepreneurship including Hayek's concept of knowledge. That is, there exists a condition of dispersed market knowledge, which means that entrepreneurial activity cannot be modeled, as this would imply assuming the availability of information that has not yet been created but will instead be developed by the entrepreneurial function itself. (Huerta de Soto, 1997). This is the concept of Huerta's empresariality, that combines the earlier contributions of Mises, Hayek and Kirzner, to create a more condensed and complete definition of entrepreneurship.

5. Conclusions

The Austrian and neoclassical schools present fundamentally different views of entrepreneurship. While the neoclassical framework marginalizes the entrepreneurial role in its pursuit of equilibrium, the Austrian perspective celebrates the entrepreneur as a dynamic agent of change. By harnessing uncertainty and driving innovation, entrepreneurs facilitate market coordination and economic progress.

Bringing the Austrian perspective to a broader audience enriches the understanding of entrepreneurship's transformative potential, bridging gaps between theoretical frameworks and practical applications. Further research should continue to explore this dynamic interplay, offering valuable insights for policymakers, academics, and practitioners alike.

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THE RELATIONSHIP BETWEEN THE FINANCIAL PERFORMANCE OF COMPANIES IN THE TELECOMMUNICATIONS SECTOR AND CUSTOMER SATISFACTION WITH THEIR SERVICES

RUMESA SELVERI[1], VIOLETA CVETKOSKA[2]

1. Objectives

The purpose of this paper is to analyze the financial performance of the dominant telecommunication companies in North Macedonia, to analyze their services and to analyze whether that financial performance is the result of the satisfaction/dissatisfaction of their customers. Which satisfaction will be measured by surveying users of telecommunication services. So to find out how the financial performance of companies interacts with customer satisfaction.

Keywords: financial analysis, telecommunication companies, customer satisfaction.

2. Theoretical background

In our paper, we deal with two competitive companies, Makedonski Telecom and A1 Macedonia, with top quality services and products that they offer on the market. Makedonski Telecom announces itself as a leading telecommunication operator, which provides the following services for private and business users: voice and data services via mobile and fixed network, Internet services, convergent services, digital

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television and advanced Cloud and ICT solutions. In parallel with the mobile network, they are also developing the optical network. While A1 Macedonia announces itself as a guide in the digital world, which offers the following services: services in mobile telephony, in fixed telephony, mobile and optical Internet, cable and digital television, convergent offer, which includes combined packages with all services, as well as advanced ICT solutions. Pikasa.ai, data analytics company, from January to November 2024 highlights how telecommunications connect communities and enhance services across the nation. The Chamber of Commerce for Information and Communication Technologies – MASIT represents the Macedonian ICT Industry, where, of course, it also analyzes the telecommunication companies in North Macedonia, according to their financial reports. Understanding and retaining customers is also an important aspect of a company's profitability. Petkovski, A. and Stojkoska, B. (2017) conducted a case study on telecommunication services in Macedonia: analysis of churn prediction. Where they analyze four machine learning algorithms (C4.5 decision tree, k–nearest neighbors algorithm, naïve Bayes classifier and logistics regression), that will predict the customer churn. In our paper, we clarify the relationship between financial performance and customer satisfaction, where it is revealed whether the real reason for the existing financial performance of companies is the satisfaction/dissatisfaction of the users of their services. Which will help customers make decisions based on clear data, about that if the telecommunication company is suitable or not, for them.

3. Methodology

Horizontal analysis, vertical analysis and ratio analysis, as the three most important techniques, have been implemented in this paper to obtain the result of the movement of financial performance of companies. According to the obtained results, we come to a conclusion, whether the companies over the years have increased or decreased their profit, assets, liabilities and capital. Additionally, other financial techniques have been implemented, such as: cash flow analysis, leverage analysis, profitability, liquidity, efficiency, rates of return, growth,

valuation, scenario and sensitivity and variance. After analyzing the financial performance of the companies, the results obtained from the conducted survey are analyzed in the next part. Which survey was completed by more than 100 people, with different specifications and who have as a common point only that they are users of telecommunication services in North Macedonia. Furthermore, the connection is analyzed, in fact whether they are related to each other or not, between the financial performance of companies and customer satisfaction with their services, which satisfaction is measured by surveying the users. To enrich our work, we have also implemented a model of predictive analytics, in order to have a clearer picture of which factors affect customer satisfaction. Customer satisfaction, which we know is of crucial importance for the survival and development of companies.

4. Findings

Recently, the service is valued before the product itself. If it is owned with quality service, it is possible to come to an appreciation of the product itself. This conclusion comes as a result of the results obtained from the implementation of the survey, where 55.7% answered that the quality of services is more important for them.



Figure 1. Answers to a question from the survey. Source: Authors' elaboration.

Likewise, to the question "Which telecommunications operator do you use", more than half of the respondents answered that they are users of the services of Makedonski Telecom.

For this reason, we decided to analyze the financial situation of the dominant telecommunications company in North Macedonia. In order to be able to implement the financial techniques, the financial statements for the last 6 years have been taken into account. Since 2024 is not yet over, the data is taken from 2018 to 2023.

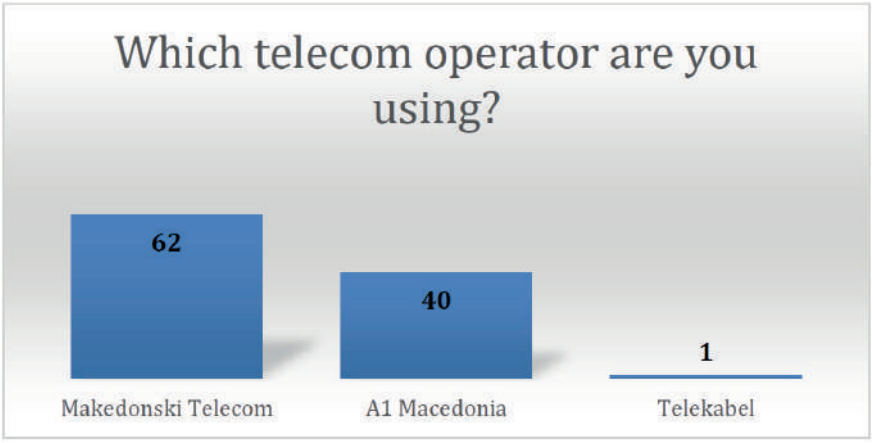


Figure 2. Answers to a question from the survey. Source: Authors' elaboration.

In the horizontal analysis, we can see the movements in the financial statements over the years of the company, in percentages. Where in table 1, the significant increase in the key points of the income statement can be clearly observed. Specifically in the operating profit, which is also reflected in the net profit, which shows that one part is the result of the reduction of operating expenses, while the other part is the result of other operating income. While in table 2, the horizontal analysis of the key points of the balance sheet of Makedonski Telecom is shown. Where can be significantly noticed, the increase of cash and cash equivalents in 2019. The same increase of cash and cash equivalents can be observed in the last year of the researched period.

In other items there is a change over the years, except for the capital which remains approximately the same over the years. According to other financial techniques, we could observe positive numbers for Makedonski Telecom, for operational work, and their profit. According to the results of the conducted survey and the financial analysis, it can be concluded that Makedonski Telecom will remain dominant in the telecommunications sector in our country.

	2018	2019	2020	2021	2022	2023
INCOME		4%	2%	1%	4%	1%
OPERATING EXPENSES		3%	4%	0%	3%	-3%
OPERATING PROFIT		8%	-7%	7%	14%	24%
PROFIT BEFORE TAX		6%	4%	-1%	7%	32%
PROFIT FOR THE YEAR		6%	6%	-1%	5%	33%

Table 1. Horizontal analysis of the Income Statement of Makedonski Telecom. Source: Authors' elaboration.

Like any company that has certain shortcomings, satisfied and dissatisfied customers, predictive analytics has been implemented to identify the factors that influence customer satisfaction. According to which certain recommendations are given for more satisfied customers, including: provide proactive support to costumers, increase loyalty, more personalized relations, listen to customers, to improve customers experience, to treat right and to deeply understand their needings.

	2018	2019	2020	2021	2022	2023
CURRENT ASSETS						
CASH AND CASH EQUIVALENTS		198%	6%	-21%	-43%	47%
TOTAL CURRENT ASSETS		9%	12%	-2%	-18%	2%
TOTAL NON-CURRENT ASSETS		-1%	-3%	0%	11%	-6%
TOTAL ASSETS		**2%**	**0%**	**-1%**	**3%**	**-4%**
TOTAL CURRENT LIABILITIES		7%	-9%	-11%	27%	-6%
TOTAL NON-CURRENT LIABILITIES		29%	22%	8%	-12%	-50%
TOTAL LIABILITIES		**10%**	**-4%**	**-7%**	**19%**	**-13%**
TOTAL CAPITAL		**-1%**	**2%**	**1%**	**-1%**	**-1%**
TOTAL EQUITY AND LIABILITIES		**2%**	**0%**	**-1%**	**3%**	**-4%**

Table 2. Horizontal analysis of the Balance Sheet of Makedonski Telecom. Source: Authors' elaboration.

5. Conclusions

Various financial techniques are implemented in the paper, in order to get a clearer picture of the financial situation of the dominant telecommunications company, Makedonski Telekom. Where we have seen positive numbers and a positive increase over the years. Since the aim of the paper was to reveal the connection between the company's success and customer satisfaction, we also presented the results of the survey. According to the results of the survey, which also shows that the dominant part are users of Makedonki Telecom compared to the competing company A1 Macedonia, they are satisfied and will continue using the services of the same company. But they have certain demands,

such as better quality services and of course more 'normal' prices for services, more acceptable prices according to the standard of life in North Macedonia.

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SOCIAL IMPACT BONDS IN EUROPE AFTER COVID–19 CRISIS: A BIBLIOMETRIC ANALYSIS

SIMONA SELVAGGI[1], ROCCO FRONDIZI[1], GLORIA FIORANI[1]

1. Objectives

This study performs a bibliometric and content analysis on the development of Social Income Bonds (SIBs) in Europe, which shows a gap, especially after the COVID–19 pandemic. The purpose of this research is to answer the following research questions: what is the current status of the literature on social impact bonds in European countries after the COVID–19 crisis? Who are the most influential authors in the field? Could social impact bonds become a shared pattern in Europe to efficiently measure the social impact of public–private partnership? Why were SIBs implemented in some European countries but not in others? With this objective in mind, the study provides a bibliometric analysis; it answers unanswered questions in three key areas, and it offers directions for future studies. From a practical perspective, the study aims to give practical indications to policymakers and practitioners to make the outcome–based approach more efficient and resilient to crises. It also aims to provide academic researchers with a new direction for further research in this growing field.

Keywords: social impact bonds, payment by success bond in Europe, impact finance, SIBs.

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2. Theoretical background

The literature on social impact bonds is still emerging, and there is a gap in the future use of this tool and its potential effectiveness in different contexts (Broccardo *et al.*, 2019). Scholars are divided between the pros and cons of these investments, especially because of their contractual complexity (Tan *et al.*, 2021). SIBs have been included in the theoretical framework of New Public Management, which spreads the idea that public administrations could be managed as businesses (Albertson, K., Fox, C., O'Leary, C., & Painter, G., 2020). The literature review on SIBs mainly focuses on their characteristics (Rizzello, A., Caridà, R., Trotta, A., Ferraro, G., Carè, R., 2018); their risks, related to the fact that the payment depends on the success of the project (Scognamiglio, E., Rizzello, A., Chiappini, H., 2018); the problem of their transaction costs (Maier *et al.*, 2018); and their ethical evaluation. Focusing on European countries, it can be noticed that SIBs are not used everywhere; there are some leading countries and some others in which the model is not used at all. As a consequence, there is a gap in the literature regarding the development of SIBs in European countries, especially after COVID–19. The aim of this paper is to address this gap by analyzing content and data on SIBs and focusing on the main geographical areas in which this instrument was developed in Europe as individuated by the Government Outcomes Lab, a specialized center of academic research on this topic.

3. Methodology

The study analyzes academic literature only; the databases used were Scopus and World of Science, which we cross–checked for accuracy. In order to perform a bibliometric analysis through the software Bibliometrix, the final research and retrieval were made using Web of Science only.

In the phase of paper acquisition, we discarded documents that were not written in English; we identified some keywords constructed into search strings, as well as the exclusion criteria; and we decided to include only peer–reviewed articles. The strings of research used were:

"Social Impact Bonds*" OR "Payment by Success Bond in Europe*" OR "Impact Finance*", and the keyword used was "SIBs". After performing the research, we collected the papers using a PRISMA scheme. Following the inclusion and exclusion criteria we set and after reading the full papers, in the last stage of the research, we considered only 50 articles to be included in the bibliometric analysis. Thanks to the data visualization performed in the bibliometric analysis and the analysis of the content, we were able to determine the most important emerging themes related to the research topic and provide directions for future research.

4. Findings

In order to answer the research questions, we performed a bibliometric analysis, which covers the following specific objectives:

- to identify the most relevant authors in the field, their production over time, as well as the most productive journals and universities.
- to identify the most relevant keywords and keywords plus.
- to examine the most prominent themes in order to give an overview of the researched subject.

The present study comprises 50 contributions from 117 authors published in 29 journals from 2020 to 2023. It can be noticed that most of the documents are co–authored; indeed, only seven documents have one single author. the International Public Management Journal has the highest number of documents published related to the domain (6), followed by Corporate Social Responsibility and Environment as well as Public Money and Management. The fact that the publications are distributed among ten distinct journals further demonstrates the journals' rising interest in the subject. All these journals were listed in the SCImago Journal Ranking Database, which is scientifically recognized as a sign of academic prestige and visibility. The most productive organizations publishing in the field are King's College London with 7 papers and the University of London with 6 papers. Three are the most

globally cited documents, which correspond with the most locally cited documents:

– Sinclair, S., 2021, *Social innovation, financialization and commodification: a critique of social impact bonds*, with 33 citations.
– Tan, S., 2021, *Widening perspectives on social impact bonds*, with 29 citations.
– Broccardo, E., 2020, *Social impact bonds: The evolution of research and a review of the academic literature*, with 18 citations.

The analysis of the publications under review, showed a total of 144 keywords as well as 76 keywords plus, which are those words useful for investigating the knowledge structure of scientific fields. According to the world cloud, the most frequently used author's keywords are: "impact investing" (AK–9), "social impact bond" (AK–5) and "social innovation" (AK–4). The most frequently used Keywords plus are: "finance" (KP–13); "challenges" (KP–11); "state" (KP–10) and "payment" (KP–7).



Figure 1. World Cloud–based on AK and KP. (Source: Author's own computation based on data processed with Biblioshiny).

The thematic map shows four quadrants: the Basic Themes quadrant; the Niche Themes quadrant; the Motor Themes quadrant; and the Emerging or Declining Themes quadrant. The purpose of creating a thematic map is to obtain an understanding of the current state of a field and to explore its prospects for the future. From this analysis, the main driving themes present in the study are: "finance", "assessing–

mission" and "business models"; "state", "market" and "policy"; "challenges", "payment" and "governance". "Pay for success" is considered an emerging theme.

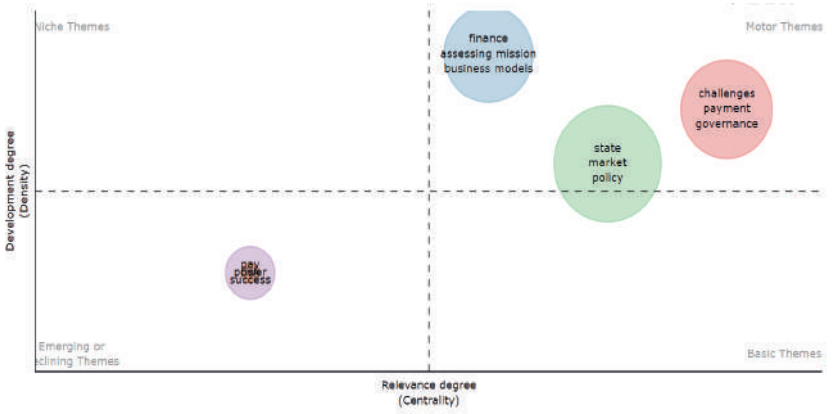


Figure 2. Thematic Map. (Source: Author's own computation based on data processed with Biblioshiny).

5. Conclusions

The bibliometric analysis answered the research questions, showing that the literature on SIBs in Europe after the COVID–19 crisis is growing; however, it is still considered an emerging theme. As emerged from the thematic map, the most cited keywords are "challenges", "state", and "policy", and this reflects the main aspects that characterize this new financial instrument. A content analysis reveals that the fact that SIBs are grounded in a tangible result makes them useful tools. However, there are still some challenges in the implementation of SIBs in Europe. This may be associated with the challenges that have affected the global economy in recent years, including natural disasters, the COVID–19 pandemic, and economic downturns.

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UNDERSTANDING THE DRIVERS OF FREQUENT PURCHASES ON AMAZON: FACTORS INFLUENCING ONLINE SHOPPING BEHAVIOUR

EKATERINA SHUBINA[1], VIOLETA CVETKOSKA[2]

1. Objectives

The global e–commerce market has continued to expand at a rapid pace since 2020, particularly in the context of the COVID–19 pandemic. Market analysts anticipate that the market will reach a valuation of $5 trillion by the end of 2024, exhibiting a compound annual growth rate of 15% from 2019 (Uzunoglu, 2024). Despite the stabilisation following the pandemic, growth in e–commerce continues to exceed that of traditional retail, indicating a sustained shift in consumer behaviour towards online shopping (ibid.). Amazon continues to be a dominant force in the e–commerce sector, with a vast product range, streamlined logistics, and a customer–centric approach that are influencing global purchasing patterns. Recent research indicates that the surge in the number of companies entering the Amazon marketplace is a strategic initiative designed to leverage Amazon's vast consumer base and robust infrastructure (Chapple *et al.*, 2022). In order to succeed in a context of intense competition, it is essential for businesses to gain an understanding of customer behaviour. This enables them to adapt their strategies to align with the needs of their target groups, thereby increasing the potential for profit. The objective of this study is to provide insight into consumer behaviour on Amazon by exploring the factors that influence the purchase frequency on the platform. The research question guiding this study is: What influences purchase frequency on Amazon to be few times a month?

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Keywords: e–commerce, purchase frequency, consumer behaviour, Amazon.

2. Theoretical background

2.1. *The role of purchase category*

The analytics indicate that groceries followed by fashion are the fastest growing product categories of e–commerce. Furthermore, it is anticipated that these product categories will continue to demonstrate the most significant growth in the coming years (Uzunoglu, 2024). It is important to acknowledge the significant influence of demographic factors, such as age, on online grocery shopping frequency (Restrepo *et al.*, 2024; Jensen *et al.*, 2021).

2.2. *The role of customer reviews in purchase decision–making*

The research evidence indicates that online reviews significantly influence consumer purchasing decisions. To illustrate, Kang *et al.* (2022) discovered that while reviews typically facilitate purchase intent, this effect can vary depending on the product category and the consumer's behaviour. The study results also indicate that the presence of reviews is associated with an increase in the frequency of purchases. At the same time, reviews may be of lesser influence with regard to repeat purchases, particularly in the case of commoditised products or items that are subject to regular use (Ahn & Lee, 2024). However, some academics argue that reviews are important even for repeat buyers, particularly for products that are perceived to be of a higher risk or where there is a potential for a greater variability in quality (Chen *et al.*, 2022).

2.3. *Product search and filtering methods*

The existing research suggests that consumers who apply advanced filtering methods and are, for example, sorting by criteria such as price, brand, or popularity, are more likely to make faster purchase decisions,

which can result in an increase in the purchasing frequency (Deng *et al.*, 2021). Moreover, the research underscores the hybrid product search approach, which integrates filters with personalised suggestions, such as algorithm–driven recommendations. This search method has been demonstrated to significantly enhance purchase frequency (ibid.). Concurrently, some scholars posit that negative reviews, in particular, have a powerful impact on purchasing intentions. This suggests that search filters alone are less effective at driving repeat purchases than review dynamics and presentation (Chen *et al.*, 2022).

2.4. *Browsing frequency*

High browsing frequency is regarded as one of the key factors affecting purchasing frequency. At the same, frequent browsing behaviour does not necessarily result in immediate purchases, however, it may establish a foundation for higher purchasing frequency over time (Sajid *et al.*, 2022).

3. Methodology

This study draws upon an open–source dataset retrieved from Kaggle. The dataset was contributed by Menon and last updated in 2023. As indicated by the author, the data was collected via a self–administered Google Forms questionnaire, disseminated through social media platforms (e.g., Facebook and WhatsApp groups). This implies that a convenience sampling method was employed, with respondents selected at random. The dataset has a total of 602 entries and 26 variables. The present study will focus exclusively on 12 variables, of which one (purchase frequency) is the dependent variable, while the remaining 11 are independent. In order to conduct the requisite analysis and create a visual representation of the results, the Power BI software was employed. As the dependent variable is categorical, a bar chart was deemed the most optimal visual representation option. For this purpose, an AI–powered Key Influencers Visualization was used.

4. Findings

The analysis has identified the following factors as having the most significant impact on the likelihood of engaging in more frequent purchasing.

4.1. *Purchase category*

The category of groceries and gourmet food along with clothing and fashion, has emerged as the most significant influencing factor in determining the likelihood of purchase frequency of "few times a month". This category represents 2.51–fold increase in comparison to the overall average. This finding reinforces the conclusions of Uzunoglu (2024) regarding the grocery sector being the fastest–growing e–commerce category.



Figure 1. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

4.2. *The importance of customer reviews in purchase decision–making*

The probability of purchasing on Amazon several times a month is 1.5 times greater for values of the variable "customer review importance" greater than 1 than for the average. As Menon (2023) explains, the importance of customer reviews was coded as a range of frequencies from

1 ('very important') to 5 ('not important'), meaning that customers whose purchase decisions are less dependent on product reviews are more likely to buy a few times a month



Figure 2. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

4.3. *Product search method*

The implementation of the filter function as the product search method has been found to result in a 1.42–fold increase in the probability of making multiple purchases per month, when compared to the average.



Figure 3. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

4.4. *Review Reliability*

The probability of a customer making multiple purchases within a month is 1.41 times greater when their reliability in product reviews is occasional than when it is otherwise (on average).



Figure 4. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

4.5. *The frequency of using the "save for later" feature*

The likelihood of purchasing on Amazon a few times a month is 1.28 times higher than the average among customers who claim to sometimes use the "save for later" feature.



Figure 5. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

4.6. *Browsing frequency*

Browsing a few times a week is 1.27 more likely to result in a purchase a few times a month than the average.

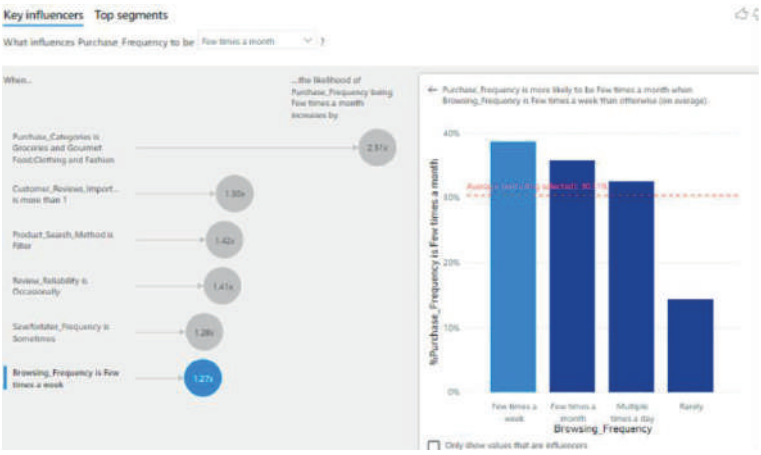


Figure 6. The impact of product review importance on frequency of purchase a few times a month. Source: Own elaboration.

5. Conclusions

As with all empirical research, this study is also subject to a set of limitations that demand critical reflection. Primarily, it is important to note the lack of representativeness of the sample in this study. As the dataset was retrieved from an online source without no opportunity to examine the original questionnaire, it is not possible to ascertain its credibility. It is unclear whether the data underwent cleansing and whether some participants were excluded, for instance, through the use of attention check questions. Furthermore, no particular target group can be identified as the contributor of the dataset was using convenience sampling method. Therefore, the results may not accurately reflect the profile of the population. The sampling method also contributed to demographic imbalance, with a higher proportion of female participants than male participants or those who preferred not to state their gender. Similarly, different age groups are also represented unevenly. The demographic

characteristics presented in the example may significantly influence online consumer behaviour, with notable variations between different groups (Rybaczewska & Sparks, 2022; Chen *et al.*, 2022; Restrepo *et al.*, 2024; Jensen *et al.*, 2021). The findings of this study align with and contribute to the existing body of research, which may serve as a basis for future research that would focus on particular product categories or target groups.

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TECHNICAL EFFICIENCY AND SCALE ELASTICITY OF INDIAN COMMERCIAL BANKS–A DEA APPROACH

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1. Objectives

In view of the growing business complexities and intensified competition, the significance of efficient operation of commercial banking services has increased considerably in the recent few decades. Further, the macroeconomic slowdown since 2008–09 and onslaught of COVID pandemic has added to the woes of the Indian commercial banks. In post–reform phase (1991–92 onwards), several research studies have attempted to assess the efficiency performance of the Indian commercial banks [Bhattacharyya, Lovell and Sahay (1997), Saha and Ravisankar (2000), Sathye (2003), Kumbhakar & Sarkar (2003), Ram Mohan and Ray (2004), Das, Nag and Ray (2005), Chatterjee and Sinha (2006), Dar, Mathur, & Mishra (2021)] using the non–parametric framework and most of them attempted to estimate and explain technical efficiency of the insurers. The present study, however, presents some additional inputs in comparison to the already existing literature especially with regard to the degree of economies of scale noticed in the industry. The current study can be divided into two stages. In the first stage the study seeks to estimate technical efficiency, returns to scale the degree of scale economies. In the second stage we have assessed the impact of contextual variables on the technical efficiency estimates corresponding to the observed public and private sector commercial banks.

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2. Methodology

The present section outlines the methodological developments related to the estimation of stochastic frontier and firm–wise efficiency. This section also outlines the regression method applied in the second stage for exploring the influence of contextual variables.

2.1. *Frontier Production Function and Estimation methodology*

Neoclassical literature on microeconomics often assumed a regular, concave and homothetic production function precluding the possibility of variations in the returns to scale. Shephard (1953) defined a production function to be homothetic if it can be represented as a continuous positive increasing monotonous function of a homogeneous production function. Further, the results relating to the productivity and returns to scale of a productive firm are derived in the context of a single output case. The possibility of inefficiency in the productive system is excluded by implying that realized output equals the potential output of the firm.

In the context of production technology, the concept of technical inefficiency is introduced with the aid of the concepts of distance functions introduced by Shephard (1953, 1970, 1974) and Farrell (1957).

Distance functions enable comparison of inefficient observation points with the efficient points on the efficient frontier. Since efficiency can be estimated from both input and output standpoints, we can accordingly present the input and output–oriented distance functions as:

$$D^{Input}_{Shephard}=\text{Max } \{\theta:(\frac{X}{\theta},Y)\epsilon T \}$$
$$D^{output}_{Shephard}=\text{Min } \{\phi: (X,\frac{Y}{\phi}) \epsilon T \}$$

The input distance function provides the maximum amount by which the observed input quantity can be divided and yet the reduced input quantity is capable of producing the given level of output (target). On the other hand, the output distance function provides the minimum amount by which the observed output can be deflated and yet the revised output (target) can be produced by the given level of input.

Farrell's distance functions (1957) can be obtained by inverting the distance function of Shephard (1953). In specific, both Shephard (1953) and Farrell (1957) introduced efficiency measures based on radial contraction of input/expansion of output compared to the production frontier. In the context of a single output constant returns to scale technology, Farrell specified the frontier as the most pessimistic linear envelopment data (Forsund, 2000). Charnes, Cooper and Rhodes (1978) extended the approach suggested by Farrell in the context of multiple output and multiple inputs and provided a ratio–based measure of efficiency. Banker, Charnes and Cooper (1984) further extended the linear programming based envelopment approach by introducing the convexity constraint. Banker (1993) provided a formal statistical basis for DEA based efficiency evaluation.

For explaining the Banker, Charnes and Cooper approach (which has been used in the present study for efficiency evaluation), we consider a technology with multiple outputs and multiple inputs. The input and output vectors are represented by $X = (x_1, x_2, \ldots, x_m)$ and $Y = (y_1, y_2, \ldots, y_s)$ respectively. We further suppose that there are n DMUs to be evaluated. Each DMU_j uses $X_i = (x_{1i}, x_{2i}, \ldots, x_{mj})$ to produce $Y_j = (y_{1j}, y_{2j}, \ldots, y_{sj})$. The production possibility set T which includes feasible production plans of the producer (called hereafter Decision Making Units (DMUs)) can be represented as:

$$T=\{(X,Y) \in R^{m+s}, \text{ X can produce Y}\}$$

The production possibility set comprises of both output and input sets. The output set $O(Y) \in P$ corresponds to the set of feasible outputs for each input vector while the input set I(X) includes the input vectors that are feasible with each output vector.

In order to provide an Algebraic form of the production set T, the following axioms are assumed to be satisfied:

a) Free disposability: If $(X, Y) \in T$, then $(X', Y) \in T$, where $X' \geq X$. Similarly, If $(X, Y) \in T$, then $(X, Y') \in P$, where $Y \geq Y'$. The inequalities between the (input and output) vectors are understood component wise.

b) Convexity: The convexity axiom implies that if $(X, Y) \in T$ and $(X', Y') \in T$, then $(X^c, Y^c) \epsilon T$ where X^c is a weighted combination of (X, Y) and (X', Y'). The value of the weight lies in the interval (0,1).
c) Inclusion of Observation: All observations are included in T.
d) Minimum extrapolation: T is minimal set i.e. the production set is formed by minimum extrapolation of data

Taking the foregoing four axioms into consideration, the mathematical form of the empirical production possibility set T is as follows:

$$T=\{(X,Y):\sum_{j=1}^{n} \lambda_j x_j \leq x_0, \sum_{i=1}^{n} \lambda_j y_j \geq y_0, \sum \lambda_j=1, \lambda_j \geq 0, j=1,2,\ldots,n$$

Thus, the input and output oriented measures of technical efficiency are:

$$E_{input}(X, Y)=E_{input}X \geq \sum_{j=1}^{n} \lambda_j x_j$$
$$E_{output}(X, Y)=E_{output}Y \leq \sum_{j=1}^{n} \lambda_j y_j, \sum \lambda_j=1$$

2.2. *Returns to scale, scale efficiency and scale elasticity*

2.2.1. Estimation of returns to scale and scale efficiency

For a production relation Y=f(X) where X and Y represent the vector of inputs and outputs respectively, suppose the inputs are multiplied by α (the revised input vector is αX and the resultant output vector is βY. Banker (1984) pointed out that return to scale can be measured at a point on the radially efficient surface on the production possibility set as $\delta=\lim_{\beta \to 1} \frac{\alpha-1}{\beta-1}$. δ is greater than, equal to and less than unity depending on the presence of increasing, constant or decreasing returns to scale.

In the CCR model the assumption of constant returns to scale rules out scale variations. The addition of convexity constraint and minimum extrapolation to the Charnes, Cooper and Rhodes model allows local variations in technology and thus the (pure) technical efficiency measure is essentially a local measure of efficiency. The global measure of efficiency (CCR), on the other hand, occurs at a point where average

productivity is maximum (Most Productive Scale Size). The locally efficient point is also globally efficient if the firm is scale efficient.

Banker (1984) derived the most productive scale size for input and output mix and estimated returns to scale in case of multiple input–multiple output technology. Banker and Thrall (1992) extended the returns to scale measure in the case of an MPSS interval accommodating the possibility of multiple optimal solutions. The production frontier can thus be partitioned in to segments exhibiting, increasing, constant and decreasing returns to scale.

In the radial approach to efficiency evaluation, scale efficiency is estimated from the CCR and BCC measures of efficiency. Scale efficiency is derived as the ratio of CCR and BCC measures of efficiency. Observed firms are scale efficient when both measures are equal implying that scale efficiency is unity. In case of increasing or decreasing returns to scale, the firm has scale efficiency which is less than unity.

2.2.2. *Estimation of scale elasticity*

Fare, Grosskopf and Lovell (1988) pointed out that scale elasticity can be measured from four standpoints all of which provide equal measures of scale elasticity. Panzar and Willig (1977) showed that scale elasticity can be measured from the transformation function T(Y, X) in the following manner:

$$E(y,x) = \sum_{j=1}^{m} x_i \frac{\partial T}{\partial x_i} / \sum_{i=1}^{s} y_i \frac{\partial T}{\partial y_i}$$

A second measure of scale elasticity can be obtained from the output distance function

$$E(y, x) = -\frac{1}{D_{Output}(y,x)} \sum_{i=1}^{m} x_i \frac{\partial D_{Doutput}(y,x)}{\partial x_i}$$

Fare, Grosskopf and Lovell (1986) provided a third measure of scale elasticity based on the output distance function

$$E(y, x)=-\left[\frac{1}{D_{Intput}(y,x)} \sum_{i=1}^{s} y_i \frac{\partial D_{Input}(y,x)}{\partial y_i}\right]^{-1}$$

The fourth measure of scale elasticity is derived from the cost function

$$E(y,p) = =\left[\frac{1}{C(y,p)} \sum_{i=1}^{s} y_i \frac{\partial C(y,p)}{\partial y_i}\right]^{-1}$$

Here, the cost function is denoted by C(y,p) where p is the input price vector.

Thus the cost function based measure of scale elasticity measures the responsiveness of firm output to variations in cost of production.

2.3. *Efficiency linkage with contextual variables*

The observed efficiency performance of the in–sample insurers is dependent on several contextual variables which do not directly enter into the production process but indirectly influences the process. In the present case, four contextual variables (Herfindahl–Hirschman index of market concentration, insurer age, market share, solvency ratio and return on equity) are used as explanatory variables. Insurer age is a proxy for insurer experience. Market share is an indicator of insurer control over the market. Solvency ratio is a measure of capital adequacy and can have either positive or negative influence on efficiency Return on equity is measure of profitability and is expected to have positive relationship with efficiency.

For estimating the relationship between efficiency and the explanatory variables, both OLS and panel data approach have been used. The benefit from the panel data framework arises from its ability to capture the unobserved effects of time and firm–specific factors. Following Banker and Natarajan (2008) and Banker, Natarajan and Zhang (2019), we have used logarithmic transformation of (technical and scale) efficiency scores as dependent variables.

3. Data, variables and estimation framework

3.1. *Description of variables*

Estimation of frontier efficiency requires the identification of inputs, outputs and prices. However, specification of input and output variables (and price parameters) in the context of a insurance industry is a difficult proposition because of the complexities involved in defining the indicator variables.

There are four approaches for choosing bank outputs: the financial intermediation approach [introduced by Sealey and Lindley (1977)], the user cost approach [Hancock (1985, 1991)] and the value–added approach [Berger, Hanweck and Humphrey (1987) and Berger and Humphrey (1992)]. The production approach as introduced by (Benston, 1965) considers banks as customer service providers. Thus, as per this approach, bank outputs reflect the services provided to the customers including the number and types of transactions, documents processed or specialized services provided over a given time. The financial intermediation approach treats financial service firms as intermediaries who bridge the gap between demanders and suppliers of funds. The value–added approach considers those activities as outputs which contributes significant value added as assessed using operating cost allocations (Berger, Hanweck and Humphrey, 1987). Broadly speaking, the value added approach assumes that the insurers provide three major services: risk–pooling and risk bearing, real financial services and intermediation. The present study seeks to construct revenue frontier. Therefore, we need to identify the major activities which contribute to insurer revenue as well as the inputs of production of service. We have included Interest income and other income as the two outputs and interest expenses and operating expenses as the two inputs. For all the outputs, price is taken as unity. Consequently, revenue efficiency in the present context is synonymous with technical efficiency. In the second stage, four contextual variables (relative market share of the observed insurers, solvency ratio, return on equity and insurer age) have been included. Table 2 presents a brief statement of the input indicators, output indicators and explanatory variables.

Description	Input indicators	Output indicators	Contextual variables
First stage (efficiency estimation)	Operating expenses, Interest expenses	Interest income, other income	Not Applicable
Second stage (regression of efficiency scores on contextual variables)	Not Applicable	Not Applicable	Log of total asset, Return on asset and Capital adequacy ratio

Table 1. Inputs, outputs and contextual variables. Source: Own elaboration.

3.2. *Data for estimation*

The present study covers the period 2017–18 to 2022–23. The study includes 12 Indian public sector banks and 18 private sector commercial banks. The data relating to the input, output and contextual variables have been collected from the business statistics provided by the Indian Banks Association and Statistical Tables relating to banks in India published by the reserve bank of India.

4. Results and discussion

4.1. *Descriptive statistics of efficiency scores*

Table 2 presents the mean efficiency scores of the in–sample banks during the period under consideration (2012–13 to 2018–19). The insurer wise efficiency scores are included in appendix table A1. A graphical comparison of mean efficiency scores for the seven years under observation is presented in figure 1

Measures	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Mean	0.9492	0.9632	0.9483	0.9361	0.9353	0.9332
Standard Deviation	0.0569	0.0506	0.0507	0.0710	0.0665	0.0775
Skewness	–1.0016	–1.2348	–0.8015	–0.9172	–0.7093	–0.868
Kurtosis	0.3170	0.4244	0.2290	–0.1952	–0.4129	–0.2336

Table 2. Descriptive statistics of the in–sample commercial banks. Source: Own elaboration.

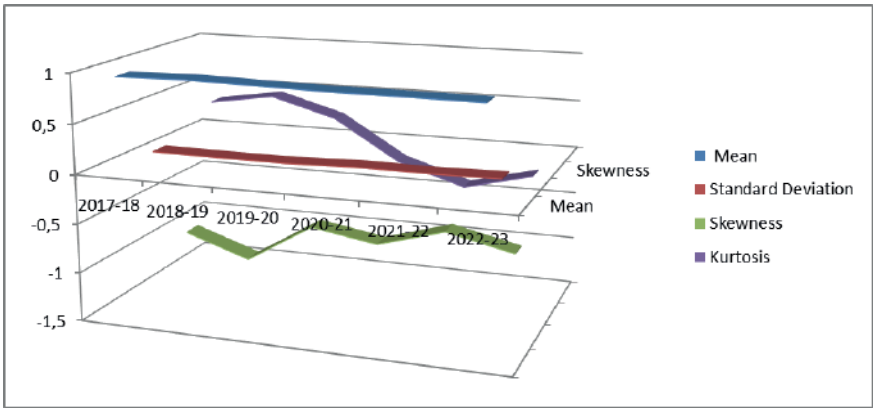


Figure 1. Descriptive statistics of the in–sample commercial banks. Source: Own elaboration.

4.2. *Variations in mean technical efficiency across bank groups*

Insurer Type	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Public sector	0.9449	0.9653	0.9433	0.9227	0.9448	0.9382
Private sector	0.9520	0.9619	0.9517	0.9449	0.9290	0.9299

Table 3. Relative mean technical efficiency performance of in–sample banks. Source: Own elaboration.

4.3. *Estimation of returns to scale and scale elasticity*

We have also estimated the returns to scale and scale elasticity of the in–sample banks. Table 4 presents the summary information about returns to scale.

Particulars	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Constant Returns to Scale	6	8	7	17	6	9
Decreasing Returns to Scale	12	12	6	2	14	8
Increasing Returns to Scale	12	10	17	11	10	13

Table 4. Returns to scale composition of the observed banks. Source: Own elaboration.

Table 5 provides the descriptive statistics of the scale elasticity of output which has been calculated (in the present case) as the negative of the input elasticity of output distance function.

Particulars	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Mean	0.9614	0.9523	0.9684	0.9785	0.9884	0.9588
Standard Deviation	0.128932	0.132819	0.1666	0.1483	0.1762	0.1451
Skewness	–1.8261	–1.57302	–0.3481	–1.3442	0.0820	–1.7903
Kurtosis	5.8379	5.587479	4.2635	6.0333	7.6599	4.9247

Table 5. Descriptive statistics of scale elasticity. Source: Own elaboration.

4.4. *Second stage analysis: Regression of efficiency scores on the contextual variables*

In the second stage of our study, we have regressed the efficiency (technical and scale) estimates on several contextual variables (log TA, return on asset, capital adequacy ratio, net NPA ratio and bank category dummy. We have run two separate regressions. The results are presented in tables 6 and 7.

Particulars	Coefficient (β)	Std. Error (σ)	Coefficient/ Std. Error	p–value
Intercept	–0.0580	0.0175	–3.308	0.0011
LogTA	0.0029	0.0011	2.681	**0.0080**
ROA	0.0124	0.0021	5.892	**<0.0001**
CRAR	–0.0004	0.0007	–0.5371	0.5919

Table 6. Weighted Least Squares panel regression of technical efficiency on contextual variables. Source: Own elaboration.

Particulars	Coefficient	Std. Error	z	p–value
Intercept	–0.0119	0.0053	–2.272	0.0243
NPARatio	–0.0028	0.0010	–2.746	**0.0067**
Bank Category	–0.0008	0.0047	–0.1758	0.8607

Table 7. Weighted Least Squares panel regression of technical efficiency on net NPA ratio and bank category dummy. Source: Own elaboration.

5. Conclusions

This study assessed the technical efficiency and scale elasticity of Indian commercial banks using a robust Data Envelopment Analysis (DEA) framework. By analyzing data from 12 public sector and 18 private sector banks over the period 2017–18 to 2022–23, the study identified key differences in operational efficiency and scale performance. The dual–stage approach provided a comprehensive assessment: the first stage estimated technical and scale efficiencies, revealing inefficiencies and suboptimal returns to scale in several banks, particularly in the public sector. The second stage regression analysis highlighted the significant influence of contextual variables, such as asset size, return on assets, and non–performing asset ratios, on efficiency outcomes.

Despite its valuable contributions, this study has certain limitations. The reliance on DEA assumes a deterministic frontier, making efficiency estimates sensitive to extreme values and noise in the data. Additionally, the study's focus on a limited set of contextual variables may omit other critical factors, such as macroeconomic conditions and technological advancements, that could impact bank performance. The dataset is also confined to a six–year window, which may not fully capture long–term trends and cyclical effects.

Future research should consider expanding the scope by incorporating alternative efficiency estimation methods, such as stochastic frontier analysis (SFA), to account for statistical noise. A broader range of contextual variables, including digital transformation initiatives and risk management practices, should also be examined. Longitudinal studies encompassing pre– and post–pandemic periods could provide deeper insights into structural shifts in efficiency dynamics. Additionally, comparative studies across different banking systems globally could offer valuable benchmarks and lessons for improving the performance of Indian banks.

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Appendices

Insurer	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Bank of Baroda	1.0000	1.0000	1.0000	0.8947	0.9184	1.0000
Bank of India	0.9352	0.9190	0.9411	0.9332	0.8887	0.9266
Bank of Maharashtra	0.8958	0.8531	0.9051	0.8907	0.9438	1.0000
Canara Bank	0.9713	0.9946	0.9352	0.9400	1.0000	1.0000
Central Bank of India	0.8598	0.8498	0.8315	0.8626	0.8804	0.8306
Indian Bank	1.0000	1.0000	1.0000	0.9587	0.9788	0.9966
Indian Overseas Bank	0.8253	1.0000	0.8222	1.0000	1.0000	0.9006
Punjab & Sind Bank	0.9793	1.0000	0.8839	0.7630	0.8472	0.8144
Punjab National Bank	0.8902	1.0000	1.0000	1.0000	1.0000	0.9587
UCO Bank	0.9822	0.9673	1.0000	0.8298	0.8806	0.8394
Union Bank of India	1.0000	1.0000	1.0000	1.0000	1.0000	0.9919
State Bank of India	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
City Union Bank Ltd.	1.0000	1.0000	0.9805	1.0000	1.0000	1.0000
Tamilnad Mercantile Bank Ltd.	1.0000	0.9681	0.9600	0.9529	1.0000	0.9997
The Catholic Syrian Bank Ltd.	0.8002	0.8450	0.9371	1.0000	0.9802	0.9621
Dhanlaxmi Bank Ltd	0.8949	0.9325	0.9944	0.8104	0.9232	0.8480
The Federal Bank Ltd.	0.9297	0.9373	0.9098	0.9483	0.8910	0.8943
The Jammu & Kashmir Bank Ltd.	0.9144	0.9350	0.9153	0.8417	0.7951	0.8507
The Karnataka Bank Ltd.	0.9223	0.9439	0.9047	1.0000	0.9190	0.9206
The Karur Vysya Bank Ltd.	0.9525	0.9184	0.8911	0.8066	0.8842	0.9605
Nainital Bank Ltd.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
RBL Bank	0.9205	0.9980	0.9394	0.9710	1.0000	1.0000
The South Indian Bank Ltd.	0.9837	0.9486	0.9362	0.9144	0.8672	0.8376
Axis Bank Ltd.	0.9144	1.0000	0.9486	0.9390	0.8527	0.8928
DCB Bank Ltd.	0.9158	0.8866	0.9236	1.0000	0.9159	0.8421
HDFC Bank Ltd.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
ICICI Bank Ltd.	1.0000	1.0000	0.9468	1.0000	0.9629	1.0000
Indusind Bank Ltd.	0.9905	1.0000	0.9439	0.9385	0.9519	1.0000
Kotak Mahindra Bank Ltd.	0.9973	1.0000	1.0000	1.0000	1.0000	1.0000
YES Bank	1.0000	1.0000	1.0000	0.8862	0.7790	0.7295

Table A1. Technical efficiency scores of Indian Commercial Banks (2017–18 to 2022–23). Source: Own elaboration.

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BUILDING ECONOMIC RESILIENCE: SOCIAL ENTREPRENEURSHIP IN POST–CONFLICT SANTANDER

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1. Objectives

The objective of this study is to explore how social entrepreneurs in post–conflict regions, specifically Santander, Colombia, mobilize and leverage external resources to overcome the absence of internal physical resources and establish sustainable businesses in highly adverse environments. Additionally, the study aims to identify the key adaptive strategies and competencies that contribute to the resilience and long–term sustainability of social enterprises operating in these challenging contexts. By employing a multiple–case study methodology, this research seeks to provide a deeper understanding of the mechanisms of economic resilience and entrepreneurial development in regions affected by armed conflict and social instability.

Keywords: economic resilience, social entrepreneurship, resource mobilization, post–conflict regions, adaptive strategies.

2. Theoretical background

The theoretical background of this study is grounded in several key concepts and frameworks that address the dynamics of social entrepreneurship and economic resilience in conflict–affected regions. Social

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entrepreneurship is conceptualized as an innovative approach to addressing social problems through sustainable business models that combine economic profitability with positive social impact (Seelos & Mair, 2005). It emphasizes the role of diverse stakeholders — including entrepreneurs, non–profit organizations, governments, and citizens — in collaboratively solving issues such as poverty, inequality, and environmental degradation (Rahdari *et al.*, 2016). In post–conflict settings, social entrepreneurship emerges as a crucial strategy for reconstruction and sustainable development, enabling communities not only to recover but also to thrive (Weerawardena & Mort, 2006).

This study draws upon the Theory of Organizational Resilience, which highlights the ability of organizations to adapt, transform, and thrive amidst adversity (Cimellaro *et al.*, 2016). This perspective emphasizes that resilience extends beyond recovery from shocks, involving continuous innovation and the reconfiguration of organizational processes to meet future challenges. In the context of conflict–affected regions, entrepreneurs demonstrate resilience through adaptive strategies and resourceful problem–solving, leveraging their competencies and networks to sustain their enterprises (Kwong *et al.*, 2017).

The Resource–Based View (RBV) of the firm further informs the analysis by emphasizing the importance of internal resources and capabilities in achieving competitive advantage. In conflict zones, the destruction of physical and human resources imposes significant constraints on businesses. However, entrepreneurs often compensate by reallocating resources, prioritizing human capital, and leveraging social networks (Baker & Nelson, 2005; Cheung & Kwong, 2017). This study investigates how social entrepreneurs in Santander mobilize both internal and external resources to navigate these constraints effectively.

Another critical theoretical framework is the Theory of Local Economic Development, which posits that collaboration among public, private, and social sectors is essential for regional economic progress (Bingham & Mier, 1993). However, in violence–affected areas, the fragmentation of social fabric poses significant challenges to such collaboration. Entrepreneurs in these contexts must adopt innovative approaches to foster partnerships and create bridges among stakeholders, thereby contributing to economic and social cohesion (Téllez, 2018).

This study also considers the concept of bricolage, which refers to the creative use of limited resources to construct solutions in resource–scarce environments (Baker & Nelson, 2005). In post–conflict zones, entrepreneurs often engage in social bricolage, leveraging social capital and community networks to sustain and grow their businesses (Tasavori *et al.*, 2019). This adaptive process underscores the importance of resourcefulness and innovation in achieving sustainability and resilience.

By integrating these theoretical perspectives, this study provides a comprehensive framework for analyzing the interplay of resilience, resource mobilization, and social entrepreneurship in post–conflict settings. It contributes to academic discourse by addressing the gaps in understanding the specific strategies and competencies that enable entrepreneurs to navigate complex and volatile environments.

3. Methodology

The methodology employed in this study adopts a multiple–case study approach to examine the entrepreneurial strategies and resilience mechanisms of social entrepreneurs in the post–conflict region of Santander, Colombia. This research design was chosen due to its ability to provide in–depth and context–specific insights into complex social phenomena, particularly in environments marked by instability and resource scarcity (Eisenhardt & Graebner, 2007). The study is practice–oriented, focusing on the challenges faced by practitioners and the practical application of theoretical concepts, aligning with calls to bridge the gap between academic research and real–world practice (Bartunek & Rynes, 2014; Tranfield & Starkey, 1998).

To gather data, the study utilized semi–structured interviews with three social entrepreneurs operating in different contexts within the region. These interviews were complemented by secondary data sources, including news articles, academic papers, and historical narratives, to provide a comprehensive understanding of the socio–economic and conflict dynamics in Santander. The selection of the entrepreneurs was guided by purposive sampling to ensure representation of diverse entrepreneurial processes and strategies. Each interview was conducted by

a different researcher, enabling variations in perspective while adhering to a common framework for data collection and analysis. The interviews were recorded, transcribed, and subjected to thematic analysis following established guidelines (Strauss & Corbin, 1998; Saldaña, 2013).

The analysis was conducted in two stages: a within–case analysis followed by a cross–case comparison. The within–case analysis aimed to identify specific resilience strategies and resource mobilization mechanisms unique to each entrepreneur. Subsequently, the cross–case comparison allowed for the identification of common patterns and emerging themes across the cases, enhancing the robustness and generalizability of the findings (Eisenhardt & Graebner, 2007).

The study also adopted a biographical research approach to explore the personal and professional trajectories of the entrepreneurs. This method provided valuable insights into how past experiences, skills, and networks influenced their ability to establish and sustain businesses in adverse conditions (Chandra, 2018). Additionally, the study incorporated a longitudinal perspective by documenting the development of the entrepreneurs' ventures over time, capturing their adaptive processes and growth trajectories.

A categorical coding approach was employed to analyze the data, with two levels of analysis: the first–order analysis focused on identifying key issues such as resource mobilization and resilience strategies, while the second–order analysis explored broader themes such as innovation, social impact, and sustainability (Saldaña, 2013). This dual–level approach ensured a comprehensive understanding of the entrepreneurial processes and the interplay between individual, organizational, and contextual factors.

While the study provides rich insights into the resilience of social entrepreneurs in post–conflict settings, it is not without limitations. The small sample size and the qualitative nature of the data constrain the generalizability of the findings. However, the methodological rigor and the depth of analysis achieved through the multiple–case study approach validate its suitability for exploring complex phenomena in resource–constrained environments.

4. Conclusions

The conclusions of this study highlight the multifaceted nature of economic resilience among social entrepreneurs in post–conflict regions, specifically Santander, Colombia. The findings reveal that entrepreneurs overcome the absence of internal physical resources by leveraging robust social networks, engaging in strategic partnerships, and mobilizing external resources. These adaptive practices underscore the critical role of community collaboration and external support in sustaining entrepreneurial ventures under adverse conditions.

The study also identifies key adaptive strategies and competencies contributing to the long–term sustainability of social enterprises in these challenging environments. Entrepreneurs demonstrated remarkable resourcefulness by reconfiguring their skills, innovating with limited resources, and aligning their business models with market demands. Their ability to continuously adapt and innovate reflects a dynamic interplay between individual resilience and external environmental factors.

Moreover, the entrepreneurs' ventures had a dual impact: generating sustainable economic outcomes while addressing pressing social challenges. By fostering social cohesion, creating employment opportunities, and promoting cultural heritage, these businesses exemplify the transformative potential of social entrepreneurship in conflict–affected areas.

Despite its limitations, including a small sample size and qualitative scope, the study provides valuable insights into the mechanisms of resilience and innovation in post–conflict entrepreneurship. It offers a framework for understanding how adaptive strategies and resource mobilization can drive both economic sustainability and social impact, contributing to broader community rebuilding efforts. These findings hold significant implications for policymakers and practitioners seeking to support entrepreneurship in conflict–affected regions.

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DEVELOPING AND IMPLEMENTING A PROJECT MANAGEMENT OFFICE (PMO) MODEL FOR HIGHER EDUCATION INSTITUTIONS: A CASE STUDY

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1. Objectives

The objective of the research is to design and implement a tailored PMO framework that addresses the unique challenges faced by higher education institutions, including process standardization, strategic alignment, and knowledge management. The study aims to evaluate the current maturity of project management practices, identify best practices through a mixed–method approach, and propose a culturally aligned PMO model that enhances project efficiency, supports strategic goals, and contributes to organizational excellence in academic environments.

Keywords: Project Management Office, higher education, project prioritization, maturity models, knowledge management.

2. Theoretical background

Project Management Offices (PMOs) have become essential in organizations seeking to improve efficiency, standardize processes, and align projects with strategic goals. In the context of higher education institutions, PMOs address challenges such as the lack of process standardization, inconsistent resource allocation, and the need for strategic alignment with institutional missions, including teaching, research, and extension (Taher *et al.*, 2016; Dougherty & Natow, 2019).

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PMOs can adopt different approaches depending on organizational needs. The Project Management Institute (PMI, 2017) categorizes PMOs into supportive, controlling, and directive types, each offering varying degrees of oversight and support. Additionally, PMOs must align with the organizational culture and adapt to the specific characteristics of academic environments, which differ significantly from the business sector (Garza, 2013; Aubry *et al.*, 2009).

The implementation of a PMO in universities not only improves operational efficiency but also facilitates strategic decision–making, fosters interdisciplinary collaboration, and enhances knowledge management practices (Pemsel & Wiewiora, 2013; Almeida *et al.*, 2019). These offices enable the integration of traditional, agile, and hybrid methodologies, providing flexibility to address diverse project demands (Kerzner, 2017; Fernandez & Fernandez, 2008).

Despite these benefits, implementing a PMO in higher education comes with challenges, such as resistance to change and the need to demonstrate value early in the process (Hill, 2004; Unger *et al.*, 2012). This study contributes to addressing these gaps by proposing a PMO model tailored to the unique requirements of higher education institutions, with a focus on cultural alignment and methodological flexibility.

3. Methodology

This study employs a mixed–method approach, integrating quantitative and qualitative methods to assess and improve project management practices. Quantitative analysis was conducted using maturity models like OPM3 and P3M3 to evaluate the current state of organizational project management, focusing on process standardization, strategic alignment, and resource allocation. Tools such as impact and urgency matrices were used to prioritize projects based on their relevance and institutional goals.

Qualitative data was gathered through semi–structured interviews with eight PMO managers and focus groups involving 14 professors, capturing diverse perspectives on best practices, challenges, and

expectations for a PMO tailored to a higher education institution. Institutional documents were also reviewed to understand the organizational framework and its relationship with project management.

The mixed–method approach allows for the triangulation of results, ensuring robust analysis and validation of findings. This methodology supports the development of a PMO model that is culturally aligned and operationally effective for higher education contexts.

4. Findings

The study underscores the strategic role of Project Management Offices (PMOs) in enhancing business research and management practices within higher education institutions. Through a hybrid PMO model that combines predictive and agile methodologies, the findings demonstrate significant potential to address inefficiencies in project management and align institutional initiatives with strategic goals.

Quantitative results, obtained using OPM3 and P3M3 models, reveal a maturity level of 3, indicating the presence of standardized processes but room for improvement in areas such as knowledge management and strategic resource prioritization. The use of impact and urgency matrices provided a business–oriented framework to classify and prioritize projects, ensuring that resources are allocated to initiatives with the highest strategic value.

Qualitative insights from interviews with PMO managers and focus groups with academic stakeholders highlighted the importance of integrating PMO practices with the organizational culture. Participants emphasized the role of standardized processes, knowledge sharing, and strategic alignment as foundational for improving management outcomes. They also identified resistance to change as a challenge that requires proactive engagement and communication strategies.

From a business research and management perspective, the findings reveal that adopting a structured PMO approach can provide higher education institutions with tools for better decision–making, enhanced visibility of project performance, and the ability to foster innovation through effective knowledge management. This underscores the

broader applicability of PMOs as a strategic asset, bridging operational efficiencies with the institution's mission to deliver value across teaching, research, and community engagement.

5. Conclusions

The study demonstrates that a culturally aligned Project Management Office (PMO) can significantly enhance project management in higher education institutions. By addressing key gaps such as process standardization, knowledge management, and strategic alignment, the proposed PMO model fosters greater efficiency and improves resource allocation.

The research emphasizes the importance of integrating hybrid methodologies to balance flexibility and structure, catering to the diverse project needs of academic institutions. The findings also highlight the critical role of organizational culture and stakeholder engagement in ensuring the PMO's acceptance and effectiveness.

This work contributes to the theoretical understanding of PMOs in educational contexts, filling a gap in existing literature, and provides a practical framework for other institutions to adopt similar strategies. Future research should focus on long–term evaluations of PMO implementations and comparisons across different sectors.

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WHAT CHARACTERIZES EARLY INTERNATIONALIZATION RESEARCH IN EUROPE?

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1. Objectives

This study seeks to map the scientific research on early internationalization in Europe through a bibliometric analysis. Specifically, we examine publication trends and assess the performance of individual countries within this field. Additionally, we conduct a co–occurrence analysis of keywords to identify the key research topics and themes surrounding early internationalization in Europe.

Keywords: born global, international new venture, early internationalization, international entrepreneruship, bibliometric.

2. Theoretical background

The internationalization of SMEs is a central topic in the field of international business (Griffith *et al.*, 2008). For many years, research in this area was dominated by the Uppsala Model, which posits that firms initially establish a strong domestic customer base before expanding into international markets. According to this model, companies tend to enter geographically and culturally proximate markets first, gradually moving into more distant and diverse ones over time(Vahlne & Johanson, 2017).

However, since the 1990s, the landscape of international business has shifted significantly due to globalization and rapid advancements

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in technology. These changes have facilitated the emergence of firms that engage in international markets early in their lifecycle, challenging the traditional Uppsala Model. Such firms are referred to by various terms, including *born global companies* (Knight & Cavusgil, 1996), *international new ventures* (McDougall *et al.*, 1994), or *early internationalization firms* (Breuillot *et al.*, 2022).

The field of early internationalization has seen substantial growth, with numerous bibliometric studies conducted to explore its intellectual structure (Dzikowski, 2018). These studies often employ co–author analyses to map the collaborative landscape of the field (García–Lillo *et al.*, 2017) or keyword co–occurrence analyses to trace its evolution over time(Ulaj & Hızıroğlu, 2024). However, despite the existence of bibliometric analyses, to our knowledge, there is no comprehensive review that specifically addresses early internationalization research in Europe. Considering that different regions operate within distinct contexts and often prioritize varying research topics, this study aims to provide an in–depth analysis of early internationalization in Europe. We do this using performance analysis and keyword co–occurrence analysis, providing significant insights into the region's unique contributions in early internationalization field.

The paper is structured as follows: the next section outlines the methodology employed, followed by a detailed presentation of the results in the fourth section. The final section provides conclusions and implications of our findings.

3. Methodology

This study utilizes bibliometric analysis to investigate the conceptual development of research in the field of early internationalization in Europe. Bibliometric analysis is a quantitative method that enables systematic evaluation of research output through the examination of publishing patterns, citation trends, and connections among important authors, journals, and concepts (Gutiérrez–Salcedo *et al.*, 2018). The analysis was performed over multiple phases, as described below.

3.1. *Data Collection and Validation*

The data for our study was collected from Scopus database. The reason for this selection is the fact that Scopus database offers a wider coverage than other databases such Wos and is highly well–know for qualitative academic publications (Zupic & Čater, 2015) in international business. The search was conducted in Article Title, Abstract, Keyword using keywords *born global*", "international new venture*", "rapid internationalizati*", "early internationalization firms", "new global business", "new global business*", "fast internationalizer*", "early internationalizer*", "Born–again global*", "Global start–up*"* identified previously in literature. Additionally, we limited our data to only authors that orginiate from Europe similar to Hoxhalli *et al.* (2024). Furthermore, we focus only on articles in English language until the end of 2023 to ensure that even the most recent publications are included. The search resulted 573 articles, which were exported in a specified format (CVS) for further processing. To guarantee the validity of the results, the dataset was carefully reviewed for duplicates and inconsistencies prior to analysis.

3.2. *Data analysis*

The bibliometric analysis was conducted using Excel, VOSviewer and R–based Biblioshiny software, which are widely used tools for visualizing and analyzing bibliometric networks (Aria & Cuccurullo, 2017; Van Eck & Waltman, 2010). Firstly we conducted performance analysis in identifying publication trends, the most important authors, papers, journals and countries (Öztürk *et al.*, 2024). Additionaly we employed co–occurrence keyword analysis. Author keywords were examined to identify emerging topics and trends in early internationalization in Europe relying in the assumption that keywords represent the articles content (Castriotta *et al.*, 2021). Co–word analysis notices patterns of term co–occurrence and co–absence of keywords, revealing the thematic framework of the research field (Marzi *et al.*, 2024). We used a minimum occurrence of kewyords of 7 and we merged small clusters which have less than 5 keywords.

4. Findings

4.1. *Performance analysis*

Our database includes 573 studies. Notably, research on early internationalization began in 1989 but gained traction in Europe nearly a decade later. The annual growth rate of publications is 15%, reflecting a steady increase in scholarly work. Furthermore, in Europe, 934 authors have contributed to this field, with an average of 2.59 authors per paper.

Timespan	1997:2023
Sources (Journals, Books, etc.)	155
Documents	573
Annual Growth Rate %	15.24
Average citations per doc	55.66
Author's Keywords	1404
Authors	934
Authors of single–authored docs	63
Co–Authors per Doc	2.59
International co–authorships %	41.54

Table 1. Main Information About Data. Source: Own elaboration.

Over 40% of these collaborations involve international co–authorship, while only 63 publications are with single author.

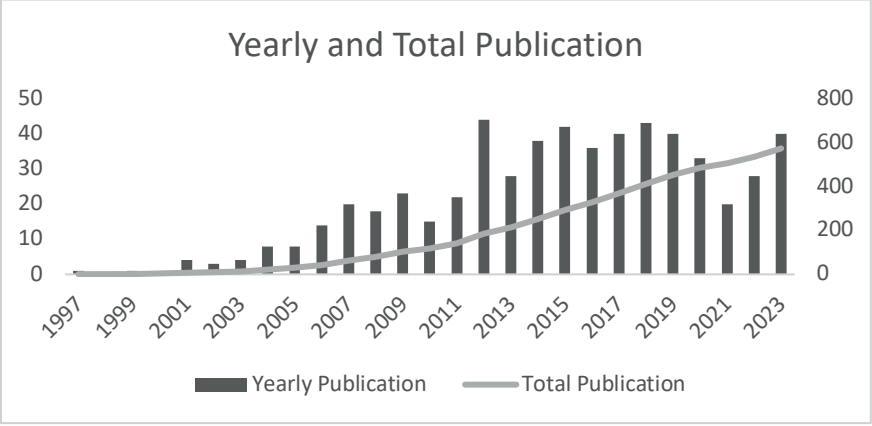


Figure 1. Yearly and Total Publication. Source: Own elaboration.

The volume of study on early internationalization in Europe has shown a steady increase over time (Figure 1). During the initial period, research output was limited and sporadic, generating fewer than 10 articles per year. Our research reveals two notable events of decreased publishing activity: the global financial crisis of 2008 and the COVID–19 epidemic. Significantly, 2012 is distinguished as the most productive year, with 44 published papers.

Rank	Country	Publications	Citations
1	United Kingdom	127	9909
2	Finland	81	4669
3	Sweeden	66	3278
4	Spain	64	3056
5	Denmark	41	3331

Table 2. Most Productive Countries. Source: Own elaboration.

The United Kingdom emerges as the most productive country in the field of early internationalization in Europe, with 127 publications and 9,909 citations. Interestingly, three Nordic countries rank among the top five most productive nations. Finland holds the second position with 81 publications and 4,669 citations, followed by Sweden in third place with 66 publications and 3,278 citations. Denmark ranks fifth with 41 publications and 3,331 citations. Additionally, Spain secures the fourth position, contributing 64 publications and 3,056 citations. This highlights the strong research output of Nordic countries in this field, alongside significant contributions from the UK and Spain.

4.2. *Co–occurrence keyword analysis*

Our analysis revealed five major clusters. The first and largest cluster (red) includes keywords such as *international new ventures*, *international entrepreneurship*, and *early internationalization*, which represent the core focus of the field: companies engaging in international activities early in their lifecycle. This cluster also highlights the importance of firm capabilities such as *dynamic capabilities*, *innovation*, *human capital*,

and *experience*. The second cluster (purple) focuses on *born global* companies, typically SMEs operating in international markets, often through *exports*. It also features the *Uppsala model*, which, despite being contradictory to the born global approach, co–occurs due to comparisons researchers often make between these two frameworks. The third cluster (yellow) emphasizes the role of *social capital*, *knowledge*, and *networks* in driving successful *internationalization*. It also reflects the growing research interest in *emerging economies*. The fourth cluster (blue) includes keywords like *international business*, *legitimacy*, and *globalization*, addressing broader themes such as how firms establish legitimacy in foreign markets and adapt to globalization trends. Finally, the fifth cluster (green) focuses on firm *performance*, particularly *international performance*, and strategic orientations like *market orientation* and *entrepreneurial orientation*, exploring their impact on firms' success in international markets.

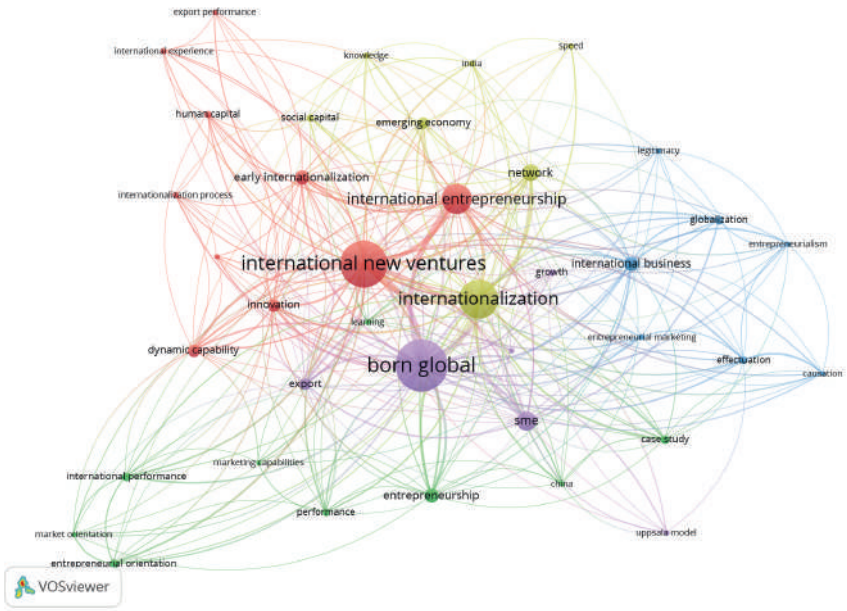


Figure 2. Co–Occurence of Keyword. Source: Own elaboration.

5. Conclusions

This study offers significant insights into the developing process of early internationalization research in Europe. Upon analyzing 573 articles from the Scopus database, it is obvious that the inception of early internationalization studies in Europe took place later than in the United States, with study beginning in 1997 as compared to 1989 in the U.S. Despite occasional decreases during the 2008 financial crisis and the COVID–19 pandemic, the field has seen consistent development over time. The United Kingdom leads in publication production and citation impact, followed by Nordic nations like Finland, Sweden, and Denmark. The co–occurrence keyword analysis identifies five main research themes that have guided academic research into early internationalization in Europe. These themes underline key topics, including organizational capabilities, networks, and performance.

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DRIVING GREEN INNOVATION TOWARDS SUSTAINABLE PERFORMANCE: THE MEDIATING ROLE OF SUSTAINABILITY ORIENTATION IN BUSINESS CLUSTERS

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1. Objectives

Analyze how belonging or not belonging to a business cluster influences the dynamics linking green innovation with sustainable performance, considering the mediating role of sustainability orientation in the industrial context of the Valencian Community, Spain.

Keywords: green innovation, sustainable performance, business cluster, sustainability orientation, organizational mediation.

2. Theoretical background

Business clusters represent geographic concentrations of companies, suppliers, and related organizations that interact in a collaborative environment, promoting innovation, competitiveness, and sustainability (Becattini, 1979; Boix & Galletto, 2006). Indeed, "Clusters, as collaborative environments, enhance this innovation through synergies, shared learning, and access to common resources" (Expósito–Langa *et al.*, 2015: 43).

This shared environment fosters a climate of trust among participants, strengthening strategic alliances and enhancing companies' ability to adapt to market challenges and environmental regulations (Belso *et al.*, 2024).

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In the context of sustainability, clusters play a crucial role in promoting responsible business practices that benefit not only individual companies but also local communities and the environment (Chen *et al.*, 2014). These collaborative dynamics enable companies within clusters to develop innovative solutions with a sustainable focus, optimizing resources, reducing operational costs, and generating a positive impact both economically and environmentally. Furthermore, this approach boosts global competitiveness by positioning cluster companies as leaders in green innovation and sustainable development.

2.1. *Green Innovation and Sustainable Performance*

Green innovation, understood as the integration of environmental considerations into products, processes, and strategies, seeks to mitigate environmental impacts while improving companies' social, economic, and competitive performance (Chen *et al.*, 2006; Díez–Vial *et al.*, 2023; Eiadat *et al.*, 2008; Parrilli *et al.*, 2023; Valdivieso–Uvidia *et al.*, 2024). In this context, it is proposed that belonging to a cluster strengthens the impact of green innovation on sustainable performance.

Hypothesis H1 is formulated: Green innovation has a significant direct effect on sustainable performance, with this impact differing between companies inside and outside clusters.

2.2. *Mediating Role of Sustainability Orientation*

Sustainability orientation is a comprehensive strategic approach that aligns business practices with sustainability principles, serving as a bridge between green innovation and sustainable performance (Roxas & Coetzer, 2012; Ruiz–Ortega *et al.*, 2021). In companies within clusters, sustainability orientation can amplify the benefits of green innovation due to positive externalities and the contagion effect.

Hypothesis H2 is formulated: Sustainability orientation mediates the relationship between green innovation (product and process) and sustainable performance, with effects differing between companies inside and outside clusters.

3. Methodology

The methodology used a mediation analysis based on the PROCESS macro for SPSS, Model 4, configured with 10,000 bootstrap samples and a 95% confidence level (Hayes, 2022; Igartua & Hayes, 2021). Two groups were compared: companies inside and outside clusters, evaluating the impact of green innovation (product and process) on sustainable performance, with sustainability orientation as the mediating variable.

The variables and frameworks are.

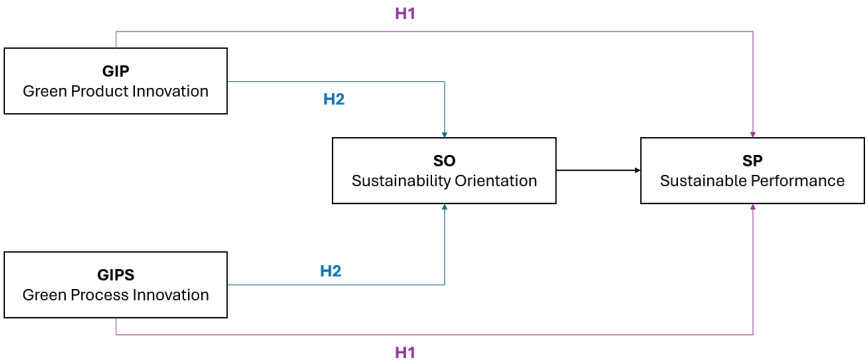


Figure 1. Framework. SOURCE: Own elaboration.

The sample comprises 189 industrial companies from the Valencian Community, Spain. Ordinary least squares (OLS) regression models were used to analyze direct and indirect effects, following the methodological recommendations of Hayes (2022). Covariates were included to control confounding effects, ensuring internal validity and comparability between groups.

4. Findings

The results show (Table 1) that companies within clusters benefit significantly from the mediation of sustainability orientation in the relationship between green innovation and sustainable performance. In

this context, the indirect effects were significant for both product green innovation (β = 0.0751, IC 95% [0.0010, 0.1994]) and process green innovation (β = 0.0897, IC 95% [0.0237, 0.1830]). However, the direct effects of green innovation on sustainable performance were not significant, reinforcing the relevance of mediating mechanisms.

In contrast, for companies outside clusters, product green innovation has a significant direct effect on sustainable performance, while process green innovation depends on the mediation of sustainability orientation to generate impact (β = 0.0101, IC 95% [0.0072, 0.2197]).

Table 1. Table captions should be placed above the tables. SOURCE**:** Own elaboration.

Trajectory	[a]Belonging to a Cluster	H	[b]Not Belonging to a Cluster	H
GIP → SP	Coefficient: 0.1596 (IC: –0.0289, 0.3480) → No Significant	NO	Coefficient: 0.5276 (IC: 0.3107, 0.7444) → Significant	YES
GIPS → SP	Coefficient: 0.1563 (IC: –0.0295, 0.3421) → No Significant	NO	Coefficient: –0.0837 (IC: –0.3171, 0.1498) → No Significant	NO
GIP → SO→ SP	Coefficient: 0.0751 (IC: 0.0010, 0.1994) → Significant	YES	Coefficient: 0.0392 (IC: –0.0132, 0.1705) → No Significant	NO
GIPS → SO → SP	Coefficient: 0.0897 (IC: 0.0237, 0.1830) → Significant	YES	Coefficient: 0.0101 (IC: 0.0072, 0.2197) → Significant	YES

[a]N= 110; [B]N= 79. IC REFERS TO THE CONFIDENCE INTERVAL USED (95%).

With these results, we know that in the context of companies within clusters, the findings highlight the crucial role of sustainability orientation as a mediator to maximize the benefits of green innovation in terms of sustainable performance. This suggests that companies located in collaborative environments should prioritize strategies that strengthen this orientation, leveraging the synergies and shared learning inherent in clusters (Belso–Martinez *et al.*, 2024).

On the other hand, companies outside clusters, which lack these collaborative dynamics, rely more on solid internal strategies, emphasizing the need to focus on green product innovation as a direct lever to improve their sustainable performance (Molina–Morales *et al.*, 2019).

These findings underscore that sustainability strategies are not universal but must be tailored to the specific environment in which each company operates. Moreover, these differences reflect the potential of clusters to act as catalysts for sustainable change while also emphasizing the resilience and adaptability of companies outside them (Becker, 2023).

5. Conclusions

Sustainability orientation acts as a bridge linking green innovation with sustainable performance, especially in companies within clusters, where synergies and shared learning strengthen mediating effects. In these environments, green innovation relies on this orientation to maximize its sustainable impact.

In contrast, companies outside clusters show that product green innovation has a significant direct impact, while process innovation requires the mediation of sustainability orientation. This highlights the importance of the business context and the need to adapt strategies according to environmental dynamics.

This study presents two limitations. First, the results are based on a specific geographic context, the Valencian Community, which might limit the generalization of the findings to other regions with different business dynamics. And second, the study employs a cross–sectional design, which prevents observing the temporal evolution of the relationships between the variables. Furthermore, future research lines should explore other mediating or moderating factors that might also influence the relationship between green innovation and sustainable performance.

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I AM DIFFERENT THEREFORE I BETTER PERFORM. A VRIO APPROACH TO THE DIVERSITY AT THE WORKPLACE CONCEPT

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1. Objectives

Nowadays firms are experiencing an increasing heterogeneity among their members. In part, this is due to the increasing international migration flows, especially in the last decades, globalization, and the new technological developments such as the internet since without a doubt they have not just drastically reduced the traditional gaps between societies of firms, but also increased the interdependence among cultures. Therefore, the scientific community as well as the businesses have been exploring the interaction between the diversity at the workplace and the results performed by the organizations. The shreds of evidence indicate that there is still a lack of consensus regarding the role and the impact of diversity in the workplace over the firm competitiveness. Therefore, our research uses the VRIO framework as a tool to test the strategic relevance of diversity at the workplace concept considering it a strategic resource: In addition to other closely similar research, our proposal considers both the dimensions of diversity at the workplace such as surface and deep–end. Also, the authors propose a theoretical model regarding the way how diversity generates a sustained competitive advantage.

The main objective of our research is to evaluate the potential of diversity in the workplace as a source of generation of a sustained competitive advantage through the VRIO framework. Also, our research

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aims to identify which one of the dimensions of diversity, either surface or deep end, contributes more to the organization's competitiveness and results. Finally, once the research has been concluded, some general recommendations have been proposed.

Keywords: diversity at the workplace, VRIO framework, surface diversity, deep–end diversity, sustained competitive advantage, inclusion.

2. Theoretical background

This research relies upon two main investigation concepts, diversity at the workplace and the VRIO framework.

2.1. *The VRIO Framework*

The framework, initially proposed by Barney (1991) as the VRIN model, analyzes the characteristics that a resource must meet to generate a sustained competitive advantage. According to the framework, the resources that are valuable, rare, imperfectly imitable, and non–substitutable lead to a sustained competitive advantage.

A second improved version was proposed in 1995 under the abbreviation of VRIO. This second version keeps paying special attention to the intern firm's characteristics. Barney (1997) indicated that for a resource or capability to create a sustainable competitive advantage, it must be valuable, rare, difficult to imitate, and of course supported by the organization, something not present in the initial model. Consequently, if the organization fully meets all the previously mentioned criteria then a higher value generation is expected. This can be either under the cost leadership of differentiation concepts as indicated by Porter (1997).

Therefore, in case, the resources or the capability that the organization possesses does not fully meet any of the conditions proposed by the model, the firm will find itself in a situation of competitive disadvantage, competitive parity, or temporary competitive advantage following the conditions met, as indicated in the Figure 1.

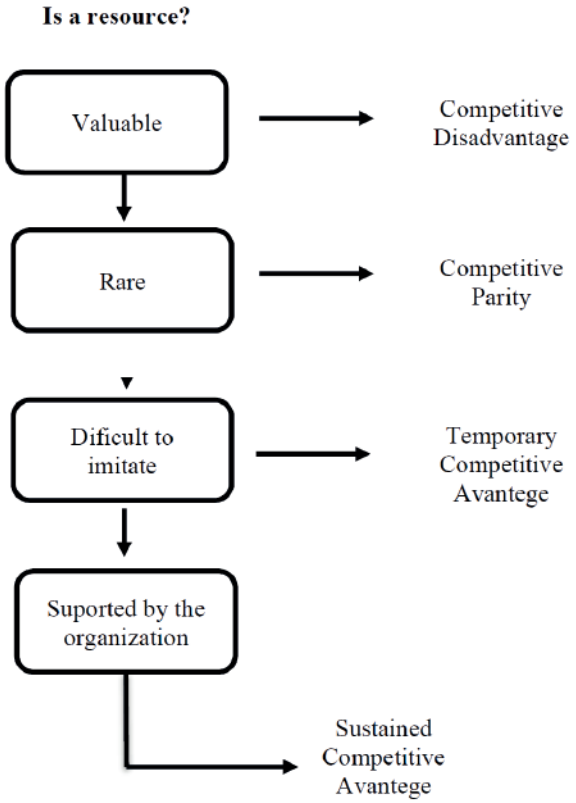


Figure 1. The VRIO Framework. SOURCE: Own elaboration based on Barney (1997).

2.2. *Diversity at the workplace*

There has been a continued increasing interest regarding diversity in the workplace concept, especially in the last decades. In part, this is a consequence of the latest social, economic, and cultural events such as globalization, migrative flows, and the development of new technologies. As a result, a great general interconnectivity and inter actuation has arisen. These dynamics apply to human sources as well.

Regarding the diversity at the workplace concept, many scholars have tried to define it, highlighting features such as culture, age, gender, and cognitive capabilities among others. However, the concept still

suffers from the lack of a univocal definition (Cox Jr, 1991; Mohammed & Angell, 2004; Roberson, 2019).

Nevertheless, there is a general acceptance among the scientific community that the dimensions that compose the diversity at the workplace concept can be classified into surface and deep–end levels (Fisher *et al.*, 2012; Harrison *et al.*, 2002; Jansen & Searle, 2021; Mohammed & Angell, 2004).

Regarding surface diversity, scholars have highlighted characteristics such as race, gender, colour, or age since those are more immediately apparent. On the other hand, regarding the deep–end dimension of diversity in the workplace scholars have highlighted characteristics such as cognitive, beliefs, values, or opinions.

Traditionally, the scientific community has paid more attention to superficial diversity, specifically to gender and race analysing the potential benefits generally at a meso level. However, in the last years, special attention has been paid to some specific components of deep–end diversity such as beliefs, cognition, or values at a meso level.

3. Methodology

This explorative qualitative research proposes a comparative study from a theoretical point of view to determine if the surface and the deep–end diversity led to a sustained competitive advantage under the VRIO model. According to the number of characteristics that are met, the authors further explore the type of competitive advantage generated.

This methodology has been used by other authors in some recent research, however not with the same focus. For instance, Miethlich and Oldenburg (2019) applied the VRIO framework to analyze the relevance of the employment of persons with disabilities as a source of competitive advantage generation. On the other hand, Astawa (2022) applied the framework to the development of tourism competitiveness. Also, (Okorie *et al.*, 2023) applied the framework to the digital transformation and the circular economy in manufacturing firms. Still, Erburu *et al.* (2005) applied the VRIN model to analyze the potential of cultural diversity as a driver of international competitiveness for multinational firms.

3.1. *Diversity at the workplace through the VRIO model*

Following the composition of the VRIO model, the surface and deep–end diversity will be analysed for their value, rarity, inimitability, and organizational capabilities. Therefore, some research hypotheses are proposed as indicated below:

– Valuable.

H1a: Surface diversity is a valuable resource.
H1b: Deep–end diversity is a valuable resource.

According to Barney (1991) a valuable resource permits a firm to implement strategies that improve its efficiency and effectiveness generally by exploiting new opportunities or neutralizing threats in a firm's environment, in other words, it generates some added value. In that sense, Roberge and Van Dick (2010) focusing more on the deep–end diversity indicated it can lead to some relevant multilevel outcomes such as creativity or innovation. In addition, Gomez and Bernet (2019) taking into account components of surface and deepen diversity, indicated that it increases firm financial performance and strongly improves its decision–making capabilities. Similar results were indicated by Hunt *et al.* (2015). The authors indicated that diversity in the workplace generates relevant advantages in talent recruitment, improved customer orientation, greater employee satisfaction, and innovation. On the other hand, Harrison *et al.* (2002) conclude that the surface and deep–end diversity has a direct impact on the team's performance task.
Therefore, we might conclude that diversity in both dimensions (either surface or deep end) is a valuable resource for the organization.

– Rare.

H2a: Surface diversity is a rare resource.
H2b: Deep–end diversity is a rare resource.

For Barney (1991) a resource can be classified as rare as long as the number of firms that possess it is less than the number of firms that need it, therefore, leading towards a competitive advantage. Following the definition, we must ask ourselves if the superficial and the deep–end diversity can be considered as a rare resource.
Regarding surface diversity, nowadays is not that rare to find teams composed of heterogeneous members in terms of age, race, or gender. This situation is even more common in developed economies such as the European Union of the United States of America, as there have been implemented different inclusion politics. In part, these strategies are part of the Corporate Social Responsibility politics the corporation has developed and supported, especially in the last two decades. Therefore, we might conclude that superficial diversity should not be considered as a rare source itself.
On the other hand, the situation is a bit more complex when talking about deep–end diversity. In fact, due to its intangible characteristics, it is not easy at all to find persons with the needed aptitude, ideas, trust, and creeds as well as the group dynamics. This match depends on the firm needs that will be different among them generating therefore ad high diversity dynamics that are not available to all the companies.

– Inimitability.

H3a: Surface diversity is an inimitable resource.
H3b: Deep–end diversity is an inimitable resource.

Referring to Barney (1991) valuable and rare resources can only be a source of a sustainable competitive advantage if the firms that do not possess them cannot obtain or reproduce them.
Referring to the superficial diversity, this condition does not fully apply. Nowadays organizations can easily imitate the diverse team composition based on ages, nationalities, or gender, of the direct competitor firm. In fact, to do so, it is sufficient for them to address the local or international market labor.

On the other hand, the situation seems to be way more different for the deep–end diversity dimension. It was almost impossible for an organization to fully replicate this resource due to the causal ambiguity and the social complexity that this dimension carries. For example, for an organization to copy some valuable and rate capabilities such as new ideas generations, personal and corporative trust, creeds, or aptitudes that distinguish an organization it requires tremendous efforts due to its intangible characteristics. Therefore, it is reasonable to affirm that deep–end diversity is a valuable, rare, and inimitable resource.

– Organization capabilities.

H4: Deep end diversity supported by organizations leads to a sustained competitive advantage.

According to Barney (1997), it is essential to be organized in order to exploit the resource or capability that leads to a sustainable competitive advantage. Of course, not all firms have the same organizational capability and flexibility. Generally, following the classic firm's organization theories, the formalization and structuration would depend on the size and the age of the firm.

Among the most relevant organizational capabilities to fully exploit a valuable, rare, and inimitable capability many scholars have highlighted the Strategic Human Resource (Boon *et al.*, 2018; Garavan, 1991; Mello, 2015) politics paying special attention to the inclusion, the type of leadership, and the Corporative Culture. These capabilities include detection, implementation, and continuous improvement capabilities regarding the strategic resources of the capability.

Therefore, it is reasonable to affirm that if a firm, possesses the needed capabilities then a valuable, rare, and inimitable resource or capability generates added value to the customer. Also, this competitive advantage will be sustainable since no direct or indirect competitor can replicate it, offering a strong competitive position to the firm that owns it.

4. Findings and implications

Taking into account the tremendous complexity that surrounds the diversity at the workplace concept while considering it as a strategic resource, the VRIO model has provided some important insides.

First, this research indicates that from a theoretical point of view, superficial diversity does not lead to a sustained competitive advantage. In fact, according to the VRIO model, the superficial dimension of diversity can lead to a competitive parity or a temporary competitive advantage following the degree of heterogeneity that surrounds a determinate firm.

On the other hand, our research confirms the primordial relevance of deep–end diversity as it leads toward a sustained competitive advantage due to its causal ambiguity and social complexity characteristics.

In such regard, table number 1 illustrates the analysis of the diversity ad the workplace, taking into account the surface and deep–end dimensions and the VRIO model.

	Surface Diversity	Deep-end Diversity
Valuable	YES	YES
Rare	YES/NO	YES
Difficult to imitate	NO	YES
Supported by Organization		YES
Competitive Implication	Competitive parity/ Temporary competitive advantage	Sustained Competitive advantage
Performance	Normal/Above normal	Above normal

Table 1. The application of the VRIO framework. SOURCE: Own elaboration based on Barney and Wright (1998).

Some relevant implication emerges, generally, orientated toward senior positions since they have strong decision–making power. For example,

the inclusion politics that a firm generates must not be fully conditioned from components of surface diversity such as gender, age, or race since they can lead toward a competitive parity or at the best to a temporary competitive advantage. On the other hand, if the inclusion politics are based on deep–end characteristics and have an organization to exploit them, then this combination leads toward a sustainable competitive advantage.

5. Conclusions

Considering diversity at the workplace as a strategic resource and contrasting it with the VRIO model some important, provided some important conclusions. First, the increasing heterogeneity must not be considered as a continuous race to inclusion since the simple act of including diverse members from a superficial point of view does not to a sustainable competitive advantage. Rather, the effort should be concentrated on the inclusion of intangible assets, hence, the strategical use of the deep–end diversity.

However the firms should be aware of the fact that despite the superficial diversity by itself does not lead to a sustainable competitive advantage, it normally generates deep–end diversity since it is accompanied by social complexity and ambiguous complexity dynamics. Also, if a firm is committed to inclusive politics thanks to a proper CSR policy, this normally generates a strong corporate reputation. In this regard, our research, while approaching the superficial diversity, indicated that hypothesis 1a fully meets while hypothesis 2a is fully met in some cultures and not in others. On the other hand, while talking regarding deep–end diversity, it fully meets all the criteria to generate a sustained competitive advantage since all the "b" hypotheses have been met.

Below is indicated in a summarized manner the interaction between surface and deep–end diversity towards the sustainable competitive advantage generation:

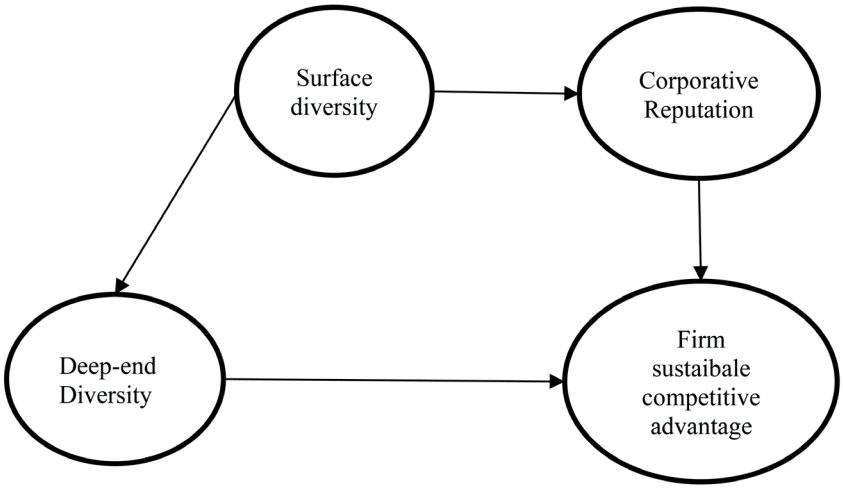


Figure 2. The competitiveness interaction flow. SOURCE: Own elaboration.

6. Future investigation lines

This research makes way to other research lines. For instance, it could be interesting and useful to apply the VRIO framework to diversity management capability. Since the nowadays environment is getting day by day more dynamic and unpredictable having proper managerial capabilities can lead to strong sustainable competitive advantages. Also, properly supporting the findings of this explorative theoretical research with some empirical data would be highly useful to further validate the findings. Finally, it would be very interesting to analyze the strategic relevance of inclusive politics considering its focus, either surface or deep–end inclusion.

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