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INTRODUCTION TO THE PROCEEDINGS OF THE PICCOLA IMPRESA/SMALL BUSINESS 6TH WORKSHOP: “NEW PERSPECTIVES AND INTERDISCIPLINARY APPROACHES TO ENTREPRENEURSHIP”

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Entrepreneurship has been recognized by the European Union as a powerful engine for economic development, essential to seize opportunities, generating ideas and turning them into financial, cultural, or social value for others (European Commission, 2013; Bacigalupo et al., 2016; Mccallum et al., 2020). It is a key driver for the creation of new businesses, but also for stimulating renewal and innovation in existing organisations (Sharma and Chrisman, 1999). Entrepreneurship underpins all enterprising activity and especially SMEs, which represent 99.8% of all businesses in the EU-27, employ around 83 million people, account for more than half of Europe’s GDP and have always been essential for European economic competitiveness and prosperity (European Commission, 2022).

Contexts in which entrepreneurship takes shape and develops have been profoundly changed by the Covid-19 pandemic (European Commission, 2022), the outbreak of war in Ukraine (Accenture, 2022; EIU, 2022) and the increase in extreme events over the past

years (Rauch and Hulsink, 2023). Such phenomena, on the one hand, have put many SMEs in crisis (OECD, 2022), at best forcing them to a fast reaction to rethink their entrepreneurial and business models (Fasth et al., 2022); on the other hand, these events have provided “the seeds for entrepreneurship” (Rauch and Hulsink, 2023, p. 662), as they have generated new needs and new business opportunities (Pencarelli et al., 2020; 2022; Zutshi et al. 2021). Finding innovative solutions to deal with climate change and improve resource efficiency, building social cohesion, speeding up transitions to a digital and sustainable economy have become high priorities worldwide (Maglio et al., 2021). Consequently, policies have to be adapted both for supporting existing entrepreneurs and SMEs to deal with the new and challenging contextual situations, and for stimulating new entrepreneurial initiatives, able to address the new challenges and needs.

The aim of the Conference was to draw a comprehensive and updated overview about entrepreneurship, show the liveliness of this field of research and offer all entrepreneurship scholars an opportunity for discussion and exchange useful for generating interesting ideas for advancing research on this topic. Notably, we intended to look deeper within the current complexity, aiming to understand the nature, meaning and features of entrepreneurship in the current historical phase, in order to advance theory and gain more insights that can be relevant for the knowledge of the entrepreneurial phenomenon, even going beyond the mainstream views of the entrepreneurship field (Welter et al., 2017). According to Welter (2011) *context* provides individuals opportunities and sets boundaries for their entrepreneurial actions. Thus, it is crucial for better understanding when, how, and why entrepreneurship takes place and who is involved in the entrepreneurial process.

The first purpose of the PISB 2023 Conference “New Perspectives and Interdisciplinary Approaches to Entrepreneurship” was thus to promote research on the *variety of contexts*, their complexity and how they shape entrepreneurship. We intend variety as the many facets of entrepreneurship within a plurality of contexts that includes:

- variety of setting: districts, communities, specific institutional and social contexts;
- variety of sectors: creative industry, cultural industry, health care, digital entrepreneurship, rural entrepreneurship, etc.;
- variety of values: green entrepreneurship, sustainable entrepreneurship, social entrepreneurship, etc.

Each context is characterised by different levels of complexity and dynamics that can be analysed with regard to antecedents, processes and outcomes of entrepreneurship.

A reciprocal relationship emerges between context and entrepreneurship (Welter, 2011): context influences entrepreneurship and in turn entrepreneurship shapes contexts throughout individuals' entrepreneurial actions, values and behaviours. A plurality of subjects/actors can be involved in entrepreneurship: starttappers (Kuckertz et al., 2020), young entrepreneurs, women entrepreneurs, entrepreneurial family (Randerson et al., 2015), ethnic entrepreneurs, senior/silver entrepreneurs, benefit entrepreneurs, disable entrepreneurs, etc. With this in mind, the second purpose of the workshop is to shed light on the *different traits of entrepreneurship* by investigating *different kinds of entrepreneurs*. Of course, contexts and actors cross each other and this gives rise to new scenarios worthy to be better investigated: women entrepreneurs in the cultural industry, digital entrepreneurship and social entrepreneurship, benefit entrepreneurs and sustainable entrepreneurship, only to make a few examples.

Facing this complexity and variety means to deal with entrepreneurship by adopting innovative and original methodological approaches and theoretical frameworks that look outside the box, both from traditional disciplines including management, economics, organisation studies, law, and finance and other disciplinary fields such as sociology, psychology, anthropology, history. Thus the third purpose of the conference was to offer insights into the ongoing debate on *the need for a multidisciplinary approach* to catch the reality of contemporary entrepreneurship.

The eleven full papers and the twenty long abstracts in these proceedings have contributed to the threefold aim in an original manner and with interesting results for theory, practice and policy.

The variety of contexts in which entrepreneurship takes place emerges from many contributions. They deal with a variety of sectors (i.e., food, energy, digital services) and take a cross-sectorial view and thus witness the multifaceted nature of entrepreneurship in different contexts: rural entrepreneurship, communities, starting-up, crisis, sustainability, innovation, welfare. Overall, it emerges how entrepreneurship needs to invent new business models and to rely on a new and evolving set of resources throughout networks and relationships, that go beyond the traditional social capital perspective.

The current entrepreneurial scenario is characterised by different types of entrepreneurs and different forms of entrepreneurship. On the one hand, papers presented in this special issue show how particular types of entrepreneurs can affect the

effectiveness of processes such as innovation, digitization, and sustainability; SMEs, small family firms, start-ups show a dynamic approach and flexibility to address digitalization and innovation along with sustainability issues, despite the limitation due to their size, even in times of economic downturn. On the other hand, the focus has been placed on how the current challenging context impacts on the characteristics of specific kinds of entrepreneurs who face the urgency to survive, adapt and evolve - as in the case of woman entrepreneurship, migrant entrepreneurship or first-generation family firms.

In most articles, the need to enrich the field of entrepreneurship research by drawing from other disciplines (sociology, psychology, economic geography, etc.) emerges. Many authors also agree that a multidisciplinary, or interdisciplinary, approach can provide a valuable contribution to the development of knowledge on entrepreneurship and to shedding light on its multifaceted nature and current complexity. Contributions from other disciplines can also stimulate the adoption of new theoretical perspectives and methodological approaches. Also in this regard, the papers presented in this special issue offer a wide variety of research approaches, methods, both qualitative and quantitative. They show the variety of tools available to scholars to enrich this field of research and pave the way for new directions for investigations concerning the various dimensions of entrepreneurship: individual or team level, venture and firm level, and context and macroeconomic level (Carlsson et al., 2013).

In conclusion, this volume confirms that, although entrepreneurship research has flourished and experienced rapid growth in recent years, it still represents a challenging and promising field of research. There is much room for future advances in knowledge, to be realised through future theoretical as well as empirical and applied research.

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Full Papers

What can we learn from the first ‘like meat’ business Made in Italy? New Business Models for the Vegan Production

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Abstract

Recent years have seen a rise in the popularity of vegan or plant-based consumption/production, which is deemed to reduce environmental burden (Fresán & Sabaté, 2019) since the impacts of animal products can markedly exceed those of vegetable substitutes (Poore & Nemecek, 2018).

Our research focuses on sustainable business models applied to vegan production with the aim of scrutinising how companies positively impact people, the planet, and sustainable economic performance. Surprisingly, academic studies by management scholars on this matter are very rare, and we have discovered that most contributions come from researchers with knowledge and expertise in other disciplines such as environmental science or agricultural and biological sciences.

In light of the above-mentioned literature gap, first, our research offers an understanding of how sustainable business models can be applied to vegan production. Namely, we elucidate the concept of Circular Bioeconomy and its applications through biocyclic vegan production and cultured meat production.

Then we focused on a paradigmatic case study, a small Italian company that produced the first “vegan meat” Made in Italy, to find out if all the theoretical concepts we have previously discussed can be used as a lens to understand the dynamics of the sector.

Our research has not only theoretical implications calling for an interdisciplinary approach to advance management research in this field but also managerial implications for vegan food production, which is undergoing a phase of evolution both in terms of technologies and markets.

Keywords – Sustainable Business Model, Vegan food production, Circular BioEconomy

Paper type – Academic Research Paper

1. Background

The concept of vegan was “invented” in 1944 by Donald Watson, a founder of The Vegan Society. It refers to a vegetarian diet that excludes eggs, dairy products and all other animal-derived ingredients. Watson wanted to underline the importance of using not only alternative non-animal products in general but also encouraging a vegan lifestyle that avoids the use of any kind of product with any animal ingredients or components (Judge & Wilson, 2015). The “veganism style” is not new but has raised awareness and attention in the last few years (Statista, 2018). It is not applied only to food but also to general products, like cosmetics or hygiene products, and it is considered a real lifestyle that produces less harm for animals and the planet (Beardsworth, 1991; Loh et al., 2021; Gendel-Guterman& Derqui, 2021).

Due to customers’ growing attention to health and climate change, the global vegan food market is expected to grow in the following years, passing from \$23.31 billion in 2020 to \$61.35 billion in 2028 (Fortune Business Insights, 2020).

In Europe, the biggest and most important companies in this market are: Danone SA, Hain Celestial Group, Inc, Conagra Brands, Inc., Beyond Meat, Inc., and Nestle SA; companies like these sell their products to retailers, which are mainly supermarkets/hypermarkets, online websites, convenience stores, etc. Most consumers make their purchases in supermarkets or big retail stores, but since the pandemic started in 2020, e-commerce for vegan products has also grown, based on data provided by Google AdWords, which has shown a growth of 47% of vegan product searches since 2020 (Saari et al., 2021). In summary, the market for vegan food is continuously expanding and is influenced by customers’ choices driven by both health and environmental concerns (Apostolidis & McLeay, 2016; Dedehayir, 2017; Carfi et al., 2018; Cooper et al., 2022).

In addition to these statistics and market trends, this paper will discuss the application of business models based on the newest and recent Circular Economy principles for vegan production with a focus mainly on the food system and the small business sector.

The purpose of our study is to investigate if innovative companies focusing on vegan production engage circularity in their activities and strategies, multiplying their opportunities to not only produce less harm for the environment, but also increasing economic and social value.

Hence, the main research question of our research is the following:

- What are the main key aspects of new business models applied to vegan food production?

Our research applies an exploratory research approach to analyse the application of sustainable strategies derived from the Circular Economy to vegan production.

Subsequently, we focused on a paradigmatic case study, a small Italian company that produces and sells vegan products, to find out if the theoretical concepts we have discussed can be applied in the business model of a pioneering vegan business.

Our contribution as management scholars is to delve into a hot topic issue, such as the production of vegetal substitutes and alternative proteins.

In this still gray field, the application of technological and process innovations to business activity must follow principles of responsibility and impact assessment that consider individual and collective and private and public interests. Food production is a key issue for humankind's survival and represents what we call a wicked problem. Producing alternative proteins may be an option to reduce environmental impact and respond to the problem of food scarcity, but the phenomenon must be studied in depth, and from a multidisciplinary and interdisciplinary perspective. Without a thorough understanding of the short, medium and long-term impact, the risk is that the interests of a few will prevail over those of the community.

The reminder of the paper is structured as follows: section two presents the research design and the methodological issues we faced; section three illustrates how companies that produce plant-based food, or companies that decide to shift their strategy towards a sustainable vegan one, can reduce the harmful effects of their processes and generate positive impacts on the environment and human health; in section 4 those concepts are used as a lens to analyse a paradigmatic case study; conclusions are drawn in section 5.

2. Research Design and Methodology

A preliminary literature review was conducted by using the following keywords: “vegan production” and “circular economy” or “vegan company” and “business model” or “sustainable production”. These keywords were selected to find as much information and research, and as many case studies as possible, both on the SCOPUS database and google scholar platform.

Surprisingly, academic studies by management scholars on this topic are very rare, and we have discovered that most contributions come from researchers in other disciplines such as environmental science or agricultural and biological sciences.

In light of this literature gap, our research, based on secondary data (i.e., academic and grey literature), offers an understanding of how new business models may be applied by vegan companies. The circular economy, in fact, has various variants and applications (Brown et al., 2021; Alcade et al., 2022; Hofmann et al., 2022) which lead to the possibility of developing new models applied to vegan companies.

The outcome of our study is an “explanatory journey”, which starting from the Circular Economy applications, combined with the Green Economy principles, leads to new business models for vegan companies. These concepts will be our lens in the analysis of a paradigmatic case study that will help us to answer our RQs.

The case study we selected is the Italian vegan start-up Joy Srl., which was founded in Piegara (PG) by the Musacchio family in 2014 in order to bring a healthy, sustainable and 100% plant-based diet to Italy through a collaboration with the Wageningen University and the development of a facility of High Moisture Wet Extrusion. These factors have led to the creation of the first “vegan meat” Made in Italy.

Data on the case study were collected and put together from different sources, such as interviews, articles, videos, etc. In particular, materials have been found through web research on the main website and social network pages.

Moreover, articles and journal papers have been collected to study its past successes and actions related to its strategy and work, which aided us in obtaining a clearer overview of the company.

Lastly, a semi-structured interview with the owner of the company has been carried out. Semi-structured interviews are characterised by a high level of flexibility and the capability of disclosing important and hidden information and, furthermore, are useful to introduce more detail and richness thanks to their more open-ended nature (George, 2022).

3. New Business Models for Sustainable Development Applied to Vegan Production

Since new production systems, which are based on the application of the Circular Economy principles have been implemented in the vegan sector in the last decade, in the

following section, the main features of new business models for sustainable development will be briefly depicted before analysing the deployment of specific technology used in vegan food production.

3.1. Circular Economy, Bioeconomy and Circular Bioeconomy

One of the most powerful tools and keys to changing the way of producing and doing business has been the passage from the old business models and the old producing mechanisms and processes to the new concept of “Circular Economy” (CE), which has been defined as “*an economic system that emerges to oppose the linear open-ended system (produce, consume, dispose), with the aim to accomplish sustainable development, simultaneously creating environmental quality, economic prosperity and social equity to the benefit of current and future generations*” (Homrich et al., 2018; Reike et al., 2018). Connected to this concept, we can consider “bioeconomy”, which essentially relies on biological inputs that are used in production instead of fossil fuels and non-renewable resources. “Bio-based economy” or “knowledge-based bio-economy” (BE) underlines the importance and power of biological resources from land and sea for the manufacturing of products, by substituting fossil fuels with the biomass integrated with biotechnology innovations.

Bioeconomy products consist of biomass and low-value products (i.e., biofuels) and high-value products, such as bio-based chemicals or compounds (McCormick and Kautto, 2013).

If we think about the application of a BE in management production, for example, food production, there must be proper management of the resources, which is often characterised by a high level of uncertainty, in order to be truly sustainable.

Indeed, the use of biomass for unsustainable food production can lead to negative effects on the environment, such as deforestation, and on society; for this reason, institutions must release proper regulations and policies not only globally but also in Europe, in particular, as BE policies tend to prioritise economic value rather than environmental and social value (European Commission, 2018).

A BE, as understood from its definition, can be linked to the CE and transformed into “circular bioeconomy” (CBE), which refers to the concept of bioeconomy integrated with elements of CE (Institute for European Environmental Policy; Kershaw et al., 2021; Muscat et al., 2021).

Since we are discussing vegan production, the Plant Based Products Council, which is the leading organisation that promotes sustainable products derived from nature, firmly promotes the circular bioeconomy through the creation of renewable products at the market scale and supports policies that ensure vegan products become part of the circular bioeconomy. Taken together, these actions reduce carbon emissions, improve water quality, enrich our soil health and curtail solid waste destined for landfills (Plant Based Products Council, 2022).

Some initiatives, such as “The Economics of Ecosystems and Biodiversity”, state that all three concepts (Circular Economy, Green Economy and BioEconomy) are linked by the interest and effort to preserve nature and, in general, are applied based on the same concepts (D’Amato, 2021). It is necessary for these models to be adopted by companies to substitute the old ones, so they can face environmental issues and meet the new requirements established by policy makers and institutions.

For this aim, the inclusion of these principles in a company business model applied to vegan production can ensure positive impacts on the planet and society.

3.2 Biocyclic-vegan Production

In the following section, we will discuss a new trend named the “biocyclic-vegan” label that was introduced in Germany in 2017. It basically refers to the exclusion of any animal by-product during production.

The concept is based on a vegan approach and, indeed, in 2016, the producer association “Biocyclic-vegan cultivation” was founded. Their task is to support the biocyclic vegan agriculture by following the guidelines provided by The International Federation of Organic Agriculture Movements - Organics International (IFOAM Organics International).

This new production methodology is based on the combination of organic agriculture and stock-free agriculture, which emphasises the importance of using natural resources and, meanwhile, enables them to ensure their availability in the future, meaning that they do not have to be depleted.

Essentially, it is primarily based on excluding materials such as horn meal, blood meal and composted manure from farming in the land cultivation, and, as it aims to re-establish a healthy life cycle, coherent with the concept of a closed-loop approach, it is followed by a compensation for the resources that are used to guarantee their availability in the future.

Biocyclic-vegan production, in particular in the agriculture sector, is strictly based on the total exclusion of animal products and farm animals, a strategy which strives to persist in the following years, in particular in Germany.

The first countries in which vegan biocyclic was introduced and applied are Germany, Austria and Switzerland. They are also the ones which have followed the labelling guidelines since 2016, to be transparent about their production methods (Jürkenbeck et al., 2019)

3.3 Alternative Meat (plant-based and cultured meat) Production

Since it is expected that animal products will be requested even more by consumers, there is an urgency to increase the production and distribution of alternative products, especially alternative meat products made through innovative food technologies able to reproduce the taste and texture of real meat and meat-based products.

The University of Nottingham (2018) has defined alternative protein as follows: *“Alternative protein, such as plant-based meat substitute, or edible insects, provides a substantial amount of protein, but requires less natural inputs (e.g., water) to produce, compared to the most common and conventional protein sources (i.e., meat and fish). They are also called ‘novel food proteins’ and are composed of different sequences of amino acids, which are responsible for building lean body tissues and human health.”*

An alternative protein of plant-based meat basically refers to alternatives to meat-based protein, which replace and replicate it not only in the taste and texture, but also in nutritional characteristics, by trying to be even more economically convenient than meat, contribute to the environment and decrease the negative health impacts derived from meat production (Wild et al., 2014; BCG, 2021).

One of the most important reasons to produce alternative protein and to adopt a different diet consists in the awareness of human health.

Meat causes diseases such as cancer and obesity in relation to its high level of saturated fat and cholesterol, while AP proposes funnelling its same nutritional benefits related to the level of protein and essential nutrients with relatively low levels of cholesterol, saturated fats and nitrates. (Chen & Eriksson, 2019)

Cultured meat, instead, is produced by culturing animal cells in vitro using tissue engineering techniques and is presented by its advocates as a good alternative for consumers who want to be more responsible regarding the increasing demand for food by

the growing human population but do not wish to change their diet (Chriki & Hocquette, 2020; Reis et al., 2020).

Alternative meat (i.e., plant-based and cultured meat) produces smaller negative environmental impacts with smaller GHG emissions, land use and water, but at the same time, since it involves activities which are highly processed and request a huge amount of energy, it can also be a threat for the environment (Tuomisto & Teixeira de Mattos, 2011).

This new production system is expected to acquire more attention from companies due to the growth of the demand for protein and the expected failure of traditional meat production, which would allow for the creation of new opportunities (Mancini & Antonioli, 2022).

Shifting to new sectors, plant-based meat can offer farmers the opportunity to diversify or completely change to the production of plants, algae, mycoprotein, seaweed, etc., and, at the same time, provide opportunities to companies by enlarging their offering and their markets (Luiz Morais-da-Silva et al. 2022).

However, not all scholars agree on the positive impacts of the production of alternative meat on people and the planet. Despite the promising purposes of these products, at the same time, there are doubts about the processing activities of AP, which can be considered as “ultra-processed food” (Monteiro et al., 2019). Indeed, health care institutes recognise that processed food can be linked to some health issues and diseases such as obesity, diabetes, etc, related to the presence of additives or flavour enhancers.

Moreover, by analysing a study conducted on the effects of the production of cultured meat, (Tuomisto & Teixeira de Mattos 2011) it has been seen that, by calculating the energy input of cultured meat, this could be relatively high due to the additional processes involved; however, this high energy consumption could be decreased by adding and improving various technologies. Table 1 summarises positive and negative aspects of the production of alternative meat.

Table 1. Positive and negative sides of the production of alternative meat

	<i>Health</i>	<i>Economic</i>	<i>Environmental</i>
<i>Positive</i>	Benefits that come from the reduction of meat consumption.	Possibilities for companies to expand their market; possibilities for farmers to enlarge their offering by diversifying or completely changing	Reduction of GHGs

<i>Negative</i>	Ultra-processed food which is doubted to be healthier	Increase in land use in order to grow the inputs necessary	A huge amount of energy used
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3.4. A Summary of Different Vegan Production Systems

In order to answer our RQs, table 2 summarises the characteristics of the three main vegan and plant-based productions, which incorporate principles of Circular Economy, Green Economy and BioEconomy in their business models. Other than proper vegan products, it has been important to also take into account the newest production system for cultured meat, which is done by using the same principles of AP products (i.e., bicyclic-vegan products), with the involvement of technologies to recreate protein products and alternatives to the real meat.

Table 2. A picture of different vegan productions

<i>Type</i>	<i>Description</i>	<i>Benefits</i>	<i>Categories</i>
<i>Biocyclic-vegan</i>	excluding materials such as horn meal, blood meal and composted manure from farming in the land cultivation	using natural resources and enabling them to ensure their availability in the future, which means that they do not have to be depleted. aims to re-establish a healthy life cycle	Algae protein; yeast; mycoprotein
<i>Plant-based</i>	Protein products made from natural resources, alternative to real meat in texture, flavours and aspect.	Eco-friendly, sustainable, and healthy affordability	more nutritious and more Pulses/legumes; Seeds; cereals; Seaweed. e.g. Pea, soy, chia seed, etc.
<i>Cultured meat</i>	cellular agriculture and is molecularly identical to conventional meat but produced through bioprocesses from animal cells extracted through biopsies	environmental and health benefits, reduced risk of contamination and food borne illness, as well as being more ethically acceptable	In vitro cultured meat cells

4 The Case Study of the Italian Vegan Start-up Joy Srl

Our next step is to understand if the application of the circular economy in vegan production is effective in terms of business sustainability.

Beyond the insight into new technologies for the production of alternative proteins, we will describe the business model of the small enterprise selected as an innovative start-up in plant-based production. Hence, for the purpose of our study, we have conducted a semi-structured interview with the entrepreneur, on the basis of the following research questions:

Materials, resources	Where do you find raw materials? What are the main resources used in the process? Is it sustainable? Is it harmful for our health?
Technologies and innovations	How do you produce the plant-based products? How does your technological process work? Is your production system sustainable?
Distribution channels, Revenues streams, costs Future expectations	What are your main distribution channels? Do you collaborate with other companies? What are your business costs? What are your future projects and expectations?

4.1 The Context

The selected case study is the Italian vegan start-up Joy Srl., which was founded in Piegara (PG) by the Musacchio family in 2014 to bring a healthy, sustainable and 100% plant-based diet to Italy through a collaboration with the Wageningen University and the development of a facility of High Moisture Wet Extrusion. These factors have led to the to the creation of the first “vegan meat” Made in Italy.

Looking back, the founder of the company, stopped eating meat when he was 19 years old and later with his wife and family opened a hotel, where they offered only vegetarian food to the customers. In 2002, the English Vegetarian Society even rewarded this Hotel with the “Best Vegetarian Hotel Award”. Given that the world has started to be more oriented to vegan food and that new technologies have been created to produce alternative products to the traditional ones, the entrepreneur decided to create Joy Srl. in 2014.

In 2019 a food line based on plant-based protein products called “Food Evolution” was launched (available at: About – Food Evolution). The first product proposed by the company was the “impossible chicken”, which is a plant-based chicken produced by a technology able to reproduce the same texture of real meat with the same flavour.

This product is made with soy protein, vegetable fibres, sunflower oil, flavourings, spices and aromatic herbs. These seem like basic ingredients, but the secret lies in the technology as explained by the small entrepreneur in an interview done in 2019:

“The products are made by using a technology developed in the Netherlands at the Wageningen University. It stretches the protein cell into a filament. It's like making pasta: a mechanical and thermal process but with gigantic machinery. You can have a product with the same taste and texture as meat, but 100% plant-based. [...] This technology — he adds — allows the thermocoagulation of the product; that is, it is not altered if it is soaked in a sauce or oil (Vegolosi.it, 2021).

As it happens, since Food Evolution was the first Italian and European company to produce “fake meat” through this new process, an insight into this type of technology is useful to understand why their products are sustainable for the environment and reflect the principles of the Circular Economy.

In 2019 the products produced by the company with this technology were restricted from 8 products (3 vegetarian and 5 vegan) to products that are only 100% vegan (i.e., fake chicken, beef, bacon, etc.), a choice primarily made due to the increase in their request.

Indeed, they have stated that their fake chicken is 100% vegan, gluten-free and has a high percentage of protein (from 22% to 25%). Furthermore, in 2019, all of their products obtained the “Quality Award 2019” (available at: Joy presenta la linea Food Evolution | Distribuzione Moderna, 2019).

The current company products, which are 100% vegan and include fake chicken, beef and burgers, are made of simple ingredients, such as extruded soy protein (water, soy protein 35%, vegetable fibre, natural flavour), sunflower oil, yeast extracts, salt seasoning, natural flavours and spices (Food evolution website, 2022).

In 2021 TuttoFood rewarded the firm with second place in the innovation prize for their fake chicken meat called “ParePollo” in the category “Better Future Award 2021” organised by the Gdo Week and Mark Up.

Their products have become popular due to an increased demand from not only vegetarians and vegans but also omnivores who care about the environment, animal welfare and their own health (available at: Gli straccetti ParePollo di Food Evolution vincono il premio Innovazione al TuttoFood 2021 - VEGANOK).

Based on an interview done with VEGANOK in 2019, the founder said that, in order to get omnivores to approach or switch to this diet, it is not effective to provide only basic

products, such as tofu, tempeh, seitan or legumes; it is necessary to produce alternative products which are as similar as possible to meat, and which replicate the same texture, flavours and experience of real meat, with the main difference that is not as harmful as meat-products (VEGANOK Speciale azienda: Food Evolution la vegan meat 100% italiana – VEGANOK TV).

The company is now also working on producing and developing products called “fake-fish” because the entrepreneur believes that it is necessary to provide not only meat substitutes but also fish substitutes to people that are used to consuming them (Table 3).

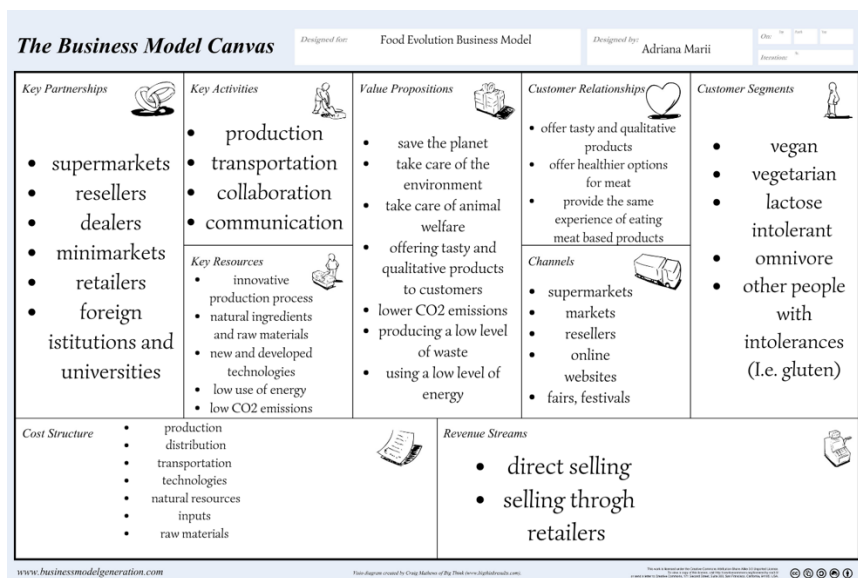
“What has happened in the last year and a half with the pandemic should have taught us that investing in plant-based products, by now, has become an obligation. However, we must make sure that the products become better; push innovation on quality and mainstream consumers: it is the only way for the plant-based counter at the supermarket to be successful (interview made by Vegolosi.it)

Table 3. *Chronological excursus of the most important events*

Year	Event
2017	Foundation of Joy Srl., a company which produces only vegetarian and vegan products.
2019	Restriction from 8 products (3 vegetarian and 5 vegan) to products that are only 100% vegan (i.e., fake chicken, beef, bacon, etc.)
2019	All of their products have obtained the “Quality Award 2019”
2020	Their products started to be sold in big supermarket chains, such as Esselunga
2021	TuttoFood rewarded the firm with second place in the innovation prize for their fake chicken meat called “ParePollo” in the category “Better Future Award 2021”

4.2 A Sustainable Business Model for Vegan Production

In the figure below is the Business Model Canvas of the company which underlines the most important key elements connected to the Circular Economy Model.



Overall, based on the entrepreneur’s interview, the company is working on respecting the ecosystem by minimising their CO2 emissions and using innovative technologies and natural ingredients which replace the use of harmful and fossil raw materials.

4.2.1. Products and Market

“Soy is, by far, the cheapest legume that exists, and, to produce our products, we use the cheapest production material that exists, and the most protein-based one, to satisfy the requests of consumers, and, most of all, the health and nutritional requirements that people need [...] Humans need the protein to live, and this is the most controversial part of the animal production industry. Indeed, if we give the animal the protein (i.e., soy) and then we eat the animals, we lose a high percentage of the power and the benefits of the protein contained in the legume” (interview).

The philosophy of the firm is based on the necessity to make real changes by being proactive and being part of the system, especially to make the real revolution through being present in supermarkets and interfacing with the large associations of producers, with the large-scale retail trade (e.g., Vegolosi.it, 2021).

Considering the retailers, their products are sold both through online and offline channels.

In April 2020 their products started to be sold in big supermarket chains, such as Esselunga ([Esselunga: in arrivo la carne vegetale Food Evolution | Distribuzione](#))

[Moderna](#), 2020), vegan mini-markets or markets (i.e., “Vivi Bistrot Roma”, “De Gustibus”, “IVegan Roma”, and “Aliper”) ([Store Locator – Food Evolution](#)).

4.2.2 The Process

In 2019 it was made an interview on “NX-Food” in which the founder declared that they managed *“to create a ‘meat-like’ structure which is absolutely unique, and that their industrial line meets the top efficiency criteria and features the most advanced technology and hygienic conditions (i.e., high care chamber production).*

To make the “fake meat” the owner explained again that they use *“this process with a high percentage of water in order to knead the protein flour; then, the proteic cellular has to be stretched at around 120-150 degrees in order to pre-cook the product. Afterward, the product goes through a laminator (i.e., a very cold stainless-steel tube), where the exchange of temperature, from really cold to hot makes, the cell close and the result is a product with high fibers. Indeed, this product has the exact texture of the meat due to the high presence of these fibers with close cells, which makes the product highly resistant”.*

Overall, *“The process is similar to the one that is used to make pasta” (i.e., for example, the one that uses Barilla), and to debunk the myth of the “highly processed food” he affirms that it is a false belief because “every food, even basic pasta, is processed.”*

The company is actually independent in its activities since they do everything in its plant in Perugia; for this reason, they do not collaborate or rely on other companies.

4.2.3 Weakness of the Business Model

The founder provided a quick summary of how the plant-based market has developed by saying that it began to be “popular” when, a few years ago, people started to invest in big companies, such as Beyond Meat, which led people to continue to invest even more in the following years. However, this mechanism was not applied in Italy, and still nowadays, there is not enough return on investment to develop the market like in the US.

“The value of the total plant-based Italian market is only € 50 million, which is really low considering the fact that it also includes big and famous companies, such as Valsoia, Kioene, Findus, etc”.

For example, Food Evolution has been working on producing a vegan sausage for two years but is still not able to put it on the market because there is not enough financing

from outside the company. *“There is still a high amount of greenwashing which makes it difficult for investors to see what is really sustainable and what is not.”*

“The company, at its foundation, decided to invest around €10 million to build their establishment in Perugia to be able to produce high-quality products independently. Other firms, on the contrary, decided to invest their money in marketing advertising and the production of their products in other countries where the cost of production is lower. Food evolution would now require more €4 million to also develop marketing, but nowadays it does not have a sufficient amount of money”.

This is a main weakness of the company because, in order to reach more consumers and sell more products, the company should increase Italian people’s awareness to show them that these kinds of products exist.

The owner added that a lot of people comply with the fact that plant-based products are more expensive than meat. The prices of plant-based products sometimes are higher than the meat ones because the amortisation costs are split on a smaller production. *“But people do not consider that in order to produce meat products there are a lot of investments involved to support it, but they are distributed over a large amount of production, which reduces the final cost of the product for the consumers”.*

During the interview, the owner said openly that the company is now suffering from a high decrease in sales, which results in a lower income in comparison to previous years.

4 Discussion and Conclusions

This case study has helped us to integrate a new business model, based on vegan food production, with the uncovering of the high moisture extrusion production system.

By analysing the processes and the strategies applied by the company, we can assert that they are working through a circular model since they have aimed to optimise the economic processes of production and consumption in the use of the resources that underlie all the products.

Furthermore, the process of high moisture extrusion can be associated with the “circular bioeconomy” (CBE), which we have seen refers to the concept of bioeconomy integrated with elements of CE (Institute for European Environmental Policy).

We could say that the example of Food Evolution has confirmed our initial statements since the starting point of our study focused on the possibility of using new technologies and the overall effects on the environment.

Firstly, it is possible to produce products by using mostly natural raw materials (i.e., legumes, vegetables, soy, etc.) and natural resources; moreover, it may reduce the amount of CO₂ emissions which, as said before, are mainly methane and nitrous oxide. Hence, the reduction of emissions and negative consequences on the environment has been confirmed by the production of fake meat. However, as it happens when new technologies are applied, there are some new environmental impacts to take into consideration, since some scholars advocate that this process will require more energy levels and the consumption would be on the higher side in order to maintain the moisture content.

This leads us to the open question of whether this process can be included in the concept of “responsible innovation”, which can be realised with the contribution of circular bioeconomy through the usage of innovations and technologies, across sociotechnical systems, knowledge-producing and decision-making capacities, yet involving a broader range of actors, such as societal stakeholders, humanities, and sciences, with the aim of balancing social and environmental issues (Kershaw et al., 2021).

This case study has helped us to integrate our analysis with the perspective of the vegan production applied by a small Italian company and revealed some of the weak points of the business. First and foremost, there is a need for funding to support a business that has not yet reached break-even volumes. It is evident that if we want small start-ups to be able to survive independently, without being swallowed up by large multinationals, policies that support companies with plant-based products, and stimulate more investments, should be implemented.

Our study opens up future research in three different but interrelated directions:

- First, as our case study shows that the application of new sustainable business models is not a sufficient condition for a business to be economically sustainable. This is especially true when new technologies require considerable investments; small entrepreneurs alone do not have the financial resources to be able to realise innovative projects. This aspect is worthy of an in-depth study and offers insights both with regard to the search for partnerships between large and small companies and the evaluation of public policies to support particular sectors of our economy.
- Then, our need for an in-depth analysis is related to the technological production process of AP products, especially of the high moisture extrusion applied not only by the Food Evolution company but also by the majority of vegan food

producers. This process appears to be sustainable since it produces fake meat and leads to the reduction of intensive farming, which is connected to the production of CO₂ emissions. However, at the same time, the process requires a consumption of energy levels, for which the precise amount is still unknown. The data that we have available right now are still not sufficient enough to provide proper answers to these questions.

- Finally, there is still an ongoing discussion about alternative meat and its real effects on the environment and human health, being “ultra-processed” food.

To deepen this debate, we deem future research should embed an interdisciplinary approach with inputs from scholars in biotechnology, human nutrition, medicine and management.

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Food Safety: Exploring the Italian Agrifood case

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Abstract

The aim of this paper is to explore food safety in Italian agri-food firms. By adopting five safety culture/climate components – leadership, internal communication, commitment, resources, and risk awareness – we intend to provide an overview of the firms' attitude towards the importance of food safety and its barriers and drivers, with a focus on their geographic localization. To achieve our goal, we analyzed a population of 4614 Italian firms by administering a questionnaire which yielded a response rate of 5.8% (270 firms). Findings showed that the main differences concerning the food safety culture/climate regard firms located in central Italy as opposed to those located in the north of the country. Specifically, these differences concern the level of commitment and of risk-taking awareness. Moreover, results showed that a lack of financial resources represents a significant barrier to adopting food safety practices, especially for firms located in the south. Finally, the values espoused by top management and the prospect of improving performance appear to play a key role in promoting the introduction of food safety systems in organizations. Relevant theoretical and practical implications emerged from this study.

Keywords – food safety, culture/climate food safety, agri-food, drivers, barriers, Italy

Paper type – Academic Research Paper

1 Introduction

The global agri-food sector – mainly composed of micro, small and medium-sized firms – is one of the most important industries worldwide, including Europe (FAO 2020, Food Drink Europe, 2020). In the last decades, the industry had to address (and will continue), a context fraught with challenges related to climate changes, geo-political tension, pandemics, and food crises (OECD, FAO, 2022), all of which has resulted in an increased focus on ‘food safety’ (FS) issues. Nowadays FS is recognized as a crucial factor in achieving the goals of the 2030 Agenda, such as No Poverty (SDG 1), Good Health and Well-being (SDG 3), and Responsible Consumption and Production, (SDGs 12) (Yadav et al. 2021).

Governments and regulators, in Europe and around the world, have to include FS in their quality assurance strategies (Hobbs et al., 2005; Brunori et al., 2013; Giannelli et al., 2021); consumers have become more conscious of food hazards and ask for higher standards of food-safe quality (Eurobarometro, 2019; Agnati et al., 2021); consequently agrifood businesses have been forced to revise their business models (Del Baldo, 2022), by integrating their corporate strategies, adopting public or private standards or implementing food safety management systems (FSMS) (Asioli et al., 2014; De Boeck, et. 2017; Corallo et al., 2020).

Despite the fact that governments/regulators and agrifood businesses are aware of the existence of food risks and have – respectively – imposed and adopted many preventive practices (such as standards and FSMS), the risk of food-borne diseases continues to be a source of concern (Griffith, 2006; Onjong et al., 2014). That indicates the shortcomings of preventive practices, raising questions about the efficacy of these systems to fully guarantee food safety.

Faced with this dilemma, scientific literature has investigated, on the one hand, the reasons for such failings. They might be found to result from the fact that FSMS are elaborated differently in practice (FAO, 2007; Kireziova et al., 2015) and are not always well adapted to cope with the conditions inherent in the context in which the firm operates (Luning et al., 2011; Kireziova et al., 2015). However, others argue that the effectiveness of standards adoption or FSMS appears to be very much dependent on the human factor, responsible for the application of practices (Insfran-Rivarola, 2020). This has led to the

recognition of FS culture/climate as a key contributory factor to the FS performance of food establishments (Yiannas, 2009; Griffith et al., 2010a, b; Powell et al., 2011).

On the other hand, literature has focused on the barriers and drivers which influence the adoption of FS preventive practices. Several obstacles are identified, particularly in agrifood SMEs (Asioli et al., 2014; Corallo et al., 2020, Palazzi, Sentuti, 2021), such as lack of financial resources and funding; absence of qualified human resources; lack of technological resources; lack of information and knowledge about standards or FSMS. Scholars have also identified numerous drivers which encourage FS practices (Karaman et al., 2012; Asioli et al., 2014; Corallo et al., 2020): obligation to comply with regulations; pressure from the external environment (consumers, retailers, others stakeholders).

Although FS is now subject to much discussion by scholars (Yiannas, 2009; Griffith et al., 2010a, b; Powell et al., 2011; De Boeck et al., 2015; De Boeck et al., 2017) and institutions at different levels, it remains a complex topic. The FS culture/climate is still poorly understood (Jespersen et al., 2017; De Boeck et al., 2015), and empirical evidence remains scarce, particularly regarding the Italian context. Furthermore, the scientific literature is still limited on the question of barriers and drivers.

Taken all this into account, this study aims to explore food safety in Italian agri-food firms. By adopting five safety culture/climate components – leadership, internal communication, commitment, resources, and risk awareness – we intend to provide a framework of the firms' perceptions with respect to the importance of food safety and its driver and barriers, with a focus on their geographic localization. Italy represents an ideal setting to explore food safety issues because the agri-food sector is one of the most important industries in the Italian economy (Italian Coldiretti, 2021) and it is mainly composed of micro, small and medium-sized firms (Giombini et al., 2021). Moreover, the Italian economy is characterized by a marked North–South territorial divide (Istat, 2022), which has led to differences in the development of economic activities over time (for instance, firms in southern Italy are less productive and innovative with respect to firms located in the North of the country), for this reason, food safety issues have been studied based on firms' geographic localization.

2 Literature background

2.1 Food safety and food safety culture/climate

Food safety as such is defined as “the condition of the foodstuffs in all stages of production, processing and distribution, required to guarantee protection of consumer's health, also taking into account normal circumstances of use and information available for the food- stuffs concerned” (Baert et al., 2011, pp. 941).

The frequent incidence of food scandals associated with food safety failings has prompted scholars to look closely at the human factors. This has involved shifting the focus from managerial and technical practices – so important for successful food safety management – and placing it squarely on the human component. For FS to be effective, food safety culture and climate have been shown to be vital (Yiannas, 2009; De Boeck et al. 2015, 2017).

“Food safety culture” and “food safety climate” are often perceived as more or less synonymous in the literature, but some scholars have attempted a distinction: food safety culture can be thought of as the big picture within which food safety climate operates. Food safety climate can be described as the mood resulting from the individual employees’ assessment of safety conditions within their company. So, it is the function of food safety culture to promote a broad, generalized context of appreciation of the importance of creating and maintaining sound beliefs and practices in FS, irrespective of local and temporal variants (Zohar, 2011).

Griffith et al. (2010a) came up with a definition which acknowledges both the differences and the areas of overlap between culture and climate: FS culture/climate encompasses the aggregation of the prevailing, relatively constant, learned, and shared attitudes, values, and beliefs that contribute to the hygiene behaviours practiced within a specific food handling environment. Moreover, in their article authors have identified several aspects or components of FS-culture, such as leadership, internal communication, commitment, resources, and risk awareness. *Leadership* is understood as the perception of the extent to which the organization’s leader(s) are able to involve staff in safety performance and compliance to meet the organization’s goals/vision concerning FS issues; *communication* which is the perception of the extent of transfer or diffusion FS related information within the firms; *commitment* is defined as the perception of the extent of engagement and involvement concerning FS of all parties within the firms; *resources* intended as the perception of the extent to which physical and non-physical

means, necessary to operate in food safe way, are present in the firms (e.g. time, personnel, infrastructure, education/training and procedures); finally, risk awareness, being the perception of the extent to which the organization is aware of the risks regard food safety and has these under control.

In their work, De Boeck et al. (2015) adopt the five FS climate components highlighted by Griffith et al. (2010a) and use them as the basis for a questionnaire, which they have devised and tested, as a means of assessing the FS climate. They conclude by appealing for this new FS climate tool to be used more extensively in researches with a view to supplementing the existing empirical evidence.

2.2 Barriers and drivers towards food safety practices

In recent decades an extensive part of management literature has focused on the barriers and drivers which influence the adoption of FS preventive practices.

From the literature review, several obstacles are identified to the implementation of FSMS or standards, particularly in agrifood SMEs (Asioli et al., 2014; Corallo et al., 2020, Palazzi, Sentuti, 2021). The lack of financial resources and funding represents a critical factor for minor enterprises (Tomasevic et al., 2013; Escanciano, Santos-Vijande, 2014b; Carmona-Calvo et al., 2016; Rincon-Ballesteros et al., 2019; Palazzi, Sentuti, 2021). Moreover, the so-called “food safety costs” are commonly perceived by entrepreneurs as too high (Corallo et al., 2020; Casolani et al., 2018; Carmona-Calvo et al., 2016; Escanciano, Santos-Vijande, 2014a; Mensah and Julien, 2011). Investments in equipment and new technologies, staff training, consultancy services, maintenance costs, etc. are some of the expenditures related to the introduction of FSMS. The perception, “but it’s so expensive”, could be negatively affected by ignorance of the real benefits stemming from FS systems. In fact, another obstacle is found in the lack of information and understanding of FS practices, as well as in the scant knowledge of advantages – economic (i.e. increasing sales, reducing cost of non-compliance) and other (i.e. improving the firm’s reputation) linked to them (Karaman et al. 2012; Escanciano, Santos-Vijande 2014a; Mattevi, Jones 2016).

From this viewpoint, numerous studies have mentioned barriers associated to human factors, placing considerable emphasis, in particular, on the role of top management. Lack of management motivation regarding the relevance of food safety culture can generate a half-hearted commitment overall (Escanciano, Santos-Vijande 2014a, b; Macheke et al., 2013). In this case, the relative lack of interest and scant familiarity with the FSMS and

standards can restrict their adoption, resulting in oversized implementation costs. Furthermore, the absence of qualified human resources (Karaman et al. 2012) is identified as a common and significant barrier hindering the implementation of FS practices. These barriers related to human factors can determine a generalized climate of resistance to change (Escanciano, Santos-Vijande 2014b) which can both compromise the decision as to whether to adopt an FS system and the performance obtained through the food safety systems adopted (Corallo et al., 2020).

Finally, lack of appropriate infrastructure and technological resources (Corallo et al., 2020) is recognized as an obstacle to the adoption of FS systems. It is often associated with low investment and little concern for innovation (Karaman et al., 2012).

Scholars have also identified several drivers which encourage FS practices. According to empirical studies drivers can be categorized on the basis of external and internal factors (Mattevi and Jones, 2016; Carmona et al., 2016; Corallo et al., 2020).

As regards external drivers, the obligation to comply with regulations is crucial (Mensah and Julien, 2011; Kirezieva et al., 2015; Corallo et al., 2020). For instance, in developed countries, governments have implemented specific and detailed regulations to address safety issues in the food sector (in all phases of production, transformation and distribution). The existence of these regulatory pressures acts as a powerful stimulus for firms to adopt FS systems and thereby operate in certain markets. The demands and expectations of the consumer are another important external factor. In the last few years consumers have become more sensitive to safety issues (Eurobarometro, 2019; Agnati et al., 2021). This augmented awareness has an influence on the conduct of firms because it encourages them to introduce FSMS and standards in order to avoid the risk to consumers of food-borne diseases (Mensah and Julien, 2011; Karaman et al., 2012; Asioli et al., 2014). Finally, pressure from the external environment is recognized as an important driver (Corallo et al., 2020). Specifically, pressures might well be exerted by other stakeholders belonging to the supply chain: for instance, retailers frequently impose their own quality and safety standards on suppliers (Fulponi, 2006; Agnati et al., 2021; Rincon-Ballesteros et al., 2021), constraining them to introduce FS systems.

Internal drivers, on the other hand, usually concern the perceived needs of the firm (Mattevi and Jones, 2016; Corallo et al., 2020) which in turn derive from the convictions of the management. The most important drivers are related to the improvement of the firm's operations. Among others we can list: improving performance, productivity and efficiency, reducing the costs and time spent dealing with complaints in the case of a

product hazard (Mensah and Julien, 2011; Karaman et al., 2012; Escanciano and Santos-Vijande, 2014b; Carmona et al., 2016); increasing sales and competitiveness, also along the supply chain in which firms operate (Corallo et al., 2020); accessing international markets where specific conditions obtain in terms of food safety (Casolani et al., 2018); enhancing the firm’s reputation and legitimacy, meeting consumer expectations and guaranteeing food quality (Mensah and Julien, 2011; Rincon-Ballesteros et al., 2019). Moreover, internal drivers would also include the need to demonstrate a sense of social responsibility and ethical values, such as ensuring the wellbeing of the consumer in conformity with the firm’s beliefs and culture (Schwartz et al., 2012; Rincon-Ballesteros et al., 2019).

3 Methodology

A sample of 4614 Italian firms belonging to the sectors of Agriculture, Manufacturing, and Fishing was extracted from the Atoka database. A questionnaire (Table 1) was administered by email investigating the firms’ characteristics, the food safety climate in terms of leadership, commitment, internal communication, resources, and risk awareness, and the factors able to foster and hinder this orientation, as shown in table 1. Specifically, the components of FSC are assessed through a 1-to-7 Likert-type scale (where 1= totally disagree and 7=totally agree) , and it represents the judgment given by the respondent about the degree of food safety orientation; also barriers and drivers are assessed through a 1-to-7 (where 1= very little and 7=very much) Likert-type scale, and it represents the judgment given by the respondent about the influence that these factors have on hindering or promoting the food safety culture. After the data collection, a descriptive statistics analysis was performed, and one-way ANOVA was run to test whether there were differences between FSC, barriers, and drivers depending on geographic localization.

Table 1: Questionnaire design

Items	Description
Leadership	In your company...
L1	we clearly defined objectives and expected results in terms of food safety
L2	we encouraged employees to work in compliance with food safety

L3	we listened to employee comments and suggestions about food safety
L4	we tackled food safety issues constructively and with a view to continuous improvement
Commitment	In your company...
C1	we considered food safety a matter of great importance
C2	we recognized and rewarded the contributions of those safeguarding food security
C3	We set a good example by acting quickly to correct food safety issues
C4	we engaged employees on food safety issues
Internal communication	In your company...
I1	we communicated regularly with employees/outsourcers about food safety issues
I2	we communicated clearly and effectively with employees/external collaborators on food safety issues
I3	employees/external collaborators spoke freely with managers and with each other about food safety problems and issues
I4	the importance of food safety was highlighted through the placement of food safety posters, signage, and/or icons
Resources	In your company...
R1	the number of people employed was sufficient to ensure food safety
R2	employees had adequate infrastructure (for example good workspace, good equipment) to work in such a way as to ensure food safety
R3	we had the necessary financial resources to support investments in food safety (e.g., laboratory analyses, external consultants, extra cleaning, and equipment purchases)
R4	staff had adequate food safety skills
Risk awareness	In your company...
RA1	food safety risks had been clearly identified
RA2	food safety risks were regularly monitored
RA3	the staff closely monitored potential risks and problems related to food safety
RA4	staff had adequate knowledge of potential food safety issues and risks
Barriers	How much do the following barriers hinder the adoption of practices and tools aimed at improving food safety?

BAR1	Absence of public contributions or difficulty in obtaining them
BAR2	Lack of financial resources (bank loans or own resources)
BAR3	Lack of technologies necessary for the implementation of food safety
BAR4	Lack of skills, experience, and information
BAR5	Lack of time
Drivers	How much do the following factors favor the adoption of practices and tools aimed at improving food safety?
DR1	Improvement of corporate image and reputation
DR2	Obligation to comply with the relevant legislation
DR3	Consistency with the values of the top management
DR4	Performance improvement prospects
DR5	Pressure from external subjects (e.g., retailers, consumers, stakeholders) or internal to the company
DR6	Obtaining public funds

4 Findings

A final dataset of 270 questionnaires was collected, yielding a response rate of 5.8%. The sampled firms mainly belong to the agriculture, forestry, and fishing sector with 111 organizations (41.11%), followed by 110 enterprises undertaking manufacturing activities (40.75%). Table 2 shows firms' sector of activities by geographical localization. In addition, these firms are mainly located in the northern region with 165 organizations (61.11%), while, in the central and southern regions there are respectively 52 (19.26%) and 53 (19.63%) firms. Firms' size has been defined in accordance with the EU recommendation 2003/361. Therefore, the sample is composed of 18 large firms, 77 medium-sized enterprises, 163 small-sized enterprises, and by 12 micro-enterprises. Moreover, the businesses that took part in the study had a range of employee sizes: 4% had up to 9 employees, 73% had between 10 and 49, 21% had between 50 and 249, while the remaining 2% had more than 250 employees. Table 3 shows the geographical distribution of firms by size. Based on the end market, almost half of the enterprises (51.48%) operate internationally, 27.03% run their activities only on the national territory, while 21.48% make business within Europe. Table 4 shows the end market of firms by geographical localization.

Table 2: Sector of activities by geographical localization

Sector of activities	North	Centre	South	%
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A) Agriculture, forestry, and fishing	70	14	27	41.11
B) Extraction of minerals from quarries and mines	1	0	0	0.37
C) Manufacturing activities	63	29	18	40.75
E) Water supply; sewerage, waste management and remediation activities	1	0	0	0.37
G) Wholesale and retail trade; repair of motor vehicles and motorcycles	14	4	3	7.77
I) Accommodation and catering service activities	4	2	1	2.59
M) Professional, scientific, and technical activities	1	0	0	0.37
S) Other service activities	10	3	4	6.30
U) Extraterritorial organizations and bodies	1	0	0	0.37
%	61.11	19.26	19.63	100

Table 3: Geographical distribution of firms by size

Size	North	Centre	South	%
Large	14	3	1	6.66
Medium	45	14	18	28.53
Small	99	32	32	60.37
Micro	7	3	2	4.44
%	61.11	19.26	19.63	100

Table 4: End market of firms by geographical localization

End market	North	Centre	South	%
National	43	15	15	27.04
EU	39	7	12	21.48
International	83	30	26	51.48
%	61.11	19.26	19.63	100

Regarding the respondent's characteristics, we find out the following information. The questionnaire has been filled out by 139 women (51.48%) and by 131 men (48.52%). On average, men result to have 22 years of experience in the industry, while women have 16 years. Based on educational level, about half of the respondents (51.85%) had a bachelor's or master's degree, 34.81% declared that they had a high school diploma, 2.59% attended a middle school, and finally, only 10.74% had postgraduate training. Table 5 shows respondents' educational background by gender.

Table 5: Educational background by gender

Educational background	Women	Men	%
High school diploma	54	40	34.81
Postgraduate training	15	14	10.74
Bachelor's or master's degree	68	72	51.86
Middle school	2	5	2.59
%	51.48	48.52	100

Table 6 shows the descriptive statistics for food safety climate by the firms' geographic localization. Through the one-way analysis of variance (ANOVA), we discovered that, when it comes to food security climate, geographic localization matter. The importance of food safety (item C1) seems significantly different between firms located in the center (mean=6.62, $p=0.002$) and in the north (mean=6.28, $p=0.002$). Therefore, the importance to guarantee food safety to consumers seems, on average, to be more perceived by firms located in the center, than by firms located in the north. Moreover, the territorial position seems to matter also when it comes to risk awareness on food security. Specifically, the attention to the clear identification of food safety risks (item RA1), seems significantly different between enterprises located in the center (mean=6.48, $p=0.04$) and in the north (mean=6.11, $p=0.04$); the periodicity of risk monitor (item RA2), seems significantly different between firms located in the center (mean=6.52, $p=0.03$) and in the north (mean=6.13, $p=0.03$); and, the employment of human resources with better knowledge of potential food safety issues and risks (item RA4) seems significantly different between enterprises located in the center (mean=6.23; $p=0.00$) and in the north (mean=5.75, $p=0.00$). Therefore, firms located in the center compared to those located in the north, seem to consider factors such as risk identification, monitoring, and the owner of adequate knowledge to face risks more strategically.

Table 6: Food safety climate by geographic localization

Items	North				Centre				South			
	Mean	St. dev	Min	Max	Mean	St. dev	Min	Max	Mean	St. dev	Min	Max
L1	5.84	1.32	1	7	5.90	1.418	1	7	5.98	1.39	2	7
L2	6.12	1.11	1	7	6.40	0.774	5	7	6.38	0.90	3	7
L3	5.82	1.30	1	7	5.94	1.211	1	7	5.98	1.29	2	7
L4	6.12	1.11	1	7	6.21	0.936	4	7	6.21	1.03	3	7
C1	6.28	1.07	1	7	6.62	0.661	5	7	6.49	0.75	4	7
C2	5.15	1.67	1	7	5.35	1.714	1	7	5.49	1.54	1	7
C3	6.15	1.14	1	7	6.46	0.753	5	7	6.28	0.95	2	7
C4	5.84	1.37	1	7	6.27	1.050	3	7	6.06	1.22	2	7
I1	5.68	1.34	1	7	6.06	1.145	3	7	5.92	1.31	2	7
I2	5.67	1.37	1	7	6.12	1.114	3	7	5.83	1.35	1	7
I3	5.67	1.37	1	7	5.88	1.096	4	7	5.64	1.44	1	7
I4	5.27	1.62	1	7	5.73	1.443	2	7	5.66	1.53	1	7
R1	5.69	1.35	1	7	6.12	1.078	2	7	5.60	1.47	1	7
R2	5.90	1.27	1	7	6.33	0.923	3	7	5.92	1.07	3	7
R3	5.87	1.34	1	7	6.12	1.022	3	7	5.66	1.37	2	7
R4	5.68	1.25	1	7	6.06	0.938	3	7	5.83	1.07	3	7
RA1	6.11	1.14	1	7	6.48	0.779	4	7	6.19	0.94	4	7
RA2	6.13	1.15	1	7	6.52	0.727	5	7	6.09	1.20	2	7
RA3	5.88	1.21	1	7	6.31	0.981	2	7	5.81	1.33	2	7
RA4	5.75	1.32	1	7	6.23	0.962	3	7	5.89	1.17	2	7

Table 7 shows the descriptive statistics for drivers and barriers able to promote or hinder food safety. Through the one-way analysis of variance (ANOVA), we discovered that, when it comes to drivers and barriers, geographic localization matter. Focusing on the drivers, the fact that food safety is consistent with the values of top management (item DR3) seems significantly different between enterprises located in the center (mean=6.21, $p=0.00$) and in the north (mean=5.70, $p=0.00$). Also, the prospect of improving performance (item DR4) seems significantly different between firms located in the center (mean=6.23, $p=0.00$) and in the north (mean=5.55, $p=0.00$). Therefore, drivers such as the alignment between entrepreneurial values and beliefs with food safety principles and the

importance of increasing performance seem, on average, more influencing for firms located in the center than in the north. Regarding barriers, the lack financial resources (item BAR2) seems significantly different between companies located in the south (mean=3.96, p=0.02) and in the north (mean=3.30, p=0.02). Thus, for enterprises located in the south, the difficulty to access or collect financial resources represent a greater obstacle to meeting food safety than for firms in the north.

Table 7: Barriers and drivers by geographic localization

Items	North				Centre				South			
	Mean	St. dev	Min	Max	Mean	St. dev	Min	Max	Mean	St. dev	Min	Max
BAR1	3.68	2.01	1	7	4.13	1.87	1	7	4.13	1.80	1	7
BAR2	3.30	1.89	1	7	3.35	1.80	1	7	3.96	1.64	1	7
BAR3	3.18	1.72	1	7	3.17	1.79	1	7	3.75	1.66	1	7
BAR4	3.05	1.76	1	7	2.96	1.81	1	7	3.57	1.72	1	7
BAR5	3.62	1.91	1	7	3.19	1.65	1	7	3.66	1.83	1	7
DR1	5.45	1.50	1	7	5.90	1.24	2	7	5.66	1.24	2	7
DR2	6.07	1.26	1	7	6.31	1.14	2	7	6.23	0.87	3	7
DR3	5.70	1.40	1	7	6.21	1.09	2	7	5.96	1.18	2	7
DR4	5.55	1.44	1	7	6.23	0.94	3	7	5.83	1.10	2	7
DR5	5.22	1.49	1	7	5.52	1.46	1	7	5.23	1.50	1	7
DR6	3.08	1.83	1	7	3.27	1.71	1	6	3.74	1.80	1	7

5 Discussion and conclusion

This study aims to explore food safety in Italian agri-food firms by providing a framework of perceptions with respect to the importance of food safety and its driver and barriers, with a focus on their geographic localization.

Data showed that the main differences concerning the food safety approach regard firms located in the center with those located in the north. Specifically, these differences concern the level of commitment and risk-taking awareness. Enterprises located in the center seem to have integrated food safety into organizational culture and planning activities more than those located in the north. These results suggest that for firms located in the center, food safety is a key objective to be pursued as much as the economic one. The relevance of this topic is also testified by the fact that these firms put great attention on what concern the identification and monitoring of risk-food safety related. This risk

awareness means that firms, to guarantee food safety, are more inclined to consider all aspects of the food chain as interrelated processes, starting from primary production to the sale or delivery of food to the consumer. This approach facilitates risk assessment, management, and communication. Therefore, firms located in the center seem to adopt a strategic and systematic approach to defining measures, and interventions to protect consumers' health, in a way effective, proportionate, and targeted. For these firms, the human dimension plays an important role in food safety. These results suggest that for these enterprises training activities and a shared and broadened culture at every level are pivotal to implementing strategies devoted to increasing food safety. Thus, the set of attitudes, values, and beliefs on food safety shared by the entrepreneur can be considered an important driver to promote the commitment and robustness of an organization's food safety management. Data also suggested that a proactive approach to food safety is pushed by what firms expect to obtain in return: and for firms located in the center, the prospect of improving their performance is fundamental to planning activities focusing on food safety.

Data showed lack of financial resources represents a barrier to the achievement of food safety, especially for organizations located in the south.

The main implications are the following. From a scholarly standpoint, this study makes two main contributions to the extant literature regarding food security, especially in the Italian context. First, it provides a framework for how Italian firms, especially SMEs, manage leadership, commitment, internal communication, resources, and risk awareness to feed the food security climate. The framework's identification could increase entrepreneurs' and managers' awareness of their key role in the spread of an organizational culture able to set up paths focusing on food safety and on its contribution to the firm's value-creation mechanism. Second, this work attempts to provide a deep understanding of the drivers and barriers that respectively push the firms or disincentivize them from implementing food safety practices. This could incentive enterprises to plan what they expect from food safety as well as undertake activities to overcome issues related to its implementation. As for practical contributions, the empirical results suggest that firms located in the south should be involved in training projects devoted to increasing knowledge of food safety practices and systems, and governments should support this learning process through specific public funds. Moreover, all firms, regardless of their geographic localization, should promote a holistic and integrated approach to food safety, from the firm's boundaries to the supply chain.

Two main limitations can be mentioned and may offer avenues for future research. The main limitation is related to the restricted sample size, which means that the generalizability of the results is limited to developing contexts in which the data were collected. Therefore, the study should be replicated across other European countries. Second, this study, as explorative, employed only a descriptive statistical analysis. Therefore, further research could improve the analysis by exploring, for example by ordinary least squares regression (OLS), what components of barriers and drivers can positively or negatively affect the achievement of food safety.

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Food safety and Innovation in Italian Agri-Food Enterprises

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Abstract

Due to the recent pandemic linked to the Sars Cov-2 and the future challenges linked to climate change emergency, globalization and the war in Ukraine the global Agrifood system has suddenly become the protagonist of the political debate and has entered the agenda of all Governments. A key issue for scholars and entrepreneurs is to understand how to boost innovation in the Agri-food sector. Therefore, this paper investigates the impact that each food safety climate component (leadership, internal communication, resources and risk awareness) has on innovation performance. Data were collected from 168 Italian firms operating in the agri-food industry from March to May 2022 through an online questionnaire. Results show that only leadership has a direct significant impact on innovation performance and suggest that food safety climate, even if it is formed by several components, has to be conceptualized and analyzed as a whole. This study is the first one that analyses the impact of food safety component on innovation performance in the context of Italian firms and is part of an interdisciplinary research project funded by Urbino University focused on food safety in Italian Agri-food firms. The main limitation

of the present study is that we collected data from a single European Country and results cannot be generalized.

Keywords – food safety, food quality, food safety climate, innovation, Agri-Food Enterprises

Paper type – Academic Research Paper

1 Introduction

The 2020 pandemic linked to the Sars Cov-2, probably starting from a small wet market in China, in a few months, cornered the whole humanity, highlighting the problems related to global interconnection. Western countries have taken full awareness of the link between the production, processing and consumption of food for and the spread of possible pathogens (Santa Chiara Lab, 2020). In such a context, the global Agri-food system has suddenly become the protagonist of the political debate and has entered the agenda of all Governments (Palazzi and Sentuti, 2021).

Agri-food is defined as the combination of the primary sector and the food industry (European Commission, 2007). As well known, this sector has been faced with countless challenges in the past (e.g., geo-political tension and food crises (FAO, 2020) and the years to come will not be outdone due to the climate change emergency, globalization and the recent war in Ukraine. The growing attention paid by different stakeholders (governments, NGOs, community, etc.) to sustainability, climate changes, etc., have forced firms to revise their business models (Del Baldo, 2022) and adopt strategies focused on food safety and food quality (Merola, 2015). In fact, consumers today express very specific needs and demand more guarantees than in the past (Ajzen et al., 2007; Boccia and Sarnacchiaro, 2015).

In the European Union Agri-food is one of the most important sectors in terms of economic output and employment (Food Drink Europe, 2020) and is mainly composed of SMEs (Cesaroni et al., 2021). Its importance has also been underlined by the European Green Deal and the Farm to Fork (F2F) strategy, which aim to guide the transition towards a fair, healthy, and respectful food system for people and the environment. Moreover, the European partnership for research and innovation in the Mediterranean area (PRIMA, 2018) sees for the first time a research programme dedicated specifically to the Mediterranean, with concrete repercussions on an essential sector such as agri-food. PRIMA's main goal is *“to devise new research and innovation approaches to improve*

water availability and sustainable agriculture production in a region heavily distressed by climate change, urbanisation and population growth”.

For the Italian economy, perhaps even more than in other countries, the primary sector plays a leading role (Boccia, 2015). Indeed, the Italian agriculture does not occur only as an economic activity, but as a real way of life, a tradition, a cultural identity. The tradition, whose continuity is ensured using raw materials of excellent quality, is increasingly supported by innovation, which provides instruments such as the fact traceability, by which we can reconstruct the history of the product and meet the needs guarantee consumer (Zouaghi and Sanchez, 2016). Therefore, for Italian firms operating in the agri-food sector, food safety and quality became fundamental assets to develop through both technological and organizational innovation. Producers, processors, distributors and operators of the agrifood sector are called to adopt new practices in line with the new requirements of food security regarding nutritional content, absence of pathogens and contaminations, treatment of animals and reduced impact on the environment.

Consequently, a key issue for scholars and entrepreneurs is to understand how to boost innovation in the Agri-food sector. In particular, as empirical evidence is still limited, our goal is to investigate if a food safety climate within firms enhances or hinders innovation.

By adopting the perspective of Griffith et al. (2010) we analyzed the impact that each food safety climate component (leadership, internal communication, resources and risk awareness) has on innovation performance. Results show that only leadership has a direct significative impact on innovation performance confirming the assumption of De Boeck et al. (2015) according to whom food safety climate components has to be considered has a whole in order to be effective.

2 Literature Review

The growing attention paid by governments, NGOs and the civil community to food safety and quality (Hartmann, 2011; FAO, 2020) agrifood companies have begun to adopt food safety management systems (FSMS) (De Boeck et al., 2017). Food quality is defined as “*a complex and multidimensional concept which is influenced by a wide range of situational and contextual factors*”, among others: safety, origin, nutrition, sensorial properties, authenticity and convenience (Knowledge Centre for Food Fraud and Quality, 2021). A food “quality” must fully satisfy the customer, which now is interested also

interested in ethical values (Covino, 2014). Food safety has been defined as “*the condition of the foodstuffs in all stages of production, processing and distribution, required to guarantee protection of consumer's health, also taking into account normal circumstances of use and information available for the food stuffs concerned*” (Baert et al., 2011). As claimed by Casella (2001) food safety is an inherent part of food quality. From this perspective a food can be considered safe if it is the result of a combination of primary resources, healthy and controlled, with no risk to consumer health.

Recent events of consumer food poisoning and outbreaks (European Parliament, 2019; Griffith, 2006) have shown that FSMS per se are not sufficient to guarantee food safety as most of the accidents were due to food handler errors and/or non-adherence to food hygiene or safety procedures (Powell et al., 2011; Wright et al., 2012). This drove several scholars to shift their attention from FSMS to human-centric aspect of food safety, and concepts like food safety culture and food safety climate begun to emerge (Powell et al., 2011; Taylor, 2011; Yiannas, 2009).

While food safety climate is considered as “*the employees' perception of the situation within an organization (vide infra), a 'snapshot' that reflects important aspects of an organization's safety culture*”, food safety culture is “*the bigger framework, of which food safety climate is a component*” (De Boeck et al., 2015). More in detail they conceptualize food safety climate through several variables that only taken together produce the desired outcomes (a climate of food safety) (De Boeck et al., 2015). However, there is still a lack of empirical research on this topic and the role played by each food safety climate's component is still not clear. This reason led us to investigate if and how each food safety component enhances or hinder a firm's ability to innovate.

According to Griffith et al. (2010) food safety climate includes four main components: leadership, internal communication, resources and risk awareness. Leadership is the ability to engage people in hygiene and safety procedures and meet the organization's goals, vision, and food safety and hygiene requirements (Griffith et al. 2010). Leaders should set food safety and hygiene goals and urge staff to follow them as an organization's culture starts at the top and trickles down. Leaders should also consider employees' feedback regarding hygiene and food safety, as employees are more engaged and driven when their perspectives are recognised and respected (Yiannas, 2009).

In agri-food businesses, innovative performance is heavily influenced by the quality of the leadership at the helm. Leaders who inspire curiosity and experimentation, encourage lifelong learning, and promote teamwork can do wonders for the spread of novel concepts

and methods (Amabile et al., 2004; Mumford et al., 2002). Leaders can affect innovative performance by providing a compelling vision and reasonable targets that motivate workers to think outside the box and develop unique approaches to achieving the organization's goals (Zhang and Bartol, 2010). Leaders can encourage employees to freely share their ideas and try new things (Amabile et al., 2004). Transformative leaders can boost their teams' creative potential by giving their employees a voice and helping them grow professionally (Gumusluoglu and Ilsev, 2009). Leaders can foster an innovative culture by promoting the free flow of information and ideas within the company (Carmeli et al., 2013). Effective leadership in the agri-food industry can have a significant impact on innovative performance by encouraging a culture of creativity and collaboration, establishing tangible company goals and facilitating two-way communication at all levels. Therefore, we hypothesized that:

H1: Leadership (LEAD) has a positive direct impact on innovation (INNP);

Hygiene and food safety information has to be shared through organization. Leaders should regularly remind staff about cleanliness and food safety to ensure they understand their duties and responsibilities. Leaders should use clear, education-appropriate language. Food handlers (operators) should also be able to talk to their leaders about hygiene and food safety. Organizational openness may improve food safety (Griffith et al., 2010). Employees are more inclined to believe in hygiene and food safety if reminded often and consequently, posters, signs, and other items should stress hygiene and food safety (Yiannas, 2009).

When it comes to innovation performance internal communication is crucial. The spread of information, expertise, and ideas within an organisation is greatly aided by strong lines of communication, creating a setting in which collaboration and new ideas may flourish (Carmeli et al., 2013). Employees are more inclined to participate in innovative activities and provide novel ideas when they know they may voice their thoughts and opinions without fear of retaliation. The creative activities of a company might be better coordinated and aligned thanks to effective internal communication (Cabrera et al., 2006; Giampaoli et al., 2021). Employees will be better able to understand their position in the innovation process and work collaboratively to accomplish the intended outcomes if the company's goals, values, and expectations surrounding innovation are properly communicated (Cabrera et al., 2006). Finally, recognising and

celebrating creative successes through internal communication reinforces and motivates staff to keep up their innovative work (Zhang and Bartol, 2010). Knowledge exchange, alignment and coordination of innovation activities, and recognition and celebration of inventive successes are all aided by strong internal communication, which is vital for improving innovative performance. Therefore, we hypothesized that:

H2: Internal communication (COMINT) has a positive direct impact on innovation (INNP);

Resources include time, personnel, infrastructure, and education or training. When an organisation has enough and trained employees, each team member has ample time to work hygienically and safely. Support may motivate hygiene and food safety (Griffith et al., 2010). When employees aren't under pressure, their work may be better. Hygiene and food safety infrastructure and enough funding show organisational support. An essential resource affecting the effectiveness of innovation is human capital, notably the skills, knowledge, and expertise of employees (Osterwalder and Pigneur, 2010). Businesses with competent and diversified workforces may provide a wider range of innovative ideas and solutions, which eventually results in higher levels of innovation (Laursen and Foss, 2003). Innovative performance is heavily influenced by technological capabilities, particularly the organization's capacity to create, adopt, and adapt new technologies (Liu et al., 2021; Paoloni et al., 2022). The culture, procedures, and systems of an organisation make up its organisational infrastructure, which may help or inhibit innovation (Giampaoli et al., 2021). Therefore, we hypothesized that:

H3: Resources (RES) have a positive direct impact on innovation (INNP);

Risk awareness concerns the organization's understanding of hygiene and food safety issues and capacity to handle them (Griffith et al., 2010). Risk perception is essential to food safety (Griffith et al., 2010). Risks should be known to employees so they can consider them into their daily work decisions. When employees trust the food safety management system, they feel less stressed, and the company is functioning well. This trust might inspire them to maintain hygiene and food safety (Zhu and Akhtar, 2014). At the same time, overconfidence might lead to underestimating food safety issues (Griffith et al., 2010). To identify risks and respond correctly, executives and workers must be

risk-aware (Griffith et al., 2010). Leaders who exaggerate hygiene and food safety issues may deter workers from working in a hygienical and safe way. A higher degree of risk awareness enables firms to see and evaluate prospective possibilities and dangers, empowering them to make innovation project decisions. Lendowski et al. (2022) found that higher level of risk management lead to an increased innovation intensity. Therefore, we hypothesized that:

H4: Risk awareness (RISK) has a positive direct impact on innovation (INNP).

3 Methodology

The population of Italian companies working in the agri-food industry was extracted from the Atoka database, including firms from the sectors of Agriculture, Manufacturing and Fishing. A total of 4614 companies were identified, of which 3178 had no certifications and 1437 had certifications. Two questionnaires were utilized to gather survey information, with the first directed to the entire population of companies, and the second focused on certain aspects of companies with certifications. The survey ran from March to May 2022, and a total of 168 companies—approximately 14% of the 3178 firms from the ATOKA database—participated. The businesses that took part in the study had a range of employee sizes: 4% had up to 9 employees, 73% had between 10 and 49, 21% had between 50 and 249, while the remaining 2% had more than 250 employees. The Food Safety Climate scales adopted for the study were taken from De Boeck et al. (2015), while the innovation performance scale was taken from Kianto et al. (2017).

4 Results

To test our hypotheses, we created and empirically tested a structural model using PLS-SEM following the procedure of Hair et al. (2017). PLS-SEM is a variance-based structural equation modelling method suitable for exploratory research (Benitez et al., 2020). Moreover, PLS is the most appropriate technique when the data's nature (common factor or composite) is unknown, as it produces less estimation bias compared to covariance-based SEM. Measurement model was tested through reliability, convergent and discriminant validity of the scales (Hair et al, 2017). Results are shown in Table 1 and Table 2. No items were dropped because all the factor loading are above the recommended threshold. To assess the statistical significance of the structural model we

employed a bootstrap algorithm (Hair et al., 2017). Both measurement and structural model show good parameters and are suitable for our purpose.

Table 1: Reliability and convergent validity

Reliability and convergent validity					
Inherent variables	Items	Loadings	Cronbach's alpha	Dillon-Goldstein rho	AVE
COMINT			0.909	0.919	0.789
	COMINT1	0.948			
	COMINT2	0.949			
	COMINT3	0.858			
	COMINT4	0.788			
INNP			0.892	0.904	0.755
	INNP1	0.877			
	INNP2	0.902			
	INNP3	0.806			
	INNP4	0.888			
LEAD			0.893	0.915	0.757
	LEAD1	0.798			
	LEAD2	0.893			
	LEAD3	0.890			
	LEAD4	0.893			
RES			0.891	0.914	0.752
	RES1	0.838			
	RES2	0.887			
	RES3	0.870			
	RES4	0.874			
RISK			0.958	0.964	0.888
	RISK1	0.936			
	RISK2	0.953			
	RISK3	0.943			
	RISK4	0.938			

Table 2: Discriminant validity

Fornell-Larcker					
	COMINT	INNP	LEAD	RES	RISK
COMINT	0.888				
INNP	0.435	0.869			
LEAD	0.824	0.436	0.870		
RES	0.750	0.381	0.776	0.867	
RISK	0.799	0.348	0.831	0.819	0.942

We found good parameter for innovation ($R^2=0.219$) but only leadership has a significant direct impact ($\beta=0.295$, $p=0.045$) on the latter. Results are shown in Figure 1 and Table 3:

H.1 LEAD \rightarrow INNP: evidence support H1 ($\beta=0.295$, $p=0.045$) confirming that Leadership (LEAD) has a positive direct impact on innovation (INNP).

H.2 COMINT \rightarrow INNP: evidence does not support H2 as internal communication has not a significative impact on a firm's ability to innovate.

H.3 RESOURCES \rightarrow INNP: evidence does not support H3 as resources per se have not a significative impact on a firm's ability to innovate.

H.4 RISK \rightarrow INNP: evidence does not support H4 as risk awareness has not a significative impact on a firm's ability to innovate.

Figure 1: Results of the structural model

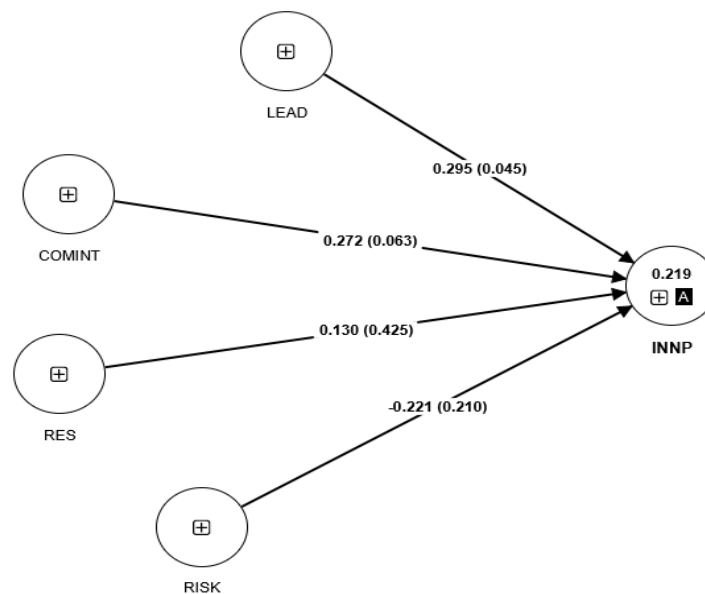


Table 3: Results of hypothesis testing

Hypothesis	Path	Path Coefficient	t-value	p-value	Status
H1	LEAD -> INNP	0.295	2.001	0.045	Supported
H2	COMINT -> INNP	0.272	1.857	0.063	Not supported
H3	RES -> INNP	0.130	0.797	0.425	Not supported
H4	RISK -> INNP	-0.221	1.255	0.210	Not supported

5 Discussion and conclusion

Results confirm that innovative performance in agri-food companies depends on leadership. Leaders who stimulate curiosity, experimentation, lifelong learning, and cooperation may disseminate new ideas and methodologies (Amabile et al., 2004; Mumford et al., 2002). Leaders may inspire innovation by setting clear goals and a compelling vision (Zhang and Bartol, 2010), providing a secure area for employees to express their ideas and try new things to inspire creativity (Amabile et al., 2004). Leaders may support innovation by encouraging knowledge and idea sharing inside the firm (Carmeli et al., 2013). By fostering creativity and cooperation, setting clear corporate goals, and promoting two-way communication, agri-food executives can boost innovation.

Contrary to what was assumed, internal communication has no significant impact on innovation performance. The findings seem to contradict theoretical and empirical studies showing that knowledge sharing stimulates innovation (Giampaoli et al., 2021). However, we must underline that our focus was on the internal communication of food security information and not knowledge-sharing per se. This may partly explain the results.

Also, the availability of resources (financial, infrastructure and human capital) does not appear to have an impact on innovation performance. These findings are partly in line with studies where human capital is the only component of intellectual capital that does not facilitate innovation. It should be added that Italian agricultural enterprises are often small and family-run, and therefore may have difficulty in accessing the resources needed to innovate. The funding allocated to support innovation in the agricultural sector through the PNRR (2021) is therefore an opportunity that is necessary to harness to modernise the Agri-food sector.

Finally, risk awareness also does not appear to facilitate innovation. Probably, if this on the one hand helps to establish a food safety climate and operate safely, on its own,

awareness of food security risks does not seem to be enough to stimulate creativity and innovation. As Amabile (1988) argues, in order to find creative solutions, three basic ingredients are needed: creativity, knowledge and motivation. It is therefore necessary to actively engage all the staff of the organization and motivate them to food safety objectives.

Having found that only leadership has a significant direct impact on innovation, empirical evidence seems to support the assumption of De Boeck et al. (2015) according to whom food safety climate is formed by several variables that only taken together produce the desired outcomes. However, it is important to understand the dynamics among food safety components to understand better if and how they enhance each other.

In conclusion our work contributes to food safety literature by analyzing the impact of each food safety climate components on innovation performance in the Italian agri-food sector. We offer valuable insights that can help agri-food firms to understand food safety and its implications better. As said before, in the future innovation will have a key role in addressing challenges and transforming the Agri-food sector to be ready to respond to the new needs of an increasingly interconnected population, now conscious of the implications that food has on health, environment and the whole society. The main limitation of this paper is that data were collected from Italian firms and results cannot be generalized.

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The circular economy in the restaurant sector. The qualitative multiple case study of piadinerias in Pesaro

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Abstract

Objectives: This study seeks to investigate and understand the current degree of diffusion and application of circular economy practices in small and medium-sized enterprises (SMEs) in the Marche region engaged in the piadineria service, highlighting the limits and benefits of implementation.

Literature review/Theoretical Framework: The circular economic model is increasingly gaining the attention of the academic, professional, and institutional world (Zhang et al., 2022). In this framework, the restaurant sector, among others, emerges, whose environmental impact appears to be highly significant (Camilleri, 2021). Several scholars state that this sector largely contributes to climate change, generating pollution, wasting energy and using plastic and other harmful detergents and chemicals (Milindi et al., 2022). Moreover, the restaurant industry is a huge generator of food waste and other resources, resulting in greenhouse gas (GHG) pollution, wasted materials and huge investment costs (Kim et al., 2020).

Approach/Method: A qualitative multi-case study was conducted, as this is one of the most widely used instruments for carrying out qualitative research. To this end, a structured questionnaire consisting of 43 questions divided into four main sections was created and administered in interviews to seven food establishments offering piadineria service and located in the city of Pesaro.

Main Results: The choices and actions taken by SMEs in the restaurant sector appear to vary according to their different sustainability orientations and are strongly dependent on economic and financial determinants. The food service establishments under investigation have just taken the first steps towards the goal of a fully sustainable operational approach, much still needs to be done for circular economy practices to become an integral part of the way of thinking and managing internal activities and processes.

Value and Implications for Theory and Practice: This study contributes to enriching the literature on the circular economy applied to the restaurant sector by offering an overview of the current degree of implementation and diffusion of sustainable practices within SMEs. Furthermore, managers and practitioners could use the developed framework as a tool to assess their current level of maturity in terms of circular economy. Similarly, politicians could become aware of the need to introduce measures to promote environmentally friendly investments, which could address the typical difficulties of SMEs in the sector.

Keywords – Circular economy, Food service sector, Sustainability, Circular restaurant, SMEs.

Paper type – Practical Paper

1 Introduction

The current historical period is characterised by the pressing issues of the climate crisis and the depletion of the planet's available resources, while the world's population numbers are increasing year by year. Nowadays, almost one third of global greenhouse gas (GHG) emissions come from food systems, which require large amounts of resources to run, thus compromising the biodiversity of natural environments (Camilleri, 2021). For a long time, and even more today, the food sector has been facing challenges such as food loss and waste, food safety, supply chain traceability, product quality and environmental degradation (Al-Obadi et al., 2022). In this regard, restaurants and related production and consumption practices play a not insignificant role. Several scholars state that this sector largely contributes to climate change, generating pollution, wasting energy, and using plastic and other harmful detergents and chemicals (Milindi et al., 2022). In addition to this, the restaurant industry is a huge generator of food waste and other resources, resulting in greenhouse gas pollution, wasted materials and huge investment costs (Kim et al., 2020). In this framework, the linear economic model, based on the perpetuation of the

“extract-produce-use-throw away” mechanism, represents an outdated paradigm (Greer et al., 2020) that risks seriously compromising the chances of survival and well-being of future generations. To cope with these difficulties and prevent them from turning into irreversible consequences, a change of path is therefore imperative, which requires the adoption and introduction of a new economic paradigm, namely the circular one. The analysis of opportunities and barriers to increasing the environmental performance of the food service industry through the implementation of circular business models has thus gained much attention within the academic, managerial, and institutional debate (Zhang et al., 2022). However, most studies and interventions focus on issues related to food waste and healthiness (Greer et al., 2020). Similarly, Dani et al. (2021) point out the scarcity of empirical evidence on the topic of food ethics and sustainable restaurant practices, compared to more exploratory interest on different circular economy (CE) approaches applied to businesses in other sectors (Kirchherr and van Santen, 2019). Furthermore, circular models appear predominantly examined with reference to large companies (Walker et al., 2021), although small and medium-sized enterprises represent a substantial part of the restaurant sector (Iraldo et al., 2017).

To fill these gaps, this study aims to investigate and understand the current degree of diffusion and application of circular economy practices within the Italian restaurant industry and, more specifically, within the small and medium-sized food establishments in the Marche region that provide *piadineria* service. Therefore, a qualitative multiple case study was carried out involving seven *piadinerias* in Pesaro - an important urban centre in the Marche region in terms of gastronomic culture and culinary experiences - investigated by using a structured interview. In particular, the following research questions were

addressed: (i) How much importance is given to the implementation of CE practices within the restaurant sector, especially by the *piadinerias* in the city of Pesaro? (ii) What is the current degree of progress with respect to the implementation of circular practices and which of these do the premises under investigation prefer to adopt? (iii) What are the advantages and limitations related to the implementation of CE practices encountered by the interviewees? (iv) What kind of incentive(s) to support the implementation of these practices do the interviewees need?

The paper is organised in three sections. Section 1 presents a review of the literature on the circular economy in the restaurant sector. In Section 2, the research methodology used, and the results of the study are described. Finally, Section 3 presents the main

conclusions, contributions of the analysis conducted, limitations and future research directions.

2 Literature Review

The concept of Circular Economy (CE) has been declined over time in a multifaceted way (Yuan et al., 2006; Lieder and Rashid, 2016; De Angelis, 2021), assuming multiple meanings depending on the context and its economic, socio-cultural, and political-institutional change. In the face of an ever-evolving body of scientific knowledge, many studies relate and reduce the concept of CE mainly to issues concerning the efficient use of materials and natural resources, mostly dealing with purely notional and regulatory aspects (Alhawari et al., 2021). Nevertheless, de Leonardis (2019, p.7) emphasises that the circular economy is "a concept with revolutionary potential", which implies the adoption of a radically new perspective on issues that are not only environmental, but also socio-economic and related to both production and consumption systems of goods and services. Therefore, it is necessary to investigate CE also from a more operational point of view, as a tool that would allow the concept of sustainable development to be implemented systematically and effectively (Ghisellini et al., 2016; Murray et al., 2017) within different business activities. To this end, it is needed to draw up an operational definition of CE, which possesses clear and measurable characteristics capable of creating a common language among scholars and practitioners (Alhawari et al., 2021), with consequent effects on the practices to be performed towards a sustainable transition. In this perspective, particularly comprehensive appears to be the formulation of Kirchherr et al. (2017, pp. 224-225), according to which the circular economy may be understood as "an economic system that is based on business models which replace the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations".

Over the last few years, the circular economic model is increasingly gaining the attention of the academic, professional, and institutional world (Zhang et al., 2022), both in terms of the conceptualisation of its theoretical paradigm and the complex practical

implementation of its fundamental principles. In this framework, the restaurant sector emerges, among others, whose extensive and varied business and the plurality of actors involved in it contribute to making its environmental and social impact highly significant (Kim and Hall., 2020; Camilleri, 2021). Several scholars state that this industry largely contributes to climate change, generating pollution, wasting energy and using plastic and other harmful detergents and chemicals (Milindi et al., 2022).

Restaurants can be quick-service restaurants (QSR, or more commonly known as fast food), they can be themed, multi-cuisine, or simple cafés. Regardless of their classification, every restaurant is structured into three main departments (Dani et al., 2021): the first is production, in which purchased raw materials are combined, cooked and transformed into attractive and appetising dishes; the second relates to the activity of serving food and beverages to customers; the third concerns cleaning and maintaining the hygiene of all the spaces in the restaurant. To perform this complex set of complementary activities in the best and most coordinated way, each restaurant must possess a wide range of equipment made of different materials, from plastic and wood to metals such as iron, stainless steel and aluminium, while the equipment, especially those located inside the kitchen, run on electricity, coal, gas and water (Dani et al., 2021). Hence, the restaurant business primarily involves a high and sometimes careless consumption of conventional resources, which results in the release of large amounts of highly polluting carbon emissions into the environment (Liu et al., 2022); in addition, the restaurant industry can be qualified as a huge generator of food waste, which results in material waste and high investment costs (Kim et al., 2020). Specifically, Dani et al. (2021) distinguish between the impact on the environment resulting from food preparation and that generated by the food and beverage service within the restaurant. The food preparation and cooking phase involves (El-Sharkawy and Javed, 2018; Nawaz et al., 2019; Dani et al, 2021): (i) air pollution, caused by the use of traditional man-made fuels such as wood and charcoal, but also oils and organic substances subsequently aerosolised and vented into the outside air by the kitchen exhaust system; (ii) plastic pollution, related to the fact that most raw food, perishable and non-perishable, is marketed in plastic packaging, which is then dispersed into the environment and the atmosphere; (iii) water pollution, resulted from the disposal of cleaning products in lakes and rivers, many of which contain substances that are toxic to humans, animals and plants and which, being able to remain in the environment for long periods of time, end up contaminating the food chain; (iv) resource depletion, due to excessive use of natural and mineral resources, especially in the cooking of food.

Similarly, food and beverage service generates (Chaabane et al., 2018; Kim et al., 2020; Dani et al, 2021): (i) noise pollution, premises may produce more than 100 dB of noise, exceeding the 65 dB threshold set by the World Health Organisation (WHO); (ii) waste generation, whether solid such as food waste, paper, disposable plastic, or liquid, which contain suspended materials, oils and fats, leftovers, chemicals and biochemicals; (iii) energy consumption, deriving from air conditioners, lighting or other elements; (iv) indoor air pollution, caused by combustion smoke, building materials, furniture, cleaning products, room fragrances, centralised air-conditioning systems and so on.

The adoption of circular and responsible business practices thus becomes an imperative for restaurant operators, whose choices and behaviour are increasingly being discussed by public authorities and consumers (Yoon et al., 2020; Chaturvedi et al., 2022). A growing number of people recognize the issue of sustainability as an important selection criterion on where to enjoy a meal outside home, prompting restaurateurs to revise and transform their business in response to a more environmentally conscious and sensitive audience (Jones et al., 2014; Han et al., 2020). Recent studies show that consumers have begun to demand sustainable food services with a reduced carbon footprint (Price et al., 2016), thus preferring restaurants that adopt green measures (Park et al. 2020).

Despite the obvious importance of adopting a circular economy approach to restaurant business management, there are still few studies on food ethics and sustainable business practices applicable to the restaurant sector (Dani et al., 2021). Main focus has been on identifying and reducing food waste as well as issues related to the quality and healthiness of the food offered (Greer et al., 2020; Yang et al., 2019). Furthermore, most scholars have focused on the application of the circular economy within large manufacturing industries (Kirchherr and van Santen, 2019; Principato et al., 2019; Walker et al., 2021), despite the undeniable impacts of food service provision in terms of energy and water use, waste and carbon footprint. To address these gaps, a deeper knowledge on how the circular model can be declined in food service practices becomes crucial. This aspect appears even more relevant in the context of small and medium-sized enterprises that represent a substantial part of the restaurant sector (Iraldo et al., 2017), thus playing a key role in making the entire ecosystem sustainable.

As specifically regards Italy, it is also worth considering not only the importance of businesses in the food service industry for national economic development, but also their strong roots in the country's historical and socio-cultural heritage. Within the current

Italian food supply chain, restaurant plays a leading role; according to the Restaurant Annual Report of the Italian Federation of Public Establishments (FIPE, 2019), it ranks as the first sector in the supply chain generating an economic value of 46 billion euros per year, followed only by agriculture with 25 billion euros. In 2019, there are about 285,000 bars and restaurants that employ 1.2 million people, with an impact on national GDP of 1.4 percent (FIPE, 2019). Despite the less positive data recorded in 2020 due to the pandemic crisis from COVID-19, the restaurant remains to date a sector that must be actively involved in the process of sustainable transition, also as an element of connection and intermediation between the production and consumption systems. As a result, investigating the current application of circular economy practices within the Italian food service could act as a stimulus for the development and diffusion of more sustainable models, both among restaurants and consumers.

3 Research Methodology and Results

In order to investigate the diffusion of circular economy practices within the restaurant sector and, more specifically, within the *piadineria* service, the analysis was conducted through the methodology of the qualitative multiple case study, which is one of the most widely used tools in carrying out qualitative research. The decision to use the multiple case study, as a research method in which each case is treated as a single autonomous unit with its own structure and peculiarities, enables the collection of data that is more reliable than the single case, thus attributing more rigour to the study of the observed phenomenon; in addition to this, the replication of the case study on several realities enables them to be compared and the results obtained to be analysed from a broader viewpoint. Furthermore, qualitative research provides insight into the opinions, motivations, and trends with respect to the phenomenon under investigation, aspects that could not be captured by the purely numerical data of quantitative research (Bryman and Burgess, 1994).

The study was carried out by means of a questionnaire consisting of 43 questions divided into four main sections and administered in interviews to seven establishments belonging to the restaurant sector and located in the city of Pesaro. All these food service establishments offer *piadineria* services, but while some are classifiable as small handicraft businesses with only a take-away service, others have a more complex organisation and are to be understood as “true” restaurants.

3.1 Selection of cases

The food establishments involved in the survey were selected according to the following precise and pre-defined selection criteria:

- sector: food service establishments need to belong to the restaurant sector, and in particular offer *piadineria* service;
- size: food service establishments need to be small or medium-sized, defined in terms of turnover and number of employees consistent with the European Commission Recommendation 2003/361/EC on 6 May 2003¹;
- location: food service establishments need to be in the city of Pesaro.

Based on these criteria, 10 food service establishments were identified, 7 of which participated in the study.

The focus on small and medium-sized companies in the Pesaro restaurant sector derives from the relevance that these businesses have in terms of promoting and enhancing the city's food and wine heritage. Investigating the application of circular economy practices by these companies is therefore of significant importance, given the role they could play in encouraging the adoption of sustainable consumption models not only locally, but also regionally.

3.2 Questionnaire

The research questionnaire used for the conduct of the interview, which was administered guaranteeing the anonymity of the respondents, consists of 43 questions (mainly open-answer and 1 with a 5-point Likert scale) divided into four main sections. The first relates to the profile of the respondent and collects information on age, educational qualification and the role played in the management of the establishment. The second concerns the profile of the establishment and includes general questions on the year of opening and the type of service provided, but also questions on whether the

¹ The European Commission Recommendation 2003/361 states that the category of micro, small and medium-sized enterprises (SMEs) includes those with the following characteristics: i. number of employees less than 250; ii. annual turnover not exceeding EUR 50 million or annual balance sheet total not exceeding EUR 43 million. In addition, it should be noted that small enterprises are defined as enterprises which employ fewer than 50 persons and whose annual turnover or annual balance sheet total does not exceed EUR 10 million; micro enterprises are defined as enterprises which employ fewer than 10 persons and whose annual turnover or annual balance sheet total does not exceed EUR 2 million (<https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=CELEX%3A32003H0361>, last accessed on 22 March 2023).

business is family-run, the number of employees and the annual turnover. The third one investigates the current level of adoption and implementation of circular economy practices addressed in relation to 4 thematic categories, which recall the sustainability practices for the restaurant sector indicated by Dani et al. (2021) and Camilleri (2021); these have been organised in sub-sections, namely raw materials and ingredients used, materials used in service delivery and cleaning products, energy and water consumption and architecture of the premises, surpluses and food waste. Finally, the fourth section focuses on the approach to circular practices trying to understand the attention paid to the issue of environmental sustainability within their operational processes, the importance recognised to these practices, the main areas of application, the advantages, limitations and incentives related to their implementation, and future prospects.

3.3 Data collection and analysis

The survey, which was carried out in October 2022, started by consulting the websites and collecting the contact details of the food service establishments selected using the criteria described above; in total, 10 establishments were phone contacted and with 7 of these it was possible to make an appointment for an interview. The number of cases considered is consistent with the multiple case study theory (Yin, 2003), according to which it is recommended to analyse between four and twelve units, as a lower number of units is insufficient for the purposes of structured research, while a higher number makes data analysis complex. The interview through the administration of the survey questionnaire, as the only source of data collection, was carried out by personally meeting the interviewees; this direct interaction enabled an enrichment of the survey from a qualitative point of view, as it was able to detect sensitivity and interest in the topic studied.

All interviews were transcribed and validated. The analysis of the interviews was conducted through the interpretation and content analysis of the answers obtained from the different food service establishments investigated, following the questionnaire structure.

3.4 Results

3.4.1 Interviewee profile

The data collected in the first section of the questionnaire, concerning the interviewee profile, are summarised in Table 1 and show that the respondents are on average 45, 28

years old. Most of them have a high school degree (5 out of 7), while only two have a middle school degree; all of them are owners of the food service establishment, excluding one person who works as a staff coordinator.

Table 1: Interviewee profile.

	Food service establishment 1	Food service establishment 2	Food service establishment 3	Food service establishment 4	Food service establishment 5	Food service establishment 6	Food service establishment 7
Age (years)	45	36	49	34	64	56	33
Educational qualification	High school degree	High school degree	High school degree	High school degree	Secondary school degree	High school degree	Secondary school degree
Position held in the company	Owner	Owner	Owner	Staff coordinator	Owner	Owner	Owner

Source: own elaboration

3.4.2 Company profile

As shown in Table 2, all the establishments investigated have been in business since the 2000s and thus opened relatively recently, except in the case of establishment 6, which is older. Food service establishments 3, 5 and 6 are take-away and family-run *piadinerias*, with no or at most one employee and a turnover of much less than EUR 500,000 per year, thus constituting small businesses of an artisanal nature and presenting a rather simple business organisation. Conversely, venues 1, 2 and 4 offer not only a *piadineria* service, but also a restaurant service: their menus include appetisers, first and second courses, side dishes and desserts; they also provide a table service. The latter are not family-owned and have up to 11, 8 and up to 60 employees respectively. Even these establishments have an annual turnover of less than EUR 500,000, apart from food

establishment 4. In addition to achieving a turnover of between EUR 3 and 5 million per year and employing up to 60 employees, establishment 4 in fact has several premises located in the Pesaro area and beyond. Finally, food establishment 7 is in an intermediate situation since, although it only provides a take-away *piadineria* service, it is not a family-run business and up to 14 persons are employed in its two establishments, registering a turnover of less than EUR 500,000 per year.

Table 2: Company profile.

	Food service establishment 1	Food service establishment 2	Food service establishment 3	Food service establishment 4	Food service establishment 5	Food service establishment 6	Food service establishment 7
Opening year	2022	2018	2021	2004	2020	1983	2008
Service type	<i>Piadineria and restaurant</i>	<i>Piadineria and restaurant</i>	<i>Takeaway piadineria</i>	<i>Piadineria and restaurant</i>	<i>Takeaway piadineria</i>	<i>Takeaway piadineria</i>	<i>Takeaway piadineria</i>
Family run	NO	NO	YES	NO	YES	YES	NO
Number of employees	Up to 11	8	1	Up to 60	0	1	up to 14
Turnover range (2021)	< 500.000	< 500.000	< 500.000	3-5 million	< 500.000	< 500.000	< 500.000

Source: own elaboration

3.4.3 Circular Economy practices

The third section of the questionnaire focuses on the level of adoption and implementation of circular economy practices by the food establishments surveyed. As indicated above, these practices are considered in relation to four main thematic categories. The data emerging from this analysis provide interesting qualitative information, which can be described as follows:

- *raw materials/ingredients/products*: all the premises interviewed use raw materials, ingredients and products from local (Km 0) and/or regional suppliers in the preparation of their food proposals, in high percentages (at least 50% and up to 90%) of the total raw materials purchased, with the exception of establishment 2, which uses only 20%. All the establishments use seasonal raw materials by offering a menu that is partly fixed and partly composed of proposals that vary according to the seasonal availability of products (especially vegetables). It should be emphasised that the data reported shows, in a positive and encouraging manner, an attentive attitude by all the premises to the purchase of local and seasonal raw materials. As previously mentioned, local and seasonally-based sourcing processes are among the sustainability-oriented good practices described by Camilleri (2021), which are increasingly embraced by businesses in the restaurant (and hotel) sector, as they are able to guarantee a high quality of the chosen products and reasonable purchasing costs, especially where restaurateur and supplier work together on an ongoing basis. Slightly more than half of the premises interviewed (1, 2, 3 and 4) use certified raw materials and/or products in percentages ranging from 10% to 60% of the total raw materials purchased, with BIO, IGP, DOP, DOCG, Gluten-Free and ICCAT certifications prevailing; the remaining premises (5, 6 and 7) do not use certified raw materials, and in particular premises 7 expresses scepticism on the issue of certified products, especially BIO ones. From the interviews, it emerges that the choice of whether or not to use certified raw materials is not only guided by sustainability reasons but is also closely linked to their cost and the need to satisfy the demands of those consumers who are more demanding with respect to the authenticity of the products they consume. None of the restaurants use raw materials and/or products deriving from socially committed realities, except for restaurant 3 which claims to purchase its dairy products from a neighbouring therapeutic rehabilitation community. It can therefore be stated that among the interviewees there is a low propensity to use alternative supply channels than those with which they usually interact. At least one vegetarian and/or vegan proposal (sometimes even more than one) is present in the menus offered by the seven premises interviewed, a sign of the desire to meet the new consumer dietary trends, which have increased since the pandemic and are characterised by a lower consumption of processed foods in favour of healthy foods, such as those of vegetable origin;

- *service delivery materials and cleaning products*: regarding service delivery, most of the premises surveyed do not use washable tablecloths and/or napkins or those made of certified ecological paper. Only three of them (1, 2 and 4) use washable or non-plastic dishes, glasses and crockery since the opening of the business. For take-away service, all premises use compostable paper or cardboard packaging instead of plastic, and in two cases biodegradable bags are also used. In all establishments, washable towels and/or certified ecological hand dryers are used in the kitchen, while only three of them have hand dryers instead of paper in the bathrooms. Only establishment 1 employs the digital menu with the use of QR codes instead of the traditional paper menu; in all other cases, the menu is made of paper, sometimes recycled. It is clear, therefore, that premises do not have a uniform and consistent behaviour in implementing solutions to avoid the use of plastic or reduce paper consumption in their operations. Although Dani et al. (2021) state that replacing plastic packaging, wrapping, glasses, dishes, bowls, cutlery, and straws with those made of environmentally friendly, recyclable or biodegradable materials is one of the initiatives that a sustainable restaurant should implement, the data show that such a measure is only partially adopted by the surveyed venues and mostly in the take-away service. Only establishments 2, 3 and 4 perform the take-away service by relying on food delivery operators who mainly use polluting means of transport (scooters or cars). None of the premises purchase certified ecological cleaning products and only some of these products have an automatic dispenser. This finding identifies a behaviour that is not in line with what Dani et al. (2021) suggest, according to which an environmentally sustainable approach includes the use of organic or natural detergents without toxic chemicals in cleaning processes and the proper treatment of these;
- *energy consumption, water consumption and premises architecture*: concerning energy consumption, only in the case of establishment 4, solar panels have been installed in one of its premises to help save energy. Most of the interviewed establishments use energy-efficient household appliances (at least class A++), only some of them (1, 2, 3 and 4) use sensors with switch-off timers for less used rooms, while premises 1 and 7 are the only ones with at least 80% class A energy-efficient lighting. None of the surveyed premises generate renewable energy. In this regard, it is specified that the minimisation of electricity consumption through the exploitation of alternative energy sources such as water, wind, and sun, as proposed in the study

by Dani et al. (2021), represent practical actions that require the availability of adequate infrastructure and ample space, two conditions that almost all the premises investigated do not possess. With regard to water consumption, on the other hand, most of the establishments state that they do not have water-efficient flushing systems in their bathrooms, and only in a few cases are water flow reducers or pedal, time or photocell control mechanisms applied to bathroom and kitchen taps, denoting a largely inefficient management of water consumption. None of the premises has ever achieved voluntary environmental certification for reasons of lack of interest and/or scarcity of resources (financial or time), preferring in all cases to invest these resources in achieving mandatory certification. Neither of the premises studied has an infrastructure built using green building materials and only in the case of establishment 4 were second-hand furnishings used to equip one of its premises;

- *surplus and food waste*: in all the premises studied, waste is sorted into at least four fractions in accordance with municipal regulations and staff are given clear, simple, and comprehensible instructions on the correct identification of the different types of waste. All the establishments also collect used cooking oil and fats in special containers and deliver them to a company specialised in their treatment. Even though none of the interviewed premises is equipped with a composter or digester, they all manage waste disposal appropriately and in compliance with the rules imposed by law. The main strategies adopted to prevent the production of surpluses and food waste are the management of supplies in relation to production needs and the decision to keep a minimum amount of stock in the warehouse. These practices are perfectly consistent with the Just-In-Time purchasing systems and responsible stock-taking practices described by Camilleri (2021), which are combined with the careful and no-waste use of raw materials, made-to-order production and, in the case of the establishment 4, centralised and standardised production. Regarding the management strategies of any food surpluses produced, these include the provision of doggy bags for customers, internal reuse, internal redistribution (this is the case of establishments 4 and 7 which have more than one premises) and joining initiatives to tackle food waste (this is the case of establishment 5 which uses the Too Good To Go platform). The use of sharing economy platforms and the use of food-boxes for customers are not only responsible practices referred to in the literature but represent sustainability-oriented solutions that are easy to implement, while confirming themselves as fundamental in limiting food waste.

3.4.4 Approach to circular economy practices

The survey questionnaire concludes with a fourth section whose questions seek to understand the importance given to the issue of environmental sustainability by the interviewees and their willingness to introduce circular economy practices in their daily activities and operational processes. With respect to the importance attributed to circular practices, respondents were asked to express their opinion using a Likert scale, where 1 indicates not at all important and 5 indicates very important. In this regard, Table 3 shows that all the analysed premises attribute enough importance (4.43) to the adoption and implementation of circular economy practices within their establishment(s). The reasons that primarily motivate these answers are of an economic nature and refer to the possibility of achieving significant cost savings; secondly, all the interviewees express interest and personal involvement in the issues of fighting food and resource (especially energy) waste, respect for the environment, commitment to operate in a sustainable way, and show a sense of responsibility towards social welfare and that of future generations.

Table 3. Importance given to the implementation of circular economy practices within the food service establishment's activities and operational processes.

Importance given to the implementation of circular economy practices within operations and processes	
Food service establishment 1	4
Food service establishment 2	4
Food service establishment 3	5
Food service establishment 4	5
Food service establishment 5	5
Food service establishment 6	4

Food service establishment 7	4
Mean	4,43
Standard Deviation	0,534

Source: own elaboration

Concerning the areas of circular economy practices application considered most important, Table 4 shows that all premises indicate energy and water consumption as the prevailing one, followed by raw material consumption, tied with the area related to the production of food surpluses and waste. The choice of these specific areas of application is based on the same motivations as above, to which is added the attention paid to the quality, freshness and genuineness of the ingredients used in the preparations and therefore the care dedicated to the selection of the raw materials purchased, which are mainly local and seasonal.

Table 4. Areas of circular economy practices application considered most important by interviewees.

	Food service establishment 1	Food service establishment 2	Food service establishment 3	Food service establishment 4	Food service establishment 5	Food service establishment 6	Food service establishment 7
Raw materials/ ingredients/ products	X	-	-	X	X	-	X
Service delivery materials and cleaning products	-	-	-	-	-	-	-
Energy and water consumption, infrastructure	X	X	X	X	X	X	X

Food surpluses and waste	-	X	X	-	X	X	-
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Source: own elaboration

Finally, the interviewees were asked to express their opinion on the advantages and limitations of implementing circular economy practices within their premises, and then to indicate the incentives potentially useful to support the adoption of these practices, and to describe their future perspectives on the topic.

The benefits mentioned are mainly economic (cost savings), followed by the possibility of offering customers a higher quality product and ensuring greater environmental protection by promoting sustainability and reducing all forms of waste within their operations.

Regarding limitations, all of the premises cite cost constraints (which in the case of raw materials determine in turn an increase in the final price to the customer, who is not always willing to recognise a premium price for a sustainable product), time and regulatory-bureaucratic constraints; in addition, they highlight the problems of implementing some eco-friendly solutions (with specific reference to the lack of effectiveness of certified ecological cleaning products), the need for qualified staff for efficient management of purchasing processes and warehouse stocks, the difficulty of scheduling production to avoid the generation of surpluses.

On incentives to support the implementation of circular economy practices, interviewees point to: the introduction of tax relief on the purchase of modern and environmentally friendly professional equipment, certified raw materials and ingredients (e.g. organic), compostable or biodegradable packaging; the need for bureaucratic streamlining, especially in the process of obtaining certifications; lower taxes as a stimulus to investment due to more available financial resources.

Finally, with respect to future perspectives, premises 1, 2 and 6 express their intention to introduce further circular economy practices in their operations; in particular, establishment 1 states that it would like to commit to the complete elimination of plastic and the use of environmentally friendly cleaning products; establishment 2 expresses interest in obtaining a voluntary environmental certification in the near future; establishment 6 would like to renew its equipment and install solar panels. Establishment 4 is inclined towards improving the circular economy practices already implemented,

while premises 3, 5 and 7 do not intend to implement further circular economy practices in their operations.

It is therefore evident that it is not possible to identify a single direction of future development valid for all establishments regarding the implementation of circular economy practices within their operational processes, due to the heterogeneity that characterises the orientations and approaches of the various interviewees to the issue of environmental sustainability.

4 Conclusions

The choices and actions taken by small and medium-sized enterprises in the restaurant sector appear to vary according to their different sustainability orientations and are strongly dependent on economic and financial determinants. The food service establishments under investigation have just taken the first steps towards the goal of a fully sustainable operational approach, much still needs to be done for circular economy practices to become an integral part of the way of thinking and managing internal activities and processes. The most widespread and implemented circular economy practices concern the selection of raw materials and the management of food surplus and waste. As stated by Camilleri (2021), local and seasonal purchasing processes and good procedures to deal with food waste enable a higher quality product and lower operating costs, while protecting the environment.

Conversely, in the fields of energy and water consumption and the architecture of restaurant establishments, only a few measures are taken to promote a more sustainable operational approach. Dani et al. (2021) point out that practices such as the use of alternative energy sources (e.g., water, wind, and sun) require the availability of adequate infrastructure and ample space; these are two conditions that most of the establishments investigated do not possess. Although all the interviewed business owners recognise the importance and benefits of adopting circular economy practices, there are still many difficulties that these small and medium-sized enterprises encounter in their implementation; these include cost, time and regulatory-bureaucratic constraints and the lack of proper sustainable management skills. This result appears to be in line with what has been found in the literature with respect to the main barriers faced by Italian SMEs with respect to their circular transformation, namely the limited human, economic and time resources (Salvioni et al., 2022). To cope with these limitations, the analysed

piadinerias emphasise the need for more support from local and national authorities in terms of economic incentives, reduction of bureaucratic procedures and green investments in the restaurant industry.

This study contributes to enriching the literature on the circular economy applied to the restaurant sector by offering an overview of the current degree of implementation and diffusion of sustainable practices within small and medium-sized enterprises, which to date have been little explored, although they constitute a crucial part of this industry. In this perspective, several important aspects were explored and highlighted, such as the importance given to the implementation of circular economy practices within its own business, their degree of diffusion, the advantages and limitations associated with them. The research also provides interesting managerial implications for restaurant operators and public authorities. Managers and practitioners could use the developed framework as a tool to assess their current level of maturity with respect to the implementation of circular economy practices, identifying critical areas, needs for improvement and priorities for action. Similarly, politicians could become aware of the need to introduce measures to promote environmentally friendly investments, which could address the difficulties faced by small and medium-sized enterprises in the sector and encourage the adoption of a sustainable management approach.

The paper also presents some limitations. Specifically, the sample consists of establishments operating exclusively in the city of Pesaro. Similarly, the premises considered are mainly specialised in the *piadineria* service. In the future, it would be interesting to extend the research to other businesses in the restaurant sector and to consider different Italian geographical areas, to identify similarities, differences and main priorities for intervention.

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Sustainability practice in first-generation family firms. Some empirical evidence from the Scanian wine sector

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Abstract

In family business studies, sustainability is an upcoming subject. The wine sector is an industry in which family firms and sustainable practices are deeply intertwined and widely analysed. Prior research focused on long-lasting family businesses in old and mature wine districts. This study aims to identify and understand sustainability practices in first-generation family firms in the emerging Scanian wine sector, with a particular focus on copreneurial ventures.

By embracing a micro-foundational lens, the research focuses on the individual level, i.e., the family members at the head of the business, and aims to answer the following research questions: (RQ1) How do first-generation family firm members in a nascent wine country make sense of sustainability practices? and (RQ2) How do they integrate sustainability into their family firms?

We have adopted a qualitative approach based on multiple case studies and collected data from three copreneurial ventures. Using Gioia method to analyse data, we have identified two aggregate dimensions: foundations of sustainability and sustainability development. “Foundations of sustainability” refers to RQ1 and concerns how first-generation family firm members make sense of sustainability practices. This dimension includes three themes: values, well-being and living in nature, more than organic. The “sustainability development” dimension refers to RQ2 and concerns how first-generation family firm members integrate sustainability practices into their family

firms. This dimension includes two themes: experiencing sustainability and spreading sustainability.

The paper contributes to deepening knowledge of how family members interpret sustainability and translate it into their business and aims to get to the root of sustainability by providing a theoretical explanation of how firm-level outcomes (sustainability practices, in our case) emerge from the values, beliefs and behaviours of individuals.

Keywords – First-generation family firms, Copreneurial ventures, Sustainability, Wine sector, Sweden.

Paper type – Academic Research Paper [work in progress]

1 Introduction

Family firms build the backbone of every society; they are highly heterogeneous (Westhead & Howorth, 2007) and the predominant form of enterprise in the world (Sharma et al., 2012). Family firms are strongly influenced by the family's binding social ties, emotional attachment and assuring longevity (Gómez-Mejía et al., 2007; Gómez-Mejía et al., 2010; Gómez-Mejía et al., 2011). Therefore, sustainability in the sense of firm survival is included as a natural concept in family firms (Abdelzaher et al., 2018).

Looking at recent research within family business, sustainability is an upcoming subject: see Adomako et al. (2019); Broccardo et al. (2019); Dayan et al. (2019); Mullens, (2018) among others.

There are several definitions of sustainability in family firms that refer to different meanings e.g. serving stakeholders over time (Gunry et al., 2014), the business's effects (Huseh, 2018) and long-term effects for future generations (Jayakumar, 2017). As the dominating form of business, family firms have a huge responsibility to accelerate their sustainability work into practices that embrace sustainable thinking throughout the whole working process (López-Perez et al., 2018) and ensure it to be both profitable and environmentally friendly (Jayakumar, 2016).

Sustainability in family business studies has been discussed from mainly two different perspectives: 1) the survival and longevity of the family firm (Canovi & Lyon, 2020) and 2) social and environmental sustainability, such as sustainable processes, products and practices (Miroshnychenko & De Massis, 2022) This study focuses on the latter perspective.

Sustainability business practices can be defined as a business that both improves profitability and embraces a business strategy that keeps the environment healthy and sustainable (Larson et al., 2000). It can be divided into internal sustainability practice (pollution prevention and green supply chain management) and external sustainability practices (green product development) (Miroshnychenko & De Massis, 2022).

Le-Breton Miller & Miller (2016) reason that family firms' relationship to sustainability on one hand must consider family values and long-term orientation and, on the other, family conflicts, private socio-emotional wealth and performance (Le-Breton Miller & Miller, 2016; Adomako et al., 2019). However, family firms' longevity is not a prerequisite for sustainability practices (Memili et al., 2018); instead, differences have been identified among early and later generations in how environmentally and socially responsible family firms act (Adomako et al., 2019).

According to Broccardo et al. (2019), small and medium sized, young family firms have a more positive impact on sustainable and green practices (Dayan et al., 2019). The fact that later-generation family firms are keener on sustainability investments (Mullens, 2018) points in a direction that sustainability becomes more of a mindset.

Despite that, we know very little about first-generation family firms and their understanding of, and attitude towards, sustainability practices (Sharma & Sharma, 2021) and how they are integrated and distributed in the family business from the start (Miroshnychenko & De Massis, 2022).

The wine sector is an industry in which family firms and sustainable practices are deeply intertwined and widely analysed. Extant literature shows that old, mature wine districts such as France, Italy, South Africa, Australia, New Zealand, US and Chile (Corbo et al., 2014; Flores, 2018) have been broadly explored. However, a knowledge gap exists on first-generation family firms' work in sustainability practices in the cool climate wine sector like Sweden. Sweden is a country in Scandinavia, famous for being one of the most sustainable countries in the world (Månsson, 2016). Due to climate change, Sweden has surprisingly become a wine country with a commercialised wine production and growth. It is an award-winning country for its wine and has started building a wine region in Sweden's southernmost part — Scania. The region holds approximately 55 registered vineyards out of which 35 are commercial and the major part are family firms (Livsmedelsföretagen, 2020; Föreningen svenskt vin, 2020).

In this regard, Broccardo et al. (2019) states that family business research needs to accelerate empirical qualitative studies on drivers and obstructions to sustainability

practices and create an understanding of family firms' sustainable behaviour (Dayan et al., 2019) and the entire distribution of sustainability practices (Miroshnychenko & De Massis, 2022). Still, there is very little knowledge about sustainability practices in young family firms in emerging markets (Adomako et al., 2019), those active in related industries (Le-Breton Miller & Miller, 2016) or how sustainability practices are implemented (Lopez-Perez et al., 2018; Memili et al., 2018).

Therefore, this study aims to identify and understand features of sustainability practices in first-generation family firms in the Scanian wine sector. Specifically, the study embraces a microfoundational lens (De Massis & Foss, 2018), providing a theoretical explanation of how firm-level outcomes (sustainability practices, in our case) emerge from the values, beliefs and behaviours of individuals (family members, in our case) (Felin et al., 2015). Namely, the research focuses on the individual level, i.e., the family members at the head of the business, and aims to understand how their values, motivations and expectations give rise to and shape the sustainability practices adopted by the family business. In this sense, the study aims to get to the root of sustainability practices by understanding how family members interpret this concept and translate it into their business. On this basis, the paper will answer the following research questions: (RQ1) How do first-generation family firm members in a nascent wine country make sense of sustainability practices? and (RQ2) How do they integrate sustainability into their family firms?

2 Theoretical background

2.1 Family firms

Family firms can be defined by their unified system of economic resources and capabilities that affect performance (Basco, 2013; Frank et al., 2010) and bring wealth for coming generations (Habbershon et al., 2003; Reay, et al., 2015). What family firms have in common is the capacity to capitalise on preservation and knowledge creation within the firm and with external stakeholders (Carney, 2005). This in turn influences cash holding, gives room for flexibility (Caprio et al., 2020) and makes family firms less sensitive to financial shocks (Škare & Porada-Rochoń, 2021).

Whilst family firms have been synonymously categorised into one domain of businesses, there are studies that focus on the differences among family and non-family firms; albeit those differences, there are even greater differences among family firms

(Chua et al., 2012). This creates a family firm heterogeneity that can be defined as “[...] the range of categorical and/or variational difference(s) between or among family firms at a given time or across time” (Daspit et al., 2021, p. 298). Albeit family business literature explains heterogeneity through succession, firm size and growth, and family-based capital, the level of analyse has been focused on the firm. Studies using the controlling family as the level of analyse is still very scarce (Daspit et al., 2021).

The composition of the controlling family could be an interesting element of heterogeneity (Zellweger, 2017). Among the various possible combinations, the so-called copreneurial venture can be considered a subset of family businesses, one of many expressions of the heterogeneity of family business as a phenomenon. A copreneurial venture is a family firm owned and managed by ‘a male and female couple, integrated as a working team’ (Kuschel and Lepeley, 2016). Living and starting a business together as a couple is a specific situation that has also been labelled co-preneurship (Fletcher, 2010). Copreneurs are often the foundation and starting point of many family businesses (Nieman, 2006). Studies on copreneurs highlights work/family relationships (Wu et al., 2010), how copreneurship operates (Fletcher, 2010) and the link between entrepreneurship and family business (Hedberg and Danes, 2012). Sentuti et al. (2019) found that copreneurial ventures is an overlooked theme that needs further investigation, because it offers an important and novel perspective on family business studies.

2.2 Sustainability practices in family firms

Sustainability practices in family firms has been defined as “those that work towards the long-term benefit of all of an organisation’s stakeholders — the broader community included” (Le-Breton Miller & Miller, 2016, p. 26) and have been discussed from several perspectives, such as long-term orientation (Kallmuenzer et al., 2018), long term investment (Memili et al., 2018) and the size of the firm (Broccardo et al., 2019).

Studies about family firms and sustainability was widely neglected until 2020 (Curado & Mota, 2021; Clauß et al., 2022). Most of the studies have focused on countries like Italy and Spain and mainly used quantitative methods. Scholars have acknowledged that social inclusion, economic development and environmental protection play relevant roles in sustainable business development and adopting sustainable practices (Curado & Mota, 2021).

What is shown is that firm age does not seem to have any significance regarding family firms environmentally sustainable orientation (Adomako et al., 2019); however,

what does seem to affect sustainability practice is the generation of the family firm. Sharma et al. (2021) have pointed out some advantages that differentiate first-generation family firms from other generations when it comes to sustainability practices. For instance, the possibility of integrating sustainability principles daily instead of changing an established culture, and at the same time looking after the family's sustainability core values. First-generation family firms can further enhance sustainability practices by designing the business in a way that can ensure sustainability as a driver for expansion and growth (Sharma & Sharma, 2021) as well as be a ground for the core of the business (Seow & José Parada, 2021). The challenge however is the need to sacrifice short-term returns and customer investment in favour of long-term orientation. Other forms of long-term orientation are to keep employees over time by fair treatment and sharing a sustainable mindset (Sharma et al., 2021).

One sector that is deeply involved in sustainability is the wine industry, in which extant literature has mainly focused on three different areas of interest. First, environmental impact such as water footprint (Aivazidou & Tsolakis, 2020), environmental effects (Bartocci et al., 2017; Ferrari, et al. 2018) and carbon footprint (Carrasco et al., 2021; D'Ammaro, et al., 2021). Second, the agricultural phase such as life cycle assessment (Arcese et al., 2017) and viticulture (Chiriaco, et al. 2019). Finally, the winemaking phase such as waste (Ahmad et al., 2020) or packaging (Ferrara et al., 2020).

In this regard, studies on New Zealand's wine producing family firms show that family influence, such as family ownership, recourses, identity and values, are affecting their work on environmental sustainability. Positive drivers for biodynamic practices are health for family, coworkers, and external contacts (Kariyapperuma & Collins, 2021).

In the Italian wine sector, researchers highlight that compared to private non-family firms, family firms are more prone to investing in sustainability projects such as production, organic farming, employee's benefits and product quality. They further articulate that taken sustainability actions indicate better economic results (Broccardo & Zicari, 2020).

In this vein, a study between Spanish family and non-family wine making firms has revealed that family firms return on assets and operating margin are higher and the debt and debt ratio is lower. The authors suggest that it depends on advantages in the product's price and lower agency costs. This in turn results from lower risk exposure and increased long-term financing in family firms. What is highlighted further is that the profitability is

generated from family firm's greater efficiency, e.g., key competencies, family culture and strategic flexibility (Soler et al., 2017).

As studies have shown, heterogeneity in sustainability is primarily affected by founding owners and their families' values; specifically when two or more generation family members are working together (Kariyapperuma & Collins, 2021). However, research does not show how heterogeneity occurs among first-generation family firms.

Specifically, scholars have acknowledged that specific types of family firms such as copreneurial ventures, working in related industries (as the wine sector), need to be more investigated (Breton-Miller & Miller, 2016; Sentuti et al., 2019), in addition to the relationship between family firms and sustainable wine production (Soler et al., 2017).

Researchers have taken into consideration that primary data needs to be used to understand how family logics and commercial logics coexist and its influences on environmental sustainability (Kariyapperuma & Collins, 2021). What calls for further investigation is how sustainability options guide family business strategies and how family business decisions influence sustainability work (Curado & Mota, 2021).

In their call for papers, Clauß et al., (2022) have indicated that how sustainability is or can be integrated into family business, what drivers motivate sustainability initiatives and to what extent family firms contribute to sustainable innovation are still neglected in research. Conducted research has also highlighted the ethical and economical mindset to improve viticulture (Mancuso, et al. 2022) to empirically investigate internal drivers and the learning potential in relation to sustainability (Flores, 2018) and proactive strategies with sustainability in the centre of firm logic (Broccardo & Zicari, 2020).

The above-mentioned call for research in its whole or in its parts stimulated this study, which aims to fill some of the gaps identified in the literature.

3 Method

3.1 Context

Scania, in the southern part of Sweden, has a typical landscape for agriculture with mild winters and medium hot summers. As global climate change has affected Sweden, it has become a great opportunity for viticulture.

For most winegrowers, interest in wine started as a hobby but emerged over time, resulting in a business startup after retirement or during a career change. The

winegrowers in this study are engaged or married couples working together in family firms.

3.2 Data Collection

To address the research questions, the study has focused on three Scanian couplepreneurs in first-generation wine making family firms – Kallerud’s vineyard, Frosarp’s vineyard and Alnarp’s vineyard. The study draws on firsthand data (Holstein & Gubrium, 2000) collected from the couples’ narratives about their experience (Riessman & Quinney, 2005). As narratives reveal how people perceive themselves in a context (Josselson & Hopkins, 2015), they help us to understand the meaning of (Dalpiaz et al., 2014; Gabriel, 2015; Kostera, 2006), and how, sustainable practices are implemented into the family firm. The empirical research is still ongoing to collect further data and expand the number of case studies.

3.3 Data Analysis

The data has been analysed according to Gioia et al’s (2012) three-step structure. First, a close reading of the narratives to unravel 1st order concepts and understand the couplepreneurs’ context in which they integrate sustainability into their everyday business. Second, as the study sought a deeper understanding of how the couplepreneurs are constructing the meaning (Bruner, 1990) of sustainability, an analysis of 2nd order themes (Gioia, et al., 2012) helped to identify their invisible processes and underlying aims (Gabriel, 2015). The third step analysed and pulled forth the aggregated dimensions of the themes into an aggregate dimension as foundation for theory building. Because of space restrictions, the complete data structure generated and analysed in the study is not included in the paper but is available on request from the authors.

4 Findings

4.1 Case A – Kallerud’s vineyard

Kallerud’s vineyard started in 2001 and became a family firm in 2005 and was a sole trader until April 2022 when it was changed to a limited company. The vineyard is owned by the couple Leya and Martin (55 and 56 years old), who have one external employee

working full time. During high seasons extra staff is hired and Martin's father (now over 80) helps the couple with the extra he can manage.

The start of Kallerud is grounded in the couple's genuine interest in wine. They liked to drink and learn about wine. They were active in a nonprofit association about wine and gradually wanted to grow their own wine. The initial idea was to buy a vineyard abroad, but in 1999 they read in a paper that it was possible to grow wine in Denmark. *"If they can grow wine in Denmark, then we can also."*

They went to Denmark and talked to the Danish farmer Mikael Bondesson. In 1999 they put their first 500 plants on Leyas's sister's land. Then in 2001 they started to grow plants on Martin's parent's farm, where they now live and work: *"We are here to stay"*.

Sustainability at Kallerud means keeping the crop organic and as non-toxic as possible. It is not necessary that the whole business chain is organic; however, the aim is to be as organic as possible and use locally produced items and goods. *"... it is important to buy, for example, cardboard boxes locally, and not just order something that is cheaper from China."*

The word sustainability is connected to well-being, which means that all involved in their business chain shall feel and be well. Well-being includes everything from the land and soil to the bottle producer. *"The thoughts of sustainability in our world would have been broken if we would have ordered cheap cardboard boxes from China just because of the price."* The couple is thinking about sustainability in every step of the business chain; however, sustainability is also deeply connected to good quality. *"Sustainability is quality for us, not any throw-away; it should be something that is worthy and add something."*

In practice, Kallerud has established sustainability as they use no toxics and do all the work and harvest by hand, compared to international vineyards that use machines. *"[...] we sort out the bad grapes manually so that there are only fine ones left. The wine will be bad if you mix bad and good grapes."*

The biggest obstacle for sustainability practices at Kallerud is logistics and transporting. Unlike foreign vineyards, Swedish vineyards, due to the Swedish State monopoly, are not allowed to have cellar door sales. The sale is regulated and allows them to sell only to Systembolaget (the monopoly shop) and restaurants. The couple transports wine themselves to restaurants nearby; however, for longer transportation they need to hire a transporter.

"If we could have our sales here — then we could avoid heavy transports that are both expensive, complicated and pollute nature."

The firm has existed for 20 years, and their philosophy from the start has always been to work along and with nature. Therefore, one example is to give back to the soil what has been taken. *“[...] when we pressed the grapes, we throw the peel back into the vineyard again; what we take we give back.”*

The learnings of 20 years of wine producing is that weather is a factor you cannot change; you must do your best with what you have. The mix of plants is a lesson they also had to learn, e.g., grapes are not suitable for the Swedish climate, or plants sensitive to diseases, that accordingly need to be treated with toxics (which is something they don't want to do) or plants late in their growth, which is not appropriate together with plants that grow faster.

Having a family business works fine for the couple, even if, at times, it is difficult to draw a line between their work and private life. *“During high season you have to prioritise work — that's it ”*. The only time of the year the couple take off work is during winter. *“[...] we just jump into our car with dogs and everything and drive away.”*

The family firm affects family life in different ways; however, it doesn't bother them. *“We have nothing to compare our life to; however, you get stronger as partners[...]”*. Even if the family firm demands hard work that limits the possibilities to take vacation, it is in some strange way a sort of security, which other people don't get. *“If you compare yourself to other people that have 5 weeks of paid vacation and can go anywhere, they don't understand that this is freedom to us.”* Freedom is being outdoors, in nature, and planning the administrative work as we please. *“If we wake up at 5 in the morning, I can do the administrative work and then be outdoors. It is another kind of freedom — to plan our time as we please.”*

What is most important for the couple is to be healthy and feel well, instead of having a stressful job and be tightly scheduled. The family has never been interested in chasing money or buying stuff such as the latest car or a fancy TV in every room — they are happy with one TV and one computer. *“We have food on the table; that's more important than stuff [...] it is an honour and privilege to live this life[...]. We live our dream.”*

Leya proudly showed us the vineyard and the surrounding land. She talked about the bees and how they (Leya and Martin) have put a flower meadow beside the vineyard so that the bees *“have something to collect”* and that they also built bee-houses. This was not something special for the grapevine; it's a way of “living along with nature”.

4.2 Case B – Frosarp’s vineyard

Andrew and Bella became interested in wine when they lived in England. They lived next door to a wine dealer who bought wine directly from producers. He told stories about how the wine was made and knew everything about those vineyards. The couple were interested and fascinated about the big difference between various vineyards. Their wine interest started in London. But then they moved home to Sweden, to a ranch, and started a new business. Their profession was personal efficiency in big companies.

As their ranch (Bella and Andrew’s) was big enough for viticulture, they thought it would be fun to try to grow wine themselves. The only problem was that their village was situated in a hinterland climate zone which sometimes causes frost in May after a warm period. So, after 3 years they realised that this is not working. As their interest in wine growing increased, they started to look for properties suitable for growing grapes.

In 2010, at 60 years old, they moved to a new farm. They ran their business until 2011 and sold it to one of their employees. And after that they decided to dedicate their time to wine. However, in the meantime, they took summer classes in Nordic viticulture, went on trips to Germany to learn more about vinification and got engaged at the Swedish wine association. Since then, they have tried to learn as much as possible; personal development is their driving force. At the age of 61 they retired. Nowadays they have a commercial vineyard, where they sell their wine and have wine tastings. However, they do not earn their living on it.

They have been working together for a very long time. As they have different competences and backgrounds, they have different skills, which make them a unique combination. *“Even if we sometimes have our conflicts, it works very well — we always have something to talk about.”* Compared to couples that have different jobs and occupations, they may have fewer problems.

Knowledge is the main thing for the couple. Due to the overload of knowledge you need to grasp viticulture, Andrew has focused on the winery, and Bella has concentrated on the vineyard. They usually discuss how to proceed but as Andrew is more into chemistry and Bella is interested in doing other things, it ended up that way. *“We always enjoy each other’s company and have a pleasant time together. There is always something to do. We also have a mutual interest in marketing.”*

The first and most important value that guides their firm is honesty with their customers. The couple tries to be available, and as they have a small-scale business, they are keen on highlighting just that.

“The family aspect of our firm is important in relation to our customer, and as we try to bring on a personal approach, it also generates friends.”

Since they have a lot of experience running businesses and handling the bookkeeping, it was easy for them starting up and name a new one. Bella has been working as a former bank manager; however, Andrew has become the one who does all the bank business and Bella has become more of a controller. The upside of running a business as a family is that they always develop and grow personally and become nerdy about it, so nerdy that all their holiday trips are at vineyards. However, the downside is that it can be seen as insular.

“The fascinating part about wine is that a lot of people are interested, feel the same way and want to know everything. However, since we are so into wine, it can just as well be our interest that guides the conversation when meeting new people.” The goal of running a family business is the journey in itself; the couple are going to continue as long as they can manage.

The couple grows special plants to assure regrowth; it is all about not poisoning the soil. *“Sustainability is about the wellness of the ground and soil.”* However, the bottles are an issue, too. They have now changed to glass corks. They are thinking that the next step could be PET bottles. They are minimising the use of resources and the imprint on the environment; for example, in the last 3 years, they have used an electric car for the delivery of their wine to Systembolaget (monopoly liquor shop) and the surrounding restaurants. They are also using solar cells to charge the winery, car and their house. Everything from the vineyard that they cut down goes into the compost and then they mulch it back into the soil. They have also switched from chemical fertiliser to manure, which they can get from their neighbour’s cows. *“Depending on the cow’s diet, some work and others don’t.”*

On the vineyard they have a pond where they let meadow-flowers grow. As the wine is self-pollinating, the aim is to contribute to the pollination of other plants and flowers and, as a result, support insects and animals. *“We love nature and our garden.”* Bella’s main interest is nature, animals and birds.

In Sweden grapes cannot be sprayed due to strict regulations; so, they have concentrated on disease resistant grapes. *“Our vineyard is completely clean and more than organic because we do not spray the grapes with copper as they do in Europe.”* Their wine is not certified due to the extra costs. The viticulture could be organic, biodynamic or “krav” certified. *“We could get certified to be an organic vineyard;*

however, if our neighbour sprayed their crop and some got on our grapes, the certification would be withdrawn for three years. Many vineyards' grapes were ruined because of that." Therefore, they made a list of hormones that can damage grapes and gave it to the surrounding farmers. Even though the neighbours are following all the rules and keeping a distance, some spray evaporates and spreads throughout the air, which means it can come down on crops from a distance. The only thing the couple can do is to plead to the farmers. *"However, as farmers risk penalty for damaged crops, the problem is increasing in Sweden due to the entrance of many small vineyards. As a result, the vineyards can pave the way for a poison free viticulture."*

"For years, you had no clue what the farmers were up to; however, now there are vineyards popping up, and by spreading their lists, knowledge is reaching farmers everywhere, and it has increased their interest in sustainable agriculture."

One problem for the couple is finding staff that can learn the handicraft of wine growing. At this moment, they are trying to get schools and institutions to help educate more people about viticulture. The branch of industry is growing, and they need more staff, both for the vineyard and the winery. They have discussed having a continuation course about viticulture with educational actors.

The couple is positive about the distribution of wine to Systembolaget in combination with cellar door sales, which at the moment are not allowed in Sweden. For example, if they have visitors on a Sunday from the northern part of Sweden and they would like to bring their favourite wine home, and the wine has sold out on Systembolaget, it would be idiotic not to have the opportunity to buy it from us. Now a proposition has been brought to the Swedish parliament to allow customers to buy 3-litres of wine when visiting a vineyard.

Their children are not interested in taking over the vineyard. One of their grandchildren tried working there; however, he decided to be a lawyer. *"Previously it was common that you started a vineyard when you retired; nowadays things have changed, and young people are starting with the aim of their children taking over."* "What they can see further is that investors are putting a lot of capital into the business and going big from start. To solve the issue with employees, they are hiring staff from China, America, France, Argentina and Australia. *"One problem with foreign workers is the challenge of getting them to stay longer than 2 years. To solve this problem, the vineyards have advertised for couples to come and work on Swedish vineyards."* The strategy went very well and they got more than 60 responses. One example is a Frenchman and his Swedish

wife who moved here, so, as a result, they may stay permanently. To sum up, there are two different kinds of vineyards in Sweden—the small ones and the big with a lot of invested capital. The latter are owners but not working on the vineyards themselves. *“There’s a nice atmosphere among vineyard owners; we are more colleagues than competitors, and we call each other and talk about different issues and things.”*

4.3 Case C – Alnarp’s vineyard

The couple, Anna (18 years) and Josef (23), met very young. Josef was running his own firm and Anna started working there during her studies. Anna did the bookkeeping and Josef worked in the store. The couple has always worked together. They work in different areas and talk a lot about the firm and what to do.

Anna went to university to become a teacher in biology and science, and Josef is a self-made builder and entrepreneur. *“I talked to my husband and said – I think I want to work with wine in some way.”* During her education to become a teacher Anna and her schoolmates visited a place called Alnarp in Scania. The place was so beautiful that when the couple were looking for a farm to buy, they focused on, and found one, in Alnarp. The farm was in bad shape and needed continuously renovation. *“Josef needs to be busy and work on new projects for the house otherwise he will be sad.”*

Every penny the couple made was re-invested into the house, a job that continued for 10 years. The investment of the house paid off so when the couple were about to start their vineyard, they could hypothecate the house to get funding for plants and equipment needed for wine production. At that time the couple were 28 and 33 years old. *“We had our full time jobs and everything we earned we reinvested into the house.”*

The wine growing started on a small scale from one hectare and has expanded to 30 hectare throughout the years and is increasing each year. The income from the vineyard is re-invested into the farm. They never had any investors; they wanted to build it on their own. They can now make a living and they quit their part-time jobs 4 years ago.

During wintertime they have one winemaker, one viticulturist and 4 people cutting the grapevine; they pay salary to about 10 employees in February. On the other hand, in July, they pay about 60 employees who work in the vineyard, restaurant, hotel and glamping. During off season the guests stay at the vineyard; however, in the summer, there are a lot of tourists that own summer houses, so they visit to drink, eat food and have guided tours. *“The wine is attracting people to come; however, it is the other businesses that makes it profitable.”* Now, at first, they made a living on the wine production, but without the

profit from the restaurant and hotel they could not expand. The couple takes a minimum salary and the rest is re-invested into the business. *“There are always holes to fill with money in a business.”*

Big vineyards often have investors that also have a say in each decision and a comment on return on investment. The couple wants to keep the business in the family. *“We don’t want to give anything away, we want to build.”*

It took 5 years to get the first harvest of grapes. In the beginning, the couple had no plans to run a restaurant and hotel. However, they are happy they changed their minds to avoid bankruptcy. The first few years the vineyard produced very little wine, almost nothing. Now the vineyard produces approximately 50,000-70,000 litres a year.

The wine is sold to Systembolaget (the authorised liquor shops), other restaurants and for consumption on the vineyard. As soon as the regulation of cellar door sales is released, the couple will start selling. The current government is working on a decision.

“It would make a huge difference for the vineyard, with opening hours during the whole year, and the guests could buy some wine to take home.”

The couple has 4 children. The eldest daughter is 21, and she manages the restaurant during summers. She is in charge of scheduling and she is really competent. The next child is their 19-year-old boy. He has started studying architecture at university, so he will end up doing all the design and calculations on up-and-coming building projects like his dad. He enjoys working in the restaurant during summer break; however, he is not a very social person, so he is a wedding-planner and is really competent. The youngest daughter is 17 and works in the restaurant during weekends; she and her boyfriend are servers. The youngest boy is 9, and he enjoys helping out by carrying things.

During off season the family takes vacations 3 to 4 times a year. Everybody in the family that wants to come, and their boyfriends are even welcome to join. *“There is much work if you stay at home, but when you travel it is another thing — it’s so cosy.”*

The vineyard ought to be as sustainable as possible. The couple cultivates to keep the soil as healthy as possible when the time comes for the kids to take over and avoid sprays. *“Sustainability is the biggest thing for us”,* and for the couple it means integrating it in every step and every development of their firm.

“Sustainability means not destroying anything on the land while harvesting grapes and keeping the quality of the soil as high or higher as when we started.” At the moment the couple is working on creating zero carbon dioxide. A lot of carbon is produced during the fermentation process, and if they can capture and compress the carbon, they would be

negative in carbon emission. It would then be possible to sell it to others that use carbon; however, their hope is that the sustainability evolution will make it possible to press it back down to the ground instead of letting it out into the atmosphere. They also brought up the discussion with Atlas Copco.

The couple is way ahead the movement on sustainability (which is one of those things that Josef is spending his nights thinking about), and when the movement has caught up — the couple can easily join.

Between the grapevine they grow plants rich in nitric, and their roots nourish the grapevine. They have also tried mini sheep, a type called Baby Doll. They are so small that they can walk under the grapevine and graze. As a result, the couple saves some diesel from the cutting machines; however, sheep also spread methane gas so the carbon footprint will not be that much lesser. *“Our vineyard can be seen as one of the most sustainable vineyards in the world.”* The couple doesn’t use any sort of spray and doesn’t need to as they grow grapes that are immune to diseases. They also have zero carbon imprint, don’t use chemical fertiliser, use light bottles, refuse to export their wine and use big plastic bottles (30 litres) for wine delivery to restaurants and bars. They don’t have any certifications as some of them are less sustainable than the vineyard already is. *“We are more than organic.”*

The only issue the couple experience is how they are going to sell their wine. The customers are visiting the vineyard and the couple would have been able to sell off the whole production to them, however cellar door sales are not allowed in Sweden. If changes in regulations are not coming any time soon the couple finds themselves forced to export their wine. *“It’s idiotic to export our wine to New Zealand, Japan or China and at the same time thinking about sustainability.”*

5 Discussion

This preliminary analysis of the narratives has allowed us to offer an initial answer to the research questions that motivate our study: (RQ1) How do first-generation family firm members in a nascent wine country make sense of sustainability practices and (RQ2) How do they integrate sustainability practices into their family firms?

Although the three vineyards are first-generation family firms in the same industry (Le-Breton Miller & Miller, 2016), during the same time, in the same district, heterogeneity (Daspit et al., 2021) between copreneurs became visible (Chua et al., 2012).

We identified two aggregate dimensions to describe these differences and similarities: foundations of sustainability and sustainability development.

The “foundations of sustainability” dimension refers to RQ1 and concerns how first-generation family firm members make sense of sustainability practices. This dimension includes three themes: values, well-being and living in nature, more than organic. They represent the main aspects that emerged from the narratives to explain the meaning, in terms of sense and signification of implementing sustainability practices, to the interviewees.

Being sustainable means, first of all, giving substance to specific values (Schwartz et al., 2012) that are particularly clear in the narratives: the willingness to preserve the natural environment, the freedom to cultivate one’s own ideas and abilities and the freedom to determine one’s own actions. These shared values represent an element that in each family firm ties the couple together in doing business. This is consistent with prior research that pointed out that a family shares common values as key factor in tying the family together and acting like cultural drivers (Gómez-Mejía et al., 2011).

Furthermore, sustainability means well-being and living in close contact with nature, in tune with it. We decided to put these two aspects together because they are closely linked, as for the interviewees their well-being is strongly related to “living along with nature”. Although working in a vineyard is demanding with a heavy workload during high seasons, the opportunity to be outdoors in nature is worth the while. The couples often mention well-being and wellness, which includes everything that has to do with the environment (land, soil, plants and animals) and all people involved in their business chain. Consistent with the values underlying sustainability, the latter is not limited to respect for the environment but becomes a lifestyle. Sustainability means personal freedom, respect for oneself, one’s own rhythms, one’s own times and also doing without having interest in luxury living in order to invest in the realisation of one’s dreams. These concepts go beyond the classical work-life balance because it is not only about reaching an equilibrium between life and work but also finding harmony with values and deep well-being in what one does. It is a kind of “personal sustainability”.

Finally, sustainability means going beyond the concept of organic in wine making and the strict Swedish regulations on toxic for viticulture. “More than organic” are the words interviewees often used to describe what adopting sustainable practices in wine production means to them and their business. All three vineyards work eagerly with a state of mind of a non-toxic environment. For them, being sustainable means adopting a

series of measures, behaviours and practices that affect the entire supply chain in order to create a product that is not “only organic” but also deeply respectful of the environment.

The sustainability development dimension refers to RQ2 and concerns how first-generation family firm members integrate sustainability practices into their family firms. This dimension includes two themes: experiencing sustainability and spreading sustainability.

Experiencing sustainability refers to all practices specifically adopted by couples in all business processes. It implies paying attention to the entire supply chain and integrating sustainability practices from the start (Mirshnychenko & De Massis, 2022) by controlling environmental impact (Aivazidou & Tsolakis, 2020) in the wine-making phase (Ahmad et al., 2020) and packaging (Ferrara et al., 2020). They are all keeping their vineyards completely clean by not using toxic spray, using plants rich in nitric between the grapevine to assure regrowth, not using chemical fertiliser and refusing organic certification as it allows, within certain limits, spraying which none of them use today. Moreover, in one case, they also use light, big plastic bottles to transport wine to restaurants and try in any way to cut down the carbon footprint (D’Ammaro et al., 2021). Finally, concerning selling wine, some copreneurs feel that they have to choose between export and sustainability. This is especially interesting for vineyards that produce bigger amounts of wine than they can sell to restaurants and visitors on the vineyard. Due to the strict Swedish regulation and alcohol monopoly, cellar door sales are not allowed. Despite this, some copreneurs prefer avoiding wine exports because not only is it very complex and expensive, but above all they believe that transporting wine around the world is not sustainable from an environmental pollution point of view.

Spreading sustainability concerns all practices adopted by the respondents to promote sustainability practices outside their family business and cooperate with others to develop new sustainability practices. This can be considered in line with Clauß et al.’s (2022) question regarding the extent to which family firms contribute to sustainable innovation. To this regard, Frosarp spreads information about hormones, which has created an interest among farmers, and, as a result, they have started paving the way for poison free viticulture and agriculture. Along that line, Alnarp has contacted industries and discussed ideas on inventions for capsuling and compressing carbon, which can be seen as interactive innovation (Muñoz-Rojas, et al. 2022).

6. Conclusions, implications and limitations

Despite heterogeneity in running their family businesses, these couples have something in common: doing something beautiful for themselves, nature and for coming generations. Their love for nature pushes them in directions for a sustainable viticulture that also have a spillover effect on agriculture. Their work and interest are bringing something new to the Swedish landscape and also awareness of how to treat mother earth. Not only are they forerunners for health, honesty and sustainability but they also bring something fine to the table — wine.

Theoretically, this paper contributes to the wine sector research about the meaning of sustainability (Flores, 2018; Maesano et al., 2022), the drivers for sustainability work (Flores, 2018) and startup wineries in the cool climate wine sector. Furthermore, it adds to family business research about sustainability practices in first-generation family firms (Sharma, Sharma & Steiner, 2021) and copreneurial ventures (Sentuti et al., 2019) and to understanding heterogeneity among families and family specific differences in family firms (Chua et al., 2012; Daspit et al., 2021).

In practice, this paper contributes to how viticulture in Sweden can accelerate sustainability practices in other branches in agri-business.

As the study moves forward to gather more narratives and deepen the analysis, this paper should be considered a first step in the research. Limitations are related to the small number of cases analysed and the need to reach theoretical saturation (Eisenhardt, 1989) and deepen the analysis before results can be considered as definitive.

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How is circular entrepreneurship created? Insights from a study on Italian entrepreneurs

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Abstract

Circular economy (CE) can be considered as a new approach for the production and consumption of goods, through the pursuit of social and environmental values, as well as the achievement of economic profit. Although studies on CE are increasing in number, the debate on circular entrepreneurship does not seem to be sufficiently exploited, as well as studies on the profile of the promoters of innovative and circular ideas and on the intra-organizational collaboration among founders. Therefore, the present paper intends to contribute to reducing this gap through a literature review on the theoretical strands of sustainable and circular entrepreneurship and through an empirical study based on 234 Italian circular organizations, and carried on through a qualitative approach adopting the content analysis method.

The results highlight the presence of complementary skills in the ownership structure of circular companies, with a prevalence of scientific skills. Indeed, it emerges that the contamination and collaborative learning, that favours innovative initiatives, is based on a continuous exchange of knowledge and technical skills and is favoured by a considerable differentiation of academic and job knowledge.

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Finally, the present study provides future research trajectories and implications that will be further deepened through an empirical analysis that involves professionals and key informants.

Keywords – Circular economy, sustainable entrepreneurship, circular entrepreneurship, Italian circular companies, skills, knowledge

Paper type – Academic Research Paper

1 Introduction

In recent years, the attention to sustainability issues is constantly growing, as it is the pillar of the current global framework of the Agenda 2030 for sustainable development (United Nations and General Assembly, 2015). According to sustainability definitions, achieve the sustainable development means to integrate economic, social and environmental goals, through innovation, ensuring the satisfaction of the primary needs for present and future generations (WCED, 1987). Within the sustainability paradigm, an essential role is played by the circular economy approach (Murray et al., 2017; Geissdoerfer et al., 2017). The circular economy is an economic model that is clearly in contrast with the current linear economy, now considered ineffective in facing problems such as climate change and pollution, driven by an irrational usage of resources and a strong negative impact on the natural environment in terms of environmental damages and waste inefficient management. In fact, CE can be considered a new approach to the production and consumption of goods, through the pursuit of social and environmental values, as well as the achievement of economic profit. It relies on closing loops (Yong, 2007) through material recycling and reuse practices, to achieve a greater efficiency in resource management (Klettner et al., 2014), and in the production, distribution, and consumption processes (Manea et al., 2014). One of the main objectives of CE is to transform waste into new resources, keeping products and materials at the maximum level of utility and value over time (EC, 2015; Bocken et al., 2016), as well as reducing waste production.

In this approach a key role is played by entrepreneurs that can take the opportunity offered by the CE (Geissdoerfer et al., 2017). According to Schumpeter (1934), “entrepreneur’s main function is to allocate existing resources to new uses and new combinations” since “innovations are essential to explaining economic growth, and the entrepreneur is the central innovator (...) that does not retreat from engaging in risky

business ventures (...) His disposition to face risks makes him an entrepreneur” (Śledzik, 2013, p. 91). Hence, the context where the entrepreneur operate has a crucial value, since very often entrepreneurs are inspired by it to identify new opportunities and, in line with the sustainable approach, identify practices to employ natural resources efficiently and with a low level of wastage (Dean and McMullen, 2007).

Although these issues are spreading rapidly, the debate on circular entrepreneurship does not seem to be sufficiently exploited. Therefore, the present paper intends to contribute to reducing this gap through a literature review on the theoretical strands of sustainable and circular entrepreneurship and then through an empirical study based on 234 Italian circular enterprises.

In particular, the paper aims to study the sustainable businesses or, more properly, circular businesses, analysing the profile of the promoters of innovative and circular ideas and focusing on the combination, integration, and contamination of their skills and on the intra-organizational collaboration. Intra-organizational collaboration (Huxham, 1993) appears to be an interesting research perspective but still scarcely investigated, in contrast to the external relations entertained by the enterprises (Pinelli et al., 2021), that is widely investigated in the literature.

Thus, the core of this work is to understand entrepreneurship in the circular economy in order to identify the characteristics and skills the sustainable entrepreneur should have. In line with this, the work considers the following research question (RQ): *Who are the promoters of circular enterprises?*

The paper is organized as follows. In section 2 we present the literature review on sustainable and circular entrepreneurship, on the perspective of collaborative learning and on the importance of sharing knowledge; in section 3 we describe the research process; in section 4 we present the results; in section 5 we provide the implications of the study and the conclusions.

2 Literature review

2.1 Circular business and entrepreneurship

The circular economy is an approach based on the so-called closed-loop production systems (Ellen MacArthur Foundation, 2012; Murray et al., 2017), through the adoption for innovative solutions that can partially repair the environmental damages due to the linear production systems, and improve resource efficiency (Maglio et al., 2021).

Enterprises adopting a sustainability vision play an active role in the circular economy, as they can generate concrete responses to many social and environmental concerns (Hall et al., 2010; Geissdoerfer et al., 2018) by embracing the "triple bottom line" approach (Henry et al., 2019). Indeed, in line with the SDGs of the 2030 Agenda (Preston and Lehne, 2017), they are responsible for implementing innovative strategies to reduce and properly manage waste, reutilising materials and products, and to educate consumers to a responsible consumption behavior and the use of ecological products (Veleva and Bodkin, 2018).

Circular entrepreneurship is based on the circularity of ideas, knowledge and skills, the aim of which is to create innovation through the design of goods and services needed by people, promoting the incorporation of recyclable materials and minimising waste production (Zucchella and Urban, 2019).

The debate on the circular businesses has analysed various issues concerning the creation of these companies. Some scholars have underlined the key role played by collaborations and the importance to adopt a responsible approach in using and managing resources (Aaboen et al., 2017, Pagano et al., 2018). Others have underlined the importance of social ties in the development of the innovative idea, which play a significant role in facilitating the culture of circular economy (Dantas et al., 2022).

Very often, entrepreneur's specific skills and competences, dictated by previous studies and experience in certain fields, are needed to enable them to undertake a successful circular initiative (Dantas et al., 2022). The debate also underlines the importance of the complementarity of knowledge and skills of all the individuals within the enterprise for the creation of new circular enterprises (Dodd et al., 2021), since it favours the promotion of a flexible mentality, readiness for change, the implementation of innovative solutions to take new opportunities (Trokić, 2016; Bailey et al., 2020; Triguero et al., 2022).

With special reference to the sustainable entrepreneur, the debate underlines some characteristics and motivations that characterize him/her, such as a strong sense of environmental and social responsibility, strong links between environmental protection, human dignity and market success, strong personal ambition and commitment, ability to share knowledge, a spirit of adventure and innovation (Schaltegger and Wagner, 2011; Welter et al., 2017; Sawe et al., 2021). The combination of these characteristics can favour the generation of innovative products and services, also aiming at reducing the environmental impacts and increase people quality of life (Schaltegger and Wagner,

2011), in line with the definition provided by Masurel (2007), that describes the sustainable entrepreneur as an individual focused on people, planet and profit (Zamfir et al., 2017).

These characteristics can also be attributed to the so-called “circular entrepreneur” (Henry et al., 2021). Indeed, the debate associate the circular entrepreneur to other forms of sustainable entrepreneurship, such as: “organic entrepreneurship”, focused on health and well-being; “green entrepreneurship”, mainly focused on the climate issues and ecosystems; and “blue entrepreneurship” focused on clean water and marine life (Crecente et al., 2021; Suchek et al., 2022). The above-mentioned approaches have some common elements with the CE, in fact, according to them, "the components and materials keep their value and are recycled, remanufactured or reabsorbed by the natural environment" (Inigo and Block, 2019, p. 283).

Anyway, some scholars provided a distinction between the circular entrepreneur and the social entrepreneur, defining the latter as an individual who seeks opportunities to increase social wealth, through the creation of new businesses or the innovative management of existing organizations, in order to promote the reinvestment of positive outcomes in respective communities, groups and stakeholders (Zahra et al., 2009; Phillips et al., 2015).

Alongside the studies that reveal the characteristics of the entrepreneur, others studies underline the driving force of the entrepreneurial fabric for economic development at local, regional and national levels (Ferreira et al., 2017; Iacobucci and Perugini, 2021; Suchek et al., 2021), as well as the importance of the circular businesses as they play a multiplier role for the implementation and diffusion of circular business models (De Chiara, 2020).

2.2 Collaborative learning perspective in circular enterprises

According to the academic debate, the complementarity of individuals' knowledge and skills is necessary to implement circular economy initiatives (Dodd et al., 2021). Starting from this need, the perspective of collaborative learning is fundamental (Van Hoof and Thiell, 2014), as it explains the advantages of the complementarity of knowledge. People with different backgrounds, skills and knowledge influence each other in a positive way, giving a strong boost to the company's innovative processes. The existence and combination of a various forms of knowledge and skills within a company generates a

positive effect on absorptive capacity (Van Hoof and Thiell, 2014) and on the firm's ability to create value and generate innovation.

The concept of absorptive capacity has been extensively investigated; for example, Zahra and George (2002) defined it as a set of routines and organizational processes through which companies acquire, assimilate, transform, and exploit knowledge to produce organizational capacity dynamics (Zahra and George, 2002).

Austin (2010) stated that the higher is the level of collaboration and the transfer of tangible and intangible resources within the company, the greater is the innovative value of its final product and service (Austin, 2010); other scholars highlighted the various benefits that derive directly from the exchange of know-how between different individuals who, through the establishment of forms of collaboration within the organizational model, integrate their knowledge, favouring the processes of aggregation and improving the competitiveness of the company (Cao and Zhang, 2011; Alguezaui and Filieri, 2014).

The debate also highlighted the opportunities deriving from the contribution of diversified knowledge, considered the result of the collaboration among different profiles and backgrounds (Martínez-Pérez and García-Villaverde, 2019), and underlined that a wide variety of knowledge, experiences and skills can fuel and promote the development of knowledge in other fields (Fantoni et al., 2006), improving the exploitation of internal knowledge (Quintana-Garcia and Benavides-Velasco, 2004) and making companies more competitive (Marcelino-Jésus et al., 2020).

Regarding sustainable companies, given the strong innovative profile that characterize them, it has been argued that internal collaboration and the integration of knowledge and skills positively influence the creation of innovative processes (Schaltegger and Wagner, 2011). Clarke and Roome (1999) underlined the impact of the interaction between the actors directly interested in the activities on sustainability practices. In this regard, a particularly interesting contribution can be found in the study by De los Rios and Charnley (2017), who identified a set of skills useful for defining sustainable production strategies. Similarly, Charnley et al. (2011) highlighted that the transversality of skills and knowledge is crucial in the development of circular economy practices. To sum up, the generation of new or innovative ideas can be considered the lifeblood for firms, even more for those that, like circular companies, base their core business on the proposal of innovative products or services. Therefore, in these companies, the study of mixed competences appears to be important, since the fundamental element within these

companies appears to be the human capital, made up of different professional profiles, experiences, cultures and values. This diversity in the ownership structure should be considered as a specific area of research as it can explain the birth and success of circular companies.

3 Methodology

The empirical analysis was carried on through a qualitative approach and adopting the content analysis method (Krippendorff, 2012), namely a method based on the analysis of reliable documents to detect the most relevant topics with the use of a software to ensure the objectivity of the study.

The sample analysed is represented by 234 circular organizations located in Italy; data related to the organisations have been collected over the period between January and November 2022.

To collect secondary data, we considered the information provided by the companies through the Italian Atlas of the Circular Economy platform, a continuously updated digital platform that collects and reports on companies, associations and research organisations and promotes circular economy and sustainable practices. In addition, we considered the organisations official websites.

The analysis was performed through the software NVivo (Krippendorff, 2012), that is one of the most adopted tools when performing this kind of investigation (Harwood and Garry, 2003; Houghton et al., 2015). Due to the characteristics of the software, we selected documents in one language (Italian) and with a similar length, to guarantee the reliability of the analysis and avoid any bias. We collected and classified the information detected through a set of variables concerning: i) the description of the ownership structure; ii) the professional profiles of the partners promoting. Figure 1 illustrates the survey elements.

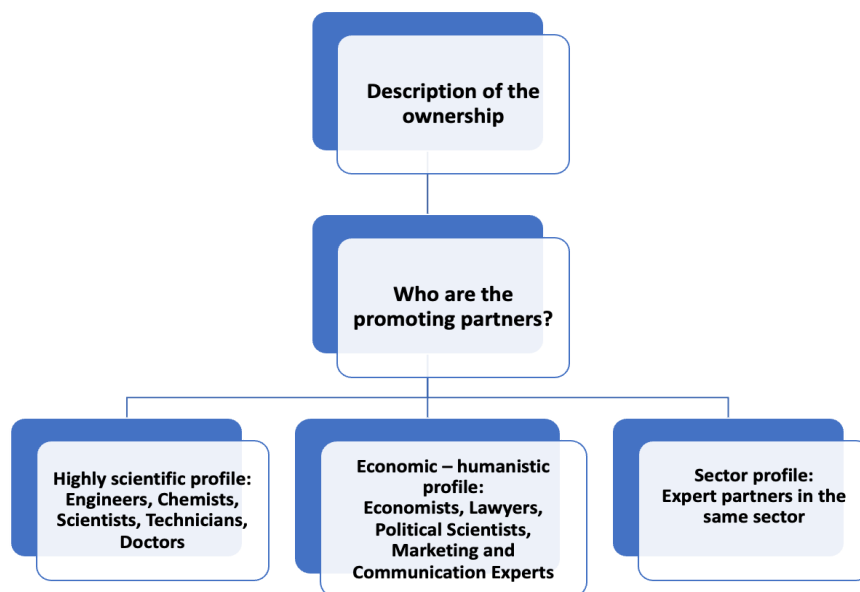


Figure 1: Structure survey elements

4 Results

The first phase of analysis shows that the companies we investigated give a considerable importance to the description of their ownership structure. In fact, 80% of the circular companies clearly describe the composition of the ownership team (figure 2). More in detail, it emerges that members of the ownership team possess predominantly mixed skills (42%), since belonging to different branches of knowledge (figure 3). The combinations of knowledge and skills refer to the set of all three different types of academic and job backgrounds previously described. However, it should be noted that, within the "mixed skills" in most cases there is a strong predominance of the so-called hard skills, namely scientific skills, often mixed with sectorial competences. Furthermore, significant results are detected with reference to individuals with specific sectorial competences (38%), i.e. individuals from the same sector, who, by pooling their specific skills, are able to develop circular ideas. On the other hand, 17% of the companies examined have only founding partners with highly scientific skills, such as engineers, chemists, biologists, biotechnologists, etc. Finally, a very low percentage is registered for economic and humanistic skills, namely economists, jurists, sociologists, marketing and communication experts, etc...

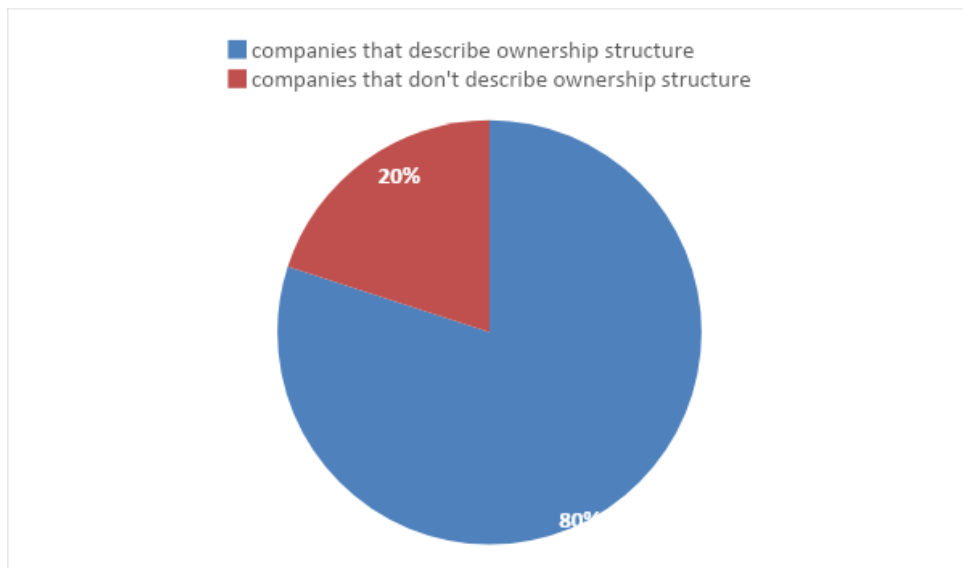


Figure 2 Description of the ownership

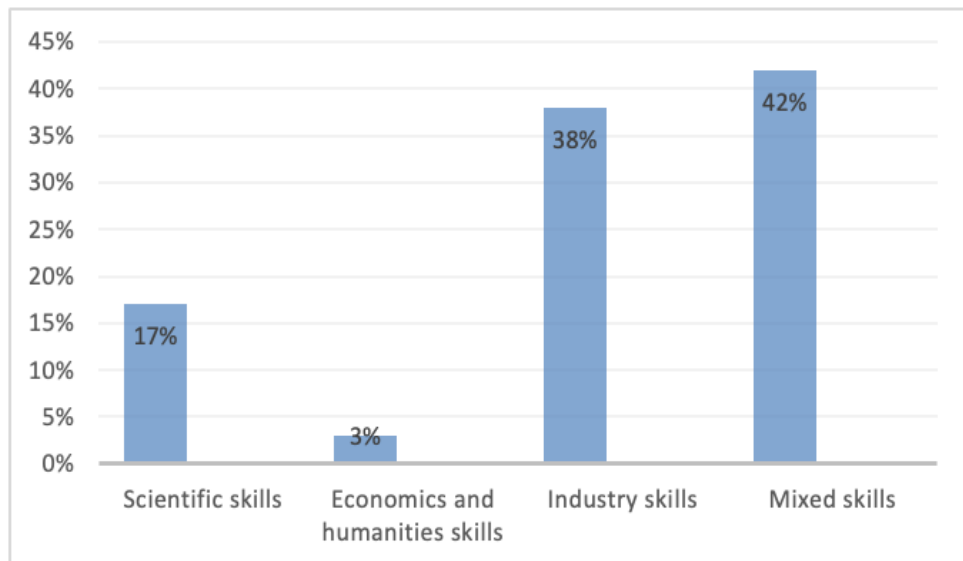


Figure 3 Profile of promoters of circular ideas

As concerns the composition of ownership structure, the results of the content analysis show that the combination of competences and multidisciplinary visions is important for circular organizations. Indeed, to point up this phenomenon, in the table below we list

some quotes related to the relevance given to the combination of different academic and job backgrounds (table 1).

Table 1: The importance of mixed skills in circular companies

Name of circular company	Sentences
Alisea	<i>To transform ideas into commercial successes, it is necessary to create a network of actors with different knowledge and to open up to a new way of working based on sharing, in order to regain competitiveness on a global market.</i>
Circularity	<i>Circularity, thanks to its team of expert professionals on sustainability and materials engineering and to its network of qualified partners, is able to accompany companies along the path of integrating the circular economy within their business model.</i>
Krill design	<i>Innovative startup born from the desire of a group of sustainability, technology and design enthusiasts to do something that would have a concrete impact on (business) models that are not compatible with sustainable development.</i>
RiMaflow	<i>The interaction between artisanal and industrial activities and rural activities, with the aim of overcoming the division between city and countryside and between producer and consumer across the board.</i>
Mediterranea	<i>Mediterranea is born at the beginning of 2018 thanks to the synergy between the Vincentian Family, the Medihospes Social Cooperative, the non-profit association Linaria and Margherita Grasselli.</i>
The Circle	<i>Team of expert professionals on highly scientific, economic and social issues.</i>

Isa	<p><i>It was born with the support of the PIN regional tender, from the dream of a group of women who put together their values, experiences and resources to establish themselves as a female artisan company founded on: innovation, reuse, creativity and relationship.</i></p> <p><i>The strength of ISA is in the contamination of creativity, techniques and materials: it combines different skills and materials, traditional and innovative craftsmanship.</i></p>
Orange Fiber	<p><i>Italian company made up of two women with two very different curricula, one specialized in textiles, especially textiles with innovative materials, and the other a graduate in International Cooperation for Development and in Communication.</i></p>
R.ED.EL. Srl	<p><i>Since 2014, the company has had a Research & Development department with an organization chart of experts, with the aim of developing new solutions for improving company efficiency and launching activities in the circular economy sector.</i></p>
ScartOff	<p><i>Designers, marketers and creatives have combined their experiences and values to create this project.</i></p>
Progeva	<p><i>Progeva, the very name of the company contains the common thread that has linked together research, passion and the ability to do business, under the common aegis of an essential prerequisite: to love one's land and want to preserve it, re-educate the prevention and treatment of nature.</i></p>

5 Discussion, implications and conclusions

The paper addresses an emerging issue, delving into the topic of circular entrepreneurship focusing on the characteristics of the ownership team of a CE company.

In particular, the focal point is represented by the circular entrepreneur, and the knowledge possessed by the owners of a circular company, as well as the intra-organizational exchanges among founders.

The results highlight the presence of complementary skills in the ownership structure of circular companies, with a prevalence of scientific skills. Indeed, contamination and collaborative learning is based on a continuous exchange of knowledge and technical skills and is favoured by a considerable differentiation of academic and job knowledge.

The benefits related to the integration and combination of skills and abilities emerge both in the literature and in empirical evidence, an aspect that, in general, characterizes companies with a strong propensity for innovation, but which is also evident in circular companies. This confirms that circular entrepreneurship is the result of processes of connection of experts in different fields, where new ideas are fuelled by the exchange and contamination of the different skills of the founders (Van Hoof and Thiell, 2014). Besides, the combination of different competences and knowledge not only allows the creation of innovative initiatives, but also favours the dissemination of knowledge and awareness of the importance of adopting a responsible and sustainable approach, expanding the social role of companies.

In addition, combining different perspectives and knowledge, owners manage to innovate facing social and environmental challenges, by embracing the principles of sustainable development. Indeed, the social role of circular companies can also be detected in the fact that, as listed in some official reports and sector studies (Eldar, 2017; Bauwens et al., 2020), there are many non-profit or hybrid companies that embrace the circular approach. An important element is represented by the role played by non-profit organizations and, in particular, by the relationships they are able to create and maintain with other economic actors in the context of CE, implementing models of convergence between profit and non-profit. However, studies on this aspect are still scarce - and most of them are focused on the second-hand markets (Valor et al., 2022; Persson and Hinton, 2023), this highlights the importance of further investigating this aspect. Indeed, this perspective appears to be an interesting context of investigation with reference to CE, in contrast to the inter-collaborative approach widely investigated in literature.

Another interesting research trajectory that emerges concerns to the ability of circular companies to transfer individual knowledge at the organizational level. In fact, in the theoretical debate, multidisciplinary is considered as fundamental for the passage from individual knowledge to the assimilation, transformation, and exploitation of knowledge

at the organizational level (Sun and Anderson 2008). This aspect should be deepened in the future also for the important managerial implications deriving from it.

Alongside the theoretical implications highlighted, the study provides policy implications, considering the important role that institutions have in directing the transition towards the circular economy (Ellen MacArthur Foundation, 2015). For example, in Italy, the recent institutionalization of the Minister of the Ecological Transition bodes well for the planning of specific policies for supporting the reconversion of production and consumption models. The commitment of the policymakers must be aimed primarily at supporting the training of human capital with scientific-technological skills, in line with what emerged from the present study, namely that many entrepreneurs have an educational background in STEM disciplines (science, technology, engineering and mathematics). Investing in education appears to be an essential condition for supporting the development of industrial processes based on innovation, such as circular economy models, but at the same time it represents an important premise for helping to improve the quality of life of people, reducing the environmental impact of the industrial activities, as well as intervening on inclusion and social cohesion.

Institutions must be prepared to support new entrepreneurs but also SMEs, to make them able to face this challenge and take part to this process. It is believed that initiatives to develop digital solutions that enable internal and external collaboration for innovation are important. Spreading knowledge on digital platforms that make it possible to support, accelerate and orchestrate the entire innovation process of companies, from the generation of new ideas to their launch on the market, and to support open innovation processes, are initiatives that represent an important challenge since the circular economic can provide new employment opportunities and favour community wellbeing, ensuring the improvement of the economic, environmental, and social performance.

In conclusion, the main limitation of the study is due to the adoption of secondary data to perform the analysis. This allow us to a partial investigation that does not include some intangible aspects that are scarcely investigated in literature and that need to be furthered. In line with the above, our main contribution is to provide research trajectories, mainly related to the role of policymakers and the role of the owners and founders in terms of implementing innovative initiatives and adopting a CE approach.

The present study will be further exploited through on-field research following the grounded theory (GT) approach, thanks to the involvement of entrepreneurs,

professionals and key informants, with the main aim to observe intangible factors affecting knowledge exchanges and intra-organizational collaboration and their consequences.

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How does communication in SMEs change in the digital era? Some insights from the entrepreneurial perspective

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Abstract

The aim of the paper is to present an empirical study that examines digital communication in small and medium-sized enterprises (SMEs) from the entrepreneurial perspective. The academic literature is mainly focused on digital transformation in large companies and more research on communication in SMEs is required. An exploratory study was carried out in 205 Italian manufacturing SMEs, using the questionnaire method to fill this gap. Data analysis was conducted with descriptive statistics. The preliminary results show that SMEs still do not exploit the benefits offered by digital communication as the adoption of digital communication tools and the level of marketing and communication skills are still very low although some little gaps by company size (small and medium) and type (B2C and B2B) emerge. The value of our paper can be traced to the broad perspective adopted to investigate digital communication, including the analysis of the digital communication mix, social media areas and scopes, and digital skills in SMEs, by company size and type.

Keywords – Digitalization, Communication skills, Entrepreneurship, SMEs

Paper type – Academic Research Paper

1 Introduction

The digital revolution has radically changed marketing and communication activity (Bala and Verma, 2018; Kolter et al., 2021). New services, touchpoints, and communication instruments through which customers interact are increasing and new digital marketing skills and professionals have grown exponentially (Pagani and Parco, 2017; Cham et al., 2022). Within this context, SMEs struggle to invest in digital marketing and communication because of structural and cultural limits (Dethine et al., 2020).

The entrepreneurship literature has mostly analyzed the obstacles and facilitating factors to the digitalization of SMEs (Kergroach, 2020). Empirical research on digital transformation is more extensively focused on large companies and further research on SMEs is required (Raimo et al., 2021).

While large companies are fully seizing the opportunities and challenges of digitalization, SMEs lack managerial vision and resources to fully understand the impact of digitalization and start adopting it properly (Moeuf et al., 2018). Although the recent pandemic crisis and geopolitical upheavals (Pencarelli et al., 2020) have forced companies to use digital tools, SMEs risk not being able to take advantage of all the potentialities of going digital compared to larger enterprises also because they are often still poorly connected to high-speed broadband internet and have a lesser chance of fully exploiting cloud computing for data archiving and processing (Pencarelli, 2022).

The impact of the digital revolution on the communication strategy of SMEs has received little attention, and the academic investigation on the digitalization of marketing activities refers mainly to large companies (Caliskan et al., 2021; Rosario and Dias, 2022). However, as SMEs contribute heavily to the world economy and consumers are spending increasing time online, it is important to understand better how SMEs approach and use digital marketing and communication.

The aim of this research is to contribute to filling this gap, by describing how communication is changing in SMEs. In particular, this paper aims to answer to the following research questions: *(RQ1) Which digital communication mix do SMEs adopt? (RQ2) What digital skills are required to improve marketing communication?*

Specifically, we investigated the digital communication mix with a focus on social media and the digital communication skills adopted and needed by SMEs, trying to understand the existence of any differences between company size (small and medium) and types (B2B and B2C). It is our aim, therefore, to expand the research on the current

and required adoption of digital communication tools and skills, in order to understand the actual and required approach to digital communication and marketing strategy.

To answer the research questions a survey on manufacturing SMEs of the Italian Marche region was carried out. Italy is a country characterized by a very high presence of SMEs and Internet and social media users. Data analysis is in progress and we present the preliminary results of descriptive statistics.

The paper is structured as follows: the first section reports the theoretical background on digital marketing and communication strategy and skills, with reference to SMEs. The methodology is stated in the third section. Then, the analysis of the results is presented. The last part discusses the findings and presents the conclusions, highlighting the theoretical contribution of the study, managerial implications, and future research directions.

2 Theoretical background

2.1. Digital communication and social media

Marketing literature has investigated digital marketing from different perspectives: themes and trends in the sector (Rosario et al., 2021), the impact of Industry 4.0 (Sunday and Vera, 2018), of artificial intelligence, augmented reality, IoT, and robotics on marketing practices (Kotler et al., 2021).

Further studies have investigated specific aspects, including the impacts of digitalization on marketing mix theory (Caliskan et al., 2021), the relationship between supply chain management and marketing integration (Ardito et al., 2019), and the transformation of the organizational aspects of the marketing function (Vassileva, 2017).

According to Chaffey and Ellis-Chadwick (2019, p. 10), digital marketing may be defined as follows: “Achieving marketing objectives through applying digital media, data, and technology”. In a similar vein, Bala and Verma (2018, p. 323) proposed the following definition: “Digital marketing is the use of technologies to help marketing activities in order to improve customer knowledge by matching their needs”.

All marketing activities (Sunday and Vera, 2018); Kotler et al., 2021) from informative ones (e.g., analysis of customers and competitors) to strategic ones (market segmentation and brand positioning), as well as marketing tools (Caliskan et al., 2021) have been impacted by digitalization.

Among marketing policies, communication has been strongly impacted by digitalization (Cham et al., 2021; Kotler et al., 2021; Rosário and Dias, 2022).

In the digital context, communication can be managed more effectively as messages can be created for very specific targets and there are numerous new digital communication instruments to relate with consumers (Kotler et al., 2021). Artificial intelligence (AI), machine learning, augmented reality, IoT, and robotics strongly affect communication. These technologies allow market-driven approaches that involve the acquisition of accurate and timely information on customers, markets, and products (Rosário and Dias, 2022). Then, big data analysis with AI and machine learning (Ardito *et al.*, 2019a) allows to manage segmentation and targeting activities more effectively, discover patterns, and gives insightful inputs based on customer needs and expectations (Kagermann, 2015). All company types (B2B and B2C) can quickly understand customers' needs, predict their behaviors and respond to their desires (Ardito et al., 2019).

Contemporary internet-based communication allows consumers to connect instantly with businesses, share feedback and opinions on a product or brand and be directly involved in developing marketing strategies (Cham et al., 2021; Rosario et al., 2022).

Marketers can use many online communication instruments to offer users a total digital experience, such as websites, mobile apps, communication techniques, including search engine marketing, online public relations, online partnerships (e.g., affiliate marketing and co-marketing), online display advertising, email marketing (Cham et al., 2022; Rosario et al., 2022) and social media marketing (Tuten and Solomon, 2018). Hence, digital communication contributes to develop a strong customer relationship and brand image (Chaffey and Ellis-Chadwick, 2019).

Within marketing automation, content automation is considered one of the marketing activities with the greatest commercial impact (Bala and Verma, 2018). In fact, it is possible to personalize communication for each customer and develop promotional activities for them (Başyazicioğlu and Karamustafa, 2018). Through marketing data analysis tools (e.g., Google Analytics), marketers can optimize marketing campaigns and reduce the costs of promotional activities (Cham et al., 2022).

Social media (social network, podcast, forum., wiki, virtual words, blog, etc) are part of the more general digital marketing communication tool which include web site, corporate blog, search engine, e-mail, mobile (Tuten and Solomon, 2018). Social media deserves a specific focus as time spent by consumers on these platforms is constantly increasing. In 2022, Internet users were 64.4 % of world population (+1.9% on 2021),

unique mobile users were 68.0% (+3.2% on 2021) and active social media users were 59.4% (+ 3.0% on 2021).

The marketing literature has provided different definitions and classifications of social media and definitions of social media marketing. For example, Kaplan and Helein (2019) consider social media as platforms on which people build networks and share information and/or sentiments. Tuten and Solomon (2018) affirm that social media are “the online means of communication, conveyance, collaboration, and cultivation among interconnected and interdependent networks of people, communities, and organizations enhanced by technological capabilities and mobility”. Similarly, Peters et al. (2013, p. 281) focussed on their distinctive nature of being “dynamic, interconnected, egalitarian, and interactive organisms” social media have generated three fundamental changes in the market (Li et al., 2020): 1) social media enable firms and customers to connect in ways that were not possible in the past; 2) social media have transformed the way firms and customers interact and influence each other. Social interaction involves “actions” (e.g. word of mouth); 3) they allow companies to better manage customer relationships and enhance decision making in business.

Social media can be grouped in four areas (Tuten and Solomon, 2018): social community, social publishing, social entertainment, and social commerce. Further, they can be used to different objectives by firms (Li et al., 2020): promote and sell, connect and collaborate, listen and learn, empower and engage. The Authors define social media marketing strategy (SMMS) as “an organization’s integrated pattern of activities that, based on a careful assessment of customers’ motivations for brand-related social media use and the undertaking of deliberate engagement initiatives, transform social media connectedness (networks) and interactions (influences) into valuable strategic means to achieve desirable marketing outcomes”. Therefore, SMMSs may differ depending on the firm’s strategic objectives, social media engagement initiatives, and consumers motivations and behaviours (Venkatesan, 2017), as well as the different degrees of interactivity and interconnectedness in yielding sound marketing outcomes (Harmeling et al., 2017). Further, firm benefit from such customer engagement in both tangible (e.g., higher revenues, market share, profits) and intangible (e.g., feedbacks or new ideas that help to product/service development) ways (Pansari and Kumar, 2017).

Among new technologies, social media are particularly interesting to investigate since they can be more easily adopted by smaller firms, even those located in lagging areas (Aronica et al., 2021). According to the Authors, their usage could even stimulate

economic convergence, or at least mitigate divergence, between core business and lagging regions.

Recent literature shows that social media can play a strategic role also in B2B contexts (Lamberton and Stephen, 2016; Bocconcelli et al., 2017) and that sales people increasingly use social media in their work (Itani et al., 2017; Lacoste, 2016). For example, Fraccastoro et al. (2020) investigated the importance of the integrated use of social media digital, and traditional communication tools in the B2B sales process of international SMEs stressing that digital communication tools seem to be most prevalent in the persuasion phase, whereas more traditional communication tools still prevail in customer relationship management.

2.2 Studies on digital communication and skills of Italian SMEs

To investigate digital communication and social media, qualitative analyses and pilot studies have been adopted, while a lack of quantitative studies is observed (Aronica et al., 2021). Further, most of the studies on digital communication tools and social media refer to large companies.

A study on a sample of Italian SMEs (Cesaroni and Consoli, 2015) shows that, although social media are quite common among small businesses. they are not always able to use these tools in a truly profitable way. Social media are often introduced because they are "fashionable", because companies feel "forced" to use them. as "all competitors do it". However, there are different situations and an entrepreneur mentality makes the difference.

A recent study on the digitalization of Italian companies (Bettiol et al., 2017) have stressed that marketing is one of the most impacted business functions, both in large and small companies and that it is a strategic function for the digitalization of the whole organization.

An empirical investigation on a large sample of firms and specifically focusing on the lagging regions of Italy, namely, the southern regions (Aronica et al., 2021) indicates that smaller firms in lagging areas are more likely to adopt social media but at the same time less likely to use them at a professional level. This reflects poor strategic targets of social media adoption and lower probabilities of entering international markets.

A recent survey carried out by Italiaonline in 2021 stressed that the investments in digitalization of a representative sample of about ten thousand Italian SMEs has increased

by 22% with respect to 2020. The 73% of the sample have a website, 12% have an e-commerce around 200.000 companies have carried out online communication and advertising campaigns on search engines. Further, 49.9% of the sample use social media. in particular Facebook (94.6%) and Instagram (44.8%). In 2021, in particular, both the number of companies that made investments in digital increased, equal to 1.2 million units (+7.5%). and the average investment per company, which reached 2.3 thousand euros (+13%). The study shows the consolidation of digital communication compared to traditional media: in comparison. the growth of the market of traditional means of communication (e.g. TV, Radio, press, billboards, fairs, etc.) is still significantly lower than the pre-pandemic values of 2019. It is important to underline that the overthrow of digital communication investment in traditional ones took place in 2020. However, the use, even commercial, of communities is more exploited by medium/large companies which rely on social interactions for 55.2% and 59.9% respectively. Influencer marketing strongly increased (+50% in terms of investments compared to 2020) and while initially it was considered the prerogative of medium-large companies, now it is increasingly used by small businesses too. Technology together with strategy can give business answers already in the short term even without large investments and with few resources. However, this study underlines the lack of competencies to use these new tools.

The demand for digitally competent personnel in marketing and communication has increased with the digital revolution and the new ICT (Kotler et al., 2021; Sassoon, 2022). The role of managers and employees is widely recognized as central to the successful adoption of digital technologies by SMEs and studies have shown the importance of (senior) managerial commitment and support (Ko et al., 2021). Indeed, managers and employees need to develop digital skills, together with the use of digital tools, to collectively develop a digital capability in SMEs (Proksch et al., 2021) and remain competitive (Ko et al., 2021).

Thus, one relevant digital revolution's implication is the need for new skills and professionals. The academic (Gregori and Pascucci, 2018) and practitioner literature (Cantamaesse and Ferrero, 2022) identified many new professionals in digital marketing and communication such as digital content manager, social media manager, SEO manager, Web analyst, e-commerce manager, digital PR, data scientist and community manager.

Recent studies on the impact of digital transformation on human resources are focused on large companies (Conte and Siano, 2023). However, personnel in small and medium

firms (SMEs) have a much lower likelihood to participate in adult learning activities than workers in large firms. According to the OECD Survey of Training in SMEs (2022) - that reviews initiative in Italy that can expand the up- and re-skilling efforts of SMEs to accompany their digital and green transition - three out of four Italian SMEs trained their workers informally in 2018-19, while only 46% offered a formal or non-formal training activity. Furthermore, the share of firms offering more structured forms of training is increasing in size, with 61% of medium firms offering it in 2018-19, as opposed to 38% of micro firms. Three main barriers prevent SMEs from investing further in their workforce's skills: the lack of a learning culture in these firms, their relative inability to identify skill gaps and attract appropriately qualified workers, and the high sensitivity to the cost of training.

3 Methodology

To answer the research questions, a quantitative study based on a structured questionnaire was conducted with the entrepreneur of a selected sample of Italian SMEs. Based on the concepts and models of the digital revolution in marketing and communication identified in the literature, a questionnaire was designed. The research questionnaire used for the survey, which was administered guaranteeing the anonymity of the respondents, consists of 15 questions (multiple choices and with a 7-point Likert scale, dichotomous questions and one open question) divided into three parts.

The first part of the questionnaire contains questions to identify the company profile: company type (B2B and B2C) company size (small and medium), sector (metal, furniture, leather, textile and clothing, food, wood and cork, etc.), and revenues (five discrete categories calculated in millions of euros: < 1, 1-4, 5-9.9, 10-49.9, > 50).

The second part is aimed at identifying the new digital communication tools and online metrics adopted by companies. In particular, questions were related to identify the composition of the digital communication mix and the major social media areas adopted the main scopes of using social media platforms. The following digital communication mix was adopted (Gregori and Pascucci, 2018): corporate website, corporate blog, social media, email marketing, display advertising, google advertising, paid advertising on social media and chatbot.

Furthermore, the classification of social media proposed by Tuten and Solomon (2018) was adopted: social community, social content, social entertainment, and social

commerce. the scopes of social media were taken by Li et al. (2020): to promote and sell, to connect and collaborate, to listen and learn, to empower and engage. A list of the most commonly used online metrics was also taken from the marketing literature (Gregori and Pascucci, 2018): like, share, comments, number of fans, engagement, website visits, average time spend on web site, Cost through rate (CTR), cost per click (CPC), and conversion rate.

The third part of the research questionnaire consists of questions aimed at identifying the current and desired level of digital skills. One question refers to the evaluation on a 1-7 Likert scale of the current digital marketing and communication skills and the skills they need to develop to compete in a digital context. Furthermore, respondents were asked to indicate the most important digital professionals for the company. In particular, a list of new digital professionals was taken from the literature (Cantamesse and Ferrero, 2022) and respondents were asked to select maximum three options among digital content manager, social media manager, SEO manager, Web analyst, e-commerce manager, digital PR, data scientist and community manager. An open-ended question is aimed at identifying the level of investment in digital communication, measured as the percentage of digital communication budget on the total communication budget. In the last question, respondents were asked to indicate whether a data-driven marketing approach is used.

The sample is made up of 205 manufacturing companies from the Marche region and is stratified by company size and province. It was extracted from the iCribis database of July 2021. Data was called in August and September 2021. The survey process was web-based and descriptive statistics were performed.

4 Results

4.1 Sample characteristics

The sample is made up of 205 manufacturing companies from the Marche region and is stratified by company size and by provinces. Table 1 shows the distribution of companies by type (B2C and B2B), size and sector. The sample reflects quite well the distribution of the overall manufacturing companies in the Marche region since the universe/sample variations are almost irrelevant. It is made up of 62% B2B companies, 38% B2C companies. Most of the companies are small (61%) and among medium-sized companies (39%), the companies with 51-100 employees prevail (27%) followed by companies with 101-200 employees (10%) while the largest companies with 201-249

employees are very scant (2%). Companies that manufacture metal products (16%), leather and similar articles (11%), textile and clothing (9%) wood and cork (8%) prevail, followed by companies of the following sectors: rubber and plastic (7%), mineral (7%), food (7%) furniture (6%) computer and electrotechnics (5%) and electronics (5%).

Table 1: Sample descriptive statistics

Company Type		
	N	%
B2B	127	62
B2C	78	38
Company Size		
Small (11-50 employees)	126	61
Medium (51-250 employees)	79	39
Sector		
Metal	33	16
Leather	22	11
Textile and clothing	19	9
Wood and cork	17	8
Rubber and plastic	15	7
Minerals	15	7
Food	15	7
Furniture	13	6
Computer and electronics	11	5
Electrical appliances	11	5
Other	25	3
Revenue (million euros)		
< 1	25	12
1 - 4.9	77	38
5 - 9.9	34	17
10 - 49.9	61	30
> 50	8	4
		N=205

4.2 Digital communication mix, social media and metrics

The respondents of the sample show that the digital communication mix (tab. 2) is still scant (the average value is 2.72 on a 1-7 Likert scale). Table 18 shows that the main digital communication tools is email marketing (6.09), followed by the corporate website (4.49), whatsapp (3.75) Facebook (3) LinkedIn (2.81) and Instagram (2.67). Despite the fact that e-mail is widely used, there is a very low use of e-mail marketing software (2.39), especially by small companies. Among the other suggested communication tools, four companies indicated virtual fairs and events, Google ads, Google News and direct contact. Medium companies use more digital tools on average (3.01) than small companies (2.55).

In particular, medium companies use much more paid advertising on social media (3.04), google ads (2.76) and LinkedIn than small companies, while small companies use WhatsApp (Var. -1.03) more than medium ones. B2C companies use on average slightly more digital communication tools (3.13) to communicate with customers than BtoB companies (2.62). As expected, B2B companies use more paid adv on social media, google ads, display advertising (e.g. banner) and Linked and e-mail than B2C companies which use much more Facebook and Instagram.

Table 2: The digital communication mix

Digital communication tools	Company size				Company type		
	SMEs	Small	Medium	Var.	B2B	B2C	Var.
Corporate website	4.49	4.18	4.99	0.81	4.43	4.60	0.17
Corporate Blog	1.70	1.67	1.76	0.09	1.57	1.92	0.35
Youtube	2.01	1.76	2.41	0.65	1.97	2.08	0.11
Facebook	3.00	2.77	3.37	0.6	2.60	3.65	1.05
Instagram	2.67	2.39	3.11	0.72	2.31	3.24	0.93
LinkedIn	2.81	2.45	3.39	0.94	3.00	2.51	-0.49
E-mail	6.09	6.07	6.13	0.06	6.24	5.85	-0.39
Whatsapp	3.75	4.14	3.11	-1.03	3.77	3.71	-0.06
Chatbot and/or AI tools	1.31	1.21	1.46	0.25	1.19	1.50	0.03
Google advertising	2.40	2.17	2.76	0.59	2.20	3.09	0.89
Paid adv on social media	2.53	2.21	3.04	0.83	2.26	4.56	2.3
Display advertising	2.02	1.70	2.54	0.84	31.81	2.91	1.1
PR and online events	2.06	1.77	2.52	0.75	2.08	2.71	0.63
Other	1.30	1.19	1.48	0.28	1.20	1.46	0.26
Mean	2.72	2.55	3.01	0.46	2.62	3.13	0.49

Similarly, the level of adoption of software to digitally manage customer's relationship is scant. Medium-sized companies use more CRM for marketing and sale, marketing automation and email marketing software than small companies, while B2C use more marketing automation, but, both B2B and B2C companies use CRM and email marketing software in a similar way.

Table 3: Software adopted to digitally manage customers

Software	Company size				Company type		
	SMEs	Small	Medium	Var.	B2B	B2C	Var.
CRM	2.38	1.94	3.06	1.12	2.39	2.36	-0.03
Marketing automation	1.99	1.80	2.28	0.48	1.72	2.65	0.93
Email marketing software	2.39	2.02	2.99	0.97	2.23	2.65	0.42
Mean	1.69	1.44	2.08	0.64	1.59	1.92	0.33

The use of social media is quite scant as the average value is mostly under three on a 1-7 Likert scale (table 4). As expected, the most used areas of social media are a social community (2.84) and social publishing (2.72). with a considerable gap between medium and small companies. and between B2C and B2B companies where the former makes greater use of them. Social commerce is underutilized (1.78) but B2C companies use it mostly (2.35). The use of social entertainment (1.76) is very low even in medium-sized enterprises. The data suggests that there is still ample room for improvement by local SMEs in exploiting the potential of social media in all four dimensions. Owning or using them does not guarantee that social media are also well used in the processes of value creation and co-creation.

Table 4: The four areas of social media (average value 1-7 Likert scale)

Social media area	Company size				Company type		
	SMEs	Small	Medium	Var.	B2B	B2C	Var.
Social community	2.84	2.52	3.35	0.83	2.57	3.28	0.71
Social publishing	2.72	2.47	3.11	0.59	2.55	2.99	0.44
Social entertainment	1.53	1.38	1.76	0.38	1.48	1.69	0.21
Social commerce	1.78	1.65	1.97	0.32	1.43	2.35	0.92

Mean	2.22	2.01	2.55	0.53	2.01	2.58	0.57
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Social media (tab. 5) are mainly used to “connect and collaborate” (4) especially by medium-sized (4.38) and B2C (3.09) firms and less to “promote and sell” (2.71) and to “listen and learn” (2.60). They are used even less to “empower and engage”, that is to involve customers in projects (2.25), especially by small businesses (2.15) and B2B companies (1.71). Therefore, communication (to connect and collaborate) represents the most advanced form of use of social media of the SMEs analysed.

Table 5: Scope of social media

Social media scope	Company size				Company type		
	SMEs	Small	Medium	Var.	B2B	B2C	Var.
To promote and sell	2.71	2.58	2.91	0.33	2.04	3.09	1.05
To connect and collaborate	4.00	3.76	4.38	0.62	2.93	4.56	1.63
To listen and learn	2.60	2.43	2.89	0.46	2.06	2.91	0.85
To empower and engage	2.25	2.15	2.42	0.27	1.71	2.47	1.03
Mean	2.89	2.73	3.15	0.42	2.19	3.26	1.14

Online metrics are still poorly adopted (tab. 6) by SMEs (28.82%), especially by small companies (23.45%). The most popular metric is website visits (56.59%) followed by like (37.07%), number of fans (32.20%), comments, share and average time spent on website (37.71%). The Click Through Rate (CTR) (30.24%), and the engagement rate per post 27.80% are also used by three out of ten companies. Again, medium companies (37.40%) use more metrics than small companies (23.45%). Similarly, B2C companies (37.67%) adopt metrics more than B2B companies (24.27%). In particular, the former use more the number of fans, like, abandoned carts, and time on website and conversion rate metrics than the latter.

Table 6: Level of adoption of online metrics (%)

Metric	Company size				Company type		
	SMEs	Small	Medium	Var.	B2B	B2C	Var.
Like	37.07	25.40	55.70	30.30	30.71	47.44	16.73
Share	31.71	26.98	39.24	12.26	25.98	39.74	13.76
Comments	31.71	26.98	39.24	12.26	31.50	44.87	13.38
Number of fans	32.20	24.60	44.30	19.70	23.62	44.87	21.25

Engagement	27.80	23.02	35.44	12.43	25.20	33.33	8.14
Website visits	56.59	49.21	68.35	19.15	55.12	58.97	3.86
Time on web site	31.71	24.60	43.04	18.43	25.98	41.03	15.04
CTR	30.24	25.40	37.97	12.58	24.41	38.46	14.05
Cost per click	17.07	13.49	22.78	9.29	13.39	24.36	10.97
Conversion rate	14.15	13.49	15.19	1.70	8.66	23.08	14.42
Abandoned carts	6.83	4.76	10.13	5.36	2.36	17.95	15.59
Mean	28.82	23.45	37.40	13.95	24.27	37.65	13.38

4.3 Marketing and communication personnel and new digital skills

The manufacturing companies of the sample adopt mostly both internal and external (tab. 7) marketing and communication skills (47.3%) followed by internal personnel (43.9%). Small companies show a slightly higher level of internal marketing skills than medium companies, while B2B companies use more internal skills (47.24%) than B2C companies (38.46%). B2C companies use the highest level of external professionals in communication and marketing (10.26%).

Table 7: Marketing and communication personnel (%)

Marketing and communication personnel	SMEs	Small	Medium	B2B	B2C
Internal	43.9	50	34.2	47.24	38.46
External	8.8	8.7	8.9	3.94	10.26
Both internal and external	47.3	41.3	57	48.82	51.28
Total	100	100	100	100	100

In the entrepreneur's perspective the most important professionals digital marketing and communication (tab. 8) in their business are digital content manager (46.3%), social media manager (42.4%) and SEO manager (34.6%). Social media manager is much more important for B2C companies (55.13%) than B2B context, and for medium companies (54.4%) than small ones. Furthermore, e-commerce is much more important for B2C companies than B2B companies, as well as web analyst and community manager.

Table 8: The most important digital marketing and communication professionals

Professionals in digital marketing and communication	Company type				Company type		
	Small %	Medium %	Var. %	SMEs %	B2B %	B2C %	Var. %
Digital content manager	40.6	54.4	13.8	46.3	49.61	41.03	-8.58

Social media manager	34.4	54.4	20	42.4	34.65	55.13	20.48
SEO manager	32.5	38.0	5.5	34.6	33.86	35.90	2.04
Web analyst	14.3	13.9	-0.4	14.1	13.39	19.23	5.84
E-commerce manager	14.3	17.7	3.4	15.6	10.24	24.36	14.12
Digital PR	11.9	12.7	0.8	12.2	10.24	15.38	5.14
Data scientist	6.3	13.9	7.3	9.3	11.02	6.41	-4.2
Community manager	5.6	5.1	-0.5	5.4	3.94	7.69	5.14

Focussing on digital marketing and communication skills, the study reveals that all the respondents affirm that the current digital skills (2.96) and the digital skills companies need to develop (3.32), as well as current training costs (2.85) are very low, on a 1-7 Likert scale.

Table 9: Digital marketing and communication skills (1-7 Likert scale)

Company size and type	Current skills	Skills to develop	Training costs
Small SMEs	2.96	3.32	2.85
Medium SMEs	3.56	3.94	3.52
B2B	3.19	3.56	3.11
B2C	3.00	3.31	2.87
	3.49	3.95	3.49

Furthermore, the investment in digital communication, measured by the percentage of the digital communication budget on the total communication budget, (tab. 10) is still low in SMEs (26.57%), especially in small (15.44%) and B2B (16.24%) enterprises.

Table 10: Digital communication budget

Company size and type	Digital communication budget (%)
Small	15.44
Medium	26.57
SMEs	19.73
B2B	16.24
B2C	26.44

Consistently, table 11 shows a scant use of data to develop marketing and communication strategies. Indeed, all the companies seem not to use sufficiently big data to take decisions and are not aware of the importance of adopt data-driven marketing in the near future, except for medium-sized companies (4.29).

Table 11: Data-driven marketing approach

Company size and type	Current use of data	Importance to use data
SMEs	3.40	3.45
Small	3.06	2.92
Medium	3.92	4.29
B2B	3.37	3.37
B2C	3.43	3.57

5 Discussion and conclusions

The aims of this paper were to understand how manufacturing small and medium-sized companies communicate in a digitalized business environment and which digital skills are adopting. As the academic and practitioner literature are mainly focused on digital transformation of large firms, this study investigated digital communication strategy and skills in small and medium-sized companies, identifying gaps between B2C and B2B contexts.

Three main results answer the research questions. First, the level of adoption of digital communication in SMEs is generally very low (2.72 in a 1-7 Liker scale). This result, in line with the previous literature (among others, Dethine et al., 2020; Cesaroni and Consoli, 2015; Caliskan et al., 2021), can be explained by the fact that the structural limits of SMEs, especially the lack of financial resources and poor managerial and digital culture can prevent them from exploiting the opportunities of digital transformation.

Second, medium sized firms adopt a slightly higher level of digital communication mix than medium-sized firms, as well as B2C firms with respect to B2B firms. On the one hand, this result confirms that medium-sized firms have more resources and culture in comparison to small firms and can better face the challenges and seize the opportunities of digital transformation. Therefore, most likely, medium-sized companies could adopt a more strategic approach to digital marketing and communication. On the other hand, this result shows that communication in B2B firms is increasingly digital.

Among digital communication channels, B2C companies are mainly adopting the major social media platforms. Only LinkedIn is more popular in B2B context. All respondents state that the main purpose of social media, especially social networks, is “to connect and collaborate”. This means that main purpose is still the basic one, which is to communicate. More demanding and ambitious goals suggested in the literature (Tuten and Solomon, 2018; Li et al., 2021), such as “to empower and engage”, which require a strong

commitment and an active role of the company, are the least adopted among the companies in our sample. Furthermore, this result indicates that small enterprises may adopt social media but are less likely to use them with a clear strategy. Hence, this result is in line with the main literature (Aronica et al. 2021; Fraccastoro et al., 2020). Furthermore, the average values of the use of metrics, the percentage of the digital communication budget on the total communication budget and the use of data to develop a data-driven strategy are very low.

Third, the actual level of digital communication and marketing skills is very low (2.96) compared to the skills needed in a digitalized environment. In the entrepreneur's perspective, the digital skills required (3.32) and the actual training costs (2.85) are also very low. Therefore, respondents underestimate the importance of properly developing new skills. This result may be interpreted with the structural limitations of SMEs and the low awareness of management of the benefits associated with the digital transition (Ko et al., 2022; Conte and Siano, 2023; OECD report, 2022).

The main preliminary theoretical contribution of the study consists in the attempt to take a broad perspective on the topic, since we investigated the digital communication strategy of SMEs both in terms of the digital communication mix adopted - with a focus on social media - online metrics, budget and digital communication skills and by size and type.

The small size of the sample and the geographic origin of companies imply limited generalizability and further research on the topic is recommended.

This study has several preliminary managerial implications. The results suggest that entrepreneurs and their collaborators should be more aware of the importance of investing in digital communication and developing marketing and communication skills. Italian companies are very good at manufacturing "beautiful and well-made" products, but they should learn more to effectively communicate their offer. This means that SMEs should be open to cooperate with new digital marketing professionals, especially digital natives. Furthermore, some institutional implications are provided. Policymakers could provide financial resources, training and advice in digital communication to help the digital transformation process of SMEs. Universities could help to increase awareness and knowledge of digital marketing and communication and develop appropriate skills through ad hoc training programs with entrepreneurs.

The research is in progress and further analysis will include Anova analysis of variance and cluster analysis in order respectively to calculate the significativity of differences of

means between groups and to create clusters of companies with similar digital communication strategies and skills.

Due to its exploratory design, future studies should focus on both qualitative research, such as case studies, in order to gain a deep understanding of the most successful communication strategies, and quantitative research (e.g. with a longitudinal design).

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Crisis Management in SMEs: an empirical analysis in the Marche region

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Abstract

Objectives: Due to the continuous and rapid changes in economic, political and social scenarios, the centrality of the crisis and its management in the life path of enterprises has been increasingly recognised. In this perspective, the study aims to analyse how the discipline of crisis management can be applied to the context of Italian small and medium-sized enterprises (SMEs), with particular focus on those operating in the Marche region.

Literature review/Theoretical Framework: Crisis management is understood as an ongoing process that develops within the company and makes it aware of its vulnerability to certain negative events, thus supporting it to deal with them effectively (Khodarahmi, 2009). The continuous unexpected and traumatic events have made crisis management indispensable for the long-term survival of companies, especially small and medium-sized ones. In Italy, 160,000 companies fit into the European definition of small and medium-sized and generate a total added value of EUR 204 billion (Rapporto regionale PMI, 2022). In the Marche region, SMEs account for 99.9% of the regional industrial fabric (Le imprese nella regione Marche, 2020).

Approach/Method: A quantitative analysis was developed by means of a survey questionnaire, carried out through computer-assisted web interviewing (CAWI) methodology. The target population included SMEs operating in the Marche region. A total of 134 companies took part voluntarily in the survey.

Main Results: As regards the first phase of crisis management, namely pre-crisis, the investigated SMEs are still far from having developed a proactive attitude to business crises. Concerning the crisis phase, on the other hand, the results obtained denote a

positive attitude by SMEs, especially about crisis communication, which seems to play a fairly important role. Finally, with regard to the post-crisis phase, the level of readiness of the SMEs under study can be considered positive overall; in fact, most of them recognise the importance of post-crisis learning.

Value and Implications for Theory and Practice: This study contributes to enriching studies on the topic of crisis management by deepening SMEs, which represent an interesting setting of analysis for both academics and practitioners. It also offers managerial implications. First, it would be particularly useful to involve heterogeneous tools in monitoring the internal and external environment. Second, a crisis management plan could be crucial, as it allows for a disciplined and timely response to the crisis. Third, a crisis management team could prove very useful in coping with the complexity involved in a crisis management process.

Keywords – Company crises, Crisis management, SMEs, Crisis management process, Crisis management tools.

Paper type – Practical Paper

1. Introduction

Due to the continuous and rapid changes in economic, political, and social scenarios, the centrality of crisis and its management within the business environment has been increasingly recognised. Historically, the life path of a company has always been characterised by alternating phases of success and crisis (Doern et al., 2019), which must be addressed with the right readiness to achieve positive evolutionary results. Over the years, growing attention has been given to the topic of crisis and its management by entrepreneurs, moving from the concept of crisis as a particular moment in the lifetime of a company to that of crisis management. In particular, crisis management is understood as a continuous process that develops within the company and makes it aware of its vulnerability to specific negative events, thus supporting it in dealing with them effectively (Khodarahmi, 2009). In the context of small and medium-sized enterprises (SMEs), this process takes on extreme relevance due to the lack of adequate resources and skills (Marullo et al., 2020), which makes them particularly fragile in the face of adverse and traumatic phenomena (Pencarelli et al., 2020).

Considering the crucial role of SMEs for the development and well-being of national and regional economies (Björklund et al., 2020; Brown and Cowling, 2021; Doern, 2021), deepening the topic of crisis management within this type of organisation is extremely important. In the European Union (EU) there are 25 million SMEs, which make up 99% of all enterprises, employ around 100 million people and generate around 56% of the EU

gross domestic product³. Only in Italy, 160,000 companies fit into the European definition of small and medium-sized enterprises and generate a total added value of EUR 204 billion (Rapporto regionale PMI, 2022). Despite this evident relevance, SMEs approaches to crisis management still appear to be poorly explored and investigated (Kurschus et al., 2017; Eggers, 2020; Fasth et al., 2022; Salamzadeh and Dana, 2022). In this perspective, the aim of the study is to analyse how the discipline of crisis management may be applied within the framework of Italian small and medium-sized enterprises, with particular focus on those in the Marche region. More specifically, the research questions that this work intends to address are: (i) Do SMEs in the Marche region adopt a reactive, proactive or passive attitude with respect to crisis management? (ii) In SMEs in the Marche region, who is responsible for crisis management? (iii) How do the SMEs in the Marche region behave when the crisis occurs? (iv) How important is taking care of the communication aspects during a crisis for the SMEs in the Marche region? (v) How do the SMEs in the Marche region behave once the crisis is over? To answer these questions, a quantitative analysis was developed by means of a survey questionnaire; a total of 134 companies located in the Marche region participated in the study.

The present paper is organised as follows. The first section offers a theoretical framework on business crisis and crisis management, paying particular attention to the tools that companies have at their disposal to effectively cope with crisis events. In the second section, the research methodology deployed, and the results achieved are presented. Finally, the third section provides the main conclusions and academic and managerial implications, as well as limitations and suggestions for future research.

2. Literature Review

The economic-managerial literature has developed multiple definitions of business crisis over time (Guatri; 1995, Pearson and Clair, 1998; Sciarelli, 2011; Coombs, 2007; Pencarelli, 2013), thus making it complex to develop a unitary formulation. To fully understand the topic, it is therefore useful to start from the distinction between the concepts of *business decline* and *crisis*. The first can be understood as a phase of erosion of the company's profitability and weakening of its image towards stakeholders, in which

³ Stato dell'Unione delle PMI (2021), available online on [https://www.europarl.europa.eu/RegData/etudes/ATAG/2021/690633/EPRS_ATA\(2021\)690633_IT.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2021/690633/EPRS_ATA(2021)690633_IT.pdf) (last access on 20 March 2023).

there is a decay that affects both the quality of products or services and relations with customers and suppliers (Guatri, 1995). During the decline, there is a negative impact on the entire vitality of the company (Pencarelli, 2013), which inevitably leads to a state of general instability. When this instability becomes systemic and irreversible and effective recovery measures are not implemented (Guatri, 1995; Sciarelli, 2011; Pencarelli, 2013), the state of decline turns into a crisis. The latter can thus be qualified as the acute phase of a particular pathological situation that compromises the company's economic and financial equilibrium, seriously compromising its ability to generate value (Sciarelli, 2011; Ciambotti, 2005; Pencarelli, 2013).

A crisis state is not always reached along a path of progressive escalation of critical dimensions for the long-term survival of the company (Pencarelli, 2013). Sometimes, there are sudden changes of scenario, both internal and external, that place the company directly in the crisis phase. In general, the factors underlying the decline and crisis of enterprises can be mainly referred to two opposing approaches, namely the subjective-behaviourist and objective ones (Guatri, 1995). According to the first strand, the main cause of the crisis is ascribable to the human factor, which becomes responsible for mismanagement, managerial inadequacy, and incompetence, as well as incorrect decision-making assessments (Paoloni, 2003; Pencarelli, 2013). On the contrary, the objective approach recognises the vulnerability of the company to the occurrence of specific and complex external phenomena, such as drastic decreases in demand, increases in production factors, catastrophic events, global economic crises, sector issues, exacerbation of stakeholder relations, changes in the competitive, legislative, social and technological environment (Pencarelli, 2013; Provisiero, 2014; Mayr et al., 2017). In this perspective, the business crisis is thus the result of adverse events that can occur both inside and outside the business context (Sciarelli, 1995). Despite this distinction, it should be stressed that the internal and external variables at the origin of the crisis are strongly interconnected (Palazzi et al., 2018). The crisis process, in fact, is triggered by the inability of top management to effectively combine the turbulence and instability of the external environment with the complex internal dynamics, due to a lack of adequate resources and skills (Peterson et al., 1983; Coda, 1983; Pencarelli, 2013).

In addition to distinguishing between internal and external causes, the literature has also identified different types of business crises. Although this is not an exhaustive list, the classification formulated by Guatri (1995) is particularly useful in understanding the different crisis situations that a company may face during its lifetime. Specifically, it is

possible to identify (Guatri, 1995): (i) inefficiency crisis, which occurs when one or more company functions operate with returns that are not in line with those of competitors; (ii) overcapacity crisis, which is caused by an excessive production capacity that is not absorbed by the surrounding environment due to a decrease in demand, a sector crisis, and so on; (iii) product obsolescence crisis, which manifests itself when the product is no longer attractive to consumers. This, leads to a loss of market share and a reduction in margins between prices and costs; (iv) crisis from lack of planning/innovation, which arises from the inability to adapt the conditions of management to environmental changes, accompanied by insufficient and/or ineffective innovation processes (v) economic/financial crisis, which translates into an imbalance in the income dimension that generates economic losses affecting the value of the company's capital and into a compromised solvency capacity in the short and medium-long term from a financial point of view (Pencarelli, 2013). Moreover, crises may be temporary or irreversible. In the first case, timely remedial action or favourable environmental and market conditions can reverse the trend and return the company to a state of regular operation; irreversible crises, on the other hand, lead to situations of instability that inevitably lead to the end of business activity (Pencarelli, 2013). Finally, Hahn (1988) divides crisis into: (i) potential, that is, manifestation linked to the developments of the company's reality and contexts; (ii) latent, meaning the occurrence is highly probable and is linked to the existence of specific implicit and adverse conditions; (iii) acute, namely actual appearance.

Regardless of the different peculiarities and possible forms of manifestation, the crisis has always accompanied the enterprise throughout its life path (Doern et al., 2019). Recent years have been characterised by a deep and long recessionary phase, which has severely challenged enterprises and their competitive capacity. Furthermore, there have been many crises resulting from unexpected natural phenomena such as earthquakes, floods and, most recently, the coronavirus pandemic. The instability of the environment, both socially and naturally, has made it essential for companies to implement useful plans to cope with any phenomenon capable of generating imbalances (Coombs and Laufer, 2018). In this scenario, the concept of crisis management finds affirmation, not only in the sphere of large, structured, and rigid companies, but also in smaller companies (Spillan and Hough, 2003), which are more exposed to all kinds of difficulties and with limited resources. Over the years, the centrality of the crisis and its management by entrepreneurs has been increasingly recognised, moving from the concept of crisis as a particular moment in the life of a company to that of crisis management. In particular, crisis

management is understood as an ongoing process that develops within the company and makes it aware of its vulnerability to certain negative events, thus supporting it to deal with them effectively (Khodarahmi, 2009). Hence, crisis management does not only deal with management activities during a crisis, but includes activities before, during and after a crisis event occurs. In this sense, scholars agree that the crisis management process consists of three phases: pre-crisis or research, crisis or response, and post-crisis or recovery (Coombs, 2007). The pre-crisis phase is aimed at anticipating, avoiding or eventually minimising a possible crisis. To this end, the drafting of a crisis management plan and the establishment of a crisis management team become essential (Barton, 2001; Coombs, 2007). The crisis management plan is not a guideline on how to manage the crisis, but rather a tool that defines in advance several tasks, gathers key information and serves as a reference source to optimise timing during the onset of a crisis (Barton, 2001; Fearn-Banks, 2001; Coombs, 2007). To pre-assign tasks and responsibilities, a crisis management team should therefore be created. The members of this team must be adequately trained in the roles to be filled and the activities to be performed during a crisis (Mitroff et al., 1996; Coombs, 2007). In addition, it is necessary to identify one or more people who will be in charge of communicating with all media during the crisis; their role will be crucial for corporate reputation and credibility (Lerbinger, 1997, Fearn-Banks, 2001; Coombs, 2007). Other particularly useful tools to intercept and promptly manage the first signs of danger may be the indicators contained in the New Code on Business Crisis and Insolvency (Legislative Decree No. 14 of 12 January 2019), strategic analysis tools and techniques such as the business formula model, planning and control systems and the balance scorecard (Bazzerla, 2018; Baldissera, 2019; Bogarelli, 2020). In the response phase, the crisis manifests itself concretely so the company should mobilise to contain the damage through the implementation of the crisis management plan. There are three objectives to be pursued: (i) rapidity in providing a valid response to stakeholders on the incident; (ii) accuracy in the information to be disclosed; (iii) consistency in the communication of news and content (Coombs, 2007). The company will thus be able to demonstrate its control over the crisis situation that has arisen, while safeguarding its credibility and reputation (Carney and Jorden, 1993; Coombs, 2007). The possibility of successfully managing a crisis situation is strongly linked to the organisation's ability to communicate correctly and proactively with its stakeholders (Mazzei and Ravazzani, 2015; Diers-Lawson, 2019). Although crisis management depends primarily on the company's capacity for strategic management, the

communication factor plays a decisive role in the chances of ultimate success. This communication must not only be directed externally, namely to institutions, customers, suppliers, and associations, but also and above all internally, that is to employees and trade unions (Adriani, 2013). Nowadays, it is also increasingly important to be able to manage crisis dissemination on social media (Civelek et al., 2016; Maal and Wilson-North, 2019; Wang and Cai, 2021), avoiding the sharing of incorrect content that compromises the corporate image. In addition to crisis management and communication, the Master Events Log (MEL), the Briefing Cycle and the Emergency Operations Room (EOR) can also be valuable support tools (Burton, 2016; 2017). Finally, the post-crisis phase is designed to verify the ex-post effectiveness of the actions taken in the previous steps, to communicate the results achieved in order not to lose stakeholders' trust and to initiate a learning process to improve the internal crisis management process (Coombs, 2007; Cucculelli, 2017). A careful evaluation of the actions taken in managing the crisis that has just ended is essential to identify strengths and weaknesses on which to intervene to better face possible future crises. In this sense, the tool elaborated by Folsom and Garrettson (2020) is particularly interesting, which subdivides the post-crisis review into four main moments: (i) basic analysis on the preparedness of the crisis management action; (ii) assessment of responsibilities; (iii) review of company performance; (iv) examination of the future usability of the implemented crisis management plan.

It is therefore clear that crisis management is a necessary and fundamental process for reacting to crisis situations in a disciplined and timely manner, thereby significantly reducing the scope of its impact. The continuous succession of unexpected and traumatic events has renewed the interest of academics and practitioners in the topic of crisis management. However, implementing an adequate and efficient crisis management process appears to be quite complex, especially for small and medium-sized enterprises (Hong et al., 2012; Alves et al., 2020). Although such organisations have the inherent ability to be flexible and to adapt quickly to sudden changes in the market (Cesaroni and Sentuti, 2016; Pencarelli et al., 2020), the frequent scarcity of financial, technological, and organisational resources and adequate skills (Pace, 2013; Marullo et al., 2020) significantly weakens their response to negative phenomena. Given the extreme importance of SMEs for the development and prosperity of national and regional economies (Björklund et al., 2020; Brown and Cowling, 2021; Doern, 2021), delving into the topic of crisis management within this category of organisations is highly valuable

and could make important contributions to the literature on the subject, as well as offer interesting food for insights for entrepreneurs and managers of such companies.

3. Research Methodology and Results

To observe the level of preparedness with respect to crisis management, the conception of the event and the way in which the different phases of the crisis management process are dealt with in small and medium-sized enterprises in the Marche region, a quantitative analysis was developed by means of a survey questionnaire. The questionnaire, carried out through computer-assisted web interviewing (CAWI) methodology, is structured in four main sections. Specifically, the first section was dedicated to the collection of anagraphic-descriptive information concerning the company and the history of company crises. The remaining three sections of the questionnaire were defined following the phases into which Crisis Management is divided, in line with what is presented in the literature. Therefore, a section focused on the pre-crisis phase, one dedicated to the crisis phase and finally another section on the post-crisis phase was developed. In the section dedicated to the pre-crisis phase, the monitoring tools used by SMEs to catch the premonitory signs of the crisis were investigated; the possible preparation of the crisis management plan and the establishment of a crisis management team; and the knowledge of the New Business Crisis and Insolvency Code (Legislative Decree 14/2019). The latter aspect was analysed with the aim of assessing whether SMEs are aware of the novelties introduced by this decree and, if so, to obtain their opinion with respect to the usefulness that the hierarchical system of alert indexes may actually hold in preventing a crisis. The section on the crisis, on the other hand, explores the habit of SMEs of keeping track of all the main stages that develop as the crisis evolves, for example by putting them in writing in a special document; the importance attributed to internal and external communication of the crisis, especially in terms of rapidity, accuracy and consistency; and the holding of periodic meetings within the company to discuss and debate the crisis situation. The last section of the questionnaire refers to the post-crisis phase and explores the management of post-crisis communication with respect to stakeholders; the importance given by SMEs to obtaining feedback on the management of crises that have now ended; the organisation of post-crisis meetings with their employees in order to highlight both best practices and failures.

The research questionnaire was sent - from June to August 2021 - to a sample of 1,600 small and medium-sized enterprises (SMEs) operating in the Marche region. Such SMEs were selected according to the definition proposed in the European Commission Recommendation 2003/361/EC on 6 May 2003; therefore, the research target included all those companies with registered offices in the Marche region, employing less than 250 people and with an annual turnover not exceeding EUR 50 million (or alternatively an annual balance sheet not exceeding EUR 43 million). Based on this consideration, an online search was conducted to identify a group of SMEs for each of the five provinces in the Marche region. Afterwards, the different company websites were consulted to collect the necessary contact information for the administration of the questionnaire by e-mail. A total of 134 companies took part in the survey.

The decision to limit the research to SMEs in the Marche region stems from the importance of these companies for the region's economy, which represent 99.9% of the regional industrial fabric (Le imprese nella regione Marche, 2020).

3.1 Results

3.1.1 General information on the sample

The questionnaire data concerning the biographical-descriptive profile of the 134 SMEs participating in the survey are presented in Table 1. Regarding the sector, it emerged that most of them operate in the secondary sector (69.40%), followed by those operating in the tertiary sector (19.40%) and finally those active in the primary sector (11.19%). About age, only two companies were founded before 1900 (specifically, in 1897). In the other cases, the year of foundation ranges from 1950 onwards, up to the youngest, which was founded in 2020.

Table 1: Economic sector and foundation year of SMEs.

Sector	%	n.
PRIMARY SECTOR:	11,19%	15
- Primary unspecified	6,67%	1
- Agriculture	80,00%	12
- Livestock farming	6,67%	1
- Renewable energies	6,67%	1
SECONDARY SECTOR:	69,40%	93
- Unspecified industry	1,08%	1
- Textile industry	7,53%	7

- Food industry	4,30%	4
- Cosmetics industry	3,23%	3
- Shoe and leather industry	8,60%	8
- Wood-furniture industry	10,75%	10
- Glass industry	2,15%	2
- Plastic industry	6,45%	6
- Marble industry	1,08%	1
- Paper industry	1,08%	1
- Metal industry	32,26%	30
- Electronics industry	4,30%	4
- Marine industry	1,08%	1
- Building industry	9,68%	9
- ICT	6,45%	6
TERTIARY SECTOR:	19,40%	26
- Services not specified	23,08%	6
- IT consultancy services	15,38%	4
- Translation services	3,85%	1
- Trade services	26,92%	7
- Distribution	3,85%	1
- Transport services	3,85%	1
- Tourism services	3,85%	1
- Housekeeping	3,85%	1
- Healthcare	7,69%	2
- Graphics and advertising	3,85%	1
- Environmental Surveys	3,85%	1
Foundation year	%	n.
1897	1,49%	2
1950 – 1959	4,48%	6
1960 – 1969	5,22%	7
1970 – 1979	11,19%	15
1980 – 1989	15,67%	21
1990 – 1999	17,91%	24
2000 – 2009	14,93%	20
2010 – 2019	28,36%	38
2020 – today	0,75%	1

Source: own elaboration.

In addition, the history of crises faced by companies over time was explored (Table 2). The majority of the SMEs participating in the study (76.12%) had to face between 1 and 5 crises during their corporate life. Moreover, among those SMEs that had faced at least one crisis, the majority (88.50%) believed that such events were effectively managed. This confirms what has been pointed out in the literature, which shows that no

company is exempt from crisis risk and that one should ask not so much if a crisis will occur, but rather when and what kind of crisis will occur (Brown, 2019).

Table 2: History of SME company crises.

Total crises managed	%	n.
No crisis	15,67%	21
From 1 to 5 crises	76,12%	102
More than 5 crises	8,21%	11
Effectiveness of past crisis management	%	n.
Yes	88,50%	100
No	11,50%	13

Source: own elaboration.

3.1.2 Pre-crisis section

With respect to the pre-crisis phase, 62.69% of the surveyed SMEs stated that they monitor the internal and external environment to catch pre-crisis warning signs (Table 3). Specifically, the tools mainly used to carry out such monitoring are those of planning and control (58.33%). This is followed by activities concerning the calculation and evaluation of budget indices (17.86%), strategic analyses and evaluations (13.10%) and the use of the Balanced Scorecard tool (2.38%).

Table 3: Detection of premonitory signs of crisis by SMEs.

Implementation of internal/external environment monitoring activities to detect premonitory signs of crisis	%	n.
Yes	62,69%	84
No	37,31%	50
Type of activities carried out to monitor the internal/external environment and to catch premonitory signs of crisis	%	n.
Planning and control	58,33%	49
Calculation and evaluation of balance sheet ratios	17,86%	15
Strategic analysis and evaluation	13,10%	11
Balanced Scorecard	2,38%	2
Other	8,33%	7

Source: own elaboration.

Despite the importance given to the drafting of a crisis management plan and the creation of a crisis management team to effectively deal with negative phenomena

(Barton, 2001; Coombs, 2007), the majority of SMEs (86.57%) stated that they do not use such tools. Many of them (88.06%) also specified that it is the entrepreneur himself who manages any crisis (Table 4).

Table 4. Definition of Crisis Management Plan and Crisis Management Team by SMEs.

Definition of Crisis Management Plan	%	n.
Yes	13,43%	18
No	86,57%	11
		6
Definition of Crisis Management Team	%	n.
Yes	5,22%	7
No, crisis management is assigned to the entrepreneur alone	88,06%	11
		8
No, crisis management is assigned to professionals outside the company	6,72%	9

Source: own elaboration.

Finally, 72.39% of the companies surveyed stated that they were not aware of the innovations introduced by the New Code of Business Crisis and Insolvency (Legislative Decree 14/2019) in preventing crises. Among the SMEs in the sample that are aware of the decree and therefore the hierarchical system of alert indices presented in it, it is interesting to note that 56.76% do not believe that this system is actually useful in predicting and preventing a crisis situation (Table 5).

Table 5: SMEs' knowledge of the New Business Crisis and Insolvency Code (Legislative Decree 14/2019).

Knowledge of the New Business Crisis and Insolvency Code (Legislative Decree 14/2019)	%	n.
Yes	27,61%	37
No	72,39%	97
Usefulness of the hierarchical system of alert indices presented in the decree	%	n.
Yes	43,24%	16
No	56,76%	21

Source: own elaboration.

3.1.3 Crisis Section

Despite the importance emphasised in the literature regarding tracking, most of the responding SMEs (60.45%) do not keep a record of crisis-related events (Table 6).

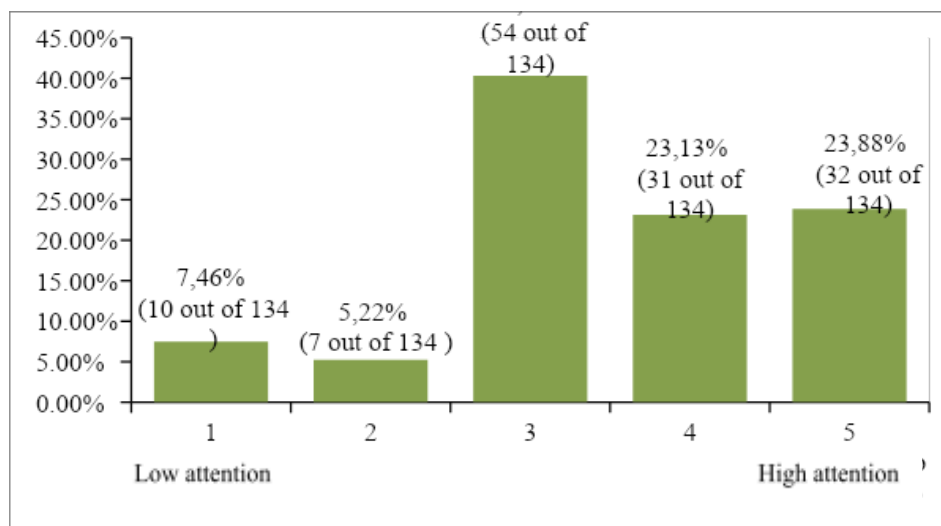
Table 6: Recording/tracking of crisis-related events by SMEs.

	%	n.
Yes	39,55%	53
No	60,45%	81

Source: own elaboration.

Figure 1 shows the degree of attention with which the SMEs in the sample communicate information about the crisis, both internally and externally to the company. In this regard, the majority of the sample (87.31%) showed themselves to be attentive to crisis communication activities, with values ranging from 3 (indifferent) to 5 (high degree of attention) being predominantly attributed to them.

Figure 1: Degree of attention of SMEs in providing information on the crisis, internally and externally to the company.

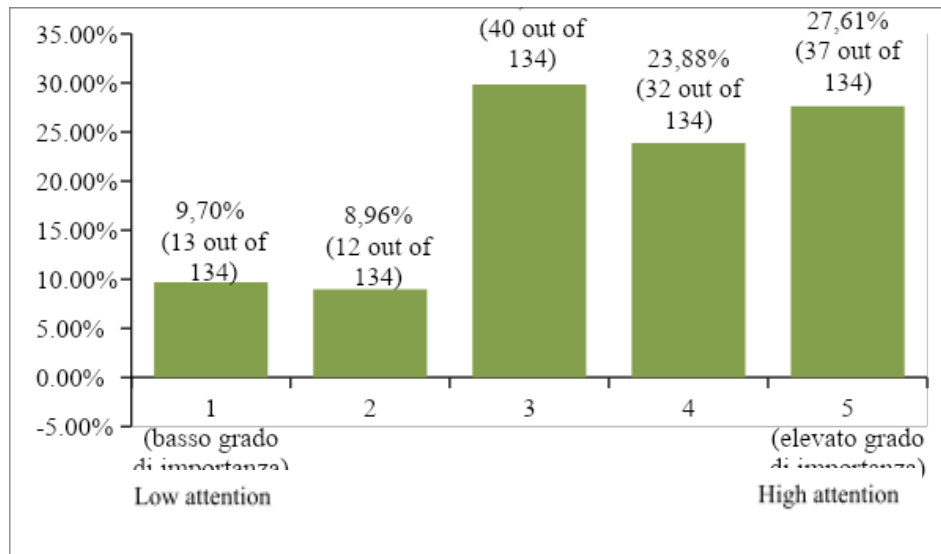


Source: own elaboration.

Based on the factors identified by Coombs (2007) regarding crisis communication, three questions were then asked regarding the importance SMEs attach to rapidity, accuracy, and consistency in crisis communication. A large majority of SMEs (81.34%) attributed a medium to high degree of importance to the rapidity of communication, while a small percentage of respondents (18.66%) did not attribute significant importance to this element (Figure 2). About the precision and accuracy of the information provided, 40.30% of the SMEs surveyed assigned a very high degree of importance to these elements, while only a few SMEs assigned a low degree of importance to this factor

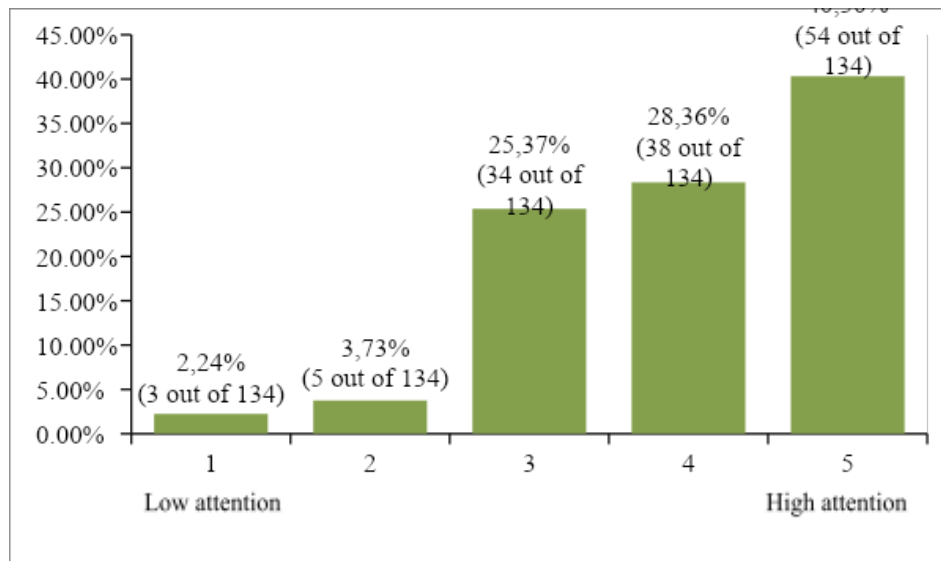
(5.97%) (Figure 3). Similarly, the element of consistency was considered extremely important by the majority of the sample (45.52%), who assigned this element a value of 5 (Figure 4).

Figure 2: Degree of importance given by SMEs to the element of timeliness in crisis communication.



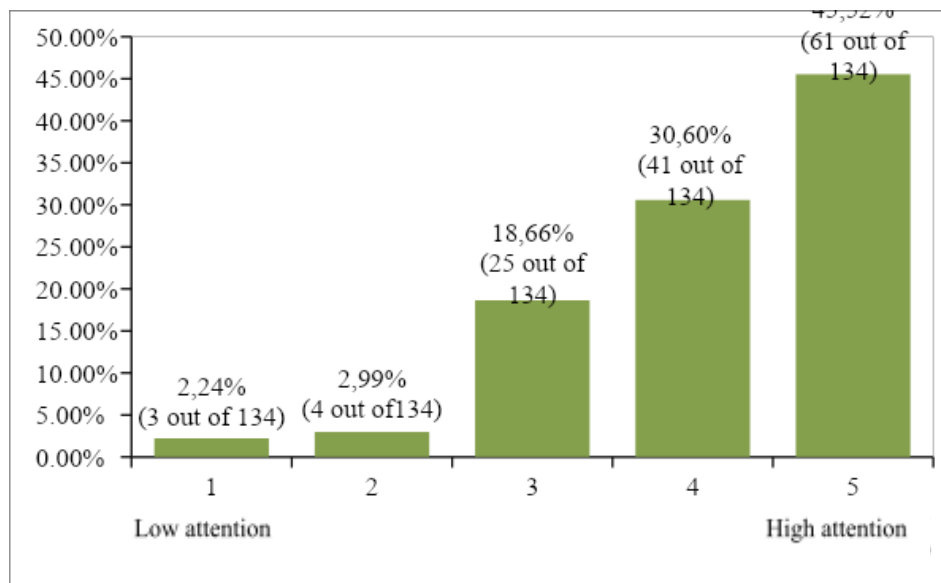
Source: own elaboration.

Figure 3: Degree of importance given by SMEs to the element of accuracy/precision in crisis communication.



Source: own elaboration.

Figure 4: Degree of importance given by SMEs to consistency in crisis communication.



Source: own elaboration.

At the end of the section, the sample was asked about the periodic holding of meetings within the company to discuss crisis situations. In line with what was suggested

by Burton (2017), most of the SMEs studied used to hold periodic meetings during the crisis period (76.12%), with the aim of sharing information internally and establishing future strategies (Table 7).

Table 7: Organisation of meetings during the crisis period.

	%	n.
Yes	76,12%	102
No	23,88%	32

Source: own elaboration.

3.1.4 Post-crisis section

Observing Table 8, it emerges that most of the responding SMEs (60.45%) are attentive to post-crisis communication, trying to inform the relevant stakeholders about the company's recovery situation.

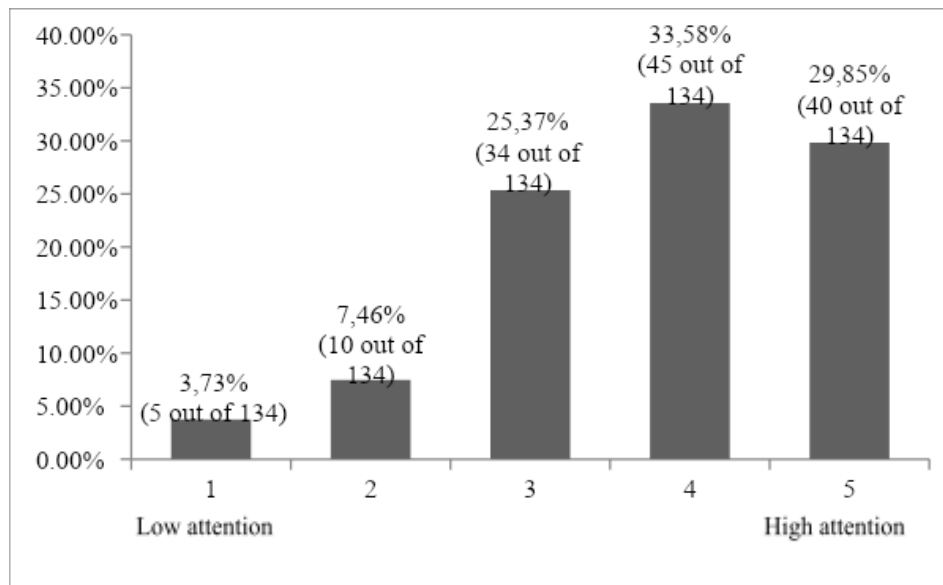
Table 8: Implementation of post-crisis communication.

	%	n.
Yes	60,45%	81
No	39,55%	53

Source: own elaboration.

Thereafter, the importance that SMEs recognise in obtaining feedback on the management of closed crises was explored. Again, they were asked to express a degree of importance on a scale of 1 to 5. The answers obtained show that the majority of SMEs consider this element important (88.80%), attributing it values ranging from medium to high (Figure 5). It is only through a careful evaluation of past crises, in fact, that companies can be stronger and more resilient to possible future crises (Folsom and Garrettson, 2020).

Figure 5: Degree of importance given by SMEs to obtaining feedback in relation to crisis management ended.



Source: own elaboration.

Finally, the majority of SMEs participating in the survey (61.19%) stated that they carry out post-crisis meetings with their employees in order to be able to highlight best practices, which are useful in view of future crisis management (Table 9).

Table 9: Organisation of post-crisis meetings in SMEs.

	%	n.
Yes	61,19%	82
No	38,81%	52

Source: own elaboration.

4. Conclusions

Although crisis management has long been a subject of study in managerial and organisational theory, the magnitude and persistence of recent political, economic and health crises have once again made this topic of extreme topicality and interest. This attention is even more important in the context of small and medium-sized enterprises, which have always appeared particularly vulnerable in the face of crisis situations (Pencarelli et al., 2020). With the aim of investigating how Italian SMEs, and in particular those in the Marche region, conceive the crisis and how they manage it, a quantitative

survey was conducted based on the administration of a specific research questionnaire. The results show that only a small number of SMEs surveyed had never had to manage crisis situations. With respect to these, the year of foundation is quite heterogeneous; the oldest SME was founded in 1950, while the youngest SME was founded in 2019. From this it can be deduced that a company can operate for many years without necessarily encountering a crisis, although this does not make it immune to future crises. In this regard, the Crisis Management theory suggests conceiving the crisis as a normal event in corporate life, which will hit the company sooner or later (Bazzerla, 2018). Regarding the first phase of crisis management, the pre-crisis phase, the SMEs surveyed are still far from having developed a proactive attitude towards company crises. Although most companies state that they monitor the internal and external environment, the main tools used to carry out this activity focus mainly on monetary aspects, while crises can result from different causes (Paoloni, 2003; Pencarelli, 2013; Mayr et al., 2017). Concerning the crisis phase, on the other hand, the results obtained denote a rather positive attitude by the SMEs interviewed, especially as regards crisis communication, which, from what emerged, seems to play a fairly important role. Consistent with what is suggested in the literature (Coombs, 2007), the companies analysed are also used to organising meetings during the crisis period to become fully aware of the situation and to study the most appropriate strategies to be undertaken. On the contrary, few SMEs in the sample reported having prepared a crisis management plan and having set up a crisis management team, although these tools are considered essential (Barton, 2001; Coombs, 2007). With specific reference to the establishment of the crisis management team, SMEs point out that the management of possible crises is generally left to the entrepreneur alone. Finally, as regards the post-crisis phase, the level of preparedness of the SMEs surveyed can be considered positive overall; in fact, most of them recognise the importance of post-crisis learning. As pointed out by Folsom and Garrettson (2020), a careful assessment of the strengths and weaknesses of crisis management is crucial to better cope with possible future crises.

The study presents both academic and managerial implications. This paper contributes to enriching studies on this topic by deepening and investigating small and medium-sized companies, which represent an interesting setting of analysis for both academics and practitioners. It is crucial for owners and managers of SMEs to prevent business disruption and economic damage resulting from crisis situations. In this respect, the study offers some insights on how SMEs can effectively manage the different stages of crisis.

Among the other managerial implications, it would be particularly useful to involve heterogeneous tools in monitoring the internal and external environment, thus being able to consider both monetary and non-monetary aspects. Moreover, a crisis management plan could be crucial, as it allows for a disciplined and timely response to the crisis, thus greatly reducing the scale of its impact. Finally, a crisis management team could prove very helpful. Indeed, a proper crisis management process is particularly challenging to implement and doing it individually could be particularly difficult and time-consuming.

Lastly, some limitations are also present. The sample of companies surveyed is small and limited to the Marche region. In the future, it would be interesting to extend the research to a larger number of small and medium-sized enterprises, also involving those operating in other Italian regions. In this way it will be possible to make a comparison within the national context, identifying the needs of this category of companies to implement an adequate and effective crisis management.

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Russia-Ukraine invasion: a study on the geopolitical and energetic scenarios and the effects on the Italian SMEs

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Abstract

The war in Ukraine is having significant and dramatic consequences for both countries involved and worldwide in many aspects. The energy sector is one of the key areas affected by the conflict: leading directly and indirectly to widespread disruptions in gas supplies to the EU countries. Leaving aside that Ukraine is a relevant transit country for Russian gas to Europe, sanctions, bans, and the reaction of the Western countries influenced primarily the energy market causing instability and concerns about energy security. The crisis has highlighted a concept that is not new: the need for the European Union to reduce dependency levels on Russian gas by diversifying its energy sources and raw materials supply. The increase in energy prices has had an unfavourable impact on small and medium enterprises (SMEs). Therefore, this has led to a decrease in profits for Italian SMEs, caused by increasing production costs. Because of these events, it is possible to observe a higher business churn rate, pointing out that SMEs are suffering and struggling to remain competitive in their market. The impact of the conflict and the increased energy prices pushed the Italian SMEs to employ strategic cost management thinking to mitigate the risks and the damages, exploring alternative and green energy sources and implementing energy efficiency. With an interdisciplinary approach to the different fields of geopolitics and management, this study aims to provide a theoretical contribution by giving an overview of the political and economic situation and an insight into the market condition of Italian SMEs. In particular, using past EUROSTAT data concerning the cost of energy for non-household consumption, energy inflation rate, and business churn rate, the research provides estimates of data not yet published by EUROSTAT and shows the relationship between these variables, highlighting the statistical effect of the rise in electricity costs on the business churn rate, regarding Italian SMEs. The war in Ukraine is having significant and dramatic consequences for both countries involved and worldwide in many aspects. The energy sector is one of the key areas affected by the conflict: leading directly and indirectly to widespread disruptions in

gas supplies to the EU countries. Leaving aside that Ukraine is a relevant transit country for Russian gas to Europe, sanctions, bans, and the reaction of the Western countries influenced primarily the energy market causing instability and concerns about energy security. The crisis has highlighted a concept that is not new: the need for the European Union to reduce dependency levels on Russian gas by diversifying its energy sources and raw materials supply. The increase in energy prices has had an unfavourable impact on small and medium enterprises (SMEs). Therefore, this has led to a decrease in profits for Italian SMEs, caused by increasing production costs. Because of these events, it is possible to observe a higher business churn rate, pointing out that SMEs are suffering and struggling to remain competitive in their market. The impact of the conflict and the increased energy prices pushed the Italian SMEs to employ strategic cost management thinking to mitigate the risks and the damages, exploring alternative and green energy sources and implementing energy efficiency. With an interdisciplinary approach to the different fields of geopolitics and management, this study aims to provide a theoretical contribution by giving an overview of the political and economic situation and an insight into the market condition of Italian SMEs. In particular, using past EUROSTAT data concerning the cost of energy for non-household consumption, energy inflation rate, and business churn rate, the research provides estimates of data not yet published by EUROSTAT and shows the relationship between these variables, highlighting the statistical effect of the rise in electricity costs on the business churn rate, regarding Italian SMEs.

Keywords – Business Churn Rate, Strategic Cost Management, Energy Security, SMEs, Russia-Ukraine war

Paper type – Academic Research Paper

1 Introduction

The Russian invasion of Ukraine, which started on February 24th, 2022 with a vast military offensive, has brought several changes to the global scenario. Since that day, the world has lost its balance, experiencing a war in which there is no end in sight (ISW, 2023). While the world was going out from the COVID-19 crisis, after two difficult years for both countries and citizens, the conflict in Ukraine represents a new major crisis for the EU and the West in general. Indeed, this conflict involves closely and at different levels other actors, such as the EU, the US, NATO countries, China, and the Middle East (Dene, Labow, & Silber, 2022; Borrell, 2022; Ogunkeye, 2023).

Unlike the 2014 Russian annexation of Crimea (condemned by the West) which generated a wave of economic sanctions imposed on Russia, this conflict in Ukraine brought strong and determined stances on a broader political level. The Western reactions to the 2022 conflict have led to global political tension, direct actions at the policy level, unprecedented sanctions, and economic instability. Before the war and the wave of

sanctions imposed by the EU on the Kremlin, Russia was a major supplier of natural gas and oil, together with other goods. In addition to the sanctions, the European Union started a process of diversification on the acquisition of raw materials for energy production while increasing the utilization of renewable sources. Indeed, on the one hand, investing in renewable sources have positive repercussions in the long run, on the other hand, diversification in the import of raw materials to reduce dependency on Russia is needed in the short run. Both processes of diversification and investments in renewable sources are still ongoing (European Commission, 2022).

The EU countries are using different sources to produce energy; in 2020, nuclear energy was the 31% contributing source and 41% of energy production was from renewable sources (wind, solar, and hydro energy). Among the other sources, such as solid fuels and crude oil, natural gas represented 7% of energy production. For what concerns Italy, statistics on energy production differ from the EU average shown before. Italy is relying way more on natural gas and other fossil fuels than other European countries for its energy production. Indeed, about 40% of Italian energy production (International Energy Agency, 2023) is based on natural gas, with a higher dependency on imported raw materials, since domestic production is not sufficient. In general, taking into account the energy production source, there is a dependency relationship between Russia as a supplier of raw materials and some countries of the European Union as main buyers. This link between the EU and Russia is affected and affects a mutual bond the continental and global geopolitics.

As regards the relation between the main geopolitical trends and energetic contexts with the Italian economic situation, it has to be noticed that these circumstances had a strong impact on different macroeconomic aspects, such as GDP, inflation rate, and the import/export rate (Johnson, Hankins, & Carter, 2022; Banca D'Italia, 2023). Centering the analysis on the Italian stage, the SMEs Regional Report by Confindustria and Cerved (2022) showed that the moderate recovery registered in 2021, after the COVID-19 pandemic, slowed down in the first months of 2022. Although the global scenario keeps evolving, it is pivotal to highlight the consequences in the Italian economic system due to these occurrences: energy, agricultural, and metal prices grow, the supply chain for raw materials and other commodities was problematic, and the inflation rate touched very high levels. As a result of this, enterprises are facing a brake in production with a repercussion on their costs and revenues (Fontana, 2022; OECD, 2022; ISTAT, 2022). To deal with these difficulties, as already mentioned before, European Union decided to

implement a plan to decrease the energy dependence on Russian fossil fuels and move towards other suppliers, as well as other kinds of energy sources, such as renewable ones. This would provide an acceleration of European energetic independence, giving a boost to the green transition, and reducing prices over time (European Commission, 2022).

Due to the increasing relevance of the above-mentioned issues, it becomes meaningful to consider the survivability (or rather the competitiveness) of the Italian SMEs, in light of the current energy and raw materials supply crisis. This paper wants to investigate the condition of SMEs in Italy, considering the relationship between the business churn rate and the cost of the electricity rate for non-household consumption. Both data are provided by EUROSTAT, they define the “business churn” as the sum of business birth and death rate in a reference period (EUROSTAT, 2022). It is worthwhile to notice that the available figures for the business churn are up to the end of 2020 and the inflation electricity rate data is available until the first semester of 2022; for this reason, the study wants to provide the outcomes of the business churn rate, until the first semester of 2022 (Figure 1). This study aims to analyse the statistical effect of the rise in electricity costs on the business churn rate. Through this research, we want to shed a light on the importance of the European plans, in order to switch to renewable sources of energy and improve the awareness of the cost management of the enterprises.

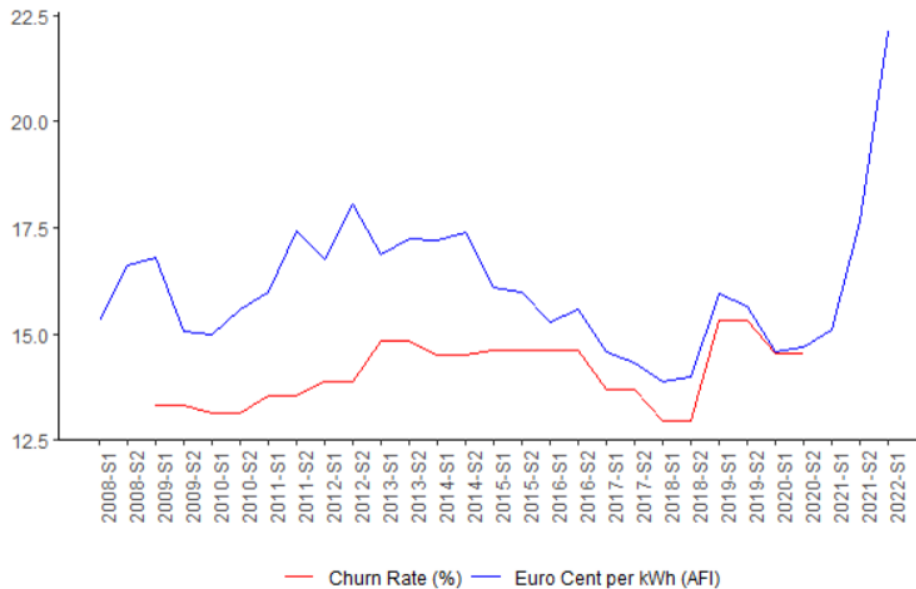
The reason for linking the theme of this paper with the literature dealing with strategic cost management lies in the fact that the current geopolitical situation has caused a sharp increase in prices, along with the increase in inflation, which can influence the decisions regarding the cost management of companies. As rising costs can pose a threat to the company's profitability, cost management becomes even more important to ensure that the company is able to generate sufficient profits and remain competitive in the marketplace (Cooper and Slagmulder, 1998). In this context, the role of strategic cost management becomes that of helping SMEs manage the impact of inflation on their costs.

The paper has the following structure: initially, it gives a background of the geopolitical situation, which negatively influenced the energy prices, and the strategic cost management literature, to be used as a guide by the entrepreneurs to deal with this matter. Further sections are dedicated to the quantitative analysis and its discussion. Implications, limitations, and suggestions for future studies are drawn at the end.

Figure 1: Observed values for business churn rate and electricity price by EUROSTAT.

2 Background

2.1 Geopolitical context and energy market implication



There is relevant concern about the consequences that the conflict is provoking under different aspects: world politics, economics, and energy management hang by a thread. The war at the borders of the European Union is an alarming scenario not seen since the Yugoslav Wars in the '90s. Despite the clear signs before the invasion, the world and, in particular, the Western countries were caught off guard. Without analysing in-depth the reasons, the events, and the development of the war, we focused this research on the European energy market. In 2022, the European Union's reaction to the conflict consisted of economic sanctions to weaken Russia and decrease any money flows, as a retaliation, Russia increased gas and petrol costs and reduces the supply directed to the EU, in some cases, even with a unilateral termination of the natural gas flows (European Council, 2022).

The different and multiple waves of sanctions that the EU imposed on Russia, the outcome of bans, and the restrictions on Russian export are affecting the European production of electricity. This depends on the nature of the raw materials that each Member State is using for producing electricity, which is, in most cases, related to the import from Russia. In brief, the European Union's electricity production utilises different

primary sources, such as solid fuels, natural gas, crude oil, nuclear energy, and renewable sources (such as hydro, wind, and solar energy). In 2020, the most widely spread source for electricity production was represented by renewable energy, with about 41% of the total EU production. 31 % of nuclear energy, 18% of solid fuels, 7% of natural gas, and 4% of oil follow renewable sources. It must be underlined that the energy production of each European Member State substantially differs from one another. In Malta, electricity is produced only using renewable energy sources, similar conditions for Portugal, Cyprus, and Latvia which rely on renewable for about 95% of their domestic electricity production. The situation is quite the opposite in other countries. France relies on nuclear energy for 75%, followed by Belgium and Slovakia with about 60%. Eastern European countries such as Poland, Estonia, and Czechia are still using mainly solid fuels. The use of natural gas for electricity production is widespread in the Netherlands, of which 63% is from natural gas. Denmark is relying mainly on crude oil (EUROSTAT, 2023).

According to the International Energy Agency (2023), Italy relied on natural gas for 45% of its total electricity production, currently representing the most utilised source, and it must be underlined that natural gas relevance for Italy is not only related to electricity costs, its impact on costs for businesses includes heating and production. At the same time, Italy's natural gas production is not enough large to satisfy the need. This caused a deep and rooted reliance on natural gas imported by foreign countries, in particular Russia and Algeria. This dependency is about 90% of the total natural gas consumption in the country (Energy Information Administration, 2023).

In the decades before the Russian invasion of Ukraine, the EU's trend of importing Russian natural gas was going constantly as European production decreased. The decreasing trend of domestic production within the EU has led to a growing import to fill the lack of products for domestic consumption. This, in turn, has brought the EU to an increasing energy dependency on Russia's fuels. In the period 2018-2021, Russia was supplying about 40% of the entire European consumption (European Commission, 2022), with an increasing concern for European energetic dependency (International Energy Agency, 2023). With the Versailles Declaration in March 2022, the European Union stated its willingness to gradually remove Russia as a supplier of fossil fuels (European Council, 2022). The Declaration underlined the need for a quick reduction of energetic dependency, together with the ambitious target of reaching climate neutrality by 2050. To do that, it will be necessary to reduce the general consumption of fossil fuels, taking into account the needs of the Member States. To substitute fossil fuels, the EU is promoting

diversification through new supply routes, the use of liquefied natural gas, and the development of biogas. The fundamental aspect of the Versailles Declaration is the push towards renewable energy, which is now seen as a strategically relevant energy source (European Council, 2022).

The Russia-Ukraine conflict has accelerated the change of route of the European Union in the energy market policies. This acceleration due to external factors and the necessity to re-set and adjust the policies of fuel imports with rapidity is bringing and will bring further changes in the energy market, with possible increasing instability. In a certain way, the advent of the strategic plan REPowerEU has been speeded up as a reaction to the emergency situation dictated by the conflict. This economic and strategic plan of energy security is based on three pillars: reduce energy consumption through efficiency, produce clean energy from renewable sources, and diversify the European energy supply. To achieve these ambitious targets, the EU funds up to 300 billion to support investment and policy structural interventions (European Commission, 2023)

The EU import of Russian gas was severely reduced going from 23% in 2022 to less than 10% in January 2023, at the same time, the EU countries “run for the cover” was effective and consisted in refilling their national storage, diversifying the gas sources, and reducing consumption (International Energy Agency, 2023). Within the European Union, the majority of natural gas is not self-produced, the member states imported 83% of the total natural gas in 2021 (European Council, 2023). Before the conflict, about half of all imported gas was from Russia, and the other half was divided among different supplier countries. The scenario completely changed in less than one year, in October 2022, Russia represents between 12% and 13% of all the gas imported, against 87% of all the other suppliers together (European Council, 2023). According to the US Energy Information Administration, the Russian export to the EU of natural gas through pipelines reached the lowest level in about 40 years (Energy Information Administration, 2022). In order to enhance diversification from Russia and end the dependency before 2030, the volume of LNG (liquefied natural gas) imported into the EU increased significantly (Natural Gas Intel, 2023; EUROSTAT, 2023). LNG tends to cost more than regular natural gas, due to its costs of transport, liquefaction processes, and related logistics (World Bank, 2022).

On the other side of the Western-Russia political tension, Russia’s export of oil and natural gas has not been paralysed by sanctions and bans. Russia re-routed the oil and gas sales to other buyers, especially in Asia, selling with lower prices and partially reducing

the impact on domestic production, keeping Russia among the biggest producers worldwide (International Energy Agency, 2023).

It must be underlined that not only the war in Ukraine had repercussions on the market and prices. The consequences of the COVID-19 pandemic were still affecting the gas and energy market with prices fluctuating when the conflict broke out (International Gas Union, 2022). Prices fluctuation and market volatility increased even more with the beginning of the conflict with consequences not only in the energy market (International Energy Agency, 2023). Indeed, prices of different commodities usually exported by Ukraine and Russia increased sharply worldwide, if compared to January 2022: for instance, coal prices increased on average by 69.31%, wheat by 60.14%, oil by 29.11%, and natural gas by 26.59% in the EU and 54.55% in the U.S. (Statista, 2023).

To sum up, from a strategic perspective, the EU and Italy built a strong diversification-oriented policy, which aim is to reduce the dependency on the foreign supplier in the years to come and at the same time reshape the European energy ecosystem in terms of sustainability. However, since the conflict pushed policymakers to quickly react to political needs, they had to face difficulties in long-term planning. This sudden and rapid separation from Russia as the main supplier, together with economic sanctions on import and export, from and to Russia, has been one of the causes of energy market instability. Analogously, market instability is one of the reasons that contributed to the increasing costs of electricity for the final consumer, including small and medium businesses.

2.2 The importance of strategic cost management

Examining the Italian business environment in 2022, there were 4.4 million enterprises, whose 99.91% were given by micro, small, and medium enterprises. The around 206,000 Italian SMEs are responsible for 41% of the entire turnover generated in the country, 33% of all employees in the sector private sector, and 38% of the country's added value (Osservatorio Innovazione Digitale delle PMI, 2022). These numbers explain why it is important to focus attention on these kinds of companies, looking at their similarities and dissimilarities. In general, each company is characterized by specific traits, such as the strategy, goals, mission, vision, targets, the way they reach the best performances and competitive advantages, and the relationship between strategy, resources, and costs management (Anderson, 2006; Baroto, Abdullah, & Wan, 2012; Johnson, Whittington, Scholes, Angwin, & Regnér, 2017; Grant, 2021). This literature

paragraph wants to accent the relevance that strategic cost management has for business success.

To have a better comprehension of the matter, it is necessary to know the meaning and become familiar with the costs terminology. "Cost is the cash or cash equivalent value sacrificed for goods and services. [...] As costs are used up in the production of revenues, they are said to expire. Expired costs are called expenses. In each period, expenses are deducted from revenues on the income statement to determine the period's profit. A loss is a cost that expires without producing any revenue benefit. [...] Many costs do not expire in a given period. These unexpired costs are classified as assets and appear on the balance sheet. [...] Cost accounting information systems are structured to measure and assign costs to cost objects. Cost objects can be anything for which costs are measured and assigned; they may include products, customers, departments, projects, activities, and so on" (Hansen, Mowen, & Heitger, 2021: 40-41). In addition to this, it is interesting to know how cost behaves in relation to the level of output. Cost behaviour depends on the kind of costs implied (fixed, variable, or mixed) for flexible or committed resources, it can be also influenced by external factors. On the one hand, flexible resources are supplied as used and needed, acquired from external sources, they usually have variable costs, since resource costs rise along with demand. On the other hand, the committed ones are supplied in advance of usage and they usually have fixed costs. Economically speaking, the cost behaviour can be expressed as a continuous function (linear or non-linear) or as a step function (Hansen, Mowen, & Heitger, 2021). An example of a flexible resource is energy power, as an output it can be measured in kilowatt-hours, it has a flexible cost, and when its demand increases, its cost increases as well.

Many scholars (Shank, 1989; Shank & Govindarajan, 1993; Cooper & Slagmulder, 1998; Silvi & Cuganesan, 2006; Kumar & Nagpal, 2011; Apak, Erol, Elagöz, & Atmaca, 2012) agree that a firm has to deal not only with the costs analysis but also with the optimization of the costs for better value creation, performance, and revenue. Indeed, strategic cost management is a broader concept that uses cost data to develop and implement strategies to gain sustainable competitive advantage (Shank and Govindarajan, 1993). Cooper and Slagmulder (1998:14) define strategic cost management as "the application of cost management techniques so that they simultaneously improve the strategic position of a firm and reduce costs". Instead, Shank and Govindarajan (1993:6) define it as "the managerial use of cost information explicitly directed at one or more of the four stages of strategic management: (1) Formulating strategies, (2) communicating

those strategies throughout the organization, (3) developing and carrying out tactics to implement the strategies, and (4) developing and implementing controls to monitor the success of objectives".

According to Silvi and Cuganesan (2006), the strategic cost management perspective considers three key factors, useful to provide information and guidance to the company: value chain analysis, value creation analysis (or strategic positioning analysis), and cost driver analysis. The value chain analysis aims to find out the overall value produced by an industry or network of businesses and how value is divided among the numerous actors who participate in its production. The result of the analysis is to determine the phases that produce the best return within the value system, toward which address the financial resources. Value creation analysis determines the value (and the costs) of the activities carried out by the enterprise. It connects cost management with the strategy pursued by the company (Shank, 1989). "Making visible the level of alignment between activity costs and the value generated enables the commencement of actions to emphasize value-added activities, make non-value added but required activities more efficient and eliminate waste" (Silvi & Cuganesan, 2006: 313). Lastly, cost driver analysis helps identify the factors and activities that are causes of cost occurrence. Some factors are strictly tied to the strategic choices of the firm, such as the scale of the investments and R&D activities, scope, and technologies implied. Furthermore, the company's costs also include the execution ones, which are the costs needed for workforce involvement, capacity utilization, plant layout, product configuration, and relationships with customers and suppliers.

It is worthwhile to notice that, despite the relevance of this framework, there is no unique definition of it in literature, this does not make it uniquely interpretable (Kumar & Nagpal, 2011). However, the broad application and development of strategic cost management are the strengths of this framework. Kumar and Nagpal (2011) criticized the framework of traditional cost management, because its primary concern was only the costs, while strategic cost management considers also revenues, productivity, and customer satisfaction, as well as the strategic position of the company. Strategic cost management "is not confined to the continuous reduction of costs and controlling of costs and it is far more concerned with management's use of cost information for decision-making" (Kumar & Nagpal, 2011:128).

The strategic cost management literature is tied up to this research topic because it shows the relevance of considering the costs in the narrow frame of strategy. Although the

inflationary environment, good strategic cost management can help the company mitigate risk and maintain profitability. Some practical applications may consider cost-cutting methods, such as optimising manufacturing processes, minimising waste, and negotiating long-term contracts with suppliers to lock in costs. Therefore, the enterprise may strive to increase its cost flexibility, such as by using a variable cost model rather than a fixed cost model, in order to minimise expenses in response to market swings. Lastly, dynamic pricing techniques, which allow product or service prices to be altered in response to inflation and cost fluctuations, can be implemented.

At the current moment, small and medium enterprises are dealing with sharp cost fluctuations that can negatively affect the balance between expenses and revenues. For this reason, this framework wants to provide some reference points on which the enterprise can develop its strategy, optimizing expenses and opportunities, in order to face the difficulties caused by the above-mentioned events, improving profitability and competitive advantage. “It is not sufficient to simply reduce costs; instead, costs must be managed strategically (Cooper and Slagmulder, 1998:14).

3 Methodology

This is a quantitative study, which aims at investigating the statistical relationship between the business churn rate and the electricity price by means of the autoregressive distributed lag model (ARDL). First, an assessment of the geopolitical conditions was made in light of the Russia-Ukraine conflict. Subsequently, research was done in EUROSTAT to identify which categories were more interesting to study and which variables influenced the business of small and medium-sized enterprises. The downloaded datasets regard the electricity prices for non-household consumers, the business demography, and the HICP, the Harmonised Index of Consumer Prices. Finally, the data was adjusted and analysed using the R studio software. The electricity price is observed on a half-yearly basis in nominal Euro/kWh. We adjust this for inflation using the 2015 base and convert it to cent/kWh. The churn rate is observed directly on a yearly basis and matched to electricity prices. In a preliminary moment, also ISTAT statistics were checked, but the data did not meet our research needs; for this reason, we have decided to use data only from the EUROSTAT website.

4 Results

Let y and x denote the yearly churn rate and inflation-adjusted electricity price in cent/kWh, respectively. We investigate the statistical relationship between the churn rate and the electricity price by means of the autoregressive distributed lag model (ARDL),

$$y_t = \beta_0 + \beta_1 x_t + \beta_2 x_{t-1} + \dots + \beta_p x_{t-p} + \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + \dots + \alpha_q y_{t-q} + u_t$$

We obtain data on y and x by combining different statistics from EUROSTAT.

In order to identify the best-fitting model we estimate the ARDL model with different values of p and q , starting from the simplest model $p = 0, q = 1$ and iteratively increasing the values until the added terms are not statistically significant. It turns out that no additional terms beyond the simplest model are significant at any conventional level of significance. This model also performs best in terms of goodness-of-fit. Table 1 reports the AIC, BIC, and adjusted R^2 for the first four models. The specification $p = 0, q = 1$ outperforms the larger models with respect to all three statistics (while we do not report it, the simplest model outperforms also the even larger models). Thus, the model we consider is:

$$y_t = \beta_0 + \beta_1 x_t + \alpha_1 y_{t-1} + u_t$$

Table 1: Information criteria to define the goodness of the fitness of the model

Model	df	AIC	BIC	Adj. R-sqr
$p = 0, q = 1$	20	42.387	46.929	0.448
$p = 1, q = 1$	19	43.400	49.077	0.443
$p = 0, q = 2$	18	43.395	48.850	0.393
$p = 1, q = 2$	17	44.773	51.319	0.375

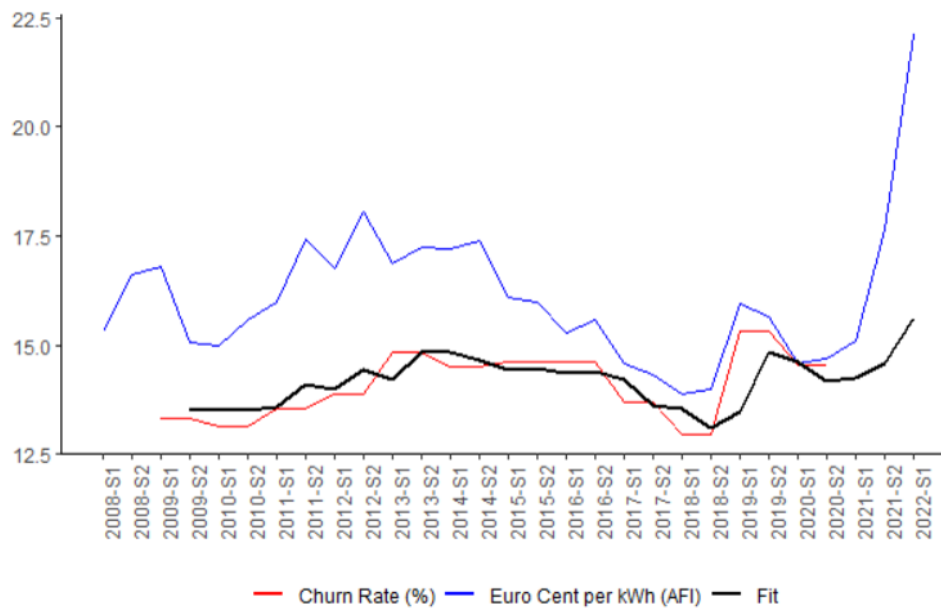
The F -test of overall significance allows us to reject the hypothesis of zero significant regressors ($p < 0.01$) in the ARDL ($p = 0, q = 1$) model. As shown in Table 2, an increase in electricity prices by one cent/kWh is associated with an economically significant 0.19 percentage-point increase in the churn rate in the same year. This corresponds to 25% of the standard deviation of the business' churn rate in the period under consideration (0.74%), and 8% of the range (minimum: 12.95%; maximum: 15.30%).

Table 2: Statistics from the ARDL model

Coefficient	Point estimate	S.E.	<i>p</i> -value
β_1	0.18714	0.09845	0.07182
α_1	0.59338	0.15688	0.00117

Figure 2 plots the fitted and observed values. We can see that the model predicts the true churn rate best when there is a marked vertical distance between the lines of the observed series (which is expected since this is the case for most of the period under consideration). The fitted values in the final three periods (2021-S1, 2021-S2 and 2022-S1) are Monte Carlo predictions using the normal distribution.

Figure 2: Plot of the fitted and observed values



5 Discussion

The background on the current geopolitical situation and the examined data show that the Russia-Ukraine conflict is causing consequences worldwide on different levels, from political instability to a proper humanitarian crisis. Focusing the attention on the economic impacts, the months of 2022 were characterized by a sharp increase in prices, in

particular of natural fuels, energy, and raw materials with repercussions on the import/export of products from Eastern Europe and inconvenience or delays in the distribution and supply chain.

“Energy prices have hit all-time highs in 2022, especially as a consequence of Russia’s invasion of Ukraine and its use of gas supplies. The wholesale price of electricity in the EU’s internal market is directly linked to the price of gas – which is mostly imported. The deliberate reduction of gas supplies by Russia is the main cause of the recent skyrocketing gas prices in the EU, which have impacted the price of electricity produced in gas-fired power plants and affected electricity prices overall. The price of energy is expected to continue to remain high in the EU in the coming months, as it takes time to replace Russian gas supplies with supplies from EU sources. EU countries have therefore adopted an emergency regulation to address high energy prices and help citizens and businesses that are most affected by the energy crisis” (European Council, 2023). How are the Italian SMEs dealing with this energy price increase? Due to the short amount of time since the beginning of the conflict and its consequences, it is early to have EUROSTAT official data to analyse. However, the published data gave us the chance to have an idea of the scenario.

The analysis demonstrates that the increase in electricity costs has a serious impact on Italian enterprises. As the business churn rate is a good indicator of company turnover, it follows that it is likely that the rise in electricity prices has had a severe impact on businesses ability to survive. The more inflation increases, the more the effects are amplified to the businesses, in terms of direct and indirect costs to sustain, and consequences in the consumer and market demand too (Brueckner, O’Reilly, Falk, Castagnino, & Tomsovic, 2022). The Italian business churn rate is confirmed by the ISTAT (2022), which reports data up to the second quarter of 2022 about new business registrations and bankruptcy. The originality of this study is to consider the statistical association of the inflation rate and consider the churn rate as an overall figure since it takes into consideration the birth of new enterprises and companies that have closed for various reasons and not just those that have gone bankrupt. Taking a market perspective, it provides an interesting viewpoint to evaluate the changes in the network of the firms, as well as in the composition of the market.

The “so what?” of the study is to increase awareness of the difficulties that businesses are experiencing. Efficient strategic cost management can help enterprises in handling long-run strategies to minimize threats. Without any doubt, the European plans and

incentives to switch to sustainable energy are having a boost. Based on their needs, resources, and assets availability, Italian SMEs should take into consideration moving to green power. The benefits would be various and in line with both Agenda 2030 and the EU Green Deal (European Commission, 2023). The green transition would bring advantages in terms of cutting down bills, reduction of greenhouse gas emissions, improvement of air quality, conservation of natural resources, creating new jobs, technological innovation, sustainable economic growth, and improvement of people's health and well-being.

The study supports that costs are dependent on external factors and actors, and sustainable development is fast proceeding because of the increase in the cost of fossil fuels and energetic dependency, as well as an increase in awareness on the matter. However, it could be criticised that if the RePowerEU plan does not devote funds and its attention to SMEs to defray costs, many companies will face the risk of being forced out of business.

6 Implication and limitations

This study wants to offer an overview of geopolitical and economic topics, as well as some considerations on the current SMEs' critical situation, due to the increase in costs of raw materials, natural resources, and electricity. The contribution is twofold. The analysis is relevant at the entrepreneurial level for SMEs that struggle for balancing costs and revenues, and the ones that are thinking of undertaking the path toward the green transition. Thanks to its focus on a policy level, the research proposes itself as an informative tool for policymakers, so that they can understand the issues to support SMEs that cope with rising costs and achieve a green transition. Indeed, taking into consideration the analysis of this study may improve public policies and business practises.

The findings of this study have to be seen in the light of some limitations. Firstly, the ongoing geopolitical situation, which keeps changing, and the consequences that it can cause to the economic condition. The study does some "prediction" of data in a period that is already passed. It was possible to extend the period taken into consideration, but the results would have been highly inaccurate, so for this reason, the study limited itself to predicting the relationship up to the first half of 2022. For the entire analysis, we have used only EUROSTAT figures. The limit is given by the release time of the data: the last

figures of the business churn rate are up to 2020, while the inflation of electricity prices is up to the first semester of 2022. However, this limitation is also the strength of this paper, as it gave the chance to do some predictions of the possible trends that have to be published. Another limitation is given by the measurement of the business churn rate. Even though ISTAT provided already the numbers related to new business registrations and bankruptcy for the whole of 2022, these figures are considered split and measured in units. On the contrary, EUROSTAT provides an overall figure which is the sum of the birth and death business measured in percentages. Moreover, the death rate taken into account does not consider only bankruptcy, but also other factors in a broader way. In the study, it was preferred to pay attention to the data that offered more complexity, even if less recent.

7 Conclusions

The study had an interdisciplinary approach with an interest in geopolitics and management. In particular, we examined the context after the outbreak of the Russia – Ukraine conflict, and its worldwide consequences. Literature on strategic cost management has been described to provide strategic support and give insights into how costs could be managed by firms and how they should consider them to seek value. Data provided by EUROSTAT on business churn rate and electricity inflation rate were analysed to identify their relationship, making some predictions of the data that will be published. Based on the analysis, some considerations about the relevance of the topic and its implications have been drawn.

Future studies need to be carried out in order to validate the relationship analysed in this paper. In addition, further researches on business green transition are an essential next step in confirming the efficiency and the application of the RePowerEu plan. Furthermore, more information on the business churn rate would help to establish a greater degree of accuracy on this matter, identifying the reasons for the business death rate and studying its relationship with market internal and external factors. Lastly, in light of the geopolitical context, this study could be repeated by analysing the trends of other countries and the way the market reacted.

In conclusion, the war in Ukraine put under the spotlight European energy independence as a fundamental strategic necessity for the domestic economic stability of the European Union. To reach this independence it is pivotal and essential to act on a

double policy level increasing the diversification of energetic sources and improving a greater use of renewable sources, under the strategic guidance of the EU. Consequently, it is possible to expect in the next months and years additional steps ahead in terms of European policies that will target these aspects.

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Financing innovative SMEs: has any progress been made?

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Abstract

This study aims to present a comprehensive literature review on the topic of innovative small and medium enterprises (SMEs) access to finance.

Innovative small and medium-sized enterprises have peculiarities that are reflected in their choices about sources of financing, so that main traditional theories on financial structure of firms are often not applicable. The so-called alternative finance can mitigate these difficulties, just as the intervention of operators specialized in the financing of such enterprises can facilitate the raising of capital.

The aim of this article is to conduct an in-depth examination of the main theories related to the problems of innovative firms' financing and to propose future directions for research advancement. In particular, the focus is on the most recent literature, in the period 2012-2022. We use a systematic literature review approach; it is a type of research synthesis that can be used to create an overview of the state of the art of research on a specific topic (Dewey, A. & Drahota, A. 2016). The results of our analysis highlight the persistence of the main constraints traditionally consolidated by the literature with respect to access to finance for innovative firms, even if some elements, such as firm's commitment to sustainability, could partly mitigate these difficulties. Moreover, a regulatory environment that encourages investment in innovative companies is undoubtedly favourable.

The value of our paper can be traced in the systematization of the most recent literature on innovative firms financing.

Keywords – innovative firms financing, financial constraints, systematic literature review.

Paper type – Academic Research Paper

1 Introduction

Innovative firms are a crucial resource for the development of modern industrial economies: the liveliness and performance of these companies strongly affect the innovative capacity and competitiveness of the economic system (Nadotti, 2014). The birth and survival of these companies is influenced by many factors that can be summarized in the two main themes of the knowledge gap and the funding gap. In particular, some characteristics of innovative firms, such as information asymmetries, under-collateralization and the high costs related to the estimate of their creditworthiness, can become strong impediments to the provision of capital, with impacts on the financial structure and profitability of these companies. These aspects are particularly stressed in countries whose economy is typically characterized by small and medium-sized enterprises. The ability of companies to innovate can become a critical factor for success, able to facilitate the development of the business; however issues related to innovation financing, including the difficulty of attributing a reliable value to innovation itself, can be amplified by the size of the company, and small and medium-sized innovative companies can heavily suffer from raising capital, with a potential brake on the development of the company.

Problems related to the financing of innovative companies should be mitigated by specific regulatory measures aimed at favouring investments in these companies; moreover, firms could adopt managerial approaches that can facilitate lenders' confidence in their business, for example, they could engage on sustainability-related issues to improve their risk profile; companies could also seek for innovative forms of financing, for which access may be less difficult than for traditional ones.

With this in mind, an exploratory analysis was conducted, using a systematic literature review, to respond the following research question: (RQ1) *Have emerged over time factors that can facilitate the financing of innovative small and medium-sized enterprises?*

The remainder of the paper is structured as follows. The second section presents the theoretical background of our investigation; the third section describes the research methodology; the fourth paragraph presents the research findings, while the last section is for conclusions, implications and limits of the research.

2 Theoretical background

The literature on the topic is robust and it can be addressed into the most relevant theoretical frameworks that explain the financial structure of SMEs: the pecking order theory (Myers and Majluf, 1984); the trade-off theory (Jensen and Meckling, 1976; Myers, 1977; Jensen, 1986); the market timing theory (Baker and Wurgler, 2002). For innovative firms, the results of these main theories are compromised by some substantial elements (Berger and Udell, 1998): innovative companies have a financial need and a level of risk that depends on the degree of development of the project; the screening and monitoring activities are difficult, due to the high level of agency costs and the degree of information opacity of these companies (Huyghebaert and Van de Gucht, 2007; Hall and Lerner, 2010); innovative firms are often not able to provide adequate guarantees to the loan (under-collateralization), because they are mostly made up of intangible and/or highly firm specific assets. These constraints mean that access to traditional sources of financing is difficult for innovative companies and therefore the financing of innovation could represent a serious and real obstacle for them. Berger and Udell (1998) re-proposed the pecking order theory for this type of company, referring to their financial growth cycle: the traditional hierarchy of funding sources is modified not only according to the company size, but also for the degree of development of the project, to which different levels of information opacity and financial requirements correspond. For these companies, therefore, the traditional hierarchy is reversed. Following the financial growth cycle theory, a more recent literature on innovative SMEs' financing has been developed (Zoppa and McMahon, 2002; Sogorb-Mira and Lopez Gracia, 2008; Hogan and Hutson, 2005; Hall and Lerner, 2010; Kuniy et al., 2010; Abraham and Schmukler, 2018). The results they achieve are not unequivocal: differences are mainly attributable to the type of innovation (product, process; incremental, disruptive; Cainelli et al., 2004; Koellinger, 2008; Czarnitzki and Hottenrott, 2010); to the business sector and firm market share (Schock, 2013; Mac an Bhaird and Lynn, 2015); to the attitude for innovation of the macroeconomic context (Arnone et al. 2015; Wilson 2015). Moreover, recently the literature is enriched with contributions that analyze the role of alternative financing instruments (Cusmano and Thompson, 2018; Vannoni, 2020; Bertoni et al., 2022; Bisht et al., 2022) and the firm's commitment to sustainability in reducing these financial constraints (Bartolacci et al., 2020; Pu et al., 2021; Tirumala and Tiwari, 2022). Our work

is part of this theoretical frame, proposing a critical synthesis of the main results of these studies.

3 Research methodology

We use a systematic literature review approach; it is a type of research synthesis that can be used to create an overview of the state of the art of research on a specific topic (Dewey, A. & Drahota, A. 2016). The systematic review should follow a clearly defined protocol or plan, where the criteria is clearly stated before the review is conducted. Our analysis is performed using Business Source Complete as research database. We selected only academic papers published in the period 2012-2022, in journals with a peer reviewed evaluation process, with full text available, in english, searching in the title for the following text-strings: “Innovative firms financing” or “Innovative and sustainable firms financing” or “Alternative finance for innovative firms”. We found 79 papers fulfilling these specifications.

4 Results

We first present the pathway that leads us to the final group of articles analyzed to answer our research question. Figure no.1 shows our first results.

Figure 1: Results about first step of systematic review

<i>Text strings</i>	<i>No. articles</i>
Innovative firms financing	18
Innovative and sustainable firms financing	35
Alternative finance for innovative firms	26
Total	79

Source: author’s elaboration.

We then refined the search, eliminating duplications, i.e. articles that appeared in more than one of the text strings (for example, eliminating overlaps between “Innovative firms financing” and “Innovative and sustainable firms financing”), obtaining the new results as in Figure no. 2. We kept the article in the category (text string) that was closest to the topic, among the alternatives, thorough an in-depht examination of the papers; on the other hand, we eliminated it from the less similar category.

Figure 2: Results about second step of systematic review

<i>Text string</i>	<i>No. articles</i>
Innovative firms financing	14
Innovative and sustainable firms financing	35
Alternative finance for innovative firms	20
Total	69

Source: author's elaboration.

Finally, we excluded articles dealing with topics related but not strictly adhering to our research objective. Figure no. 3 shows the final results. The group of analyzed articles consists of 39 items.

Figure 3: Final results of systematic review

<i>Text string</i>	<i>No. articles</i>
Innovative firms financing	7
Innovative and sustainable firms financing	21
Alternative finance for innovative firms	11
Total	39

Source: author's elaboration.

Figure no.4 presents results according to year of publication of the articles.

Figure 4: Articles per year.

<i>Year/text string</i>	<i>Innovative firms financing</i>	<i>Innovative and sustainable firms financing</i>	<i>Alternative finance for innovative firms</i>
2012	1	-	-
2013	1	-	-
2014	1	-	-
2015	-	-	-
2016	-	1	-
2017	1	1	-
2018	1	6	1
2019	1	3	1
2020	-	4	-
2021	1	3	4
2022	-	3	5
Total	7	21	11

Source: author's elaboration.

The text string with the highest number of contributions is that one for “Innovative and sustainable firms financing”: however, reading the full articles in this category (21), we found that innovation is investigated almost exclusively as a driver of sustainability, while the links between innovation-sustainability-access to finance are not stressed. Moreover, literature is rich in contributions on alternative finance, but this topic is not yet addressed by many studies in relation to the specific theme of innovative companies' financing.

With reference to each text-thematic string, we then analyzed the contributions identifying the specific topic of the articles. It was possible to categorize the papers in the following two areas of focus: financial instrument; financial constraints; moreover, we underlined if there is a sectoral focus and/or a geographical focus in the articles. Among the articles included in the category “Alternative finance for innovative firms”, the prevailing thematic motif is that one of the financial instrument; about the other two thematic areas, the distribution about “financial instrument” and “financial constraints” is almost similar; 46.2% of the articles has a sectoral focus; 20.5% of the papers presents a geographical focus.

Figure no. 5 presents results according to this classification.

Figure 5: Articles per focus area.

<i>Text string</i>	<i>No. articles</i>	<i>Financial instrument</i>	<i>Financial constraints</i>	<i>Sectoral focus</i>	<i>Geographical focus</i>
Innovative firms financing	7	4	3	3	2
Innovative and sustainable firms financing	21	13	8	10	6
Alternative finance for innovative firms	11	9	2	5	-
Total	39				

Source: author's elaboration.

The review of the literature shows, first of all, the reference with some issues traditionally linked to the financing of innovative companies; access to finance for knowledge-based firms seems to be strongly influenced by some structural elements such as: degree of development of the economic and financial reference context; information

availability, quality and disclosure about firms; size of financial needs of companies. According to the first element, the orientation of the financial system through intermediaries or market can be relevant: in market-oriented systems, for example, companies are pursuing the medium-long term goal to become public company and this attitude creates a particularly strong link between banks and enterprises, which goes beyond the lending relationship, with intermediary becoming a company partner. The structure of the financial market also affects the ways in which funding for innovative enterprises takes place: in well-developed stock markets, for example, we observe high capital inflows, per unit amount, and by number of interventions, from institutional investors in venture capital (Principi, 2012). The entry of an institutional investor in the capital structure of an innovative company is a good thing because, in addition to increasing the company's financial resources through the contribution of new capital, it enables the firm to a series of other related benefits: venture capital actively participates in the management of the company, with a qualified managerial experience that often is a decisive element for the success of high-tech enterprises; furthermore, it helps to strengthen the credibility of the firm, reducing moral hazard risk. The venture capital industry is more developed in the financial markets where the exit is less complex, mainly occurring through public offerings. The access to the capital market is possible when companies achieve the minimum compulsory requirements (capitalization, disclosure) provided by the stock exchange regulations. Moreover, substantial financial resources are needed to cover the costs related to comply with the technical and legal requirements imposed by stock exchange's regulations. To encourage listing by smaller companies, the financial markets have in many cases provided for specific requirements and dedicated trading segments to small and medium enterprises, with less burdensome obligations for companies.

The highly innovative content of their activities implies a greater opacity and informational asymmetry that make this company less attractive to external sources of financing. There is a clear relationship between the degree of innovation and financial constraint in new businesses: the greater the degree of innovation of the enterprise, the greater the perception and the degree of risk for third-party lenders. According to this evidence, Quintiliani (2013) reports the negative correlation between debt financing and the degree of innovation of the company (estimated as the relevance of investments in R&D activities). The evolution of the studies on this issue has helped to consolidate the idea that institutions and financial markets play an irreplaceable role in economic

development, especially when, as happens in modern economies, factors that generate these processes arise from so-called “intangible assets”, such as research, knowledge and attitude to innovation, which interact intensively with other elements that influence the behaviour of economic actors, such as the risks and uncertainty of economic results.

In an economic system in which the role of banks is prevalent, access to loans by innovative companies can also be influenced by the particular credit policies of the intermediary; the relationship banking model can mitigate these problems (Cosci et al., 2016). The relationship between lenders and borrowers affects allocative efficiency and, consequently, the financial system contribution to innovation; in fact, the conditions of credit access may be significantly different due to the parties' ability to relate in terms of quality of the exchanged information, the flexibility of the relationship and the ability to cooperate not only in the financial management of enterprises, but also in other aspects of management in a broader sense. Relationships based on cultural relationship-oriented models, therefore, involve a greater ease of access to bank financing, even for the apparently more risky firms (Nadotti, 2014). Moreover, the intensification of that relationship tends to reduce the use of collateral, particularly expensive for this type of firms. This evidence makes it clear that if the orientation on transaction lending is more pronounced, innovative firms could experience greater credit; conversely approaches oriented to emphasize the relationships, valuing the company as a whole and trying to highlight its future potential, can assess a convenience in allocating part of their resources in financing innovative firms.

Alternative financing instruments, for example crowdfunding, can provide finance for innovative companies (Giudici and Guerini, 2014; Vannoni, 2020); opportunities may also be found in the impact investing industry (Pinelli and Torluccio, 2021). The use of these tools presupposes, however, a good level of financial literacy in firms: financial literacy also serves to make small business familiar about availability of various financing options and support services (Anshika and Singla, 2022).

4 Conclusions

The financial variable is a decisive driver for innovation: the lack of resources to invest to create an enabling environment for competitiveness and development is, perhaps, the most binding limitation to the growth of modern economic systems, so it is

essential to identify the most effective tools to avoid losing competitiveness and to offer these businesses the financial support they need.

The level of financial sector development can be considered a good indicator of the growth of an economic system, especially when it contributes regularly to provide funds useful for the development of investments in the industrial sector and, in particular, when it selects the activities characterized by the highest rate of innovation and change in productive assets.

Informational asymmetry and moral hazard problems still act as relevant obstacles for innovative firms financing (Diaconu, 2016). Public and government incentives can help to bridge the funding gap by innovative firms. In the particular case of innovative enterprises, the uncertainty about expected outcomes is a major obstacle to the funding: as we said before, the peculiarities of this type of enterprise, information asymmetry, under-collateralization and high costs associated with their risk assessment, have often been impeding factors for access to bank financing.

Most of the economic literature share the idea that the most suitable innovation funding instrument is the venture capital; however, currently, innovative tools, using fintech models are also growing, representing an alternative channel to collect capital by firms.

To answer our research question “(RQ1) Have emerged over time factors that can facilitate the financing of innovative small and medium-sized enterprises? “, we have compiled a systematic review of the literature, from which the following main results emerge: most of the articles fit into the thematic area “Innovative and sustainable firms financing”; among the articles included in the category “Alternative finance for innovative firms”, the prevailing thematic motif is that one of the financial instrument; the distribution about “financial instrument” and “financial constraints” is almost similar for the other two thematic areas (“Innovative firms financing” and “Innovative and sustainable firms financing”); 46.2% of the articles has a sectoral focus; 20.5% of the papers presents a geographical focus.

The analysis of the most recent literature on the financing of innovative companies does not seem to be freed from the consolidated evidence with respect to the factors that hinder access to finance for innovative companies, with financial constraints even stronger in the case of small and medium enterprises. Some original elements are, instead traceable in attempts to identify factors that can mitigate financial constraints, improving the reputation and creditworthiness of firms, for example its commitment to sustainability

issues and financial literacy of entrepreneurs. However, these analyses are still not in an advanced stage, so there is a lack of robust evidence. In addition, in many articles, the research concerns case studies for singular economic sectors.

Our article gives a contribution to the existing literature about the financing of innovative companies as it proposes an in-depth analysis of the most recent contributions on the topic (period 2012-2022). To further deepen the research, the next step could be to compare these evidences with the contributions, in the same period of investigation, about the financing of non-innovative small and medium-sized enterprises, in order to highlight more precisely the differences in access to finance among firms.

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Entrepreneurship & Networks: A Literature Review

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Abstract

In recent years within entrepreneurship literature a “contextualised” perspective has emerged to place emphasis on the wide variety of contexts where entrepreneurial processes are undertaken. This led to a more complex view attempting to provide an additional and complementary perspective to “mainstream” contributions based on the analysis of entrepreneurial orientation and behaviour mainly in terms of opportunity recognition and exploitation. This attention to understanding the role of contexts has been due to the increasing effort in diffusing entrepreneurial culture and activities across sectors, regions and cities for economic development and social cohesion. This effort has been apparent with regard to the so-called *peripheral areas*, which have been strongly affected by reduction of economic activities.

In this scenario the role of networks emerges progressively in research dealing with entrepreneurship, both considered as an engine to entrepreneurial initiatives and development and as a specific context in which entrepreneurship takes place.

In this paper we conduct a literature review on the topic of “Networks & Entrepreneurship” with a particular focus on the “spatial/geographical” dimension. The

research is at its initial stage and will constitute the basis for settling the state of the art on the issue to elaborate further on the interplay between Networks and Entrepreneurship in Peripheral Areas.

Keywords – Entrepreneurship, Contexts, Networks, Place, Peripheral Areas

Paper type – Literature review paper

1 Introduction

Entrepreneurship is recognized as an engine of economic growth and development. The enhancement of entrepreneurial processes within economies are at the centre of policy actions at the local, national and European level, especially in periods of crisis and uncertainty as those faced in the last years (Sharma et al., 2022; Vatavu et al., 2022). In this vein scholars have been increasingly interested in investigating entrepreneurship as a complex phenomenon and using different perspectives and approaches for different purposes.

Notably, in recent years within entrepreneurship studies a “contextualised” perspective has emerged (Welter et al., 2019). The emphasis has been placed on the wide variety of contexts where entrepreneurial processes are undertaken, leading to a more complex view attempting to provide an additional and complementary view to “mainstream” contributions based on the analysis of entrepreneurial orientation and behaviour mainly in terms of opportunity recognition and exploitation. This effort has led to consider other disciplines and research methodologies (Welter & Baker, 2021). The variety of contexts might imply a variety of entrepreneurial forms and processes, which might show unconventional features (Guercini & Cova, 2018). The need to better understand the role of contexts has been due to the increasing effort – also in terms of policy making – in diffusing entrepreneurial culture and activities across sectors, regions and cities, thus promoting both economic development and social cohesion (OECD, 2021). This effort has been apparent with regard to the so-called peripheral areas, which have been strongly affected by reduction of economic activities and by the weakening of the social fabric (Pugh & Dubois, 2021).

An increasing number of contributions have attempted to analyse the role of contexts adopting a “networked” perspective, thus placing attention on the web of exchanges and relationships where entrepreneurial initiatives are embedded (Wigren-Kristoferson et al.,

2022). This stream of studies have moved beyond the well-known focus on “entrepreneurial networking” conceived as the main pattern describing the way entrepreneurial firms engaged with markets and market actors. Contexts might be characterised by networks showing overlapping dimensions – economic, social, technological, institutional – and therefore deserve to be better understood in their interplay with entrepreneurial processes, which might lead to interactive patterns (Shepherd, 2015; Baraldi et al., 2019).

The main objective of this study is to provide a preliminary review of contributions linking entrepreneurship and network-related concepts in terms of 1) main and emerging trends of the literature; 2) most prominent authors and relative journals; 3) avenues for further research. The reason for undertaking this literature review is twofold: first, most of the existing systematic reviews are dated (O’Donnell et al., 2001; Slotte-Kock & Coviello, 2009), while various recent contributions concern specific topics, such as entrepreneurial ecosystems (Fernandes & Ferreira, 2022) or embeddedness in entrepreneurship (Wigren-Kristoferson et al., 2022); secondly, this analysis represents an intermediate step in our research project focussing on entrepreneurship, networks and peripheral areas.

2 Methodology

For the purpose of the study, a preliminary exploration of previous contributions, we conducted a systematic literature review (Xiao & Watson, 2019; Kraus et al., 2020) focusing mainly on its quantitative part, thus not extending the qualitative analysis of the results obtained. The selected dataset is Scopus, with a settled time frame of 10 years (2014-2023).

Scopus has been chosen in the light of its openness, comprehensiveness, and easiness with respect to data collection procedures and opportunities of analysis when compared to Web of Science and Google Scholar (Bergman, 2012; Martín-Martín et al. 2019).

For what concerns the time frame we believe that this is a good period to observe for a twofold reason. First, a ten-years time frame allows us not to be overwhelmed by documents but at the same time it represents a reasonable time to observe emerging trends and to compare them. Secondly, it represents an interesting period of investigation due to the many events that have occurred over the years that have had a major impact on

the topic of our interest. For example, we catch both the period immediately following the crisis of 2008-2011 and the crisis due to the pandemic.

The selection of contributions has followed three main steps:

- Selection of keywords and boolean operators to formulate research query: we have individuated relevant keywords to be searched into the title of the document, then we have limited the subject areas of study to the most relevant for our aim.
- Refinements of the keywords, subject areas, publication type, to further limit the results to the most pertinent in order to reach a reasonable number of documents to read the abstract of each one.
- Abstract readings for exclusion of non relevant works and final assessment of the dataset.

The first step was related to the selection of key words and boundaries of the research process. In this phase we have proceeded first with a trial related to a limited period of time (2022-up to date) to test the main keywords we had previously assessed. In this phase has been possible to add relevant keywords that were not taken into account (i.e. platform*, district*), to assess the boolean operators to be used in the search engine and to verify that the search limit at the title was not too restricted.

In the second phase we refined our research query and applied it to the whole time period. We limited the boundaries of the research to specific subject areas (business, sociology, economics, decision science, arts, psychology), to specific document types (articles, review, book chapter, editorials) and to the English language. This choice is consistent with our research aim and was deemed necessary to come up with a reasonable amount of contributions to be analysed (abstract reading) to reduce the dataset.

At the end of this phase 2064 results have been found using the following search query on SCOPUS:

(TITLE (entrepreneur) AND TITLE (network) OR TITLE (ecosystem) OR TITLE (community) OR TITLE (platform) OR TITLE (district) OR TITLE ("imp")) AND PUBYEAR > 2013 AND (LIMIT-TO (SUBJAREA , "busi") OR LIMIT-TO (SUBJAREA , "soci") OR LIMIT-TO (SUBJAREA , "econ") OR LIMIT-TO (SUBJAREA , "deci") OR LIMIT-TO (SUBJAREA , "arts") OR LIMIT-TO (SUBJAREA , "psyc")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (*

DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "bk") OR LIMIT-TO (DOCTYPE , "ed")) AND (LIMIT-TO (LANGUAGE , "english")) .

The dataset at this stage was composed of 1589 articles, 386 book chapters, 38 reviews, 33 books and 18 editorials.

Since the dataset proved to be, as expected, very large, we proceeded to the last phase. We read the abstract of each item in the dataset to exclude those works that, even meeting the above described research criteria, were not actually centred on the main topic of our research. Just to make a couple of examples, the papers “*Strategic Entrepreneurship and the Performance of Women-Owned Fish Processing Units in Cibinong District, Bogor Regency*” and “*Innovation finance ecosystems for entrepreneurial firms: A conceptual model and research propositions*” were excluded. From this process, the database was almost halved, reaching 1054 items divided into: 829 articles, 181 book chapters, 16 reviews, 16 books and 12 editorials.

For the main aim of this work in progress research we performed a preliminary demographic analysis and we elaborate preliminary considerations about “place and networked entrepreneurship” that will constitute the bases of future research. These analyses are presented in the following section.

3 Results

3.1 Overview

In this section we provide the analysis of our dataset of 1054 works. The analysis we provide is mainly a demographic analysis. We first analyse the time dimension and the general composition of the dataset; we then provide an overview of the main keywords associated to entrepreneurship on which our paper is focused: networks, ecosystem, community, platform and district; finally we present a first analysis of the importance of “place” as a “context” in which entrepreneurship occurs.

3.1.1 Timeframe analysis and general overview of the dataset

The trend of publications proves to be continuously growing, with a slight decrease during 2021, largely recovered during 2022 which, at the moment, is the year with the highest number of publications, although, speculating, 2023 will undoubtedly surpass this result (see Figure 1).

It is worthy to notice that although the headlines do not explicitly mention the covid-19 pandemic, it can be assumed that the data collected refer to this period and were therefore influenced by it. This may therefore be the explanation for both the strong increase in publications in the year 2022 and the preference for specific keywords and topics.

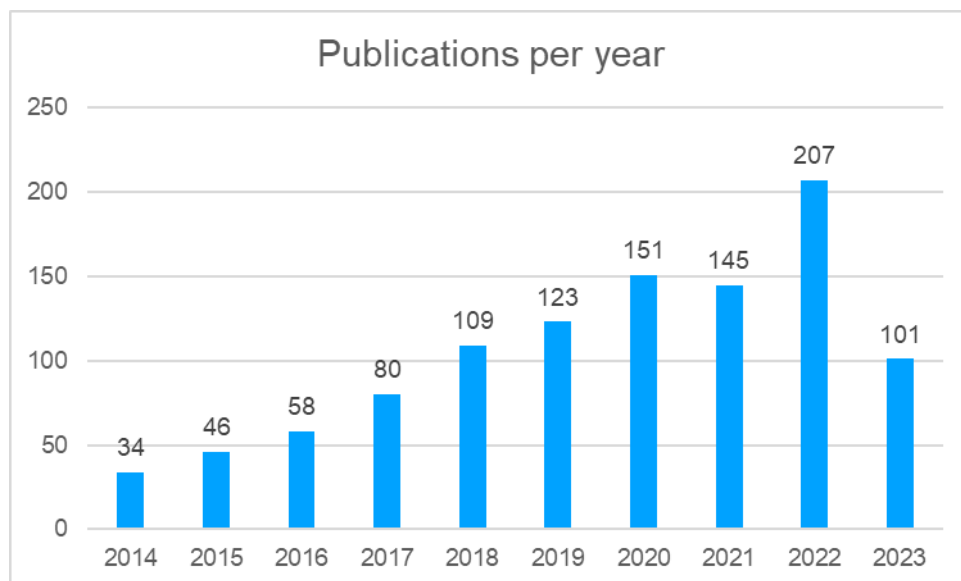


Figure 1: Publications per year

As we have already pointed out, the dataset of 1054 results in terms of kind of publications is composed as follows: 829 articles, 181 book chapters, 16 reviews, 16 books and 12 editorials. The main sources are therefore confirmed as the journals. In terms of concentration we observe that about 30% of the articles have been published in 10 journals (Figure 2). Notably, the first five journals in terms of number of publications are: *Small Business Economics* with 56 results, *Sustainability* with 32, *Entrepreneurship and Regional Development* with 31, *Journal of Business Research* with 25 and *Research Policy* tied with *Journal of Enterprising Communities* with 22 results. In this respect, we can argue that even though a majority of papers are published in those journals with a focused scope in relation to the issue under analysis, 70% of papers have attracted the interest of different outlets. This means that the topic has been investigated using a variety of perspectives and for a variety of aims in the business and economics fields.

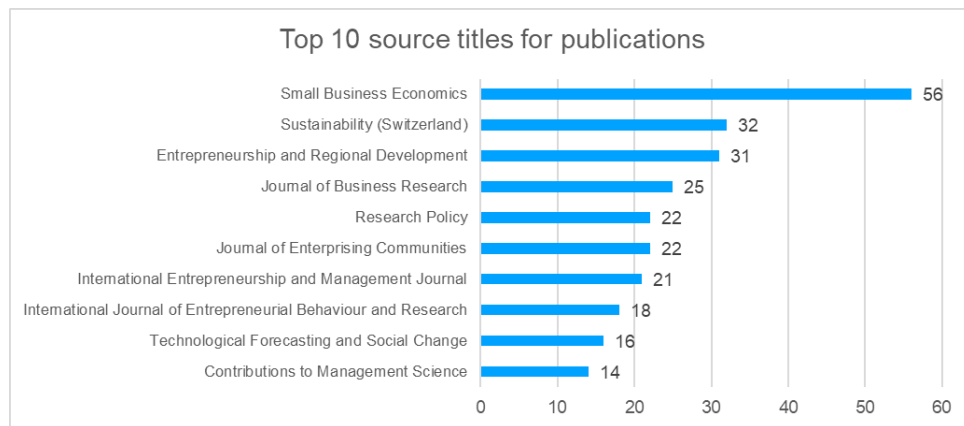


Figure 2: First 10 sources for articles

The increasing interest in this topic and the variety of angles from which the topic is investigated is witnessed by the presence in the dataset of a number of special issues (SIs) published in the ten years under observation. For example in 2014 *Small Business Economics* hosted a SI edited by Karlsson and Warda titled “Entrepreneurship and innovation networks”. Starting from the observation that so far studies emphasised institutional arrangements along with the structure and efficiency of innovation networks as major factors of the variation of the frequency and the quality of entrepreneurship between different places, regions, and countries, the Guest Editors called for studies centred on the role of knowledge and its diffusion as a triggering factor for entrepreneurship in the twenty-first century. In 2017 McNaughton and Gray in their SI about “Entrepreneurship and resilient communities” in *Journal of Enterprising Communities: People and Places in the Global Economy*, assess that there was been little research into the links between the resilience of individual entrepreneurs or entrepreneurial organisations and resilience of the communities which they belong, and thus investigated the mutual relationship between entrepreneurship and the communities it is embedded in. The latest three SIs of our dataset have been published in the last two years and all deal with Entrepreneurial Ecosystems (EEs). In mid 2021 Audretsch and colleagues edited in *Entrepreneurship and Regional Development* “The dynamics of entrepreneurial ecosystems”, a SI centred on the dynamics occurring in EEs, contending that in previous studies EEs have generally been analysed from a static perspective. In late 2022, *Research Policy* published a SI titled “Uncommon methods and metrics for local entrepreneurial ecosystems” edited by Feldman and colleagues. The aim of the SI is

to propose new empirical approaches for studying local entrepreneurial ecosystems to provide insights for the study of the dynamics and functioning of local entrepreneurial ecosystems. In March 2023 Chin and colleagues edited in *Journal of Intellectual Capital* a SI titled “Unveiling the roles of intellectual capital in entrepreneurial ecosystems: evidence from moderate innovative countries”. Guest editors, starting by the assumption that EEs “*entail the possession of diverse knowledge resources and assets as the basis for fostering sufficient innovation capacity to cope with the ever-evolving, intricate relations among actors*”, call for the imperative to investigate the dynamic mechanisms of intellectual capital that characterises the totality of an organisation’s knowledge stocks and resources.

Undoubtedly these SIs along with the number of contributions over the last decade, witness that the interest of academia dealing with entrepreneurship towards the networked dimension of entrepreneurship has constantly increased.

3.1.2 Networks, ecosystem, community and Entrepreneurship

In order to direct the analysis in the next steps, it is useful to look at the occurrence of the chosen keywords in the titles during the decade under observation (see Figure 3). Considering the totals, it is immediately possible to identify the dominance of the keyword “ecosystem*”, which appears 587 times, followed by “network*” with 359 and “social*” with 152. However, it is interesting how the trends have evolved during the decade. Notably, the first one has started to emerge only from 2016, surpassing the second one by 2018 that, instead, has maintained constant around 36 results each year. On the other hand, “social*” has a growing path that deserve attention and that has almost reached “network*” in 2023. Undoubtedly, the latter has been replaced by the first one on the more general meaning of aggregation while retaining the more interactive one. Finally, we believe that other keyword trends that deserve attention are “communit*” and “rural” that are slowly rising in the last five years.

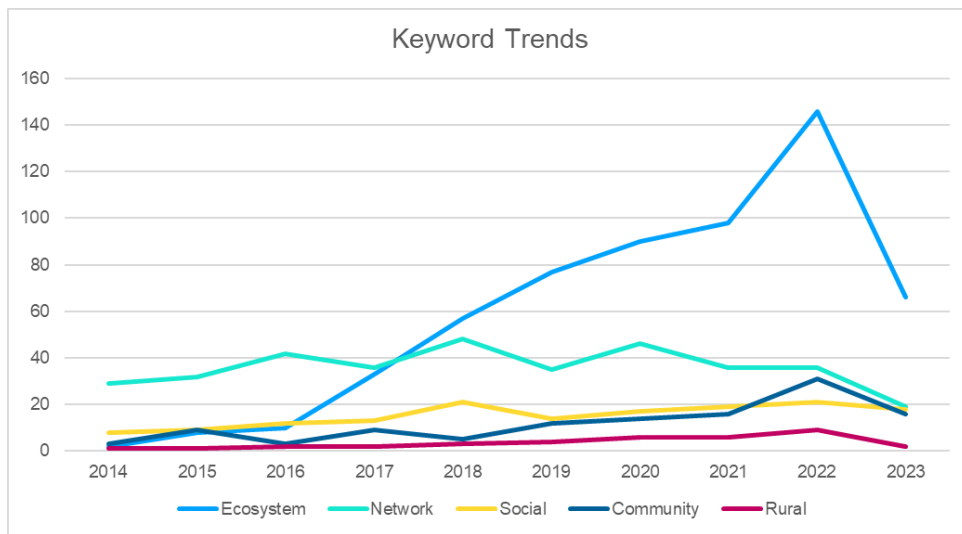


Figure 3: Occurrence of main and emerging keywords per year

More in depth, starting from the most apparent trend of “ecosystem*” we can see that the topic has been treated by the major journals since 2017 by *Small Business Economics*, which has a total of 41 publications on that; on the other hand, *Research Policy* has published one article on that in 2021 but we noted a pike on 2022 with 17 articles on the subject, while in 2023 only one article again has been published. Looking at the authors, the most active are Roundy P.T. and Ratten V., respectively with 19 and 15 results. However, despite the first one has been constant in its work since 2016, Ratten V. produced 9 works in 2020 when he approached the topic. Furthermore, while Ratten V. has published some book chapters, Roundy P.T. has worked mainly on journal articles for several sources. It is interesting to note that we can see a surge in 2021 publications compared to the trend of previous years.

Regarding the second keyword, “network*”, that has gradually been replaced by the previous one, the major source titles are *Small Business Economics* with 18 results, followed by *Entrepreneurship and Regional Development* and *Journal of Business Research*, respectively with 14 and 12 works. The main authors are Huggins R., with 6 works, Lamine W. with 5, and McGrath H. with 4. Interestingly, while Huggins has been very active on the topic since 2018, McGrath has a constant presence in the timeframe and she is the only one who has published in the last four years among the most active authors. In any case, these authors seem to not be focused on a particular journal. This

keyword has peaked in 2018 even though it maintains an almost constant level of publications every year.

Finally, the keyword “social*” is acquiring more and more relevance, coupled both with “entrepreneurship” and to “network*” keywords. Of our particular interest, in fact, is the use made to identify the social network, that is the set of relationships and contacts that entrepreneurs use to sustain their businesses. The keyword is mostly present in *Small Business Economics* and *Sustainability (Switzerland)*, both with 7 articles, followed by several other sources that account 4 results and for which it is worthy to mention *Community Development*, *Journal of Social Entrepreneurship* and *Journal of Enterprising Communities*. There seems to be that no author has specialised on the subject so far. Thus, we mention Busch C., who has been one of the first to publish one work in 2014 and another in 2019, and Drummon D. who published 2 works within 2022 and 2023. The trend peak has been reached two times, first in 2018 and later again in 2022.

On the side of emerging trends, the keyword “communit*” had a strong leap forward in its growth path in the year 2022, surpassing the publications in the same year of the keyword “social*” and almost reaching those of “network*”. The main sources are *Journal of Enterprising Communities* with 9 articles, *Entrepreneurship and Regional Development* with 6 and *Community Development* with 5 results. The authors that have appeared the most are Fortunato M.W.P. with 5 works, Roundy P.T. with 3 and Ratten V. with 2 results. The rise of this keyword can be attributed mainly to its use to denote entrepreneurial activity by a community or for a community, thus sharing some semantic meaning with the previously mentioned terms.

3.2 Place and “networked” entrepreneurship

The keyword “communit*” represents a defined set of people who share defined characteristics, and in particular may also incorporate specific spatial meanings. From this point of view, the importance of keywords pertaining to the “place” component of community as well as entrepreneurship emerges. Therefore, it is useful to investigate the trends of place-related keywords, among them being “Rural” the most prominent.

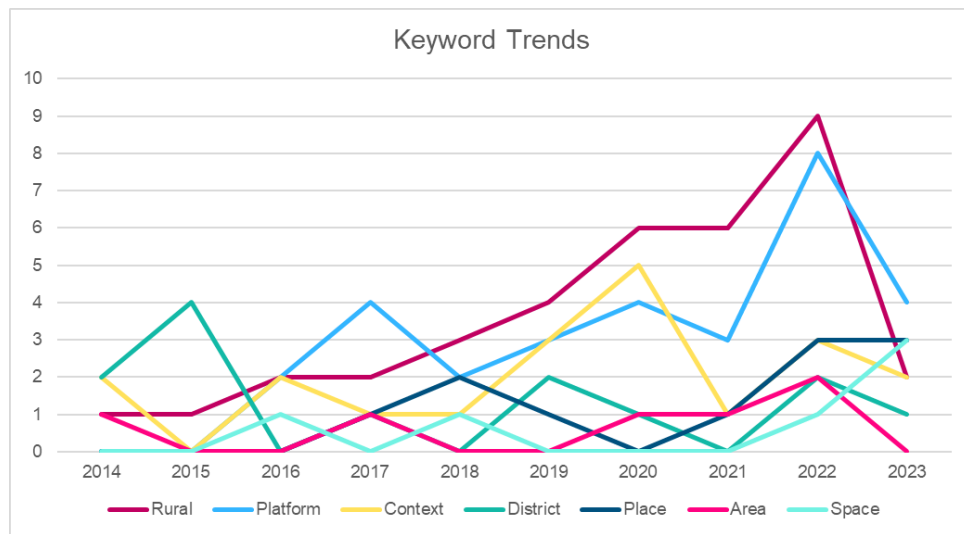


Figure 4: Occurrence of place-related keywords

With 36 results, the keyword “Rural” denotes a specific context of entrepreneurial activity, a marginal space mostly thought not suitable for it but can also create space and opportunities for the success of even innovative and high-tech activities. This has been clearly outlined by Korsgaard (et al., 2015) in their article titled “The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities”. The link with “communit*” keyword emerges in 14 papers that explicitly mention the two words and make particular reference to resilience as well as community development in this difficult context through entrepreneurial activity. Another interesting link can be found also in 12 articles that make use also of “network*” keyword, remarking a relational component of entrepreneurship in this environment. Yet, no particular journal seems to be focused on the topic: we have 3 results for *Sustainability (Switzerland)* and 2 for *Journal of Rural Studies*. Many other source titles have just one article, but it is interesting to note that they are for the most part concentrated in the last 5 years, except for *Regional Studies* and *Entrepreneurship and Regional Development* that have been the first to publish on the topic in our time-frame, respectively in 2014 and 2015. The first article was published by Freire-Gibb and Nielsen (2014) and was entitled “Entrepreneurship Within Urban and Rural Areas: Creative People and Social Networks” while the latter is the already cited one by Korgaard, Ferguson, and Gaddefors (2015); on the other hand, the latest article “Neo-endogenous revitalisation: Enhancing community resilience through art tourism and rural entrepreneurship” has been published in 2023 on

Journal of Rural Studies by Qu and Zollet. From these articles the importance of social networks in rural areas emerges, thanks to entrepreneurs developing strong ties with other local actors, thus overcoming economic stagnation and institutional weakness of this context.

The spatial component emerges also with several other keywords, such as “context*”, “district*”, “platform*”, “place*”, “space*” and “area*”. The first three have significant growing trends, with particular reference to “platform*”, and can be assimilated to “networked environments”, where actors interact with each other. Notably, these terms have been used in many titles associated with specific countries, regions or districts. In this sense we can get some idea from “Interpreting community enterprises’ ability to survive in depleted contexts through the Humane Entrepreneurship lens: evidence from Italian rural areas” published by Buratti and colleagues (2022) on *Journal of Small Business and Enterprise development*, which studies how Community Entrepreneurs operating in depleted contexts manage to survive, by successfully achieving multiple goals. The last three terms, with more general meanings, reflect these connections, but they are not as frequent as the others.

4 Preliminary discussion and conclusions

The preliminary results of this literature review shows that the analysis of networks within the entrepreneurship field has grown over time and has become a key theme in this stream of studies. This might be due to various reasons: the emergence of a wide variety of contexts where entrepreneurial processes emerge; the relevance of networked environments to increase the resilience of entrepreneurial firms; the need to understand better the nature and evolution of these networks and networked environments. Clearly, the literature reviews tracked in the dataset can give us a comprehensive overview of how the individual topics were addressed.

The growing interest in entrepreneurship and networks is apparent also in terms of the variety of journal outlets where articles on this topic are published. Beside the key journals in the entrepreneurship field, various other journals - mostly concerned with innovation and innovative processes - show contributions dealing with networks-related themes. An important connection of the two streams of research on entrepreneurship and networks-related studies has been highlighted by Baraldi E., La Rocca A., Perna A., Snehota I. in their literature review on *Industrial Marketing Management* journal of 2020,

which identifies research areas fruitful for advancing our understanding of entrepreneurial phenomena.

In terms of emerging themes this initial analysis shows two parallel evolutions. There is a growing interest in the nature and role of ecosystems as a key concept to analyse and describe the emergence of connected actors with local boundaries. This growing attention to ecosystems and ecosystem approach is due also to the relevance of technological upgrading and innovation processes and to the involvement of actors such as universities/research centres and knowledge brokers. This type of concern emphasises those entrepreneurial contexts qualified as innovation hubs and placed at the forefront of technological advances in developed areas (Rosli & Cacciolatti, 2022).

The other interesting result in terms of key themes is the recent and growing attention towards what might be defined as the “fabric” of entrepreneurial networks. The emphasis on concepts such as community, on the social dimension of networked relationships, on marginal contexts such as rural areas has lead scholars to investigate in more depth the nature and evolution these networks, placing attention on human-related and place-based factors, as shown by Korsgaard (et al., 2015).

We are aware of the many limitations of this study, in particular the absence of a citation analysis and the clustering of publications. Furthermore, the manual selection of articles on such a large dataset on the one hand, and the use of only one reference database on the other, undoubtedly lead to bias in the protocol used and the results obtained.

The future steps in the development of this literature review concern a better understanding of the contents in our dataset by looking at the abstract and clustering the works according to the subject areas. In particular, the next step of the analysis will provide a detailed view of studies dealing with network dynamics concerning different kinds of entrepreneurial typologies and how these are shaped in relation to the context, environment and place in which they occur.

This work will prove its validity first and foremost as a basis for further analysis in general terms on entrepreneurship and networks, as well as for research on the increasingly prominent role of the placial component in entrepreneurial processes. From this point of view, due to the increasing interest in rural entrepreneurship, future research can focus on it by analysing limits and opportunities, innovative methods and policy support in doing entrepreneurial activities in this context, emphasising the positive effects for the social fabric of these places.

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Long Abstracts

Sustainable Business Models: the role of Collaborative and Integrated Supply Chain

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Paper type – Long Abstract

1. Objectives

In recent years, how entrepreneurial activities impact on the environment and communities has become a prominent concern for both civil society and scientific debate. Scholars increasingly turned their attention to how firms can shape their activities to implement sustainable business models (SBM) that are suitable for combining economic performance with the protection of the environment, the stakeholders involved, and the community as a whole (Bocken et al., 2014; Levy França et al., 2016; Lüdeke-Freund, 2019).

This paper enters this research stream aiming to extend our theoretical understanding of SBM innovation. Drawing on the definition of a business model (BM) suggested by Zott and Amit (2010), we investigate how and why a firm in the agri-food industry can pursue a model of value creation and redistribution with its supply chain partners that ensures both economic performance and sustainability over time for all firms involved. We applied a Single Case Study approach that allowed us to understand the nature and the complexity of the processes that took place. The research site was a company that commercializes food products. Data were collected through interviews and secondary

sources then analyzed by following the thematic analysis approach. Our findings provide empirical evidence of a Business Model involving a company and its partners (Zott and Amit, 2010) along the entire Supply Chain with a view to integrate all the three sustainability dimensions. More precisely, we dive deep to understand the factors influencing the interaction between all the parties such as complementary, collaboration, value sharing and governance. Our results advance the extant research both in the Business Model field and in the Sustainable Supply Chain Management by showing that its linearity leaves space for a more circular and complex network between organizations when integrating sustainability concepts.

2. Literature Review

During the last decades, the management literature has increasingly focused its attention on the BM concept (Zott & Amit, 2007; Zott et al., 2011).

Business Model Innovation and Innovative Business Models (Foss & Saebi, 2016) have gained more and more importance in the field which is today experiencing an important evolution. Indeed, scholars are introducing the SBM concept (Schaltegger, Lüdeke-Freund, & Hansen, 2012; França, Broman, Robert, & Basile, 2017; Yang, Vladimirova, & Evans, 2017; Cassia Comin, et al., 2019). The paradigm according to which the unique objective for companies is to achieve a positive economic result has today been overtaken by integrating social and environmental goals in response to society's growing attention to sustainability. From this perspective, value creation should mind these dimensions and SBMs requires to be designed by considering multiple stakeholders' needs and interests to maximize the positive societal and environmental impacts (Stubbs & Cocklin, 2008; Bocken et al., 2013, Matos & Silvestre, 2013; Evans, et al., 2017; Inigo et al., 2017). Ludeke-Freund (2018) talks about "sustainable entrepreneurship". Most of the studies focus on the value creation for customers and little has been said about the supply chain. More precisely, a gap remains in exploring the drivers that help firms to realize the value creation and incorporate social and environmental goals along the entire supply chain.

3. Approach/Methods

This research was conducted through a Single Case Study (Yin, 1994) that allowed us to operate an in-depth analysis of the phenomena and processes that occur and achieve a theoretical generalization (Tsang, 2014). The case was considered appropriated because we had access to a wide plurality of sources and detailed information (Creswell, 1994). The research site is an Agri-Food company which has been pioneer and leader in organic production. Its SBM is made possible thanks to the integration of the supplier in the ownership structure and, consequently, in the decision-making bodies. The consequence is a virtuous circle in which agricultural producers are fair remunerated, this incentivizes them to maintain quality standards above the market. Data were collected through primary sources (semi-structured interviews) and secondary sources. These phases were conducted in compliance with the validity and reliability dimensions (Gibbert & Ruigrok, 2010; Ebneyamini & Sadeghi Moghdam, 2018).

4. Results

We found that the focal firm developed an innovative and sustainable business model grounded in close integration with its supply chain partners in the economic, social and environmental dimensions. We addressed the business model as a system of interdependent activities (Zott and Amit, 2010) and the collected data show that only part of the processes that make it up are implemented by the investigated firm.

The relationship with the partners of the supply chain is not limited to commercial agreements for the purchase of goods, but also includes the planning of production, the composition of the offer and the use of agricultural resources and methods of cultivation that ensure the environmental protection and the consumers' health. Indeed, the focal firm collaborates only with external or integrated partners who share their own values, which means, for example, using only extra virgin olive oil instead of others that are easier to work with but characterized by the presence of saturated acids and fats that are considered harmful to health, producing without emulsifiers and aromas, and operating with raw materials that derives by their shareholders or by selected and reliable partners so as to have more control. This obviously makes the job more difficult and possible only for companies with the same sensitivity.

5. Value and Implications

This paper extends the theoretical understanding of SBM by focusing on the integration of interdependent processes between the focal firm and its suppliers. Although previous studies investigated BM that are based on partnerships between the focal firm and its supply chain, little research to date explored how these BM can combine economic performance and sustainability. Furthermore, our research in a multi-stakeholder perspective, relates to how an original model of value creation and redistribution enables the focal firm to sustain not only its own performance, but also that of the partners involved in the supply chain.

Moreover, it sheds light on how the integration of the BM with governance processes - in which suppliers also take on the role of supplier-owner - strengthen the engagement in a relationship based on shared values and that produces mutual economic and sustainable advantages. It also identifies the mechanisms and practices that nurture its growth over time advancing the extant research (Perrini & Tencati, 2006).

According to the conference's main theme, this paper helps to understand how SBM allows to overcome the current ecological and ethical crisis and continue to grow from an economic point of view. Our findings can be useful both to managers in re-thinking their BM and to policy makers to identify the drivers for the economic sustainable development of an area, a community, or other sectors. Moreover, the governance of the integrated business model in the supply chain helps small enterprises to overcome size constraints and increases their competitive capacity in increasingly globalised markets.

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Rethinking business models for sustainability-oriented innovation: implementing collaborative logistics in manufacturing SMEs

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Paper type – Long abstract

1. Objectives

The attention of industrial firms toward environmental sustainability has grown in the past decade (Perotti *et al.*, 2012) and has pushed firms towards the implementation of sustainability-oriented innovations, such as collaborative logistics (CL) practices, being logistics one of the main sources of air pollution (Mesjasz, 2016). In this perspective, companies are feeling the need to adopt innovative models to both improve their logistics performances from a sustainable perspective and guarantee competitive advantages in the global context.

The interest in such approaches in the industrial context is associated with high-complexity levels in terms of implementation, since such a transition towards CL requires a rethinking and reconfiguration of existing business models, along their main

value dimensions (Oskam *et al.*, 2018) of value proposition, value delivery, value creation, value networking, and value appropriation (Cortimiglia *et al.*, 2016).

Such level of complexity in sustainability-oriented innovation, and particularly in sustainable logistics transition, is further enhanced for Small and Medium-sized Enterprises (SMEs) (Woschke *et al.*, 2017), in the light of their scarcity of resources, limited change management knowledge, and risk-aversion.

The present study aims to explore if and how SMEs face the transition towards CL processes and the impact on their business models (BM), by addressing the following research question: *How does transitioning towards CL impact the five dimensions of BM and linkages among them?*

In line with the explorative nature of the RQ, we adopt a qualitative approach (Yin, 2003), based on a single case study methodology (Halinen and Törnroos, 2005). The case study selected is IRON, an Italian manufacturing SME in the mechanical processing sector, which has implemented an internal project aimed at supporting sustainability-oriented innovation processes. Data collection relies on focus groups (Powel and Single, 1996) and participating observation. The resulting empirical data has been analyzed along the processual dimension of the project and codified using the five BM dimensions identified (Cortimiglia *et al.*, 2016).

2. Literature review

Logistics concerns the movement of goods, services, and information from the point of origin to the point of consumption, with the aim of meeting customer needs and creating value, and plays a crucial role in enhancing the success and competitiveness of firms (Ojha and Gokhale, 2009). Companies have realized that logistics decisions have a significant impact on costs, customer service levels, market penetration, and profits (Ballou, 1997).

CL has emerged as an innovative approach resulting from the transition from logistics management to sustainable Supply Chain Management (SCM), based on the concept of collaboration, as it involves sharing activities and resources among multiple independent companies to improve overall logistics efficiency (Stock and Boyer, 2009). CL holds the potential to achieve economic, environmental, and social sustainability as well as to meet the growing demand for sustainable business practices (Ferrel *et al.*, 2020) on the one

hand; on the other hand, it enables companies to lower operating costs, to enhance efficiency, and to improve customer satisfaction (Osório *et al.*, 2013).

Collaboration in logistics is becoming a strategic tool for SMEs; however, they face challenges in finding suitable partners for collaboration due to their limited resources, capabilities, and access to information (Zaridis *et al.*, 2021; Vlachos and Gutnik, 2016). Furthermore, innovative and sustainable-oriented ideas, as CL, require rethinking the processes leading to the company's value creation, in terms of resources needed, costs to be borne, and new partnerships to be established; thus, pushing towards changes in the companies' BMs. A successful rethinking of the BM's dimensions and a paradigm change in the way firms create and deliver value are key leverages for integrating innovation and sustainability into organizations (Geissfoerfer *et al.*, 2018; Pieroni *et al.*, 2019).

BM is "a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network" (Shafer *et al.*, 2005: 204), whose main dimensions are that of value proposition (offering), delivery (customer segments, relationships, and distribution channels), creation (key activities and resources), networking (partners), and appropriation (revenue streams and cost structure) (Cortimiglia *et al.*, 2016).

Encompassing sustainability and innovation elements in the company's BM requires a "loosening" of the boundaries of the focal firm and a consideration of the larger network, as well as for interdependence and interaction among the elements of the BM to embrace a shift towards an embedded system view (Breuer *et al.*, 2018). The adoption of a BM perspective can help in providing guidance for identifying which of the five main BM dimensions require being rethought of, reconfigured, or adjusted in interaction with the network of suppliers and customers to face environmentally complex challenges.

3. Method

This research applies an ongoing qualitative processual case study methodology (Yin, 2003; Halinen and Törnroos, 2005) in line with previous studies on the interrelation between BM and sustainable innovations (Acciarini *et al.*, 2022). The empirical setting under investigation is an Italian manufacturing SME active in the mechanical processing sector, IRON⁴, that has been chosen for its recent effort in implementing an internal

⁴ The name of the company, of the projects and of stakeholders has been anonymized to ensure confidentiality.

project aimed at supporting sustainability-oriented innovation processes and because of its commitment to redefining actors, activities, and resources to be employed for CL. The focus of the analysis is thus a project implemented within IRON, named COSI (Customer-oriented Sustainable Innovation).

Data collection is based on an 18-hours focus group (Powel and Single, 1996) with the CEO and 7 employees, and on participating observation conducted by one of the authors. Using different sources of data helps triangulate information from multiple sources to confirm results emerging within the single case study (Woodside and Wilson, 2003).

Data is analyzed following a systematic combining approach (Dubois and Gadde, 2002) and coding is based on the processual dimension of the COSI project with a focus on the three main topics covered, that is: Supply Chain Management approach for sustainability-oriented innovation; implications and challenges of CL; sustainability-driven customer segmentation, and on the five conceptual dimensions of the BM framework, as depicted in Cortimiglia *et al.* (2016).

4. Results/Findings

IRON is a small Italian company specialized in realizing metal-based products and offering related services, such as laser cut, banding, and wending. The company is located in the rural area of the Marche region in Italy and operates in a very traditional context, where innovation in terms of sustainability is difficult to access. However, the firm pays particular attention to innovation and is recently making the first efforts to achieve more sustainable business practices along its supply chain. Indeed, in 2022 the company implemented the COSI project aimed at supporting sustainable-driven innovation for customers in terms of CL. The project consisted of three days of meetings between the IRON Team and two Professors from a local University with knowledge of sustainability issues. Meetings were divided into three days.

Day one was focused on the SCM approach for sustainable-oriented collaborations. It identified some criticalities for the company, among which: organizational resistances, high perceived risk about suppliers' opportunistic behaviours, and lack of a structured approach.

Day two was dedicated to CL implementation and its challenges. Participants highlighted the limited value networking opportunities in IRON's geographical context and the limited competences of its employees on how to manage CL.

Day three dealt with sustainability-driven customer segmentation. What emerged is that IRON does not have the proper knowledge to develop a proper customer segmentation analysis.

CL is a sustainable effort involving only a small portion of the productive process, which is transportation. Therefore, it could be a first, affordable effort for SMEs to gradually try to become more sustainable. However, the IRON case reveals how even a delimited green transition as CL entails challenges and calls for adaptations in the overall BM and its dimensions.

The most stressed dimension in CL is value delivery, which is the main focus of the entire process - as CL implies a consistent revision of the adopted distribution channel, introducing new ones and achieving market segmentation to identify the set of customers interested to receive sustainable services (Brotspies and Weinstein, 2019). Value networking and value creation are also objects of change, as a faltering business network tremendously limited the opportunities for the SME in achieving CL (Velter *et al.*, 2020), and CL requires an internal reorganization, the development of sustainability-related knowledge, the achievement of a strategic vision related to sustainable performances, the increase and reorganization in logistics activities, and the activation of a control system to monitor internal performances through codified information, respectively. Value proposition and value appropriation are part of the transition, even though minor changes are required to determine the type of green offering to offer and to build an appropriate cost structure and revenue model related to green transportation services.

Notwithstanding different changes at the level of the various BM dimensions, all of them are involved in a net of links and interrelations, for which issues emerging at the level of one dimension have direct impacts on other dimensions and vice versa. Table 1 depicts the interrelations among the elements.

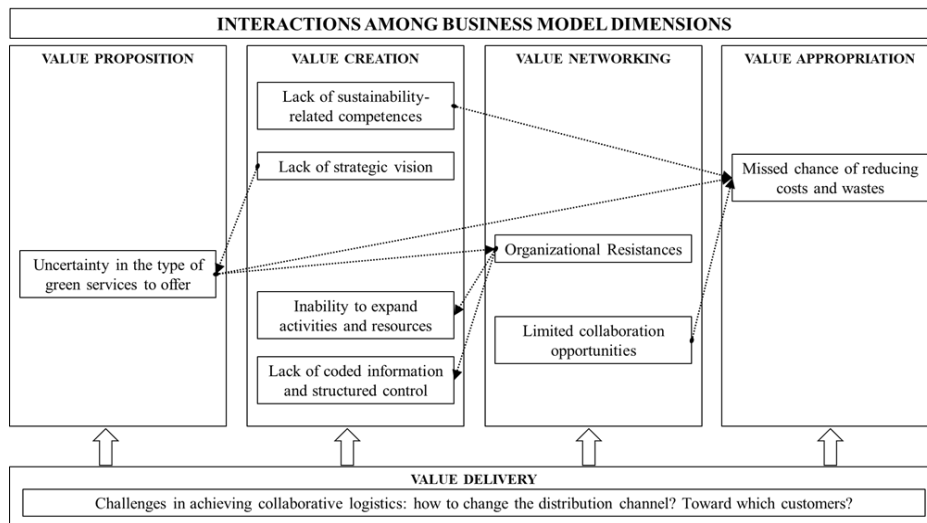


Figure 1: Interactions among business model dimensions in the IRON case

5. Value & Implications

To analyse companies' transition towards CL and how this shift redesigns its BM, this study highlights the importance of rethinking the BM for integrating innovation and sustainability-connected aspects.

Understanding the interrelation among BM dimensions is crucial for comprehending the complexity of sustainable approaches for SMEs. The interaction among dimensions creates a “domino effect”, where challenges in one dimension lead to challenges in others, increasing complexity. In this context, a cohesive strategic vision and developing specific competences are crucial.

The analysis reveals key points. First, integrating sustainability and innovation into the BM requires clear business vision and mission focused on green and sustainable practices. Second, the adoption of sustainable logistics is facilitated by establishing a partner network that enables innovation and sustainability throughout the supply chain. Third, customer segmentation plays a strategic role in identifying stakeholders interested in sustainable services.

Overcoming the limitations of SMEs, such as small size and resource constraints (Zaridis *et al.*, 2021), requires acquiring internal skills and knowledge. Investing this knowledge across all BM dimensions is essential for creating a sustainable corporate vision. Additionally, SMEs benefit from strong leadership to overcome organizational

resistance and cultural aversion, and drive the transformation toward a more innovative and sustainable BM.

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Enhancing SMEs' resilience-building processes through business model innovation. A systemic perspective to face entrepreneurial challenges in times of crisis

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Keywords – Business Model Innovation; SMEs; Dynamic Business Modelling; Resilience; Crises; Case-studies.

Paper type – Long abstract

1. Objectives

This study explores how systemic methodological support to implement business model innovation (BMI) may enhance the resilience-building processes of Small and Medium Enterprises (SMEs). In times of crisis, these firms – representing more than 90% of all businesses worldwide (Latifi et al., 2021) – require additional methodological efforts to overcome their peculiar limits (e.g., limited access to credit lines, paucity of strategic capabilities and resources, poor networking capacity) and adequately take on new entrepreneurial challenges and opportunities for survival. Emerging crises – be they related to war, pandemics, energy supply, or others – further emphasize the conventional

shortages characterizing SMEs, thus increasing complexity and uncertainty in their strategy design and performance management mechanisms (Fasth et al., 2022). However, by leveraging their strengths – such as flexibility and innovation capability – these firms may better seize new opportunities offered by the changing context than their larger competitors (Pencarelli et al., 2020). This process – to be conducted on a regular basis – appears fundamental to building up satisfactory resilience in SMEs. However, matching strengths with emerging opportunities is not easy in SMEs that usually are more focused on fostering technical product-related competencies than strategic management settings. Based on these premises, a systemic perspective in designing BMI strategies may provide SME decision-makers with an additional methodological support to understand, orient and manage entrepreneurial itineraries affected by crises.

2. Literature review

The research is rooted in the business model design and innovation field with a focus on the requirements of SMEs in times of crisis. As such, the reference literature is analyzed to evaluate the state-of-the-art in the current scientific debate related to the methods and tools supporting BMI in SMEs threatened by complex critical events. This analysis enables the identification of relevant research gaps and, as a result, the emergence of further advancing practical knowledge in this field according to the research objective. More specifically, the methodological proposal of the paper finds complementarity with the theoretical framework recently developed by Sanasi and Ghezzi (2022), which emphasizes a pivot-as-process mechanism for strategic response to crises. In particular, the systemic perspective – endorsed in this paper through a Dynamic Business Modelling (DBM) approach (Cosenz & Noto, 2018) – helps SME decision-makers foster their entrepreneurial learning processes, thus strengthening pivot experimentations for BMI (Cosenz & Bivona, 2021).

3. Approach/Method

The paper proposes and explores a Dynamic Business Modelling (DBM) approach as a systemic method to support the implementation of BMI in SMEs in times of crisis and strengthen their resilience-building processes (Zutshi et al., 2021), thereby facing the gaps emerging in the literature review and the related research objective. This method

originates from integrating an adapted version of the Business Model Canvas (Osterwalder & Pigneur, 2010) and System Dynamics modelling (Torres et al., 2017; Sterman, 2000). Such integration makes DBM valuable for modelling and investigating entrepreneurial systems characterized by complexity and uncertainty and experimenting with the models to build and test innovation-driven strategies. Figure 1 portrays the DBM approach (Cosenz & Noto, 2018). DBM frames BMI pivot experimentation according to a “build-test-learn” loop by identifying causal feedback structures among financial and non-financial business model variables. This approach does not require the implementation of “heavy” management information systems (e.g., SAP), usually adopted by larger firms. Rather, it builds upon the construction of lean systemic models, thus resulting in less expensive and more adequate decision-support tools for SMEs. To gather practical insights and implications related to the use of DBM in SMEs, the research also offers some empirical evidence. In particular, drawing on the empirical work recently developed by Clauss et al. (2022), the paper applies this approach to three case studies of SMEs struggling to overcome crises by taking on new entrepreneurial challenges through BMI.

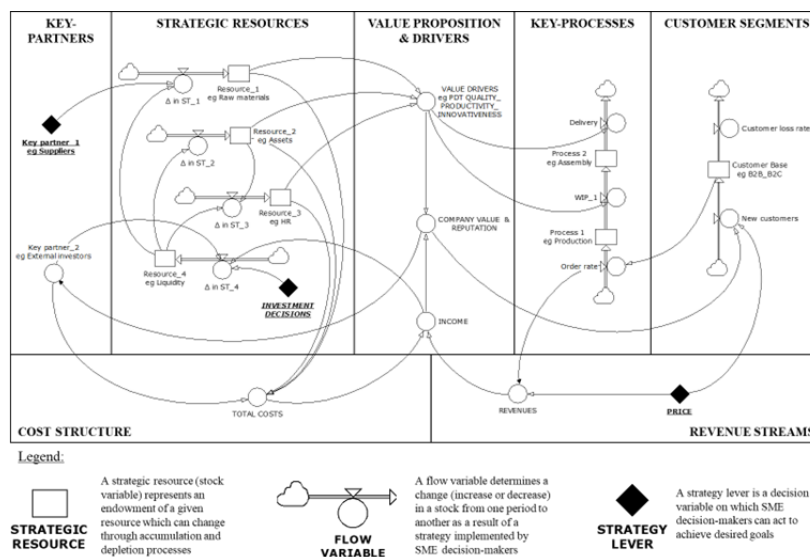


Figure 1: The Dynamic Business Modeling framework (Cosenz and Noto, 2018).

4. Results/Findings

Adopting a case-based analysis by applying the DBM approach to SMEs enables the elaboration of empirical and theoretical findings about its effectiveness and reliability in supporting resilience-building processes through BMI. Discussing these findings from a critical perspective implies exploring the main advantages and limits related to the use of DBM in SMEs for BMI purposes. Expected results investigate how DBM offers a methodological framework where financial and non-financial factors (i.e., strategic capabilities and resources) may show up as a system of causal interplays, thus enabling the introduction of new features that drive SMEs' BMI itinerary. Additional insights shed light on how a systemic perspective may boost SMEs' resilience-building processes while facing new entrepreneurial challenges in times of crisis. Eventually, findings identify emerging critical issues drawing future research perspectives.

5. Value & Implications

This work may provide a valuable contribution to the current debate on BMI applied to SMEs in times of crisis. Its value relies on the use of a systemic perspective aimed at fostering entrepreneurial learning processes to strengthen SME resilience by seizing new opportunities emerging from crisis exposure. From a theoretical point of view, the paper contributes to the current scientific debate by drawing on the shortages identified in the literature on BMI applied to SMEs in order to explore possible methodological support to overcome these barriers for SME resilience-building and survival in uncertain turbulent conditions. As for its implication for practice, the case-based analysis highlights empirical evidence of how DBM provides a practical approach to speeding up BMI in SMEs through a less costly strategy design tool. This relies on the possibility of creating, exploring and experimenting with the effects generated by the causal interplays of the business model elements, also in future scenarios characterized by crisis factors and promising BMIs to counteract their negative impacts.

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Integrating ambidexterity and family governance for business model innovation: a case study

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Paper type – Long abstract

1. Objectives

In recent years organizational ambidexterity has attracted a growing attention in family business research. Ambidexterity enables firms to enhance their performance and competitiveness and refers to the firms’ capability to exploit current abilities and resources, while simultaneously exploring and integrating new competences (O’Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008). Therefore, ambidexterity is recognized as a key driver to continuously nurture innovation and to develop organisational capabilities which enable business model innovation. However, the nexus with governance processes was substantially neglected by previous research, although it is crucial for understanding the distinctiveness of family firms’ behaviour and the heterogeneity of their performance (Stubner et al. 2012).

We adopt a process perspective to investigate how and why ambidexterity and governance interact in the flow of the entrepreneurial process (Hjorth et al., 2015; Langley, 1999) and influence business model innovation. This research focuses on the iteration, over time, of the intentions and behavior that unfold in the entrepreneurial process and deep delves into the interplay of ambidexterity and governance processes. We

challenge traditional one-way perspectives and investigate the mutual conditioning and adaptation that leads to the ability to innovate the firm's business model.

Finally, according to Kammerlander et al. (2020) we acknowledge family membership diversity and we investigated the different behavior and goals that characterize individually the family members involved in governance processes.

2. Literature review

Organizational ambidexterity refers to the simultaneous pursuit of exploratory and exploitative innovation by firms (Raisch & Birkinshaw, 2008) and recent research pointed out its positive linkage with above average performance, especially in family firms (Moss et al, 2014). The conflicting demands of ambidexterity are most relevant in family firms, since they need to balance tradition with innovation and renewal (Miller and Le Breton-Miller, 2005). Previous research found that not all family firms will be equally proficient in simultaneously pursuing exploration and exploitation to a high level (Bammens, Notelaers, & Van Gils, 2014; Carney, 2005; Cassia et al., 2012; Kollmann & Stöckmann, 2014; König et al., 2013; Lubatkin, Simsek, Ling, & Veiga, 2006; Moss, Payne, & Moore, 2014).

A central trait in managing ambidexterity is the possession of prior related knowledge in order to assimilate and use new knowledge. An organization takes advantage from individuals with a breadth of prior knowledge in multiple categories as well as various linkages across these categories, which makes organizations better prepared to take on both exploitation and exploration. This requirement is very significant in family firms that have been handing down knowledge rooted in tradition for generations, but which also represents a resource that can be mobilised to undertake new paths of innovation. Family control of ownership, management and governance provides the ability to shape organizational ambidexterity through their power and legitimacy, as well as through resources (Chrisman et al., 2012, Dyer, 2006). Therefore, family governance represents a fundamental trigger to unlock and enhance traditional knowledge in alternative uses by pursuing ambidextrous strategies that can facilitate business model innovation.

3. Methods

This research was carried out, through a process perspective, to investigate how and why the interaction between family governance and ambidexterity affects a firm's capability to innovate its business model. We analyzed, by means of a single case study (Chetty, 1996; Yin, 1994; 2009), how the interaction unfolds over time and produces mutually adaptive effects on governance and ambidexterity. The research site was a fourth-generation family firm engaged in the manufacturing of traditional food products strongly rooted in the culture of a local area. According to a process perspective, we investigated how BM innovation is realized through sequences of events (Langley, 1999; Tsoukas and Chia, 2002). We deployed longitudinal research to depict the evolution of actual processes in their natural environment. Furthermore, our open and iterative approach to data collection and analysis enables us to explore and refine our conceptualization of process dynamics (Strauss, 1987).

The data was collected through semi-structured interviews (Easterby-Smith et al., 2018) with directors, investors and other partners, experts, as well as from secondary sources such as company website, annual reports, media accounts, industry publications. Data analysis was guided by theoretical concepts regarding both the ambidexterity, governance process and business model innovation in family firms theories in an iterative cycle of analytic induction and deduction. Collected data were inductively analyzed, closely following the guidelines for qualitative inquiry, including the techniques for iterative comparison of data and emerging data structure.

4. Findings

This research investigated how and why the governance of a family firm interacts with new ambidextrous business ventures. Since we adopted a process perspective, our study allowed us to identify the mutual interaction through purposive behaviors that changed the firm's business model and its governance processes over time.

We investigated a family firm engaged in the production and trading of traditional cured meats. It initiated an exploration strategy by setting up a production site in the USA which slices and packs the sausage for large retail chains. Therefore, the business focuses on customer service capacity and requires different organisational processes, new organisational capabilities and new management methods and techniques.

We found that family governance plays a key role in encouraging or hindering the initiation of ambidextrous strategies. Given the existing and prospective balance in governance processes, the initiation of an ambidextrous strategy is only implemented if it is in line with and compatible with family governance and its balances. Therefore, ambidextrous strategies interact with family governance processes and balances.

We found that family governance and ambidexterity mutually condition each other by determining adjustments in governance balances and practices to carry forward exploration choices and consolidating exploitation activities to strengthen the resilience and continuity of the family business. Choices assigning particular family members to run exploration and exploitation strategies, the content of exploration and exploitation activities, as well as the degree of innovativeness in designing business model changes are conditioned by the family governance balances deemed appropriate and balanced and their evolution over time.

We found that the development of the processes that over time led to the implementation of the exploration strategy has had effects on the management of the family business that have resulted in a change in family governance. Moreover, it led to a change the leadership within the family governance. Consequently, these adaptations changed the power relations and authority in the family business hierarchy, also involving relations with top management and unfamiliar middle management.

5. Value & Implications

Our paper contributes to explaining the integration of strategy and governance in the family business from a process perspective. By deepening the link with family governance, helps to explain the *heterogeneous innovation behavior* in family firms (e.g., Duran et al., 2016), which is an important predictor of their long-term survival.

Our research highlights the family firm governance as a key enabler for undertaking ambidextrous strategies. An insight of our research is the link between governance and ambidexterity as a relationship of interdependence and mutual conditioning. Although previous studies have privileged the relationship between ambidexterity and the composition and behaviors of top management (e.g. Kammerlander et al., 2020), little research has delved into the relationship with governance. We argue that governance is the key element to make it possible to initiate and implement ambidextrous strategies that are then pursued over time, if in line with the current and prospective equilibrium of the

family governance. This insight extends the theoretical understanding of the *heterogeneous innovation behavior* of family businesses (Chrisman and Patel, 2012; Duran et al., 2016) which has been recognized as a significant predictor of their long-term survival (Kammerlander et al., 2020).

This paper also highlights how the governance of family businesses, by promoting ambidextrous strategies, can enable new business models that make it possible to overcome the crisis and start virtuous paths of entrepreneurial development.

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Looking for factors doing migrant women successful entrepreneurs. An exploratory study.

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Keywords – Migrant entrepreneurship, Women entrepreneurship, Individual level, Contextual level, Multiple case

Paper type – Academic Research Paper

1. Objectives

Women entrepreneurship is gaining increasing academic attention (Langevang et al. 2015; Laguía et al., 2022).

Several studies focus on the micro-level (individual) of analysis, by identifying personal traits and characteristics that appear positively linked with entrepreneurial careers (Schlaegel and Koenig, 2014; Mitchelmore and Rowley, 2013; Hassan et al., 2020), and contribute to explaining differences between men and women in undertaking entrepreneurial initiatives. In this sense, women appear to be less entrepreneurial than their male counterparts (Anna et al., 2000; Nani and Mathwasa, 2023).

Other studies focus on contextual rather than individual factors to explain drivers that stimulate or inhibit entrepreneurship and thus also women entrepreneurship (Essers, Doorewaard, and Benschop, 2013; De Vita, Mari, and Poggesi, 2014; Ratter, Dana, and Ramadani, 2017; Ogundana et al., 2021). There is a broad consensus that contextual factors affect entrepreneurship, entrepreneurial intention and behavior (Zahra et al., 2014). Specifically, following Granovetter's suggestions (1985), scholars have demonstrated that contexts can stimulate, delineate, or inhibit entrepreneurship through their specific features, originating territories with unique entrepreneurial characteristics

(Floris et al., 2020; Floris and Dettori, 2023). This phenomenon is at the origin of the embeddedness theory and refers to the intricate relational tangle of individual and organizational ties in a defined context (Dacin et al., 1999; Jack & Anderson, 2002) that affect personal life spheres, economic actions and business activities (Aldrich & Zimmer, 1986; Uzzi, 1997).

Building on the embeddedness perspective (Granovetter, 1985), this study agrees with Minniti and Naudè's view (2010), sustaining that to understand women entrepreneurship is essential to focus temporarily on the individual and the contextual level of analysis. To our knowledge, scholars have investigated the two levels separately, while we believe that the two levels coexist and thus deserve to be jointly analyzed. Additionally, following Alvensson and Sandberg's suggestions (2011: 252), we problematize the topic "with novel research questions through a dialectical interrogation of one's own familiar position, other stances, and the domain of literature targeted for assumption challenging". Specifically, this study stresses the joint role that contextual and individual factors exert in successful migrant women entrepreneurship. Because migrant women entrepreneurs are influenced by multiple embeddedness explicating in different levels, that is, context - positive or negative factors that come from their context of provenience and of migration - and individual, we aim to answer the following research question: How and why do contextual and individual factors act in successful migrant women entrepreneurship?

2. Literature review

Women entrepreneurship is increasing in its relevance, however, women that decide to create or continue a business are less than their male counterparts (Elam et al., 2019), corroborating the stereotypical concept of "think entrepreneur-think male" (Laguía et al, 2022).

To understand the reason for differences between men and women in undertaking entrepreneurial initiatives, scholars have mainly focused on the context characteristics because "context is important for understanding when, how, and why entrepreneurship happens and who becomes involved" (Welter, 2011: 166), especially concerning institutional context that includes political, economic, and cultural aspects (Shane, 2003).

Similarly, other scholars, focusing on the individual level, have spotlighted the relevance of possessing well-defined soft skills as antecedents for obtaining entrepreneurial success (Emami et al., 2022). Women appear to be rarely interested in

undertaking an entrepreneurial career path (Shinnar et al., 2012) and report lower entrepreneurial skills, knowledge and ability to set up a new firm (Allen et al., 2007). However, several individual attitudes seem to be strictly related to the context, as a result of culture and social norms. For this reason, context and individual levels need to be jointly considered.

There is a specific kind of women entrepreneurship that appear to be profoundly influenced by the context: migrant women entrepreneurship. Several studies have shown that migrant women entrepreneurs seem victims of a double disadvantage (Dhaliwal, Scott, and Hussain, 2010) or a triple disadvantage (Pio and Essers, 2014). Double disadvantage refers to the concerns stemming from being both migrants and women, while triple considers the case of migration from developing countries (Azmat, 2013). This last case worsens the condition of migrant female entrepreneurs, historically considered the most disadvantaged kind of entrepreneur (Raijman and Semyonov 1997), as they find it more challenging to adapt to the institutional framework, culture, and socio-economic context of developed countries (Drori, Honig, and Ginsberg, 2006; Azmat 2010).

Thus, migrant women entrepreneurs that come from developing countries experience prejudice from their country of origin more than the host country because of deeply rooted, discriminatory, cultural values, attitudes, practices, and the traditions of patriarchal culture (Amine and Staub 2009; Marlow and McAdam 2012). In this perspective, the embeddedness perspective lens appears the most suitable to investigate the phenomenon. Under the lens of this perspective, migrant women entrepreneurship deserves to be investigated by understanding how, to what extent, and through which main factors context affects its development and dynamic. At the same time, because migrant women entrepreneurs are influenced by factors from the country of origin and the host country, the embeddedness perspective becomes more complex, shifting into multiple embeddedness (Wigren-Kristoferson et al., 2022) that helps to interpret the phenomenon and allowing us to understand the effects of the contexts and the individual level through their intertwined ties. In other words, our understanding of migrant women entrepreneurship needs to consider the multiple contexts and the social structures in which migrant women entrepreneurs are embedded (Welter, 2011; Zahra et al., 2014).

3. Approach/Method

Given the unexplored topic, a qualitative methodology for this research was chosen and executed by a multicase approach (Eisenhardt, 1989; Yin, 1994). The qualitative approach is particularly appropriate for this study because the joint observation of the contextual and individual level of analysis of migrant women entrepreneurship requires an in-depth analysis able to penetrate interviewees' resistance. We involved four migrant women entrepreneurs to obtain their availability, presenting the objective of the study. The sample was adequate and additional cases provided no further knowledge, thus reaching saturation (Suddaby, 2006). Our study mainly relied on primary (interviews) and secondary data sources (archives, personal documents, websites, and others). Primary data consisted of four in-depth interviews with migrant women entrepreneurs. All interviews helped us understand whether and how context (of origin and host) exerts its influence and how they perceive it as supportive or not. Contemporarily, interviews allowed us to investigate whether and how individual factors interrelate with contextual factors. We analyzed data using an inductive approach (Eisenhardt, 1989; Eisenhardt et al., 2016). In the first step, we reviewed the primary and secondary data independently, highlighting the material reflecting migrant women entrepreneurs' perceptions of contextual factors. Then, we examined single cases, creating chronologically structured descriptions of each of the four firms with all relevant information. Two independent coders first read through the interviews and additional materials and subsequently scanned them for emergent themes that appeared important to answer our research question (Reay & Zhang, 2014). In the second step, we followed the recommendations of Eisenhardt (1989) and conducted a cross-case analysis to identify common patterns and contradictions across the sample (Eisenhardt & Graebner, 2007). We iterated amongst case pairs to sharpen similarities and differences and form tentative relationships between constructs. Furthermore, we shifted between empirical evidence and theory.

4. Results/Findings

Analyzing data we noted that migrant women entrepreneurs paid attention to common themes, showing similarities and differences in how they express their individual levels, how they perceive contextual factors, and how they formulate their responses to difficulties.

Concerning the individual level of analysis, the common themes that have emerged are "self-esteem" and "self-efficacy".

Referring to the context level, we noted two different perceptions, that is, neutral or positive, and hostile.

Carrying out our cross-case analysis and, thus, jointly analyzing the two levels, we noted that the interplay between individual and context levels generates two different responses based on an “individual perspective” and on a “business perspective”.

Specifically, when the context is perceived as hostile (only in one case), the individual level enhances its relevance by stimulating a response based on an “individual perspective”, necessary to face the context's negative challenges. This means that the migrant women entrepreneur, experiencing negative feelings from the context, builds her success by investing efforts and resources in the achievement of personal high skills, knowledge, and abilities. In other words, the response is a sort of “self-investment”. On the opposite side, when the context is perceived as neutral or positive, the individual level tends to reinforce the context level by stimulating a response based on a “business perspective”. This means that migrant women entrepreneurs can focus on delineating and conceiving deliberate strategies to improve their entrepreneurial activity, discovering and spotting new business opportunities.

As a result of our data interpretation, it is possible to suggest the following propositions:

P1. When the individual level is strong and the perception of the context is negative, migrant women entrepreneurs tend to formulate a cognitive response based on an individual perspective

P2. When the individual level is strong and the perception of the context is neutral or positive, migrant women entrepreneurs tend to formulate a cognitive response based on a business perspective

5. Value & Implications

This study contributes to the literature in at least two ways. First, our study unveils that migrant women entrepreneurship is heavily influenced by the interplay of contextual and individual factors - especially self-esteem and self-efficacy. Second, our study underlines that the mechanisms through which these factors interrelate determine two different cognitive responses that follow, on the one side, an individual perspective based on self-investment (when the context is hostile and individual factors try to reduce negative context effects), and, on the other side, a business perspective, based on

deliberate strategic actions (when the context is neutral or friendly and individual factors tend to enhance the positive context effects). On the practical side, the study's findings can help migrant women entrepreneurs and practitioners (consultants and other entrepreneurs) to identify the main factors that can sustain or inhibit entrepreneurial behaviors, by anticipating possible concerns and issues and, above all, trying to remove potential context barriers. Finally, findings call into action also policymakers to promote ad hoc entrepreneurship education programs to strengthen the individual level, with the aim of contrasting possible negative effects due to hostile contexts.

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Fostering Women Entrepreneurship under the lens of Agenda 2030. A closer look based on a systematic literature review

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Keywords – Women entrepreneurship, UN Agenda 2030, Sustainable Development Goals, Systematic Literature Review

Paper type – Academic Research Paper

1. Objectives

The phenomenon of women entrepreneurship is gaining increasing attention from scholars, which argue that women play a significant role in entrepreneurship (Noguera et al., 2013), contributing to socio-economic development (Strawser et al., 2021), poverty reduction and inclusion promotion (Langowitz and Minniti, 2007). In the last Global Entrepreneurship Monitor (GEM) report (2021-2022), women entrepreneurs are described as key generators of relevant “impact in their markets, industries and communities through innovation, job creation and economic growth. However, their contributions are often lost in the prevailing narrative that women are over-represented among the poorest and most vulnerable entrepreneurs globally”. Women entrepreneurship is influenced by changes in the economy, restructuring of labor markets in terms of employee qualifications, and the nature of the work contents, and it is a cross-cultural phenomenon with culture-specific aspects. Countries' and relatives' cultures influence both sexes but not in the same manner or with the same impact and there are aspects of entrepreneurial behavior that are country specific.

Despite this argument, we consider the UN Agenda 2030 as a common path that should reduce this difference and, along with the evidence, sustain women entrepreneurship above cross-cultural variables. Gender equality is one of the 17 Sustainable Development Goals (SDGs) accepted by world leaders in 2015, and we consider it a milestone in delivering on the promises of sustainability and human progress worldwide.

Previous studies agree on the fact that scholars have to spend their efforts to identify a theoretical framework to observe, analyze, and understand the phenomenon. In this perspective, there are still no studies on how literature has positioned itself after the strong impulse that the UN 2030 Agenda has given to the development of women entrepreneurship and its current stage and future development. For this reason, a systematic review of the literature that includes the reference to the UN Agenda 2030 is essential to understand, also at an institutional and political level, what is changed from 2015 to now, and what actions can be taken to further stimulate women entrepreneurship, and remove the cultural, social, economic and financial barriers that still exist.

Coherently, this study, through a systematic literature review, aims to investigate if, how, and to what extent the UN Agenda 2030 and the related SDGs have exerted an impulse in women entrepreneurship studies. Contemporarily, this study tries to understand whether and how scholars have conjugated women entrepreneurship and UN Agenda 2030 in their studies.

2. Literature review

Women who decide to create an entrepreneurial activity are significantly less than their male colleagues (Elam et al., 2019). Several scholars state that this difference accentuated in some countries compared to others, could derive from stereotyped and male-dominated perspectives which would seem to discourage women from undertaking business activities (Langowitz and Morgan, 2003). Other studies highlight other barriers, such as lack of education, experience, and training opportunities; spatial mobility and lack of family support; lack of institutional support; lack of entrepreneurial management; and problem acquiring financial resources (Raghuvanshi, J., Agrawal, R., & Ghosh, P. K., 2017). Moreover, scholars focused on the explanation of the differences between men and women in terms of entrepreneurial rates, processes of financial resource acquisition, sectoral choices, and business size and performance. Generally speaking, the

understanding of women entrepreneurship has two different, though related, levels of analysis: the individual level, mainly focused on personality traits and career stages, and the institutional level, where the context drives and lends shape to entrepreneurial activity. We notice that studies ignore cultural values concerning gender, the constraints that shape women's motivations and choices, and their implications at the macro (policy-making) level, at the meso (organizational) level as well as at the micro-level of local practice. By adopting a social theory perspective, we consider that a greater understanding of the sociocultural and spatial impact of a formal institution such as Agenda 2030 is crucial if we are to move to integrate the two levels of analysis with a gender perspective. Mainly, we consider that to advance entrepreneurship research on this topic we need to move beyond the simplistic and dichotomous explanations of gender.

3. Method

This study adopts a Systematic Literature Review (SLR) because it provides a comprehensive overview of literature related to the aim of this study and synthesizes previous work to strengthen a particular topic's foundation of knowledge while adhering to the concepts of transparency and bias reduction (Pittway, 2008; Tranfield, Denyer, and Smart, 2003). Based on the combination of SCOPUS and Web of Science databases, which include a large number of leading journals, this study carries out an analysis of the articles from 2000 to 2023 (export date March, 7th) to verify the publication trend with a particular emphasis on the content of the articles published from 2015 to 2023, to deepen the knowledge on the role exerted by UN Agenda 2030 in terms of whether and how Sustainable Development Goals are stimulating the proliferation of studies on women entrepreneurship, suggesting new perspectives and research directions. We selected 43 articles.

4. Findings

Findings reveal the existence of an underdeveloped field of research. In fact, we found that the number of articles was not high, as we rather expected. Moreover, the selected articles have been published in a small number of specialist academic journals, which have been interesting since their foundation in publishing articles dealing with sustainability issues. In other words, among the selected articles, very few have been

published in General Management or Entrepreneurship leading journals. This evidence would seem to highlight a reduced sensitivity on the side of managerial discipline scholars with regard to the joint analysis of women entrepreneurship and sustainable development goals. This appears in contrast with the relevance given to the same topics investigated separately.

After reading the articles, however, findings show the main themes that scholars have deeply analysed, as follows:

- *Women entrepreneurs in the service sector and social enterprises.*

These articles emphasize how and why women privilege the service sector, especially the tourism and the renewable energy sector, and social enterprises to undertake their entrepreneurial initiatives. Women appear to be more prone to invest their efforts in services and social businesses than their male counterparts because pushed, on the one hand, by the interest of achieving social goals and improving community well-being, and, on the other side, by the more possibility to obtain financial and social support than in other sectors. In addition, social business appears a powerful means to allow women to face the patriarchal norms of specific countries.

- *Women entrepreneurship in emerging countries.*

The articles in this cluster focus on women entrepreneurship as a driver of women empowerment in poor areas and emerging countries, and underline the role of women entrepreneurship in poverty reduction, by investing in sectors that are critical for Countries' development, and by suggesting governments to delineate ad hoc policies to promoting women entrepreneurship enhancement.

- *Barriers and opportunities.*

These articles investigate which factors inhibit or stimulate women entrepreneurship, and what governments can promote by developing public policies able to remove obstacles and ensure active actions to improve women participation in the entrepreneurial arena.

- *Technology as a driver to improve women entrepreneurship.*

The studies sustain that technology represents a valid tool to enhance women entrepreneurship, ensuring the work-life balance and allowing women to self-organize their work from home, and, at the same time, argue that women can invest in technological sector to set up their entrepreneurial initiatives.

- *Female entrepreneurship education.*

These articles spotlight the role that entrepreneurship education has on the set up of women-led firms and, contemporarily, the difficulties that women encounter in acquiring entrepreneurial skills.

5. Value & Implications

The originality of the study relies on the focus on UN Agenda 2030, to understand if it represents a driver to enhance and stimulate women entrepreneurship.

Compared to other studies, we produce new findings on the relationship between women entrepreneurship and the UN Sustainable Development Goals (SDG). We see a different relationship with SDG and we consider that future research should invest in the analysis of this difference to consider its impacts, first, on the development of the field and, second, on the practical side of the UN Agenda 2030. Based on our findings, we offer a rich research agenda to investigate the impacts of Un Agenda 2030 to foster women's entrepreneurship, including a closer look at the evaluation of the various SDGs.

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Does the sector matter? Italian Innovative SME's and Board Gender Diversity: impact on firms' performance

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Paper type – Long abstract

1. Objectives

This study aims to examine the link between firm performance and corporate governance, specifically with regards to board diversity. In particular, the main purpose is to ascertain the impact of gender disparities within the Board of Directors (BoD) on the financial performance of Italian Innovative Small Medium Enterprises (SMEs). The Italian government introduced the Innovative Small Medium Enterprises (SMEs) business category in 2015 with the aim of fostering technological advancement and national growth. This category pertains to companies that are actively involved in innovation and possess certain distinctive features, including ownership rights with regard to intellectual property, a workforce comprising of skilled individuals with doctorates or prior experience in research activities in public or private institutions, and a designated level of investment in research and development (MISE, 2015). In recent years, there has been a growing emphasis on promoting diversity within organizational boards, largely due to factors such as government mandates, media attention, and stakeholder advocacy. In response to concerns about the lack of gender diversity on the Board of Directors, various measures have been implemented. For instance, the European Commission enacted a

Directive in 2016 aimed at enhancing female representation on corporate governance bodies (European Commission, 2016).

2. Literature review

Despite the extensive research conducted on the relationship between female board representation and firm performance, the findings remain inconclusive. Numerous scholarly investigations contend that gender diversity has an impact on a company's effectiveness, as well as its ability to gain a competitive edge (Cox and Blake, 1991; Elsbach, 2003; Smith, Smith and Verner, 2006; Campbell and Mínguez-Vera, 2008; Adams and Ferreira, 2009; Westphal and Zajac, 2013). Several studies have reported that the inclusion of women on boards has been associated with enhanced asset returns and financial gains (Singh, Vinnicombe, & Johnson, 2001; Campbell & Mínguez-Vera, 2008). Mari and Poggesi (2020) conducted a study to investigate the impact gender could have on the performance of Italian innovative small and medium-sized enterprises (SMEs). The results revealed that, in contrast to male, female on boards demonstrated a higher likelihood of achieving superior performance. On the contrary, certain studies suggest that an increase in the number of women serving on a board does not have a noteworthy impact on a company's profitability. In fact, some research has shown a negative effect, as evidenced by a reduction in accounting returns (Darmadi, 2011; Mínguez-Vera and Martin, 2011). This study provides fresh evidence pertaining to the discussion on gender diversity in the boardroom of Italian innovative SMEs, indicating that its impact on performance is contingent upon the specific sector being considered. Our argument posits that the presence of women on corporate boards in high-growth sectors yields superior performance outcomes compared to those in low-growth sectors.

3. Approach/Method

The study employed a quantitative approach utilizing a sample of 2,264 Italian innovative small and medium-sized enterprises (SMEs) sourced from Aida, a Bureau van Dijk (BVD) database that provides comprehensive information on companies, including data on directors and corporate governance.

For the empirical analysis, a linear regression model has been employed where the dependent variable Return on Asset (ROA), has been considered as measure for firm performance (Adams and Ferreira, 2009; Easterwood et al., 2012; Zona et al., 2015).

The primary independent variable is Female Board, which refers to the proportion of women serving on the board of directors divided by the total number of board members. As a means of implementing control measures for the Board of Directors, Age Board has been used, calculated as the natural logarithm of the age of the individual components comprising the Board of Directors.

To assess the level of a company's dedication to investing in innovation, additional metrics have been incorporated, related to research and development endeavours. Specifically, the variables R&D expenses, Patent expenses, and Licensing expenses have been introduced as control measures.

4. Results/Findings

Findings underscore the sector-dependent nature of the influence on corporate performance, as the representation of women on boards of directors is not uniform across all sectors. The presence of gender diversity on corporate boards has been found to have a significant negative effect on firm performance.

Our present findings diverge from several prior investigations (Brahma et al., 2020; Arvanitis et al., 2022), but are consistent with certain other empirical inquiries (Adams and Ferreira, 2009; Fernández-Temprano and Tejerina-Gaite, 2020).

Furthermore, findings indicate that there is a negative relationship between the presence of female board members and return on assets (ROA), which is further exacerbated by an increase in sector growth.

The study suggests that the involvement of women on the Board of Directors in innovative small and medium-sized enterprises operating in high-growth sectors has a statistically significant adverse impact on firm performance. The impact of the Female Board variable on ROA exhibits a noteworthy adverse effect in the context of the ascending levels of the Growth Sales variable across sectors.

Therefore, the research hypothesis has not been validated, indicating a requirement for additional investigations.

5. Value & Implications

This research offers noteworthy insights into the field of innovative small and medium-sized enterprises (SMEs) and corporate governance mechanisms. It encourages

debate on the impact of female representation on the board of directors (BoD), as well as the association between board composition and performance outcomes. Industries that have been traditionally male-dominated continue to exhibit a lack of representation of women in the boardroom. In order to address this phenomenon, it is recommended that policymakers offer adequate support to female presence in the board across various industries and nations, particularly in fields where male dominance may give rise to biases.

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Women Entrepreneurship under the lens of Social Theory: The Italian case

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Paper type – Academic Research Paper

1. Objectives

The study and analysis of women entrepreneurship have increased in recent years from different research fields (Henry, Foss, & Ahl, 2016; Shane, 2003). Scholars agree about the need to invest in this complex phenomenon. Intending to build a better understanding of women entrepreneurship, this paper attempts to provide a theoretical framework for developing academic research on the topic.

First, moving from the works that support gender equality as a necessary aspect for a factual evaluation and growth of the role of women within enterprises, the proposed theories are linked by a common thread: they all take a normative perspective based on the study of the context in which the enterprise operates. This is because the context, on the one hand, influences the socialization process of managers and determines the internal conditions within the enterprise in which they or it operates. The analysis of how culture can influence attitudes toward men and women can be usefully conducted by considering Berger & Luckmann's (1966) Social Construction Theory. Indeed, it should be recalled that this theory postulates that men's and women's ways of thinking, feeling and behaving are influenced from childhood by the socialization reserved for sex. From this, men and women learn how they are expected to behave in the society in which they live. They

learn what it means, in a given social context, they learn what it means to be a woman or a man and how to construct their beliefs about the "innate characteristics" of men and women (i.e., stereotypes). Hence, the existence in some contexts of the think manager-think man stereotype, which in our view can inhibit the presence and active role of women in corporate governance in those contexts where there is the presence of a masculinist culture (non-egalitarian contexts). These aspects can also be translated concerning women who want to set up their businesses.

Second, although entrepreneurship has its own theoretical and practical tradition, it has never fully addressed the role of cultural and social context in supporting women to engage in business activities (Brändle, Berger, Golla, & Kuckertz, 2018; Gruber and MacMillan, 2017). The works have often limited themselves to describing the presence of women in certain sectors or not, but not investigating the causes. In light of this consideration, it is assumed that creating a bridge between entrepreneurship and gender studies can contribute to the advancement of knowledge on these issues from a gender perspective.

2. Literature review

Based on the interpretive lens of social identity theory, there are no entrepreneurial competencies or skills that can be attributed to gender but a dominant culture related to the specific geographic contexts in which the female entrepreneur operates. Context can play a key role in influencing attitudes toward women entrepreneurs, supporting or limiting the establishment and growth of the enterprises they govern.

In particular, contexts can be distinguished into patriarchal and non-egalitarian contexts. In patriarchal and non-egalitarian contexts, differences in personality traits are emphasized as masculine or feminine and the stereotypical view of women is reinforced. In these contexts, women find it more difficult to create and prosper in their enterprises (Bui, Kuan & Chui, 2018). In contrast, in egalitarian cultures, differences in personality traits and the above stereotypical views tend to be less pronounced since the idea is that all individuals, whether man or women, are born equal. As a result, women can create their own businesses and make them thrive just like men.

Gender stereotypes are social constructions and, consequently, are context-dependent since people jointly create them within a specific domain (Gullberg et al., 2018).

Therefore, when distinguishing between egalitarian and non-egalitarian, the purpose is to capture the role of cultural beliefs in shaping gender stereotypes.

These findings, referring to the stereotypes discussed in the literature, may ultimately influence managerial practice. The proposed point of observation, based on Social Identity Theory, thus argues that gender differences are a reaction to the social construction referred to sex. Furthermore, it should be emphasized that stereotyping can be both normative, when it attributes characteristics to the two sexes, and prescriptive when it assesses how a man or woman should be. Descriptive and prescriptive stereotypes are not mutually exclusive. What is evaluated in this paper is the fact that stereotyping (whether descriptive or prescriptive) creates different (and discriminating) treatment based on the individual's sex categories. Examples of discrimination leading to restraint of female entrepreneurs can be considered as follows:

Role of care. Since the female is the one who biologically procreates, the caring role is commonly attributed to the woman and she is expected to remain in the domestic sphere. The man, on the contrary, is naturally placed in working positions precisely because he is considered to be outside the caring roles but having the social role of providing economically for the family.

Risk aversion. The literature seems unanimous in stating that women act differently than men, particularly exhibiting more risk-averse behaviour, a characteristic underlying business activity.

Personal attitudes. Management research describes women as cautious, unconfident, unaggressive, irrational, emotional, easy to persuade, and with limited leadership and problem-solving skills. The finance literature also considers women to be less confident than their male counterparts. These are aspects that the literature considers contrary to business activity.

These stereotypes affect both the perception of the woman herself in undertaking business activity by not evaluating herself as suitable for the role (individual level) and in the evaluation by the context (think, for example, of access to credit and the obstacles that can be encountered: Bannò, D'Allura, Collier and Amorim Varuum, 2022). Therefore, we hypothesise:

Non-egalitarian contexts are negatively related to the presence of women-owned firms.

3. Method

Data for the analysis, referring to the year 2020, are derived from three databases: Aida Bureau Van Dijk, Reprint, and Espacenet. The sample for this study consists of 5,441 Italian firms. Firms were selected randomly; therefore each firm had the same probability of being selected.

Consistent with our framework, the dependent variable (*Women_Entrepreneurial*) of our linear model is measured as the total share of capital owned by women (Bear et al., 2010; Ben-Amar et al., 2017). Considering that in contexts in which women operate, there may be gendered barriers related to cultural and personal factors (e.g., lack of respect by men and refusal to do business with women), we consider the role that the context exerts on the possibility of women to be entrepreneurs. Specifically, the external context refers to the region of origin and aims to frame the peculiarities of a specific area in terms of cultural barriers embedded in its history, traditions, value and informal norms (Dacin et al., 2002). We exploit a unique feature of the Italian context: the great differences across Italian regions regarding gender roles. Recent studies show the non-egalitarian context of Southern Italy, where a traditional, patriarchal, and male-oriented view is the predominant one. In Southern Italy the woman is traditionally seen as the homemaker while the man as the breadwinner; on the contrary, in Northern Italy this belief is not dominant (Amore et al., 2014; Wright et al., 2007). Furthermore, the European Quality of Government Index (Charron et al., 2019) identifies Southern Italy as the worst in Europe regarding institutional quality. Thus, the variable *External context* takes value one if the firm is located in Southern Italy, and zero otherwise. *SME* was included as an interaction variable, it is measured as a dummy variable if the firm is a small or medium one.

In line with previous studies, we control for several firm-specific characteristics.

To test our hypothesis, we develop two econometric models. The first one which assesses the impact of the *External context* (MODEL A), and the second one which assesses the impact of the *External context* mediated by the firm size (MODEL B), on women entrepreneurship.

MODEL A: Women_Entrepreneurship = $f(\text{External context}; \text{SME}; \text{Control variables})$

MODEL B: Women_Entrepreneurship = $f(\text{External context}; \text{SME}; \text{External context}*\text{SME}; \text{Control variables})$

To test our hypotheses, we perform ordinary least squares (OLS) regression analysis (Greene, 2003).

4. Results

Table 1 reports the main statistics of the variables used in the empirical analysis. The overall descriptive statistics reported in Table 1 show that the average Women_Entrepreneurship equals 27,78%. Almost eight out of ten firms are localized in the North of Italy. More than 987% are SME and the average size equals 4 million euro total sales. The firms are on average more than 18 years old. The average profitability ROA is 4,7% revealing a good sample of profitable family firms. 24% of firms are multinational and hold, on average, one patent.

Table 1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Women_Entr~p	5,441	27.78772	34.32054	0	100
External_C~t	5,441	.2091527	.406741	0	1
SME	5,441	.9722477	.1642773	0	1
Sales	5,441	4100858	1.56e+07	0	5.00e+08
Age	5,441	18.63793	14.41223	0	112
ROA	5,441	4.71531	9.955896	-178	72
Financial_~s	5,424	35.10841	25.69624	-48	100
Risk	5,310	5.782298	10.91998	0	316
MNE	5,441	.2437052	.4293563	0	1
Listed	5,441	.0001838	.0135569	0	1
Innovation	5,441	1.094652	14.48332	0	776

Table 2: Empirical results, MODEL A

Source	SS	df	MS	Number of obs	=	5,293
Model	34572.9437	10	3457.29437	F(10, 5282)	=	2.96
Residual	6173037.75	5,282	1168.69325	Prob > F	=	0.0010
				R-squared	=	0.0056
				Adj R-squared	=	0.0037
Total	6207610.7	5,292	1173.01789	Root MSE	=	34.186

Women_Entrepreneurs~p	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
External_Context	-.6101318	1.198603	-0.51	0.611	-2.95989 1.739626
SME	.9460727	3.37515	0.28	0.779	-5.670617 7.562762
Sales	-6.83e-08	3.58e-08	-1.91	0.056	-1.38e-07 1.89e-09
Age	.0564379	.0361137	1.56	0.118	-.0143599 .1272357
ROA	-.1119906	.0531249	-2.11	0.035	-.2161372 -.0078439
Financial_constraints	.0363178	.0194155	1.87	0.061	-.0017446 .0743801
Risk	-.0160743	.0477768	-0.34	0.737	-.1097366 .0775879
MNE	-4.384766	1.17283	-3.74	0.000	-6.683999 -2.085534
Listed	-12.32362	35.22835	-0.35	0.726	-81.38574 56.7385
Innovation	.0516035	.0331307	1.56	0.119	-.0133464 .1165534
_cons	26.63784	3.60801	7.38	0.000	19.56465 33.71103

Table 3: Empirical results, MODEL B

Source	SS	df	MS	Number of obs	=	5,293
Model	39025.9417	11	3547.81288	F(11, 5281)	=	3.04
Residual	6168584.76	5,281	1168.07134	Prob > F	=	0.0005
				R-squared	=	0.0063
				Adj R-squared	=	0.0042
Total	6207610.7	5,292	1173.01789	Root MSE	=	34.177

Women_Entrepreneurs~p	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
1.External_Context	-19.26252	9.627928	-2.00	0.045	-38.13724 -.3878018
1.SME	-.8708658	3.500219	-0.25	0.804	-7.732743 5.991011
External_Context#SME					

Our preliminary results show that when the context is non-egalitarian, women-owned firms are less likely as they face barriers and discrimination that impede them both as the number of firms led by women and their development (most of them are SME).

Table 2 and 3 report the regression results from all models. The models differ about the statistical significance of the variables connected to the external context.

External context and firm dimension do not impact women entrepreneurship (MODEL A). However, when considering the interaction of the external context and SME it becomes positive and significant at $p < 0.10$ (MODEL B) and external context becomes negative and significant at $p < 0.05$.

The control variables also yield interesting results. *Sales* is negative and significant in all models, with at least $p < 0.05$. Firm age, does not impact any models. The variable measuring firm profitability ROA has a negative impact in all models (at $p < 0.05$), while financial constraints is positively significantly different from zero in all models at $p < 0.10$. The variables *Risk*, *Listed* and *Innovation* are not significantly different from zero in any models. MNE negatively impacts at least at $p < 0.01$ in all models. Some of the coefficients associated with the industry dummies are significantly different from zero in all models (available upon requests).

5. Value & Implications

The idea for this research work stems from the need to understand the influence exerted by egalitarian and non-egalitarian contexts on the birth and development of women's businesses. Such insights are bound to grow as a consequence of legislative and policy interventions attentive to the inclusion of women in entrepreneurial contexts. Women are often affected by the context in which they operate and this deserves attention.

Through empirical analysis, an attempt was made to explain the relationship between non-egalitarian context and women's presence in ownership.

In particular, the hypothesis that women's presence in ownership is lower in a non-egalitarian context than in egalitarian contexts is confirmed. The results also show that firms in which there is a greater presence of women in ownership are also smaller firms. . Women receive less confidence in expanding their business activities and in some cases are also hindered, for example, to access the necessary funds for development. Therefore, it is possible to conclude that in contexts where stereotypes, such as

preconceived ideas about personal attitudes (low self-confidence, risk aversion, and a more balanced division of care roles) are scarcely present, women's presence in business ownership is greater and the enterprises they lead also reach larger sizes.

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Design(ing) for the benefit of entrepreneurship

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Keywords – Entrepreneurship, Design, Design Thinking, Entrepreneurship Education, Networking

Paper type – Long Abstract

1. Introduction

Design is the foundation of human practice, being a part of every human culture and civilisation (Baker III & Moukhliiss, 2020). Nowadays we speak about total design that involves products, processes, and services (Hollins & Shinkins, 2006). There are multiple definitions or understandings, but according to a widely cited specification by Herbert Simon (1996:111) “Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.” Design supports competitiveness, innovation, etc., and fosters cross-disciplinary collaboration. The value of design research comprises social, cultural, economic, and environmental components. (Rodgers et al., 2020)

Design thinking is a focal feature of design, a multiplex phenomenon that includes creative problem-solving, sprint execution, creative confidence, and innovation of meaning (Dell'Era et al., 2020). Design thinking has deserved notable interest from practitioners and academics, yet there are considerable differences between its promoters and critics (Micheli et al., 2019). Still, developments in the design thinking practice have not been sufficiently grounded theoretically. Recent developments relate design thinking to critical and system thinking, and reflective practice, and importantly, “... represent a

major advance in our understanding of innovation, strategy, and entrepreneurship over traditional approaches.” (Verganti et al., 2021: 2). These developments relate to another shift, from ‘design thinking’ to ‘designerly thinking’, a more sophisticated version of the first (Hvidsten et al., 2023).

Entrepreneurship has long been seen as a key engine for economic development, but nowadays it is equally recognised as a powerful source of innovative solutions to the most intractable societal challenges, including poverty and social injustice, and climate change (Bacq et al., 2022). The ability to facilitate exploration and exploitation of opportunities and turning them into economic and social value is still a widely renowned feature of entrepreneurship, yet some hesitating voices are also sounding. Late events, such as the COVID-19 pandemic and the war in Ukraine, have driven many, especially small and medium businesses, to crisis (Fasth et al., 2022). Still, crises also generate new needs and new opportunities, thus finding innovative solutions to upcoming problems have become priorities worldwide as reflected also in pertinent public policies (Pencarelli et al., 2022). These developments are changing the image of ideal entrepreneurs, from traditional profit seekers to global changemakers for development and progress. Nowadays entrepreneurship is a possibility for everyone for all purposes, not a profession or avocation for businesspeople. This reflects another paradigmatic change towards empowered individuals as the main agents of change, development, and progress, instead of public bodies. (Lee, 2023).

Developments in practice induce scholars to advance theory, including going beyond the ‘mainstream’. One possibility for this is apprehending insights from other disciplines. A recent endeavour is incorporating design and design thinking into entrepreneurship and introducing a new journal – Journal of Business Venturing Design (Berglund, 2021). This paper follows the mentioned trends and intends to contribute to exploring the existent linkages between entrepreneurship and design, primarily design thinking, systematically reviewing the relevant literature and discussing the findings.

2. Systematic literature review

Literature was searched in two major academic databases – Scopus and Web of Science (WoS), using the keywords “entrepreneurship” AND “design AND thinking”. The second was a combined keyword because solely “design” provided a mass of useless matches, but design thinking is the definite feature. Additional criteria were

peer-reviewed articles in English with available full text. Searches provided 68 matches but eight were duplicates and two did not match the additional criteria.

The screened 58 articles were examined, using an inductive and iterative approach, and coded. The first codes were derived from original keywords and substantial (key)words in headings. In the next rounds, complementary codes were derived from texts. Similar, and especially rare keywords (such as multidisciplinary* and interdisciplinary*) were assembled. This process had several iterations until saturation when it proved impossible to perceive novel substantial (key)words. Finally, all 58 articles were examined again, some numbers of occurrences increased during this process.

Linking of entrepreneurship and design (thinking) appeared to be a relatively new trend that has emerged within the past ten years. The publication outlets vary, only a few journals have published several relevant articles, but among the relatively popular journals are five educational journals. This is probably not simply coincidental and allows to hypothesise that *design (thinking) is permeating into entrepreneurship practice chiefly via education*.

The ascertained 58 articles are from 149 authors, 13 from one and 45 from 2...8 authors; and just 10 names appear more than once. This indicates that the domain is emerging and diverse with dominant conceptual approaches still missing. The articles cover a relatively diverse area, in terms of both involved concepts and notions, as well as fields of activity –like sports, tourism and hospitality, not counting social entrepreneurship and education.

The methodology revealed a total of 29 keywords (codes) that occurred in 2...30 (on average in 21) articles. Codified keywords served as first-order constructs. To explore the codified keywords, a qualitative grounded theory approach known as ‘Gioia methodology’ was adopted (Gioia, 2021). So, four themes formed: (1) Creation and running businesses, networks and ecosystems (to benefit societies), (2) Contemporary organizational practices, (3) Knowledge development, and (4) Social and environmental responsibility. Because most formed themes are quite wide and distinct, and the number of themes is rather small, it seemed inappropriate to form third-level categories.

3. Preliminary conclusions

This paper explored several linkages between entrepreneurship and design (thinking) in existent literature, and discerned four interrelated but distinguishable themes. The

emerged hypothesis was vaguely confirmed, so it is still rather a question for further research – how do entrepreneurs obtain the idea and relevant knowledge for applying design (thinking)? Education and training may have an important role in this but possibly there are several other significant influencers. So, the consequent research questions might be about the supporting and deterrent factors for implementing design (thinking) in entrepreneurship practices, and the pertinent processes, as well the usefulness of appropriate sets of tools and methods, etc., and how all these differ across the typical phases of venture development. The findings confirmed that design is a counterpart of innovation, as its main features (customer-centricity, value (co)creation, creativity, etc.) are inherent in the (re)design or innovation of products and services. Yet, besides products and services, also processes and methods, and organizational structures are innovated, hence designed (if new) or re-designed (if existing). The design of (or for) services means a transition from artefacts to processes and methods, denoted by education (as a service) in this review. Design and innovation are legitimately important in entrepreneurship and both reasonably project-based phenomena. Thus, further research is needed for exploration of existent and possible or still hidden linkages between these phenomena.

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Community Entrepreneurship: a literature review and research agenda

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Keywords – Community entrepreneurship, Community enterprise, Social entrepreneurship, Systematic literature review, Bibliometric analysis.

Paper type – Long abstract

1. Objectives

Community Entrepreneurship (CE) at its very origin has been associated with the process of building a robust, entrepreneurial community, as a social as well as an economic endeavour by community entrepreneurs. Since then, many experiences have grown up all around the world, especially in impoverished territories of the so-called Peripheral North as well as in depleted contexts of the Global South, often giving birth to a specific kind of enterprise, named Community-based Enterprise or simply Community Enterprise (Buratti et al., 2022). Other than within the framework of Community Entrepreneurship, these initiatives have often been explored under the umbrella of the social entrepreneurship construct, with which it has many points in common. Notwithstanding, CE presents some distinctive features that may advocate a specific role within entrepreneurship studies.

Considering the above, our study aims to provide an extensive background of issues related to CE, focusing on its specificities as well as its relationships with other strands of entrepreneurship studies.

Although some literature reviews on community enterprises have been performed in recent years, to the best of our knowledge no recent review on the entrepreneurial process of community enterprises is available.

With this purpose in mind, we first introduce the topic and formulate the research questions driving the following analysis. We then illustrate the methodology adopted to select the body of literature to be analysed and provide a descriptive analysis of selected papers. Based on the literature review, an attempt is made to clarify the development path of CE, pinpointing both shared and unshared elements emerging from the various studies analysed. Finally, we conclude by describing the value and implications of our study.

2. Literature review

The label Community Entrepreneurship (CE) has been used in the past and is still used, to interpret initiatives aimed at stimulating local community engagement and active participation in local development processes (Johannisson, 1990; Dana and Light, 2011; Mars, 2022).

CE construct is at the intersection between community and entrepreneurship, where a community may be defined as a group of people based in a geographically bound area, such as a village or locality (Haugh and Pardy, 1999). Communities tend to be self-defining in place (Lyons et al., 2012), which then becomes fundamental to the entrepreneurial process (McKeever et al., 2015).

As regards instead entrepreneurship, many approaches have been developed over time, making it a blurring-boundaries concept. To our purpose, we consider entrepreneurship as both the creation of a new organisation (as proposed by Gartner, 1988), and the process of creation and extraction of value from an environment (following the holistic definition of Anderson, 1995).

Since the seminal contribution of Johannisson (1990) who first introduced the label, scholars have proposed experiences from different contexts contributing over time to the sedimentation of practices and interpretations, so much so that some stressed the urgency of getting order within a jagged body of knowledge, by recognizing the link between community and entrepreneurs as a new frontier in entrepreneurship research (Lyons et al., 2012) and/or wondering if a new stream of thought within the broader strand on entrepreneurship was taking shape (Fortunato and Alter, 2015).

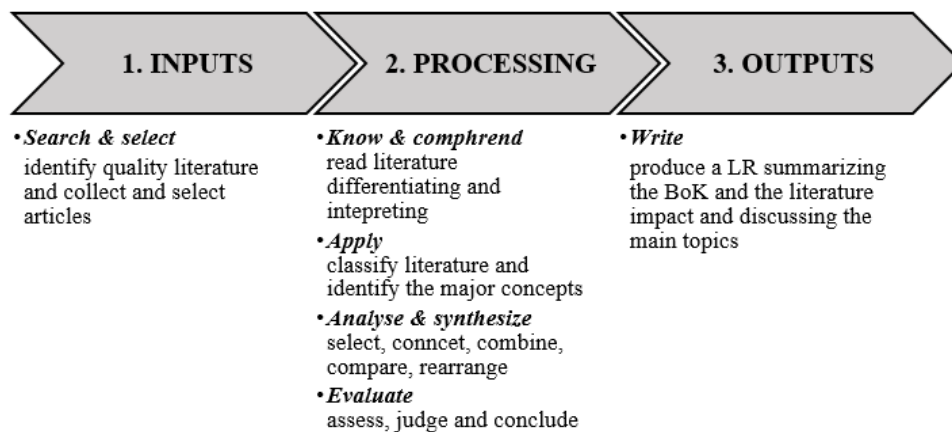
By conducting an extensive literature review, we aim to offer an up-to-date picture of the body of knowledge developed around the CE construct, both following its development over time and highlighting its distinctive characteristics, as compared to other kind of entrepreneurship.

In sum, our literature review is organized to answer the following research questions: 1. How the CE construct developed over time? 2. What are – if any - its distinctive features?

3. Method

To analyse CE research, we developed a SLR following the input-processing-output approach (Levy and Ellis, 2006), which involves sequential steps (see Figure 1).

Figure 1 – Stages and main activities of the literature review process



Source: Levy and Ellis (2006)

In the first stage, we searched within two major databases: Scopus and Web of Science Core Collection (WoS) to identify relevant (quality) literature. We limited the search to peer-reviewed academic articles published in English and collected papers containing the term “community entrepreneurship” in the title or keywords.

The queries run in January 2023 and after cross-checking 43 (Scopus) and 25 (WoS) articles, the final set of papers consisted of 44 documents.

To develop the processing stage, we read and classified the selected literature according to the typical variables of a review, such as publication year, keywords,

methodological strategy (see the taxonomy used in McGrath, 1981), and publication outlet⁵.

To sketch the state of the art of CE research, we adopted a 2-level analysis aimed to assess:

1. the scientific activity, by analysing the density of documents (number of articles), as the act of generating peer-reviewed articles is a good proxy for (quality) research activity (Henneken and Kurtz, 2019),
2. the scientific impact, by analysing the citations, as this measure can be considered a proxy for scientific impact (Moed, 2005). Data were downloaded from Google Scholar in March 2023 via Publish or Perish software.

3. Findings

The review spans more than 30 years as the first article was published by Johannisson in 1990. Over the next 20 years, scholarly activity was not intense. Indeed, only 8 articles were published, whereas, since 2011, community entrepreneurship has attracted more interest from authors. However, scientific activity has been more intense and regular only in the last 7 years, and today CE is increasingly attracting interest as an area of academic scrutiny, given that 25% of the selected literature has been published in the last 2 years.

Research set in natural systems stands out above all others, as they account for more than 65% of the analysed literature. However, articles pointing to greater generalisability of results (sample survey, combined methods research), as well as those of a conceptual nature have increased in recent years. From the viewpoint of research impact, the works of Johannisson (1990), Selsky and Smith (1994), Gliedt and Parker (2007) and Peredo (2003) are the most influential, as they each gathered more than 100 citations. Although based on case studies, these works proposed attempts at theoretical generalisations on the phenomenon investigated, providing useful stimuli for subsequent studies.

One of the challenges in understanding more than 30 years of research is to grasp how the literature has evolved and how its results relate to each other. Our analyses suggest a distinct shift in research focus over time. We let these shifts influence our sensemaking in two phases. First, we organize the shifts into three eras. Our organization under the three eras may be biased by subjective evaluations, but it is in line with observations about the

⁵ To assess the quality of the publication outlets, we adopted the journal h-index (Mingers and Yang, 2017) by basing on Scimago Journal Rank of March 2023.

most relevant papers published in periods 1 and 2 and with the rising interest in the topic in period 3. Second, we conduct a thematic exploration of the papers with their published keywords and content, using the eras as an organizing framework to extract substantive themes.

4. Value & Implications

Our study offers a portrayal of the development and current state of the literature on community entrepreneurship, i.e., a hybrid form of entrepreneurship manifested especially in areas characterized by economic decline and social impoverishment and based mainly – albeit not exclusively - on community involvement in the governance of the firm thus established and/or in supporting the implementation of development projects.

As regards the development of the body of literature over time, our review highlighted three basic pillars: first, a focus on the community entrepreneur's ability to enact the local environment and to turn an unfavourable, sometimes hostile context into one capable of offering collective well-being. Second, the emergence of the community-based enterprise as a viable solution to bottom-up approach to local development in contexts characterized by social, economic, and environmental depletion. Third, the growing interest by scholars towards obtaining legitimacy of CE construct and its specificities within the strand of entrepreneurship studies.

As regards instead the positioning of CE within the realm of entrepreneurship studies, overlaps between community and social entrepreneurship are commonly acknowledged; notwithstanding, some distinctive features of community entrepreneurship emerge.

These findings enabled us to draw attention to some issues that may be relevant to both researchers and policymakers interested in CE and related initiatives. In this regard, a particular concern is about the actual contribution to local development; the studies analyzed showed us in fact the many threats to the viability and sustainability of CE initiatives, pinpointing that, while institutional recognition of the potential of CE for communities' revitalization is crucial, it is also important to acknowledge their intrinsic fragility and to correctly size the expectations regarding their development and achievements.

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How Rural Entrepreneurship Benefits from Organic Consumers' Personal Values for Peripheral Areas Development. The Case of Girolomoni

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Keywords – Rural Entrepreneurship, Consumer Personal Values, Peripheral Areas, Territorial Development, Organic Agriculture.

Paper type – Long abstract

1. Objectives

The objective of the paper is to understand the impact of organic agriculture on peripheral areas development by integrating organic food consumer behaviour into the context of rural entrepreneurship. It is our aim, therefore, to expand the knowledge on this connection between entrepreneurship and consumer marketing streams of research by investigating the internal and external processes that enable the local roots of the organisations to relate to the needs, imperatives and opportunities that characterise global markets.

It is well known in the literature that Entrepreneurship influences and is influenced itself by the context (Welter, 2011) in which it occurs. In particular, it has been recognized to be a key factor for the development of Peripheral Areas (PAs) (Korsgaard et al. 2015a), i.e. territories marginalised by the actual path of social and economic development (Barca et al., 2014; Pugh & Dubois, 2021).

Among many activities, the one that has always existed in these places is the agricultural one and it has evolved over time as a result of several historical dynamics.

The sector, which was culturally despised during the years of industrial development, has today regained the dignity it deserves following the rise of a new demand for organic products and the development of related production, which is one of the central elements of strategies for environmental sustainability.

As organic food consumption is still considered a niche, it is important to study the elements that characterise the consumer profile and, in particular, the values and motives that determine their behaviour and choices (Kushwah et al., 2019; Sivapalan et al., 2021; Sheth et al., 1991).

To achieve the proposed aim, the case study of agricultural Co-op Girolomoni is analysed. Its founder, Gino Girolomoni, is considered the father of Italian organic farming and his entrepreneurial spirit is identified as an example of resilience and reason for the regeneration of Isola del Piano area, a town on the outskirts of the Pesaro-Urbino province, in the Italian Marche region.

The long abstract is structured as follows: the second section is a literature review on entrepreneurship in PAs, with particular reference to organic agriculture. Previous studies on the motives and values that determine the choice of organic food consumption are also outlined. Methodology is stated within the third section. Finally, sections four and five set out the main findings, highlighting both value and theoretical implications.

2. Literature review

On “rural” entrepreneurship, an important contribution comes from Korsgaard et al. (2015b), who emphasise the role that place has on the organisational structure of the enterprise and its role at the local level. Unlike space, place also includes strong social and cultural components that are intertwined with the organisational structure and modus operandi of the firm itself, making its activities unique and not replicable in other territories (Korsgaard et al, 2015b; Wright et al., 2022). The territory in turn receives benefits from this link in terms of economic development, enhancement of the territory, increased resilience, and containment of depopulation.

Although the topic of place-embedded entrepreneurship is well established in the literature, Prashantham and Birkinshaw (2022) point out that the connection between local and global contexts is not adequately studied. Shedding light on this relevant topic would be important because such connection may even be problematic in certain businesses, such as organic agriculture (Popescu, 2018; Siebrecht, 2020).

To this aim, there are numerous insights from industrial marketing and purchasing (IMP) studies, which focus on relationships and networks between companies (Håkansson & Snehota, 2006; Håkansson et al., 2009). These relationships enable companies, especially SMEs, to access important resources, goods, and knowledge that they would otherwise not be able to achieve on their own. Therefore, through these network processes, the boundaries of an organic agriculture venture expand beyond its organisational and territorial limits, allowing, at least in part, the problems of reconciling large-scale production with the dictates of organic production to be resolved.

This has been facilitated, in recent years, by the development of a more environmentally friendly mindset among consumers (Kautish et al., 2019; Sadiq et al., 2020; Sharma et al., 2020). This new breed of consumers is able to make a green mark on the world through the means at their disposal. They have many product choices and have access to and the ability to use mass media, all of which make them extremely informed (Tariq et al., 2019; Wilk, 2012). This “system of knowledge”, understood as a system of advice to consumers that can change their purchasing habits regarding food products, has been recognised as a key issue by the promoters of organic food production (Fjellström, 2009; Jørgensen, 2007; Sessou & Septime, 2020). This change has justified the adoption of increasingly green marketing strategies to support the creation of nature-friendly beliefs, both as a marketing opportunity and as a means to promote sustainability (Ghoshal, 2011; Muo & Azeez, 2019; Petrescu et al., 2015).

The existing literature suggests different motives behind the consumption of organic food. All these motives can be classified into three different dimensions of values – functional, social, and conditional – using theory of consumption values as a theoretical framework (Sheth et al., 1991). The theory proposed by Sheth et al. (1991) includes two other dimensions of value – emotional and epistemic – which are not included in the present classification due to their lack of relevance when declined in the context of organic food.

3. Methodology

To understand the impact of organic food purchase behaviours on organic agriculture entrepreneurial activities and on rural development, we adopted a case study approach (Yin, 2018; Gustafsson, 2017; Tellis 1997). Such an approach is particularly appropriate

for its flexibility in the research design (Eisenhardt 1989) and in adopting a variety of data collection procedures (Vissak et al., 2017).

Indeed, due to the novelty of the topic, there is a need for further empirical insight. Therefore, we decided to adopt an explorative approach in developing the case study, which is particularly appropriate to answer how, and why questions (Eisenhardt 1989; Welch et al. 2011; Yin 2018) when there is little knowledge about the topic under study (Yin 2018).

Moreover, given the aim and objectives of the study, we implemented a purposeful sampling technique (Patton, 2001) for the case selection, due to the importance of identifying key informants in the field of research who can help identifying information-rich cases (Palinkas et al. 2015; Suri 2011; Patton 2001). Therefore, the case selection involves individuals that expressed their availability and willingness to be part of the research by communicating their experiences (Palinkas et al. 2015).

Regarding data collection, we opted for the use of multiple sources of evidence to meet the triangulation principle ensuring the validity of the study (Yin 2018). We collected primary data through a single semi-structured interview (Saunders et al. 2019) to Giovanni Girolomoni, son of the founder Gino and actual firm's President, which lasted for one hour and eleven minutes. The interview was recorded and then transcribed and integrated with secondary data sources such as companies' websites and the other material directly provided by the interviewees (e.g., internal reports).

With specific reference to data analysis, after writing the case story, data coding was carried out independently and then discussed among researchers (Ghauri, 2004).

4. Findings

The Girolomoni Co-op was established with the mission of bringing agriculture back to marginalised lands and territories. Organic agriculture was developed here as a tool to enhance production and guarantee local farmers higher revenues, thus contributing to stop the emigration from the territory. This bound with the place and organic agriculture methods make the company identity unique and not replicable in other places in the same way (Korsgaard et al, 2015b; Zamagni & Venturi, 2017).

The prevalence of export, which accounts for 80% of total sales, has its roots in the Italian legislative system in force in the 1960s, preventing all products derived from a whole-wheat flour to be called "pasta". Today, Girolomoni exports its products to over

thirty countries. France, Germany, and the United States account for 60% of total exports and are characterised by a higher per-capita consumption of organic food than Italy. There are several possible explanations for this.

A first element is the identification, and consequent overlap, between the concept of organic food and “zero km food”, better known as “Km 0”, i.e. the movement to create a food system in which consumers only buy products from their own place of origin (Calicchia, 2017). Organic production criteria do not come exclusively from the local origin of the product.

The perception gap is also fed by the phenomenon of greenwashing, i.e. the practice of falsely promoting an organisation’s environmental efforts or spending more resources to promote the organisation as “green” than are spent to actually engage in environmentally sound practices (Becker-Olsen & Potucek, 2013).

In addition, the mistrust of Italian consumers towards the certification system does not help to heal the perception gap. Girolomoni found a gap regarding the “power” of certifications held - in terms of higher sales - between the three main foreign markets and the domestic one.

From these points of view, Girolomoni is in its own right an admirable example of rural entrepreneurship, which is a firm place-embedded in the rural setting and with its social fabric (Korsgaard, 2015b). Furthermore, thanks to the bounds both with local suppliers and global markets, the firm manages to redistribute the additional economic value created by the organic production along the entire value chain and particularly upstream to farmers.

In general, interactions with farmers, and thus between the agricultural and industrial sectors, lead to the convergence of different competences and the activation of carefully designed processes that allow, within the value chain, to bring a series of high-quality products to final consumers. In this process, we can clearly trace IMP elements, specifically the four characteristics of the relational process: adaptation, cooperation and conflict, social interaction, and routinisation (Håkansson & Snehota, 1995).

The externalities on the territory are multiple: first, the business activity itself generates income for the local community and, as data confirmed, the main pool of human resources reside in the area surrounding Montebello. This is important for the resilience of the local social fabric, which is already severely weakened (Musso, 2011), but being a rural venture also means, on the other hand, that there are few opportunities to hire personnel from outside the area (Carrosio & Faccini, 2020).

Finally, active support to farmers in firm-level investments has an impact on the industry's rate of innovation, which, although not at the level of hi-tech companies, is important to improve processes and final products (Bjerke & Johansson, 2022).

5. Value & Implications

The territorial impact of Girolomoni is remarkable, as it has restored dignity to the agricultural sector and shown its potential for development with a view to sustainability. The added value of certified organic production reaching the final consumer is traced back along the entire value chain to the farmers who, thanks to the dynamics of a social co-op characteristic of Girolomoni, obtain higher remuneration than the traditional market. Nevertheless, the company has always been committed to supporting its partners by providing both its industrial expertise and specific services for the new needs that have emerged over time.

A major limitation of this study stems from the inherent limitations of the case study approach. As much as the Girolomoni case proved to be a unique example of rural entrepreneurship and rural regeneration, the results obtained should be translated into multiple business realities in order to be able to define the ecosystem built by Girolomoni as a national model of development of peripheral areas through organic farming. Similarly, the results that emerged from the study of the Girolomoni target customer are based on the firm's historical distribution strategy rather than from a specific market survey regarding the behaviour of their target customers. Consequently, further research into the values and motivations driving organic food consumption is increasingly important.

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Tensions in SMEs' networks for sustainable entrepreneurship

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Paper type – Long abstract

1. Objectives

Small and medium-sized enterprises (SMEs) are considered the engines of worldwide economies and the primary source of job creation (Wiklund et al., 2019). In 2018, the SMEs sector employed 66.6% of all persons employed and contributed 56.4% to the value added in the EU (European Commission, 2019). Due to their impact on economic

growth and progress (Steiner & Atterton, 2014), factors influencing SMEs' survival propensity have been researched for many years (Sharma et al., 2020).

Beyond the context just described, SMEs must also consider that sustainability is regarded as a new strategic and long-term goal for firms, countries, and society (Finke et al., 2016), leading to the transformation toward more sustainable processes of production and consumption (Roy & Singh, 2017).

Successful collaboration is crucial for organizations to achieve knowledge-sharing and competitive advantage. Studies emphasize the importance of sustainable collaboration for this purpose (Cao & Zhang, 2011; Touboulie & Walker, 2015). This is even more important for SMEs, where business-to-business interaction relationships and networking become essential to pursue sustainability goals (Pastore et al., 2019). For this reason, European funds frequently support the establishment of these partnerships, providing resources to enhance SMEs initiatives, particularly sustainability initiatives, and sustaining them during the initial phase. (Kulaga & Cardinali, 2022).

Collaboration through interaction has been highlighted as valuable in literature, but there has been less focus on the limitations and tensions surrounding business-to-business relationships and interaction in network situations. (Abosag et al., 2016; Grandinetti, 2017; Tunisini, Marchiori, 2020) Further, very few studies analyse the drawbacks of business networks and business interactions aimed at sustainability goals (Tura et al., 2018; Ryan et al., 2012).

For these reasons, our work aims to investigate: (RQ1) which are the tensions that emerge in a business network with declared sustainability objectives and how they are characterised; (RQ2) which are the solutions adopted by the organisational actors to overcome problems that arose inside the business network and to exploit the value of networking.

Our research involves analyzing a particular type of business network in Italy called "Network Contracts," which have a formalized structure. The goal of this study is to identify any conflicts that arise within the network, understand what causes them, and explore the strategies used to address and prevent them.

2. Literature review (max 500 words)

2.1. Dark sides in business interactions

SMEs play a vital role in boosting the global economy by creating jobs, driving innovation, and promoting industrialization, as per OECD (2017). However, during transitional phases, like adopting eco-friendly practices or defining sustainable practices, SMEs often face resource and scale constraints and lack awareness of the benefits they can derive.

However, close relationships are only sometimes synonymous with good connections. This is evidenced by the fact that many of these close relationships fail (Anderson & Jap, 2005). The notion of the "dark side" first emerged in business-to-business literature in the mid to late 1990s and has been further developed in the new century (Barnes, 2005; Grayson & Ambler, 1999; Håkansson & Snehota, 1995; Grandinetti, 2017), suggests 'problems', 'challenges', 'difficulties', and 'drawbacks' related to structural, behavioural and psychological issues that exist in business relationships. Increased attention to the dark side of relationships has helped better understand the nature of business relations, which often require careful management.

Several variables can affect the effectiveness of the network. Tunisini and Marchiori (2020) conducted a review of network failure literature and were able to organise and categorise the factors that contribute to issues in business networks. They classified these factors as individual, structural, legitimacy, interaction, and governance issues. Specifically:

- *Individual variables*. People may struggle with prioritising personal goals, losing control, making self-centred decisions, foreseeing collaborative outcomes, and predicting finances.
- *Structural characteristics* of the network. There are differences in the features of partners, including technological, dimensional, and organisational characteristics that could lead to relationship difficulties between the companies participating in the network.
- *Legitimacy variables*. External resources such as funders, suppliers or public institutions are not providing the necessary support.
- *Interaction variables*. Establishing a network collaboration can be challenging due to reluctance, disagreements, lack of participation, unwillingness to share

knowledge and information and managing relationships. Changing existing ties within the network can also be difficult.

- *Governance variables*: the network is facing challenges due to the lack of a network manager and difficulty in coordinating its activities.

2.2. The Network Contract

In Italy, the concept of a network has been officially recognised since 2009 through the Decree-Law N°78. This law aims to formalise existing partnerships or promote the creation of new ones by identifying the members, goals, duration of the contract, and members' duties and rights. The regulations recognise two types of legal status: one is a “light” form of contractual networks (“reti contratto”) and the other is an “heavy” form of contractual networks (“reti soggetto”). Heavy networks have legal obligations, while light networks give partners more autonomy to enhance their innovation and competitiveness.

Network Contracts are versatile and can be used to set goals for various activities, including purchasing, production, R&D, and sales. They can also be used for more complex objectives, such as expanding internationally, innovating, or developing sustainable projects. Italian SMEs can benefit significantly from Network Contracts.

Over the past decade, there has been a rise in Network Contracts between firms from various industries. The advantages of these contracts have been studied, but their drawbacks are not well-researched.

3. Approach/Method (max 400 words)

Since current research on the negative aspects of sustainable business networks is still in the early stages, a qualitative research approach is appropriate to gain a thorough and comprehensive understanding of this intricate and widespread phenomenon in a real-world context (Corbin & Strauss, 2008).

Our paper thoroughly examined 7 network contracts through the interpretative model created by Tunisini and Marchiori (2020). By analyzing real-life case studies, we were able to evaluate the effectiveness of the analytical framework and gain valuable new perspectives. Additionally, these cases inspired us to expand upon the model using the methodology suggested by Eisenhardt (1989) and Siggelkow (2007).

Choosing cases for case study research can be a difficult task. It is crucial to keep in mind that practical and logistical considerations also play a role in case selection. For this reason, the selection of the cases was based on the theoretical framing approach (Yin, 2014): in setting up the multiple case study, we have selected networks that (1) have publicly stated their commitment to sustainability goals and (2) can prove that they are still actively engaged in their collaborative efforts.

The 7 case studies have been identified through a desktop survey on a database used in 2018 by some authors (Tunisini & Marchiori, 2020) for similar research. Table 1 presents the profile of the seven business networks. To protect the confidentiality, the names have been anonymised. The data were mainly collected through direct interviews conducted between April 2021 and April 2023.

All the respondents are either network managers or individuals with a significant role in their respective networks. The number of interviews was determined according to the criterion of theoretical saturation – that is interviews were conducted until the information gathered was considered sufficient and no further relevant information could be garnered through additional interviews (Corbin & Strauss, 2008). We used semi-structured interviews organised into six main parts, the first dedicated to collecting general and contextual information, while the further five sections are related to the five categories of factors that contribute to tensions in business networks (Tunisini & Marchiori, 2020).

Table 1: Sample of the networks analysed (main data)

Business Network	Number of firms	Sector	Product / Services	Informant position
A	5	Mechanical and electrical engineering	Construction of optical systems	Network leader
B	7	Construction	Sustainable building constructions	Network leader
C	9	Construction	Sustainable building constructions	Network leader
D	11	Tourism	Services for cycle tourists	Network manager
E	4	Research centre	Industrial and academic research on robotic systems and parallel kinematic simulation	Network manager

F	5	Wood industry	Design and supply of wood furniture	Network leader
G	14	Construction	Sustainable building constructions	Network manager

4. Results

Firstly, we analyse the primary tensions that harm business networks. We aim to emphasise the critical factors that hinder effective and efficient networking for sustainability. Secondly, we showcase the measures and actions taken by the network actors to address these issues.

Individual variables

One of the biggest concerns is losing control over customer management and production processes. Autonomy is highly valued, and its absence is a major issue. Unfortunately, some individuals prioritise personal gains in the short term, which can hinder the development of a collaborative work approach in the network.

Structural characteristics of the network

Different things can affect the distance between network partners. These things can relate to how companies run their processes, use technology, or how far apart they are. It's important for network members to have similarities, but not too much, or it could slow down progress and reduce motivation to work together.

Legitimacy variables

Connecting with other businesses is crucial for growth, and government organizations can provide benefits and aid. However, some of these organizations may not be as helpful as they should be, and there are no programs to support the network at different stages. The way these public organizations work can cause confusion and complications for network operators.

Interaction variables

During the interviews, participants identified two main issues in the network. One was sharing confidential data with partners, which needs improvement. The other was a lack of investment in joint activities. Participants stressed that the network's goal should be to create added value for customers by collaborating with all companies, rather than just gaining more customers.

Another important factor to consider is the network's composition. This is often not determined by prior relationship or established trust but rather by the opportunity to exploit incentives provided by the reference regulatory context in which it is formed. For instance, a public tender might incentivise the creation of a network through economic incentives. The commitment of certain members is crucial for the upkeep of the network's activities.

Governance variables

When the person in charge of a network doesn't have the right skills or knowledge, it can cause problems. At times, public institutions hire managers who may lack sufficient knowledge or experience in the industry or network management. This can make partners unhappy and cause problems. Interviews show that some companies don't understand how important it is to choose the right person to manage a network.

Finally, Table 2 provides a comprehensive overview of the findings we obtained from our multi-case study analysis. In this table, we have summarised the different approaches used by the network and have traced them back to the different categories of tensions that these actions aim to address.

Table 2. Tension and solutions

Tensions (categories)	Actions taken to overcome tensions (solutions)
Individual variables	Selection of companies in the phase of forming the network (for instance, decisions can be made based on past relationships, geographic proximity, or complementary skill sets)
Structural characteristics of the network	
Individual variables	Definition of training courses (for instance, this could be related to technical, managerial, or relational issues)

Structural characteristics of the network	
Interaction variables	
Interaction variables	Definition of a clear set of goals and shared quality/process standards. Proposal of a selections of common products/services
Governance variables	Selection of a network manager with strong professionalism and soft skills
Governance variables	Definition of roles and responsibilities within the network
Governance variables	Definition of effective communication methods and ways of involving partners in the decision-making process (an example of this is by using common rules and specific communication techniques)

5. Value & Implications

Our study found that there are several tensions (RQ1) that can cause issues in business networks, whether or not they have sustainability goals. Legitimacy concerns are especially important for networks with sustainability goals. Public and private institutions play an important role in making these networks successful, and not getting enough support during their development can harm their success.

After carefully examining the issues and possible solutions (RQ2), we have come across a paradox. The most significant tension that has been identified cannot be directly resolved by the interviewees and their networks. Even though external factors may have been helpful during the initial stages of starting a business, they can eventually become uncontrollable factors for entrepreneurs.

Our interviews have revealed that external legitimacy can sometimes be achieved through suppliers' support and recognition of added value by customers. This new discovery has further enriched our interpretation model and reinforced the theoretical reference model.

Managers and professionals involved in sustainability networking projects for SMEs can benefit from these preliminary research results. Our exploratory study has developed and applied an interpretative framework, but further extensive and quantitative research is required for better insights.

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The antecedents of entrepreneurial intention: A study of Albanian university students

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1. Objectives

Entrepreneurship research has shown that entrepreneurial intention (EI) of individuals is limited by a set of perceived barriers (Franke and Lüthje, 2004; Hsu *et al.*, 2019) that vary according to contexts (Kouriloff, 2000; Verheul *et al.*, 2006), and include not only

legal and formal aspects, but also informal rules, values and traditions (Webb *et al.*, 2020). Notwithstanding, there is a limited knowledge about specific features of entrepreneurship, motivations and differences in perceived barriers to entrepreneurship in societies with a relatively young entrepreneurial culture (Aidis *et al.*, 2007; Ivlevs *et al.*, 2021), while attempts to analyze post-communist economies (Alvarez *et al.*, 2023; Pistrucci *et al.*, 2000; Welter, 2007) show that each country has its own unique features and ways to cope with transition.

Entrepreneurship research has shown that intention to become entrepreneur is a good predictor for further behavior (Ajzen, 1991; Kautonen *et al.*, 2015; Krueger and Brazeal, 1994; McGee *et al.*, 2009), and women all over the world demonstrate a generally lower EI even in countries that, at least from a legal standpoint, offer equal opportunities to men and women. Attempts to explain these differences offered a wide array of possible causes from limitations in access to resources (Marlow and Patton, 2005) to the role women have as mothers and wives (Leung, 2011). From this standpoint, Albania represents an interesting research context, as years of communist egalitarian policy had to deal with centuries of Albanian tradition where the role of women has always been highly limited (Dana, 1996; Danaj, 2022; Murzaku and Dervishi, 2003). Entrepreneurial intention of students has been widely analyzed also in Albania (Alimehmeti and Shaqiri, 2015; Garo *et al.*, 2016; Laudano *et al.*, 2019), however, with some exceptions (e.g., Welter, 2007), research rarely evidence the influence of the egalitarian approach after the communist fall.

This study departs from the renewing claim for a better understanding of specific barriers in different cultural settings (Aidis *et al.*, 2007; Yousafzai *et al.*, 2019; Webb *et al.* 2020) and aims to analyze EI of Albanian university students by testing the differences between men and women in the idea they have about their own characteristics and about the environment as more or less supportive to start the own business.

2. Literature review

Entrepreneurship research has explored a wide range of barriers, however the understanding of barriers continue to evolve. Literature confirms that individual's perception of ability to perform a certain behavior is an important antecedent of EI (Krueger and Brazeal, 1994; McGee *et al.*, 2009; Rosique-Blasco *et al.*, 2018; Sahin *et al.*, 2019), but recently studies started to take into consideration not only the ability and

knowledge to perform the task, but the importance of the perceived fit between entrepreneurship and individual feelings about it as a possible career path (Hsu *et al.*, 2019).

Another barrier to start the entrepreneurial activity is the fear to failure. Failure can be perceived as a learning opportunity or as an event that negatively influences an individual's professional development (Yamakawa *et al.*, 2015). Studies show that fear of failure inhibits entrepreneurial growth aspirations (Verheul and van Mil, 2011), re-engagement in entrepreneurship (Yamakawa *et al.*, 2015), and dissuades individuals from starting their own firms (Cacciotti *et al.*, 2016; Shinnar *et al.*, 2012).

Search for better working hours and fair wages motivates individuals to start their own businesses (Werner *et al.*, 2014). Entrepreneurs are known for a particular passion they nurture for their activity that makes them resistant to difficulties due to extreme devotion (Cardon *et al.*, 2005; Murnieks *et al.*, 2014), but entrepreneurship also evokes risk, stress, and hard work that diminish EI (Choo and Wong, 2006; Sandhu *et al.*, 2011).

A long period of a state-provided employment affected the culture of communist countries making difficult the spread of entrepreneurial initiatives (Ivlevs *et al.*, 2021; Volkov, 1999; Webb *et al.*, 2020), but entrepreneurship may be a response both to a perceived opportunity or a need of self-realization (Falck *et al.*, 2012; Werner *et al.*, 2014) and to unemployment, low wages, an unstable economic situation (Schlaeger and Koenig, 2014).

Previous research offers some contradictory results about gender differences. Women have a lower congruence with traits required for entrepreneurship (Gupta *et al.*, 2009), but the attribution of lower participation of women in entrepreneurship to specific characteristics, such as their tendency to avoid risky activities and stress (Byrnes *et al.*, 1999; Sandhu *et al.*, 2011), is contradicted by studies that describe an inverse situation in matriarchal societies (e.g., Shahriar, 2018), therefore, stressing the role of the environment where women grow. Women's employment choices depend more on the local environment (Ahl and Nelson, 2015; Yousafzai *et al.*, 2019) and reflect also female-specific conditions that facilitate or inhibit participation in professional activities (Leung, 2011; McGowan *et al.*, 2012). Women who start their own entrepreneurial ventures may desire more flexible working hours (Adamson and Kelan, 2019; Leung, 2011), therefore entrepreneurship perceived as requiring sacrifices in other aspects of life may become less attractive for women. Therefore, following the literature that show women less available to sacrifice some aspects of their life to have an entrepreneurial

success, to have higher fear of failure, women are expected to be more influenced by barriers than men.

3. Methodology

Based on previous entrepreneurship works and stressing the relevance of individuals' perceptions, this research elaborates and tests in Albania four barriers to EI such as 1) absence of perceived fit of individual characteristics with those required for successful entrepreneurship; 2) fear of failure due to external conditions; 3) sacrifice as part of entrepreneurial journey; and 4) macroeconomic environment offering benefits and social guarantees.

The data were collected from surveys conducted at seven Albanian universities⁶ (Vlorë, Korçe, Durrës, Epoka, Tirana, University of New York Tirana, and European University of Tirana) on students in the final year of their bachelor's degrees in economic disciplines or business administration. Students in their last year of study are more likely to be considering their career plans, including the possibility of starting their own businesses.

The questionnaire was prepared in English, and an independent professional translator translated it into Albanian, while another translator translated it back into English to ensure a correct translation.

The questionnaire was anonymous, and one of the authors manually administered it to university students from May through December 2019. A total of 593 questionnaires were obtained (631 questionnaires were distributed), and 447 were fully completed (a 94% response rate).

Of the respondents, 10.5% were from Vlorë University, 13.3% from Korçe University, 23.3% from Durrës University, 16.5% from Epoka University, 12.6% from the European University of Tirana, 4.9% from the University of New York Tirana, and 18.9% from Tirana University. Furthermore, 115 male students (25.7%) and 332 female students (74.3%) responded.

EI, the dependent variable in the study, was measured as a dummy variable (yes = 1; no = 0) based on responses (yes = one; no = zero) to the following question: "What would you really like to do?" The survey offered six answers: (a) to become an entrepreneur and

⁶ The higher education system in Albania consists of eight universities, two academies, and six non-public higher schools (<https://arsimi.gov.al/universiteti/>).

have my own firm; (b) to work (as an employee) at a good position in a good firm; (c) to be a freelancer; (d) to be a politician; (e) to work in the public sector; or (f) I would rather prefer_ (space was provided here for the respondent to specify a preference). The students could only make one choice, so we considered it a dummy variable. We distinguished the choice “to become an entrepreneur” from the other answers by assigning it a value of one and assigning the other answers a value of zero.

The main independent variables were *fit of characteristics*, *fear of failure*, *entrepreneurship as sacrifice*, and *perceived social guarantees*.

4. Results

To empirically test our hypotheses, we ran a probit maximum likelihood model with robust standard errors (Shahriar, 2018; Westhead and Solesvik, 2016; Zhang *et al.*, 2014). Specifically, the following model was applied:

$$Pr. (EI = 1) = \beta_0 + \beta_1 \text{Fit of characteristics} + \beta_2 \text{fear of failure} + \beta_3 \text{entrepreneurship as sacrifice} + \beta_4 \text{perceived social guarantees} + \text{control variables} + \mu t$$

Regarding the entire sample of students, *fit of characteristics* shows a positive and significant effect ($\beta = 0.457, p < .01$) on *EI*. Therefore, the perception of having the necessary characteristics to be a good entrepreneur is a strong determinant of *EI*. However, the coefficient of the variable *fit of characteristics* remains positive only for the female subsample ($\beta = 0.497, p < .01$), so the relationship between perceiving oneself as possessing the characteristics necessary to start an entrepreneurial venture and the intention to start the venture is stronger for female students than for male students in Albania.

The coefficient of *fear of failure* is negative and statistically significant ($\beta = -0.167, p < .01$). Thus, the difficulties related to unstable economic conditions present a relevant barrier to entrepreneurship for university students in Albania. Considering the effect of *fear of failure* in the female and male subsamples, the results show that the relationship between perceiving the economic situation in the country as unfavorable for starting an entrepreneurial activity and the *EI* of Albanian students is negative and significantly stronger for women ($\beta = -0.173, p < .05$) than for men.

The variable *entrepreneurship as sacrifice* shows a positive coefficient and is statistically significant ($\beta = 0.174, p < .01$). Contrary to our prediction, *entrepreneurship as sacrifice* positively relates to the *EI* of university students. The results suggest that dedicating significant effort to one's business does not prevent the professional choice of starting an entrepreneurial activity. Interestingly, the empirical findings do not differ in terms of gender. These results contradict previous studies that were showing women as less resistant to stress and challenging work as an explanation for lower female participation in entrepreneurship (see Sandhu *et al.*, 2011).

The perception of the environment as offering fewer benefits and social guarantees has a positive influence on *EI*. The empirical findings show the positive statistical significance of the variable *perceived social guarantees* ($\beta = 0.222, p < 0.10$). This hypothesis is confirmed for the entire sample, but the coefficient retains a positive sign for the female subsample ($\beta = 0.334, p < .05$) and loses strength becoming non-significant in the male subsample ($\beta = 0.168, p > .10$). Seemingly, an institutional setting characterized by adverse circumstances in terms of social guarantees makes women, rather than men, consider entrepreneurship a possible solution with a substantially motivating effect on women. The research shows that Albanian women, but not men, consider entrepreneurship a possible way to overcome economic difficulties and compensate the lack of social guarantees.

5. Value and Implications

Albania had a long-rooted patriarchal tradition giving a very peripheral place to women in society and their professional realization was far from being a priority. However, the communist regime struggled with patriarchal values to introduce the idea of equal participation of men and women in professional activities.

In spite of some studies that highlighted a very vulnerable role of women after the communist fall (Murzaku and Dervishi, 2003), this study found some elements that show a much more evident trend of egalitarian vision among young Albanians. These results make us suggest that in a country like Albania support programs should be more oriented to psychological elements that deal with perceptions of would-be entrepreneurs about the environment in order to help them go over fear of failure and to see the ways to start their own entrepreneurial venture. Contradicting the previous studies, this research finds that the idea of hard work and necessity to dedicate time and energy to entrepreneurial activity

does not influence negatively the EI of women, on the contrary, confirming some studies(see Pistrui et al., 2000) that found a similar trend in higher propensity to hard work and sacrifice in post-communist countries.

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Obstacles and Enablers of the Adoption of E-commerce in SMEs

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1. Objectives

This research paper examines the factors that influence the adoption of e-commerce in SMEs, including both barriers and facilitators, as well as how SMEs can afford this technology. The study aims to address a gap in existing research by taking a comprehensive approach to evaluate barriers to e-commerce adoption in SMEs. It

combines elements that have received attention in the literature with those that have been overlooked.

In addition to recognizing the significance of adopting e-commerce, it is important to consider the various factors that can either hinder or facilitate this process. Previous literature has highlighted several factors, including the technological awareness of entrepreneurs/managers (Zheng et al., 2004), their managerial expertise (Chuang et al., 2007), limited resources, particularly financial constraints (Scupola, 2009), and the level of technological readiness (Abou-Shouk et al., 2016; Alam et al., 2011).

Understanding the factors that stimulate e-commerce adoption, particularly for SMEs, is crucial. Equally important is determining how this adoption enhances organizational effectiveness. Previous studies have identified three main concerns that contribute to SMEs' hesitancy in adopting and utilizing e-commerce: a lack of achievements, limited awareness of e-commerce, and uncertainty about its impact (Salwani et al., 2009). These factors directly affect business performance. Therefore, our study aims to analyze how potential obstacles and facilitators influence the adoption of e-commerce in SMEs and how SMEs can afford this technology.

In contrast to previous research, we approach this issue from the perspective of the TOE model, specifically focusing on the technological, organizational, and environmental dimensions. We pay attention to factors such as cooperation with other actors, competitive status, technology investment, lack of funds, sales and purchase forecasting, digital competencies, broadband quality, and R&D activities.

2. Literature review

The shift from traditional trade to digital platforms presents a significant challenge for small and medium-sized enterprises (SMEs) due to increased rivalry and competition in the digital world (Wang et al., 2011; Zhu, 2004). While large enterprises dominate the development of e-commerce, SMEs are often slow in adopting this technology due to limited resources and the high cost of integrating digital technologies (Van Akkeren et al., 2003; Alam et al., 2011; Govindaraju et al., 2015; Scupola, 2009). Access to resources is therefore essential for adopting digital technologies (Abebe, 2014). E-commerce is becoming increasingly important for companies, offering new opportunities, lower fixed costs, enhanced competitive advantages, comprehensive product positioning, and expanded market prospects (Lefebvre, 2005; Al-Qirim, 2007; Saridakis et al., 2019).

In the literature, the level of technology in small enterprises is recognized to play a significant role in the adoption of e-commerce readiness (Abou-Shouk et al., 2016). Limited financial resources are identified as a major obstacle in e-commerce adoption for firms (Scupola, 2009; Saridakis et al., 2019). At the individual level, the expertise of managers and entrepreneurs in management and their technological awareness are important factors in the adoption of e-commerce (Chuang et al., 2007; Zheng et al., 2004).

3. Approach/Method

The TOE model was selected as the theoretical foundation for this research due to its exploration of technical, organizational, and environmental aspects. Such a multi-faceted framework is considered to have better analytical effectiveness compared to frameworks with a single aspect (Molla & Licker, 2005). Additionally, the TOE model adopts a dynamic viewpoint that recognizes the influence of both individual and firm characteristics in driving organizational changes (Hameed et al., 2012). However, the TOE model has also faced criticism for neglecting the individual characteristics of entrepreneurs/managers and employees (Ghobakhloo & Tang, 2013).

This study employs the logistic regression method to evaluate how the independent variables impact the variable of e-commerce adoption.

4. Results/Findings

The findings emphasize that within the technological aspect, a significant negative influence on e-commerce adoption stems from the barrier of insufficient funds or financing. Similarly, investments in ICT, software, consulting, research and development, and innovation prove highly effective, but any limitations in these areas can adversely affect the adoption of e-commerce. In terms of the organizational dimension, constraints in digital skills, sales and purchase forecasting, and personal development also have a detrimental impact on SMEs' adoption of e-commerce. Concerning the environmental aspect, any decline in the competitive landscape poses a barrier to e-commerce adoption. Likewise, collaboration with both customers and competitors has a positive effect on e-commerce adoption, and any restrictions on such collaboration would harm e-commerce adoption by SMEs.

This study provides quantitative empirical evidence on a relatively unexplored subject using a representative sample of the small and medium-sized enterprises (SMEs) sector in Spain. The findings indicate that within the technological aspect, the lack of funds or financing poses a significant negative influence on the adoption of e-commerce. Similarly, investments in ICT, software, consulting, research and development, and innovation are highly effective, but any constraints in these areas can have a detrimental impact on e-commerce adoption. Concerning the organizational dimension, limitations in digital skills, sales and purchase forecasting, and personal development negatively affect SMEs' adoption of e-commerce. In terms of the environmental aspect, a decline in the competitive landscape acts as a barrier to e-commerce adoption. Likewise, cooperation with both clients and competitors has a positive effect on e-commerce adoption, and any restrictions on this cooperation harm e-commerce adoption by SMEs.

5. Value & Implications

This study has various practical implications for managers. It is crucial for any strategy aimed at overcoming the challenges of SMEs' adoption of e-commerce to prioritize investment in human resources and education, particularly in enhancing their knowledge. Additionally, the study emphasizes the significance of financing, including the accessibility and availability of funds within the ecosystem. Furthermore, the findings underscore the importance of interaction and cooperation with other stakeholders. SMEs should strive to foster the creation of such networks and incorporate them into their existing organizational structure.

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The role of Educational Digital Content Marketing in improving customer engagement and small firms' brand awareness

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Keywords – Content marketing, Educational digital content marketing, Brand awareness, Customer engagement

Paper type – Long abstract

1. Objectives

This paper discusses educational content marketing (ECM) as a recognized and effective marketing strategy (Knihová, 2019). ECM is a sub-category of content marketing that, by offering useful content, avoids traditional interruptive advertising and positively influences customer engagement (Knihová, 2021). Companies that leverage ECM have the potential to build long-term relationships with customers and achieve their business goals (Knihová, 2019). Thus, it is not surprising that the relevance of ECM has grown, especially with COVID-19, and prominent brands like Nike and Apple have started adopting it in the digital environment (Knihová, 2020).

In general, content marketing is a powerful tool for improving brand awareness, and it is considered particularly suitable for small and medium-sized enterprises due to its low-cost nature (Kraus, 2019). However, despite its potential, ECM and its digital sub-category, Educational Digital Content Marketing (EDCM), have received limited research attention (Knihová, 2019), and the effectiveness of EDCM in engaging consumers and enhancing brand-related outcomes is not yet well established. Because of the need to test the efficacy of education-based content marketing quality in enhancing brand-related variables, this study applies an online survey and contributes to the existing literature on educational digital content by analyzing the impact of EDCM quality on two key marketing outcomes: customer engagement and brand awareness. The research also uncovered customer preferences regarding educational content formats, platforms, and publication frequency. By addressing the research gap in EDCM and brand-related literature, the paper provides recommendations and guidelines for researchers in the field.

2. Literature review

Digital content marketing (DCM) is widely defined as the creation and distribution of informative and compelling content in multiple formats to attract and retain customers (Rowley, 2008). It is a fundamental tool for the success of digital marketing strategies, with several objectives such as brand awareness, customer engagement, trust-building, customer attraction, lead conversion, and customer relationship maintenance (Holliman & Rowley, 2014). Italian companies allocate a significant portion of their marketing budget – around 60% – to content marketing in online settings (Rancati & Gordini, 2014), thus DCM has gained significant interest among researchers. DCM is primarily communicated

through social media, and because social media is an informal and interactive environment allowing a closer interaction, content marketing fosters a tight relationship between the brand and the consumer, (Du Plessis, 2017). As mentioned in the definitions of DCM, among other types of content, consumers seek useful and educational ones from brands. So, by informing and educating followers on various subjects, quality content drives digital customers along their journey without directly pushing them to make purchases (Knihová, 2021). Hence, education-based content aims to offer valuable insight into a particular field (Knihová, 2020). According to experts, companies should focus on EDCM through both marketing and sales operations to establish true value-based selling (Alamäki & Korpela, 2021). Indeed, research has shown that emphasizing the educational nature of content is crucial for the success of content marketing strategies (Grubor & Milonalov, 2016) and that the level of engagement on brand pages correlates with the incorporation of educational content (Ashley & Tuten, 2015). Furthermore, Knihová (2021) suggests that, due to the increasing relevance of electronic channels in marketing, digital educational content has the potential to enhance online engagement and drive brand-related outcomes. Despite these preliminary insights, there is a lack of research exploring the role of educational content quality in both customer engagement and brand awareness. In particular, brand awareness, being a crucial aspect of brand knowledge, is necessary for companies to be considered in consumers' decision-making process (Keller, 2013), and educational content is believed to be a factor in strengthening the engagement between consumers and brands, by capturing their attention and aiding brand recall. So, based on previous research linking DCM to brand engagement and awareness, a positive relationship is hypothesized between educational content quality and customer engagement (H1), and brand awareness (H2). Also, engagement is expected to mediate the relationship between educational content quality and brand awareness (H3), given its influence on various brand-related outcomes.

3. Method

To achieve the stated objectives, an online questionnaire was implemented using the Google Form platform. The questionnaire had a first part designed to acquire demographic insights and past experience with educational content, and a second part consisting of statements regarding the constructs. To ensure that a comprehensive list of measures was included, an extensive body of research was reviewed to apply validated

scales for all dependent variables, with a few minor changes in wording. The constructs used in the survey were adapted from Dessart et al. (2016), Hinson et al. (2019), Dabbous and Barakat (2020), Gligor and Bozkurt (2021), and Hasanah and Aziz (2022). All the measures were recorded on a seven-point Likert scale (1 = “*strongly disagree*”; 5 = “*strongly agree*”). Also, single-response and multiple-choice questions were included. The survey followed a hierarchical structure. After the initial section gathering demographic data, participants were asked whether they had encountered online educational content. Those who responded affirmatively were directed to the second section, where they provided further details about their own experiences. Subsequently, they proceeded to the third section, where they expressed their preferences concerning EDCM. A total of 419 questionnaires were completed. About respondents, 127 were men, 289 were women, and 3 participants preferred not to reveal their gender.

4. Results

This study aims to analyze the impact of educational digital content quality on both customer engagement and brand awareness, and to test the mediation effect of engagement between educational digital content quality and brand awareness.

Preliminary results from correlation analysis showed that educational content quality was positively associated with both engagement (.514) and brand awareness (.283). In turn, engagement was also positively correlated with brand awareness (.483).

Simple linear regression analyses revealed that educational content quality explained 26% of the variance, $R^2 = .26$, $F(1, 334) = 120.022$, $p < .001$, indicating a significant positive effect on engagement ($B = .66$, $t = 10.96$, $p < .001$), thus confirming H1. Similarly, educational content quality explained 23% of the variance in brand awareness, $R^2 = .23$, $F(1, 334) = 72.425$, $p < .001$, indicating a significant positive effect on brand awareness ($B = .66$, $t = 10.96$, $p < .001$), which supports H2. When including the mediator in the model, we find a significant direct effect of educational content quality on engagement ($B = .66$, $t = 10.96$, $p < .001$, CI [.5409; .7776]), however, the direct relation between educational content quality and brand awareness is not significant anymore ($B = 0.07$, $t = .85$, $p = .40$, CI [-.0906; .2288]). The mediation analysis indicated a significant indirect and positive effect of educational content quality on brand awareness via engagement ($B = 0.34$; $p < .001$, CI [.2426; .4513]) confirming H3. Given no significant

direct effect of educational content quality on brand awareness was found when including the variables in the mediation model, the effect was fully mediated.

The study also revealed customer preferences for educational content types, platforms, formats, and frequency of publishing. In terms of the topics that people find most appealing for ECM, hobbies and interests, job-related topics, and health-related issues are considered the most captivating themes. When companies share online educational content, these are the areas that garner the highest interest from participants. As for the frequency of posting educational digital content, most users believe that a once-a-week schedule is reasonable and effective. Following closely behind is a preference for companies to publish content between one to three times per week. Only a minority of users find daily or monthly posting strategies to be valuable in terms of educational content. The user preferences regarding the platforms for consuming educational content can be ranked as follows: Instagram takes the lead, followed by the company's website, and then Facebook. Additionally, the results reveal that users have distinct preferences when it comes to the format of educational content: videos are favored the most, followed by pictures and text, meaning that users find multimedia content more appealing and engaging than static content in the educational context.

5. Value & Implications

This study reveals that ECM can significantly improve customer engagement and that engaging customers through ECM can effectively boost brand awareness. The analysis indicates that customer engagement significantly mediates the relationship between educational content quality and brand awareness, aligning with previous research on the mediating role of engagement (Hollebeek & Macky, 2019). The study emphasizes the value of rich and quality information in gaining individual benefits for customers and brand awareness for companies. In line with Pansari and Kumar (2017), our findings support the role of customer engagement in building brand knowledge and justify the use of educational content to enhance brand-building processes. In this perspective, by examining this relationship, the study contributes to the understanding of digital marketing and content marketing as essential means in the digital landscape. Additionally, the study offers guidance for brands and marketers on gaining customer engagement and maximizing brand performance, as it highlights potential strategies for optimizing educational digital content.

Finally, about limitations, this is a cross-sectional study, and consequently the effects of specific EDCM characteristics such as format, length, and topic are still unclear and require an experimental investigation. Also, future studies should explore other potential mediators and possible moderators.

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Equity crowdfunding platforms to support innovative small business: the Italian scenario

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Keywords – SMEs, start-up, platform, innovative financial tools, entrepreneurship.

Paper type – Long abstract

1. Objectives

The study aims on the effective role of equity crowdfunding platforms in supports Italian SMEs. Particularly, the main research questions (RQs) of this first explanatory study are: (RQ1) how are equity crowdfunding platforms distributed in the Italian economic landscape?; (RQ2) what are the main performances of Italian platforms?; (RQ3) what are the platforms' implications for the total equity amount raised for SMEs?

In recent time the world economies have been subjected to a process of transformation oriented to innovation. The innovation process has been in regards to different aspects of organizations such as the preferences, behaviors and products (Gomber et al., 2018, Balata et al., 2018; Baldissera, 2019; Pencarelli et al., 2020). This transformation has not affected only individuals but also enterprises have been involved in the process of change. Particularly, the area in which this process is being applied is entrepreneurial innovation observed from the perspective of financial innovation (Dessy, 1995; Cesaroni and Sentuti, 2016; Blakstad and Allen, 2018). Starting from 2012, the Italian regulator introduces two different kinds of innovative financial tools: the equity-side instruments (as stock exchange listing in AIM segment of Borsa Italiana and equity crowdfunding tool) and the

debt-side instruments (as private debt, minibonds, and lending crowdfunding). Hence, access to equity crowdfunding is reserved for innovative SMEs called innovative start-ups that satisfy the formal and substantive conditions established by law (Law Decree no. 179/2012). Nowadays, the number of Italian start-ups is 14.708 but only a few of these are familiar with equity-crowdfunding. In 2022, a total of 218,36 million euro (146 million of which was related to real state) was raised that supported 141 campaigns (CrowdfudningBuzz, 2023).

As it is clear, the platforms could play a crucial role in financing innovative SMEs but, in this direction, a lack in the literature emerges. Scholars seem to overlooked the role of these platforms, focusing on the main projects' characteristics (Modaffari et al., 2020; Caputo et al., 2022) and the individuals' behaviour during campaigns (Davis et al., 2017; Lukkarinen et al., 2022).

In this way, the present work aims at investigating the equity crowdfunding platform contribution in supporting innovative SMEs, as a hub between enterprises and investors. Analysing these issues is important because they represent the material junction in the financing model, without which the innovative SMEs would not have the opportunity to share equity to fill the gaps in the financial sphere.

2. Literature review

The literature section provides a general panorama of the equity crowdfunding tools, and then, it focuses on the function of platforms with particular attention to describing their business model in the Italian context. Equity crowdfunding represents one of the main equity-side innovative financial tools introduced by the Fintech Revolution (Belleflamme et al., 2014; Modaffari et al., 2020; Grassi and Fantaccini, 2022; Caputo et al., 2022). In 2012, equity crowdfunding was introduced in Italian Law (Law Decree no. 83/2012) and other relevant regulations (for instance in the USA by the Jobs ACT), allowing innovative start-ups to raise equity from investors (the crowd) through online portals, namely platforms (Zarandi et al., 2015; Vulkan et al., 2016; Walthoff-Borm et al., 2018; Cumming et al., 2020). This instrument was born to reduce the equity-gap in start-up ventures, allowing them to overcome liquidity threats in the early-stage (Veugelers, 2011; Cesaroni and Sentuti, 2016; Quintiliani, 2017; Baldissera, 2019; Pencarelli et al., 2020). However, while several scholars focus their works on other facets

of equity-crowdfunding, such as campaigns' issues or investors' behaviors, platforms' research stream has been underestimated.

Platforms represent the link between firms and investors and play a fundamental role in resolving potential principal-agent mismatching that hurt the financing process. Their effectiveness can be observed in relation to the services offered pre, during and post campaign (Burtch et al., 2015; Vismara, 2016; Paschen, 2017; Davis et al. 2017; Hornuf and Neuenkirch, 2017; Signori and Vismara, 2018). More specifically, their typical behavior can be deduced from phases such as the evaluation of the project presented by the start-up, the preparation of the negotiation and the shares placement, the possible subscription by investors and finally, the assignment of the capital shares of the start-up (Hagedorn and Pinkwart, 2016). The information that is provided during these phases, helps the investor to better understand the entrepreneurial initiative. Project evaluation and subscription phases are a crucial moment for the business model of the platform (Attuel-Mendes et al., 2018), in which a lot of activity return is generated. In fact, during the project evaluation phase the platform, based on the business plan provided by start-ups, fixes its yield expectation. However, in countries where there is weak or no regulation, platforms have more liberty to adapt their business models based on market needs. Conversely, in countries where there is strong regulation, platforms have to try to be profitable by adopting more rigid business models in compliance with the law.

Focusing on the Italian context, the Consob Regulation nr. 18592 issued on 2013, June 26, (updated on 2020, 6 feb by the resolution nr. 21259) regulates equity crowdfunding instrument, providing the behavioural requirements that platforms must maintain while operating as online portals. These mainly refers to disclosure requirements, investor protection duties, confidentiality issues and obligatory reporting of any violations to CONSOB. Particularly, it are: insurance coverage (Art.7-bis), maximum inactivity limit of not more than 6 months (Art.11-bis), conflict of interest with investors in terms of disclosure and co-investment (Art.13), due diligence to be carried out on each project by an independent professional (Art.13), negotiation of mini-bonds (Art.13), fraud risk prevention measures (Art.14), confidentiality obligations (Art.19) and record-keeping obligations (Art.20).

3. Approach/Method

To reach the declared goal, Exploratory Descriptive Qualitative (EDQ) research (Carvalho et al., 2005; Cleff, 2014; Modaffari and della Corte, 2022) supports the paper. EDQ is a qualitative methodology suitable for addressing research objectives that aim to provide a direct description of phenomena (Sandelowski, 2004).

The EDQ was applied to understand the phenomenon of equity crowdfunding platforms in Italy, through the analysis of 51 active portals that are authorized by CONSOB (Italian acronym for "Commissione Nazionale per le Società e la Borsa"). To develop the analysis and answer the RQs, the authors had to build a dataset that combines platform data from different sources. The dataset was built through three main stages. The first stage has extracted matching the platforms information by ordinary Register held by CONSOB. On 2023, Jan 03, there were 51 platforms authorized to raise equity in Italy.

After obtaining data from CONSOB register, the authors extract the information by AIDA database through queries via vat number for each platform. The extracted information focus on several issues from income statement and financial statements. Moreover, an insight on the main financial index was provided. For each platform the authors observed the working capital, operating cash flow, ROI (%), ROE (%), Quick Ratio, Debt/Equity ratio, Debt/EBITDA ratio and the NFP (Net Financial Position).

Last but not least, the third stage focused on the analysis of capital raised during the analysis period (2018-2021). For the purpose of our study and to link the performance of platforms with the volume of raised capital, the equity crowdfunding volume (Politecnico di Milano, 2022) has been:

- 36.39 million euros were raised in 2018;
- 65.41 million euros were raised in 2019;
- 101.05 million euros were raised in 2020; and
- 148.26 million euros were raised in 2021 (the last year of our analysis).

As it is clear, each stage of dataset is directly related to the specific topics of RQs.

4. Results/Findings

Equity crowdfunding represents one of the main innovative equity-side financing instruments that support innovative SMEs (Modaffari et al., 2020). Using this tool, companies obtain financial resources as risk capital to financing their business idea.

Investors, on the other hand, subscribe and get shares in the company, which offers future profits and capital gains in return. According to RQs, findings show several relevant topics. Firstly, the Italian equity-crowdfunding platforms have an irregular distribution. The data reveals a lack of homogeneity in the territorial distribution of the platforms. A significant concentration is found in the province of Milan, where 28 units out of 51 reside (or about 55% of the total). In the rest of northern Italy there are another 10 platforms, which together with the previous ones amount to 38 units (or 75.5% of the total). In central Italy there are 9 units while in the south only 3 units (RQ1). This concentration can be linked with a phenomenon already known in Italian economic history as industrial districts. In this case "digital" ones, dedicated to innovative financing instruments that offer services to innovative SMEs from the pre-collection phase up to the exit phase.

Focusing on platforms' performance (RQ2), the aggregated data do not show positive results in terms of performance for the 51 active Italian equity crowdfunding platforms. However, negative statements about the sector are not entirely correct. In fact, by focusing only on the entities that present profitability in terms of EBITDA, positive performance results become visible. Firstly, we should mention that out of the 51 platforms, only 18 have a positive EBITDA (i.e. only 35% of the sector). These 18 platforms, in 2021, contribute to the production of approximately 85% of the entire revenue volume (eur 9.5 million out of eur 11.1), producing a positive EBITDA of eur 1.7 million. From this conclusion, subsequent studies could be elaborated to understand which cost factors make platforms economically vulnerable.

Finally, approaching (RQ3), only a few players hold up the equity crowdfunding market. While the official data shows an increase in volumes raised, only a few platforms reach positive performances. In this way, SMEs seem to prefer only some platforms for promoting their equity crowdfunding campaigns. Deeping the analysis, another significant finding is that while generating negative results, platforms try to stay alive as if the cost-opportunity of losing the CONSOB authorisation is greater than the negative performance achieved each year.

In the light of what has been discussed so far and the points derived from the answer to 3RQs, we can conclude by defining the platform sector, which derives from the phenomenon of financing through equity crowdfunding, as a heterogeneous sector in which the risk of loss is greater than 50% of the entire sample. In other words, to date, the number of platforms with positive performances represents only 35% of the sector. A

further positive growth forecast can be linked to the regulations introduced in 2020, with which the possibility of negotiating debt-side instruments such as minibonds was also provided to the portal. Today, this possibility is exploited by only 13% of Italian platforms (7 units), but in the near future it could allow a real democratization of the phenomenon of innovative financing instruments.

5. Value & Implications

The work can help improve the relationship between start-ups and platforms by providing a clear representation of the current market. The present study has several theoretical and practical implications. From a theoretical perspective, it enriches the literature on innovative small-medium enterprises and innovative financial tools. Several aspects of the functioning of the innovative equity financial market for SMEs have been treated, and several topics theorized by scholars on equity crowdfunding platforms have been checked within this empirical study. From a practical perspective, the present research can be useful twofold. On one hand, it can support public authorities, such as CONSOB, in monitoring the equity crowdfunding phenomenon. On the other hand, it can navigate practitioners in supporting innovative small businesses toward platforms that perform better and therefore stand a greater likelihood of success in raising capital, supporting the growth of start-ups, which represent a rapidly growing entrepreneurial phenomenon in Italy.

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Impact of resource interaction between a startup and a medium-sized company in a business network

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Objectives

The focus of this research on entrepreneurship has been the subject of interest by industrial marketing studies (Baraldi et al., 2020; McGrath et al., 2019). In particular, the capacity of small firms to develop relationships inside business networks is now given a wider range of attention, when previously the focus of discussion was on the approach of small business toward the client (Kickul et al., 2011).

The study of entrepreneurship in business networks, which refers to the ways in which large and small firms engage with other businesses in their field, has generated interest in the literature (Halberstadt et al., 2021; Parry, 2020). Despite these difficulties, recent research has demonstrated that start-ups can successfully establish relationships with other companies by utilizing their resources and innovative push.

This study is intended to be part of the discussion that intersects the study of supply-chain and entrepreneurship, considering how in the context of the relationship between a small business and a large one, a dual reciprocity can emerge from which both benefit for different business purposes (Aaboen and Aarikka-Stenroos, 2017; Aaboen et al., 2013). Specifically, the study's focus falls on the process of interaction between two companies with different business models resulting from the size and the nature of their offerings, with respective different needs (Rizos et al., 2016; Zahoor et al., 2022).

The interaction between a small and a large company offers a chance to examine how these two businesses have come to this interaction, from which both can gain for various business goals. Since each organization has various demands and resources to provide the relationship, the resources interaction between two businesses with different business models deriving from the size and type of their offerings makes for an interesting case study.

In other words, the study first seeks to understand how in the context of a buyer-seller relationship between actors who differ in size, a closer collaboration can emerge such that they become partners despite size differences. Subsequently, it is intended to study how such relationship consolidation impacts the network of which these companies belong.

1 Literature review

The concept of resource interaction is key to the study of entrepreneurship and business relationships. The importance of network relationships in promoting resource interaction and generating chances for innovation and growth has also been highlighted (Dyer and Singh, 1998). Resource interaction has been thoroughly researched in the literature and is important in the growth of business relationships. The idea of resource interaction focuses on how crucial it is to understand how resources complement one another in order to build value in business interactions (Prenekert et al., 2022).

Furthermore, the resource interaction literature has stressed the relevance of network bonds in enhancing resource interaction and offering chances for innovation and growth (Tunisini et al., 2023). Network relationships are crucial because they allow businesses to access more resources and expertise than they could on their own (Anderson et al., 1994). Resource interaction in a network environment can occur not only between two organizations, but also between several firms inside the network (Snehota and Hakansson, 1995). Firms in a network can achieve a competitive edge and mutual benefits by sharing resources and expertise (Hakansson and Snehota, 2006).

The concept of "value creation" in business relationships is another significant contribution of the IMP literature. According to the IMP approach, value creation is a dynamic process that develops over time through the interaction of businesses (Guercini and Runfola, 2012; McGrath et al., 2019). Value creation is more than just maximizing

profits or minimizing costs; it is a process of determining how to create value for both parties involved in the relationship.

Despite increased interest in the significance of business ties in the context of entrepreneurship, there is still a scarcity of research on the interaction of companies different in size and the influence of these relationships on their business network. Although there is some literature on the obstacles and opportunities that occur when small and large companies combine (Aaboen and Aarikka-Stenroos, 2017; Aldrich and Auster, 1986), less is known about how these collaborations can be sustained beyond the buyer-seller connection and influence the broader network.

The present literature on the interaction of small and large businesses focuses on the ties between collaborating firms rather than the broader implications for the larger network of firms.

How can two firms that differ in size develop a closer collaboration that goes beyond mere buyer-seller ties such that they become partners despite size differences? And then, how does such relationship consolidation create implications on the network, specifically the downstream network?

2 Research methodology and empirical context

3.1 Research Methodology

This paper's empirical study is based on an exploratory case study technique, which is appropriate when research topics are emerging and not yet clearly defined (Eisenhardt, 1989). This paper is based on a single case study that investigates the dynamics of a business relationship between two companies that differ in size and offer. A single case study was chosen because it allows a detailed examination of the phenomena under investigation as well as an in-depth understanding of the context (Yin, 1994), and is thus useful in situations where a comprehensive understanding of a complex system or process is desired (Baxter and Jack, 2008).

The use of a single case study technique allows for an in-depth analysis of the dynamics of the two organizations' relationship, including the specific mechanisms that promote effective collaboration and the relationship's extended effects on the network.

2.2 Data Collection

Case studies sometimes rely on multiple data sources that complement one another (Yin, 1994). The interview questions focused on many areas of the cooperation, such as a description of the company's business, each individual's demands, the evolution of the collaboration, the activities engaged, and the resources employed within the collaboration.

The focus of the interviews then switched to the formation of the collaboration. Interviewees were asked to describe how the relationship began and how it progressed from the beginning, which offered insight into the elements that supported the collaboration, the problems encountered, and how the organizations overcame them. Each respondent was also asked to discuss how collaboration has altered their company's activities. Furthermore, the interviews tried to identify the resources required to carry out specific activities, as well as the changes that needed to be made to those resources.

In addition to allowing us to take advantage of the flexibility of data collection, the overlap of data analysis with data collection gave us an edge in data analysis and in fine-tuning our tool for structuring and interpreting data. This way of comparing frameworks with empirical observations as the case study proceeds has been termed "systematic combining" (Dubois and Gadde, 2014).

3 Results and Findings

4.1 Case description

Beta selected Alfa as a supplier for high-quality clothing due to its reputation as a prestigious textile company. Initially, Alfa supplied fabrics to Beta, establishing a customer-supplier relationship. Alfa collaborated closely with Beta to determine suitable materials and blends for Beta's products. They also worked together on logistics and supply chain management. Over time, the relationship between Alfa and Beta grew stronger, resulting in a mutual exchange of resources. Beta not only relied on Alfa for a consistent supply of textiles but also gained industry knowledge and organizational abilities. Alfa was interested in this collaboration because Beta's digital-focused business model aligned with their aspirations. Eventually, Alfa acquired Beta in 2020, viewing it as a strategic move to expand their product range and enter the customized menswear industry.

3.2 Case analysis

The customer-supplier relationship between Alfa and Beta has evolved into a strong partnership characterized by mutual cooperation and strategic interests. Initially, the relationship was based on a simple exchange of resources, with Alfa supplying materials for Beta's products. However, the collaboration gradually deepened, going beyond the traditional customer-supplier dynamic.

Alfa, being a larger company, brought industry-specific expertise, financial resources, and organizational skills to the table. They sought to acquire digital talents that Beta possessed, aligning with their aspirations for digitalization. Alfa's resources enabled them to invest in innovative technologies, research and development, and sustainable practices, enhancing their competitiveness.

On the other hand, Beta, as a digital-focused business, contributed its digital skills and online presence to the partnership. Their emphasis on customized clothing attracted a loyal customer base and expanded Alfa's reach. Beta's digital expertise helped Alfa modernize its operations and improve competitiveness.

Beta's investment in technology and digital infrastructure allowed them to streamline operations, provide efficient service, and gather valuable customer data for continuous improvement. This digital focus propelled Beta's success in the men's fashion industry.

The collaboration between Alpha and Beta had profound implications for their respective business networks. By combining their resources and competencies, they were able to generate new opportunities for value creation and innovation across industries.

The collaboration significantly expanded both organizations' networks. Beta gained access to Alpha's network of textile industry suppliers and clients, fueling growth and expansion. Alpha, on the other hand, leveraged Beta's digital skills and online platform to tap into a new customer base and develop new business models. Acquiring Beta allowed Alpha to enhance its market share, particularly in the B2C industry, where it had minimal exposure.

Trust and cooperation were the foundation of the collaboration, leading to a shift from a traditional buyer-seller relationship to a more collaborative approach to value creation. This collaboration also facilitated network-wide innovation and learning. The sharing of knowledge and expertise between the organizations led to the development of innovative products and processes. Additionally, it provided opportunities for employees to learn and grow as they embraced new ways of working and gained fresh perspectives in their fields.

4 Value & Implication

This study explored the collaboration between a small and a major textile company and its impact on the business network. The aim was to examine how both organizations could enhance their competitive positions through resource interaction and outline the implications for the network. Existing research on collaborations between small and large firms in business networks was found to be limited.

Preliminary findings showed that the partnership between Alfa and Beta was mutually beneficial. Alfa's acquisition of Beta allowed them to gain digital competences and access a broader customer base, particularly in the B2C segment. The collaboration also strengthened the buyer-seller relationship by facilitating the integration of resources and expertise. Moreover, the study found that such collaborations had significant effects on the wider network, influencing power dynamics and potentially reshaping the competitive landscape.

However, it is important to note that this study has limitations as it was based on a single case study. Further research is necessary to validate the findings and assess their generalizability. Additional data gathering and analysis are required to obtain comprehensive results.

In conclusion, this study underscores the potential benefits of collaborations between small and large businesses within business networks. Alfa's acquisition of Beta expanded their customer base and boosted their competitive position through digital competence.

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Innovative startups and social goals: how far are Italian firms from an effective impact assessment?

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Paper type – Long abstract

1. Objectives

Sustainable Development Goals in the “2030 Agenda for Sustainable Development” by the United Nations emphasized the need to steer business behaviors toward social goals; hence, the numerous attempts to formulate methodological solutions to attribute value and/or measure the social impacts of different phenomena.

Social impact assessment is a very complex activity, which requires a deep examination of all the processes of the company; it requires a lot of time, critical attitude and stakeholders’ involvement. The increased awareness of the role played by business in improving not merely economic, but also social return is reflected in the way which the debate on the purpose of firms has broadened to include scholars, institutions and practitioners.

Over time, national governments have increasingly encouraged firms to behave responsibly and to generate social impact. In Italy, a particular type of firm has also been regulated, it is the Innovative startup with a social goal (hereinafter ISUSGs): it is a firm that meets the requirements introduced for innovative startups in Decree-Law no. 179/2012 and, in addition, operates in any of the sectors identified by Italian legislation on social enterprises (Legislative Decree 112/2017, art. 2, paragraph 1, which replaces D.lgs. 155/2006, art. 2, paragraph 1, referenced by the original provision). These firms are obliged to draw up an “Social Impact Description Document” when applying for recognition of the status of innovative startup; the document must therefore be updated annually to demonstrate the maintenance of the requirements necessary for this status. The procedures to grant the status of Innovative startup with a social goal are regulated by Circular 3677/C, issued by the Italian Ministry of Economic Development on January 20, 2015. The analysis of these documents can be used to assess the approaches adopted for social impact assessment and how these have evolved over the time.

This paper aims to explore how Italian Innovative startups with a social goal approach the impact assessment and how/if this approach changes over time. With this in mind, an exploratory analysis was conducted, using a qualitative method based on longitudinal multiple case studies, to respond the following research questions: *(RQ1) What is the approach to the impact description document by Italian ISUSGs?*; *(RQ2) How does impact assessment changes over time?*

2. Literature review

Early definitions of social impact assessment (SIA) tended to see it as being inherently linked to a regulatory context (Vanclay 2003). Over the time, this interpretation has given way to a broader definition of SIA, including in the impact assessment widely the effects of projects and other public and private initiatives; the scope of social and economic variables to be included in social impact assessment has greatly expanded over the years, with a new consideration to long term impacts related to community sustainability (Vanclay and Esteves, 2011; Vanclay, 2012). A rich academic literature has bloomed out, proposing critical and conceptual analysis of SIA (Vivalt, 2015; Mathur, 2016) and/or methodologies for summarizing the results of such assessments (Dos Santos and Rodrigues, 2008; Roshayani et al., 2015; Koks and Thissen, 2016; Silovská and Kolaríková, 2016; O’Faircheallaigh, 2017; Grieco, 2018). Many different classifications

are proposed about SIA methodologies: Perrini and Vurro (2013) suggest an indexing among strategic, participatory and integrated methods; Nicholls (2015) distinguishes between output-based techniques, positive outcome-based techniques and holistic techniques; Grieco et al. (2015) propose, instead, a classification according to the nature of the technique, distinguishing four main criteria: simple and social; holistic and complex; quality screening; management assessments. The most recognized classification, however, is still that one provided by Clark et al. (2004), which considers three main approaches to the problem: process methods, impact methods and monetization methods. Process methods are based on comparative evaluation of inputs, outcomes and outputs, as defined in the “Impact Value Chain” logical model. The most common approaches within this category are: Best Available Charitable Option (BACO; Acumen Fund, 2006), Global Reporting Initiative (GRI; GRI Reporting Framework, 1997), B rating system (B-Lab), Endeavor’s Impact Assessment Dashboard (SAP, 2011), Global Impact Investing Rating System (GIIRS; Invest with value, 1970), Impact Reporting and Investment Standards (IRIS; The Rockefeller Foundation, 2008). Impact methods seek to capture the social and/or environmental returns of a project or investment through a qualitative analysis of the interactions among the different elements that define a particular phenomenon; the most commonly used techniques in this area can be traced back to the following theoretical approaches: Participatory Impact Assessment (The Feinstein International Center, Catley, 1999), Ongoing Assessment of Social Impacts (OASIS, The Roberts Enterprise Development Fund, 2002), Theory of Change (Aspen Institute, 2002). Monetization methods, finally, assign a monetary value to the benefits generated by identifying appropriate economic and financial proxies. This group includes: Cost-benefit analysis, Social Return on Investment (SROI, Roberts Enterprise Development Fund, 2000), Social Capital Partners’ Socially Adjusted Interest Rate (Social Capital Partner, 2001).

Overall, the analysis of the literature results in the following main points: lack of consensus in defining the so-called “impact perimeter”; need to combine cross-discipline issues and skills; difficulty of finding replicable methods; impact measures are strongly influenced by the context in which they are applied (“context-dependence issue”, Vivalt 2015); regardless of the practical approach adopted, the identification and involvement of stakeholders in the impact assessment process is a key.

3. Approach/Method

A qualitative approach based on longitudinal multiple case study was adopted, analyzing Italian innovative startups with social goal operating in the service sector with Social Impact Description Documents available on their website.

A multiple case study is particularly appropriate, given the focus on the how questions (Eisenhart, 1989; Eisenhart, Graebner, 2007). Furthermore, longitudinal approach allows us to observe and analyze the phenomenon during a longer time period (Yin, 2009).

The Italian context is particularly eligible for this study, as Italy introduced a specific law for innovative startups with a social goal in 2015 and this status has proved increasingly appealing.

Firms were chosen through a criterion sampling strategy (Patton 2002), based on the following criterion: we looked for firms set up as Innovative startups with a social goal no more than five years before, operating in the service sector, and having at least two consecutive “Social Impact description documents” available on their official websites. In Italy, Innovative startups with a social goal operating in the service sector are 216 (november 2022); among these firms, 172 have been set up for no more than five years. We have consulted the websites of these 172 companies, finding Social Impact description documents available just for six companies; three of these firms have at least two subsequent Social Impact description documents available, so we focused our analysis on them (companies are indicated anonymously, as Alpha, Beta and Gamma). The information was gathered using the Italian Business Register for Innovative startups, last updated on november, 2022. Data gathered through the multiple case studies have been analyzed by content analysis (Krippendorff, 2012). It allows us to verify the alignment of the social impact description documents with the indications contained in the ministerial guide and other relevant characteristics (readability, style, form, etc.), also exploring change over time. For each firm we furnish a description of the corporate purpose and some of its characteristic features; moreover, we compare content of the Social Impact Description documents of the three firms in our case study with the characteristics that the document should have according to the indications of the Italian ministerial guide.

4. Results/Findings

Alpha's and Gamma's approach to social impact description looks rather like an attempt to fulfil a legal obligation. In fact, besides being rather concise, the documents do not contain all the information relating to impact assessment, theoretical framework and the standards used for measurement. The documents, moreover, show no particular signs of improvement over time: form and content remain much the same, confirming a style which is succinct. Readability is high, because the language is extremely simple, but the documents don't allow third parties to deeply understand the actual social impact of the activity and the path to the impact. Instead, in the case of Beta, the documents deepen more adequately the description of the social impact, with reference to the theoretical framework of Theory of change and use of quantitative indicators and standards. Undoubtedly, this result is conditioned by the fact that Beta is also a benefit corporation: to meet the transparency requirements of the legislation, Benefit corporations are required to draw up the annual impact report to be attached to their financial statements and published on the company website. Firms must be compliant with the evaluation standard specified by the legislation, so there is a regulatory constraint on the content of the report.

Based on these results, the answers to our two research questions can be formulated as follows: for (RQ1) "What is the approach to the impact description document by Italian ISUSGs?: (RQ2) How does impact assessment changes over time?", the approach to social impact description still seems to respond, almost exclusively, to a compulsory requirement to receive/maintain the status of ISUSG; for (RQ2) "How does impact assessment changes over time?", the structure and content of the documents appear almost unchanged over time, revealing a still low level of awareness about this relevant issue by companies. These critical evidences are mitigated in the case of Beta, since it is also a benefit corporation.

5. Value & Implications

Results highlight the persistence of significant lacks in assessing the social impact of ISUSGs, resulting in rather simple social impact description documents, which merely provide some general information; however, a greater awareness of this issue is emerging in the case the firm is also a benefit corporation.

In our opinion, the search for an effective social impact evaluation approach requires that both academics and practitioners increase interdisciplinary skills.

The value of our study can be traced in providing an original contribution to the existing literature, as the studies referring to the theme of impact assessments in innovative firms in Italy are still limited (Piccarozzi, 2017; Gallo and Vannoni, 2020); moreover, the Italian case may be relevant to draw policy indications also for other countries, given the importance that the third sector has in the country; finally, it is important that companies consolidate increasingly effective solutions to assess their social impact, because this is also an important driver to ensure sustainable development.

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A case study of social impact evaluation in a regional non-profit organisation: Identifying challenges and suitable measures.

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Paper type – Long abstract

1. Objectives

This study is focused on the practical dilemmas faced by non-profit leaders as prompted by Benjamin et al. (2022). It explores a case study of social impact (SI) reporting and evaluation (SIE) in a small non-profit organisation (NPO) located in a peripheral region (Tödting and Tripl, 2005). The study adopts a stakeholder approach and presents analysis of interviews with stakeholders that establish the perceptions of the social impact of the organisation as well as their suggestions for how it ought to be measured. It further shares some suggested metrics specific to this case that may be useful for other similar entities seeking to produce social impact reports.

2. Literature review

Prosocial activities in NPOs are of interest to a wide group of stakeholders that may benefit from or support the mission of the NPO either financially or in kind (Arena et al., 2015). The NPO needs to provide these stakeholders with evidence of their “primary stewardship” to society (Chen, 1975, p. 536), and may elect to do so using SIE, a “rational myth” (Kleszczowski and Raulet-Croset, 2022 n.p.) that supports their claims to legitimacy, but SIE adds the complexity often reserved for for-profit companies like performance management, heightened accountability, complexity and judgement (Bagnoli and Megali, 2011). This resource-draining measurement approach may result in

inconsistent and localised results, and are particularly difficult for small, underfunded entities (Kleszczowski and Raulet-Croset, 2022; Luke et al., 2013; Rawhouser et al., 2019).

Theoretically, agency and stakeholder theories can be used to motivate the need for NPOs to produce and report measures of their SI. In small NPOs there is a heightened power imbalance (towards funding providers) and information asymmetry (for managers). Bagnoli and Megali (2011), identify the community at large as principals, which provides a view consistent with stakeholder theory in NPOs.

However, quantification of SI creates dilemmas since NPOs and their stakeholders regularly interact for long periods and many activities are delivered at low or no cost on a voluntary basis. Further, NPO managers may be inclined to report favourably and not report failures to resource providers (Polonsky et al., 2016). Small NPOs with limited pools of funding report erratically and may focus on easily measured outcomes (Kah and Akenroye, 2020) to protect against mission drift (Maier et al., 2015; Polonsky et al., 2016).

Careful evaluation of the suitability of the mix of multiple multifaceted measures of SIE available - both quantitative and qualitative – is needed, particularly in the under researched small entity sector. This is important if funders are to rely on the reports to allocate scarce resources. While not generalisable, researchers propose that small entities could overcome resource restrictions by selecting narrow parameters like single sectors to model the relationships between SI and variables like performance ratios (Jo et al., 2015; Polonsky et al., 2016; Rawhouser et al., 2019).

This study seeks to explore the real-time issues associated with SIE in a small NPO located in a peripheral region; and the perceptions of stakeholders about the types of elements (activities or output) that should be included in the SIE and how these might be valued.

3. Approach/Method

Interview data was recorded and transcribed from 18 stakeholders of a NPO during the production of a SI report in 2019. Interviewees were drawn using a snowballing technique from representatives of the triple-helix surrounding this NPO. The first interviewees were suggested by the CEO of the NPO. The NPO studied is in a peripheral region and was seeking donor funding. The data was manually analysed for themes using

a grounded theory methodology. Additional data was obtained by scanning internal and publicly available records of the entity.

4. Results/Findings

This NPO is found to provide social benefits that are highly valued by the stakeholders interviewed. These benefits are not matched by high value outcomes and are difficult to quantify, particularly where records are scant and similar offerings are few or non-existent. There is a resultant tension between the desire to quantitatively value SI for the purposes of seeking funding and the stakeholders' qualitative perceptions of the NPO. Further, the NPO's SI and the CEO's personal qualities are closely related, making the SI value difficult to quantify, extract or replicate. The closeness of the ties between the NPO and its immediate group of stakeholders means that services and benefits are delivered collectively, and the direct value added by the NPO itself is difficult to extract. These blurred boundaries, the CEO's human capital and limited record keeping make historical quantitative measurement of SI impossible.

The article describes diverse stakeholder understanding of the measurement objectives of SIE that lead to conflicting expectations of results from SIE and possibilities for misrepresentation of data. The article describes a set of forward measures constructed for the NPO by the research team and stakeholders within its SI report that should be relatively inexpensive to collect, allowing for reporting to funders in future SIE iterations.

5. Value & Implications

There are conflicting interests in small entities like the one described in this article where the entity believes it needs a SI valuation to secure future funds but does not have the present resources or records to prepare it. Much of the understanding about SEI in NPOs is derived from large organisations and this article provides new understandings from the perspective of a small entity that is also a NPO and in a peripheral region. It provides caution for funding bodies of small NPOs and underscores the value of a narrow focus and qualitative evaluations where resources are lacking. It explores the tension between what is perceived as a "good" SEI and what is possible and valued by internal stakeholders. Funders should be aware of the blurred boundaries around SIE that might distort reporting.

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Review on the digitalization of occupational welfare services in Italy before and after the COVID-19 pandemic

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1. Objectives

One of the most interesting trends in the work Western world, which characterized the last fifty years is the growth of occupational welfare (OW) (Farnsworth, 2012; Halkos et al., 2022; Halkos & Nomikos, 2021; Nica, 2013). The main reasons behind the growth of the OW are attributed, on the one hand to the difficulties of public welfare and on the other to the prevalence of neo-liberal ideologies (Greve, 2008).

Other reasons are then grafted onto these roots, including greater awareness and sensitivity on issues such as work-life balance, stress management and the relationship between employee satisfaction and the evident increase in work productivity with the consequent affirmation of successful companies.

Based on this assumption, the aim of this Systematic Literature Review (SLR) is to demonstrate how digital technology has altered the OW landscape in Italian SMEs. The study's central research question is based on SMEs' welfare practices and the phenomenon of digitalization. The depth of both advantages and disadvantages will be analyzed. Additionally, using digital service providers that furnish welfare services will receive attention. In social systematic reviews, generalizing effectiveness studies is necessary to make meaningful statements about effectiveness. For this purpose, gathering contextual and procedural data from primary studies is necessary. Therefore, the PICOC model (Petticrew & Roberts, 2008; Walker, 2007) outlined in Table 1 is used to develop the RQ.

The in-depth study carried out in this paper is derived from the first study on “Digital welfare: web-based platforms and personal social service use” (Pesenti et al., 2021) presented at the ISIRC – 13th international social innovation research conference. The proliferation of web-based platforms for accessing a variety of goods and services is changing the traditional model of distribution and use of welfare services. These platforms primarily use technology to connect people, organizations, and resources to create an ecosystem of value. Producers, distributors, and consumers engage and trade (often without intermediaries) tangible or intangible goods and services leveraging on user-friendly tools of the (welfare) platform (Bonomi et al., 2020; Iannotta et al., 2014).

Table 1: PICOC model

Variable	Data
Population	SMEs in Italy
Intervention	Digitalization in the role of OW
Comparison	Between SMEs with different features
Outcomes	Level of implementation of OW through the digitalization system
Context	OW from 2012 to 2022

2. Approach/Method

Four electronic databases were selected to ensure the comprehensive literature search: Web of Science, Google Scholar, Scopus, and ProQuest. Furthermore, given the type of RQ, only studies published between 2012 and 2022 are considered. A combination of keywords is considered in the investigation as shown in Table 2.

Table 2: Keyword family

keyword family	Keywords used in the research
welfare	corporate welfare; occupational welfare, social policy
Welfare service	welfare service company, portal, provider, web-based, intranet
Covid-19	pandemic, Covid-19, SARS-CoV-2
Companies	SMEs. company, firm, organization
digitalization	digitalization, digital service, technology, information technology, innovative

In the initial phase, the search for keywords was concentrated exclusively on the abstracts. Subsequently, it was necessary to extend the search to the whole text, as only the abstracts offered a poor result in terms of numbers. This database exploration resulted in an initial number of ninety-eight paper across all four databases. Then, in the first selection round, there was no screened by reading their titles.

The second round of selection comprised removing duplicate paper and reading abstracts. Furthermore, the grey literature search yielded one Ph.D. dissertation that explored the topic of interest. It was included in the final list of paper. In total, twenty-eight studies were thoroughly read and analyzed.

The study is categorized using three different quality rating systems. A checklist with fourteen questions was used to evaluate the quantitative studies' research design, sampling, measurements, and statistical analysis (Kmet et al., 2004). Moreover, the paper adapts a tool suggested by Spencer et al. (2003) for qualitative studies. The framework is based on a set of guiding principles that can be used to frame and organize appraisal questions that might be posed to evaluate a piece of work critically. Finally, the checklist suggested by EFSA (2015) is chosen for the review's quality rating.

It serves as a Critical Appraisal Tool (CAT) that makes it possible to evaluate the methodological soundness of a study or process, which in turn affects the validity of the evidence generated by that study or process.

In total, five paper used a qualitative method, twenty used a mixed method or review, and three used a quantitative method. Most qualitative studies applied thematic analysis, whereas others used different methods (e.g., survey and focus group). The quantitative paper used descriptive and regressive analysis to interpret the data.

In the last step, the paper are divided into three categories of SLR: information technology, work-related and Covid-19. Some paper of SLR are included in both categories.

3. Results/Findings

The SLR analyzed three categories of digitization (information technology, work-related and Covid-19) about the OW in Italy with an eye to the SMEs which representing 99.80% of the workforce (EUROSTAT, 2022).

The first category considered, information technology, offered a reasonably clear overview. In this direction, information technology has undoubtedly simplified access to the OW. The benefit is that the provider has greatly simplified the delivery of welfare plans and transformed the management phase into a digital process. Moreover, it adapted to the changing nature of work under Industry 4.0, a process revolution that is affecting areas like business organization and people management (Di Paolo, 2021). From this point of view, as underlined by Bonomi et al. (2020), there are several examples of suppliers who have approached the world of OW and the employees of companies that offer this service through “welfare budgets” ranging from the health sector to corporate welfare (food stamps, fuel vouchers and online purchases). The “welfare budget” makes it possible to clarify how information technology has undoubtedly eliminated the barriers to accessing these services not only with platforms but with a real “online world.” Accessing these services through any device, regardless of position, is possible since the latter can be viewed online.

The second category taken into consideration concerns the aspect of work and the role of digitalization. In this case, the SLR underlined, in the first instance, that there is a low level of collaboration on territorial agreements for the diffusion of the OW about SMEs (Maino & Rizza, 2018). Apart from some rare examples documented in the paper of Piras et al., 2018, it is highlighted how most of the SMEs that use OW are headquartered in the Centre-North.

In this region local welfare is more successful than in the South SMEs (Maino & Rizza, 2018). Despite the low level of territorial agreements, also in this case it can be highlighted how digitization could play a key role in the diffusion of the OW through these projects (Piras et al., 2018).

Another major issue the paper addressed in the second category is the role of remote working. This element straddles two factors: work and covid-19. The pandemic has wholly revolutionized the paradigm of the use of remote working. If we examine this element only in relation to the work factor, we can highlight how in the SLR the low use of forms of flexibility is highlighted in only one paper (Viganò & Lallo, 2020). On the contrary, other studies underline its importance as a form of work-life balance (Arlotti, 2019; Bonomi et al., 2020).

As previously mentioned, remote working allows the introduction of the third category of the SLR: Covid-19. In this sense, It is essential to highlight how remote working has been fundamental during the pandemic in order not to stop all work activities; in this sense, the companies with a high level of digitization have been able to offer this service in the best possible way and move all work activities remotely (Delfino & van der Kolk, 2021). Remote working can be seen as a service included in corporate welfare since it allows an increase in work-life balance and this perspective, SMEs seem to favour a policy of mixing remote activities and on-site activities for their employees (Barabaschi et al., 2022; Delfino & van der Kolk, 2021). The SLR has highlighted another element of the Covid-19 category, which is related to relations with the Municipalities. In this direction, during the pandemic emergency, various corporate welfare programs have changed, which allow employees to apply directly online for public subsidies (such as solidarity contributions, family allowances, maternity allowances and Covid-19 shopping vouchers) and social purchase services for children, the elderly and people with disabilities offered by cooperatives (Santoni & Maino, 2021). Finally, as regards the health system with the Covid-19 factor, the SLR highlighted a limited level of association due to the need for specialist solutions to adapt the social and health services already provided in the territorial business platforms to the complications imposed by the emergency pandemic (Pesenti & Scansani, 2020; Santoni & Maino, 2021).

Going back to the RQ, with the analysis carried out of the 28 paper object of the SLR it is possible through the three categories studied (information technology, work, and covid-19) to affirm that there is an important contribution of digital technology in changing the landscape of OW in Italian SMEs. From this point of view, it is possible to mention each element of the three factors under study which had significant relevance in SLR. Simplification and the online world due to the factor of information technology.

Form of territorial aggregation and Work-life balance for the work factor. Finally, relations with municipalities and remote working for Covid-19. Moreover, it is possible to underline how the level of digitalization influenced the Covid-19 category. The companies with a high digitization rate were the ones most ready during the pandemic to implement remote working with a willingness to maintain it through a structured policy even after the pandemic emergency. In this vein, the methodological choice of the systematic literature review sought to highlight some possible gaps in the literature and propose innovative ideas for future research paths in this field.

In addition, there were definite limitations to this study. Even though the initial phase of the search produced ninety-eight results, about three-fourths of the studies were disregarded since they failed to provide any information regarding the digitalization system and its relationship to the OW throughout the qualification-level screening process. Secondly, the study found a problem in how study quality was assessed. Some studies only obtained moderate grades since the authors omitted important information (such as how to handle outliers or a brief description of the methods section). It is important to point out that these elements might have been covered in the studies but left out for space considerations. As a result, the evaluation of research quality may have produced poor outcomes. Finally, the study conducted an SLR rather than a meta-analysis. A systematic review is part of every meta-analysis, although not every systematic review is a meta-analysis. A meta-analysis is a statistical technique for examining the quantitative findings of a thorough literature study.

4. Value & Implications

This review systematically evaluated the existing literature published between 2012 and 2022 on the multidimensional influencing factors of the digitization system related to OW in Italy. The paper aims to offer a contribution to the existing literature on OW and expand studies in terms of the digitalization of the phenomenon.

The contribution built its action through the analysis of the literature on the development of the digital aspect of SMEs for the provision of welfare services. In this sense, the research aims to help focus attention on the growth of the role of suppliers within the selection of corporate welfare paths. The paper sought to increase knowledge of the subject by drawing on the state-of-the-art of previous research and a detailed picture of the current situation. The paper also wants to be a starting point for the

adoption of managerial techniques that have had a positive impact on corporate welfare on other entrepreneurial realities. Digitalization can be a useful tool for simplifying and accessing occupational welfare tools for all employees, even in SMEs that have traditionally lacked resources for their welfare systems.

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