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- ESG and value creation in SMEs
- Passion, creativity, and hard skills in circular entrepreneurship
- Tensions in SMEs' networks for sustainable entrepreneurship
- Leveraging ESG dimensions through the walking-to-talk pathway in SMEs
- Sustainability reporting practices in SMEs
- Exploring sustainability reporting in Italian listed SMEs
- Italian hospitality business and digital-based critical success factors
- The impact of coworking spaces on knowledge



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EDITORIAL

CONNECTING ENVIRONMENTAL,
SOCIAL AND GOVERNANCE (ESG) ASPECTS
WITH VALUE CREATION IN SMALL
AND MEDIUM-SIZED ENTERPRISES

Selena Aureli
Bologna University
selena.aureli@unibo.it

Mara Del Baldo
University of Urbino Carlo Bo
mara.delbaldo@uniurb.it

Charl De Villiers
University of Auckland
charl.devilliers@auckland.ac.nz

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Abstract

Purpose. This editorial aims to examine how SMEs are transforming their way of doing business in light of social and environmental sustainability and their different approaches used to externally report ESG aspects.

Design/methodology/approach. The editorial presents the contributions included in a thematic issue on ESG aspects and value creation in SMEs by framing the sustainability discourse along the « walk and talk » pathway that allows to better understand and compare what companies really do (or walk) versus what companies convey (or talk) to stakeholders.

Findings. This editorial and the contributions included in the thematic issue identify some key topics that deserve future researchers' attention when investigating SMEs' way to ESG. First, SMEs' approach to sustainability and circular economy may present peculiarities as they do not mimic what their larger counterparts do. Reasons for different pathways, like the impact of the entrepreneur-founder's profile and personality, should be further investigated. Second, sustainability reporting in SMEs is still limited and suffers from a lack of organizational resources. In this regard, dedicated, simplified reporting standards seem to be crucial. Finally, SMEs' walk and talk should be analysed, bearing in mind their position in the value chain and network relationships that largely affects the potential for sustainability transformation and value creation.

Practical and social implications. The editorial provides some suggestions for future research and introduces the selected articles that show the walk and talk pathways to favour critical reflections useful for both managers, entrepreneurs, academic researchers and policy makers.

Originality of the study. The editorial presents some concepts derived from the long-standing shared research path focusing on CSR and tries to link it to the latest ESG framework to emphasise how sustainability actions lead to value creation both in economic, social and environmental terms.

1. Background

The latest UN climate change report on emissions (UN, 2022) reminds us of the urgent need for changing consumption and production practices to reduce the carbon footprint and operate in a more sustainable way. The UN 2030 Agenda, with its 17 SDGs and 169 targets, call countries and businesses worldwide to eradicate poverty, protect the planet and ensure that all human beings can enjoy prosperous lives (United Nations, 2015). At the same time, academic research and media highlight an increasing customers' and stakeholders' demand for more sustainable products and sustainable business practices (Huang et al., 2023; Barrone et al., 2013), while the finance world scrutinizes environmental, social and governance (ESG) aspects that impact on economic risk, return, and stability (Chiaramonte et al., 2022) and have become a priority for many supervisory bodies of the financial markets and the banking sector (ECB, 2020; EBA, 2021).

In response to this changing context, organizations have started transforming their business model in the light of sustainability and circular economy ideas (Linder and Williander, 2017; Ashrafi et al, 2018; Cano-Rubio et al., 2021; Maglio et al., 2021; Aureli et al., 2023) and have increased their transparency and accountability to stakeholders with more CSR/ESG communications and reporting (Herremans et al., 2016; Ruiz et al., 2021). Substantive CSR practices ('walk') include sustainable business model innovation (Geissdoerfer et al., 2018; Shakeel et al., 2020) as well as the integration of sustainability objectives into corporate strategies and day-to-day management decisions and processes (Lee and Hageman, 2018). Communication practices ('talk') range from the disclosure of CSR, sustainability and integrated reports to the publication of social impacts and sustainability-related certifications assessed through different metrics and tools (including the B-Lab assessment).

While one might assume that organisations voluntarily start to report CSR/ESG practices after having understood and embedded sustainability principles in their operations and goals, thereby following the 'walk and talk' route to sustainability (Wickert et al., 2016), there are different pathways.

First, many businesses assume a greater level of responsibility for contributing to decarbonization, diversity and social equity, while not implementing any form of external reporting, i.e. 'walk, no talk'. New ventures 'born to be sustainable' (Allal-Chérif et al., 2023), green entrepreneurship and 'born-green ventures' that use green technologies in their businesses or offer green products and services are examples of this circumstance (Mrkažić et al., 2019). There are also new forms of hybrid firms that combine profit seeking goals with social positive impact (Battilana et al., 2017; Gazzola et al., 2019; Nigri et al., 2020) and many SMEs that behave in a sustainable

way or have strong sustainable cultures (Wehrmeyer et al., 2019) but do not engage in ESG disclosures. Some scholars argue that SMEs adopt extensive and authentically driven CSR practices since they are not opportunistic nor externally driven oriented (Graafland et al., 2003; Del Baldo, 2012). In other words, they put in practice the CSR walk, rather than focusing on CSR talk (Schoeneborn et al., 2020).

Second, businesses may start their sustainability journey because they are compelled to reporting by regulations or because they experience pressure to do so, i.e. ‘talk, no walk’. Mandatory ESG reporting requirements have forced businesses to start reporting opportunities and risks associated to sustainability, but have also prompted internal changes (Sciulli and Adhariani, 2022) such as the integration of financial and non-financial aspects in company strategies (Rossi and Luque-Vílchez, 2021). Recent government mandatory provisions, such as the latest CSRD Directive (EU Directive 2022/2464), assume that imposing the disclosure of a company’s impacts on society and the environment will change business behaviour and contribute to the sustainable development of nations (Haji et al., 2023). Coercive pressures for reporting may push businesses to walk sustainability by rethinking their current strategies, build new processes and procedures to implement and report ESG policies (Scarpellini et al., 2020; Aureli et al., 2020a). However, pressures for more sustainability talks have also generated unethical behaviours (e.g. impression management) and claims of corporate environmentalism that hide mere greenwashing (de Freitas Netto et al., 2020) or “box-ticking” reporting exercises, which do not allow businesses to see the value potentially associated to their ESG efforts (Serafeim, 2020).

The key issue is that many organizations still do not fully understand how ESG initiatives, their measurement, and reporting can help uncover and create value. Prior academic studies show how integrating ESG challenges in operations and strategies may create a unique competitive advantage (Serafeim, 2020). Discussions on ESG aspects also favour a more long-term perspective on value creation that is beneficial to businesses and economies, compared to managerial short-termism (Gong and Ho, 2021). Finally, researchers demonstrate that when reporting is not considered as a mere compliance exercise, but as a tool allowing external stakeholders to understand the organization’s true value, along with its tangible and intangible assets, then it is capable to increase stakeholders’ trust and favour strong beneficial relationships. As put forward by Castro and Gradillas Garcia (2022, p. 167), ESG can become a “value-creation tool for organizations and not just a set of meaningless metrics”.

2. The case of SMEs

This increasing attention on ESG issues is no longer limited to large corporations that easily fall under consumers' scrutiny and criticisms due to their size of operations (Del Baldo, 2012; Aureli et al., 2020b). SMEs are also called to contribute to a more sustainable development and regulators are starting to call on them to be more accountable and transparent on non-financial aspects (Calace, 2014; Bikefe et al., 2020). For example, the CSRD will compel about 50,000 European organisations to provide disclosures, including much smaller organisations than the roughly 12,000 that had to report under the previous non-financial disclosure directive, including extensive supply chain information. This provision will require many more SMEs to provide sustainability information to their large business customers (European Commission, 2021).

While some SMEs are strongly committed to CSR, in line with their owner-entrepreneurs' sense of social and environmental responsibility (Sawe et al., 2021), many others still struggle to adopt a sustainable business model (Bikefe et al., 2020; Trequattrini et al., 2021). SMEs need to revise their operations to continue doing business with supply chain actors more attentive to sustainability (Parida and Wincent, 2019; Scipioni et al., 2021), but they encounter several difficulties in embracing sustainability in general (Álvarez Jaramillo et al., 2019) and circular economy practices specifically (Rizos et al., 2016; Dey et al., 2022). Similarly, ESG reporting is not widespread in SMEs and, in some cases it is provided in a simplified and / or informal format compared to the disclosure of larger companies (Dias et al., 2019). There are several factors hindering sustainability reporting of SMEs (Cavicchi et al., 2022), with the lack of resources to invest in reporting being the most cited (Baumann et al., 2013; Calace, 2014).

Nevertheless, SMEs show an increased attention to sustainability and circular economy practices and reporting tools. According to Guidi et al. (2024) two key drivers explain this uptake: regulation and supply chain dynamics. The first driver is exemplified by the EU taxonomy for financing sustainable activities (Regulation EU 2020/852) and the EU CSRD Directive that extends non-financial reporting obligations to listed SMEs and has planned to issuing new reporting standards dedicated to SMEs that will voluntarily comply with the new regulation although not falling within its scope (EFAA, 2017; EFRAG, 2022). With reference to the second driver, SMEs are prompted to implement and report sustainability practices because they need to adhere to sustainability requirements of leading supply chain companies (Bunclark and Barcellos-Paula, 2021; Morsing and Spence, 2019). In addition, antecedents (or initiation) to sustainability and ESG reporting may also stem from SMEs entrepreneurs' values or ethical orientations (Moneva and Hernández-Pajares, 2018) especially when focusing on values-based SMEs and social enterprises (O'Dochartaigh, 2019).

3. The papers in this special issue

With this in mind, a deeper understanding of how SMEs adopt sustainability and report their ESG commitment to stakeholders becomes more urgent than ever. The contributions of this special issue of the Journal *Piccola Impresa*/Small Business aim to offer scholars and professionals insights on both ‘walk’ and ‘talk’ ESG practices, contributing to deepen the limited literature on ESG adoption within SMEs, often relegated to case studies (Del Baldo, 2017; Barbaritano and Savelli, 2020; De Villiers et al., 2020).

Accordingly, the first two articles selected for this special issue investigate SMEs’ behavior to better understand what facilitates the implementation of sustainable practices and which problems may hinder or slow the achievement of economic, social and environmental value, i.e. they walk, but don’t necessarily talk. Specifically, the De Chiara et al. paper entitled *‘Passion, creativity, and hard skills in circular entrepreneurship: A multiple case study on Italian companies adopting circular economy practices’* focuses on three key elements of the entrepreneurial team that enable CE adoption: the founder’s profile, the personality and the skills of the entrepreneur(s). Their results show that drivers and barriers to CE adoption do not only refer to structural or institutional aspects (Gennari, 2023) because entrepreneurs’ characteristics also play a key role. CE is associated with entrepreneurs’ strong sensitivity to environmental issues and social responsibility (i.e. ethical values or a sense of solidarity), a great propensity for creativity and innovation, as well as scientific and technical competencies.

The Ceschel et al. paper entitled *“Tensions in SMEs’ networks for sustainable entrepreneurship”*, also focuses on challenges that may hinder the adoption of sustainability practices. They specifically address SMEs’ interactions with supply chain and other business actors, showing that a network is not always a lever for sustainability. Thanks to the possibility of sharing resources and implementing joint activities, the network usually contributes to overcome the limits of being small scaled, but it may also have a “dark side” related to interactions problems. From their analysis, we learn that the main factor that causes tensions and problems in a business network with sustainability goals is the lack of external legitimacy. If the network is not recognized as an entity with its own status and credibility by external actors, also internal legitimacy (by network members) is at risk, which in turn reduces internal collaboration, network’s proper functioning, and generates conflicts among actors. In line with Harrison et al. (2023), the authors raise the necessity for more studies on the tensions and problems that may hinder sustainable entrepreneurship in SMEs networks.

Then, the Bivona and Scirè paper entitled *“Leveraging environmental, social and governance dimensions through the walking-to-talk pathway in SMEs: findings from a longitudinal agri-food case study”*, analyses the ESG ‘walk and

talk' relationship through the case of an Italian SME wine cooperative over ten-years of operations. They demonstrate that for SMES the best approach to ESG is to first implement ESG strategies, structures, and processes and only afterwards invest in external communication. In addition, they identify drivers and constraints that respectively favor and hamper SMEs' implementation of ESG aspects over time. Among key drivers, the authors mention strong local rooting in terms of relationships with the community, board members' interest to ESG, management continuity and the practice of gradually introducing ESG initiatives. Social and governance aspects are central to support ESG objectives because the latter require organizational changes endorsed by senior managers to be implemented (Eccles et al., 2014).

Finally, the two last papers of this special issue address SME sustainability reporting practices (i.e. they talk, without necessarily building on 'walk'), a topic that has not received large attention in the academia (Hsiao et al., 2022). Specifically, the Cicchini et al. paper entitled "*Sustainability reporting practices in SMEs. A systematic study and future avenues*", reviews existing literature sourced from Web of Science and Scopus databases to identify three key thematic areas of research, namely (i) Integrated Reporting and SMEs; (ii) CSR reporting and SMEs; and (iii) SDGs reporting, CE and SMEs. Their analysis shows how academic papers highly recommend IR for SMEs despite the challenges that hinder its widespread implementation. As demonstrated by the limited number of articles focusing on IR reporting, this area of investigation has received less attention compared to the mainstream theme of CSR reporting. Relevant aspects included in this second research area refer to drivers/enablers/obstacles/benefits associated to SMEs reporting and the role of the SME managers in corporate reporting, with reference to different geographical contexts of operations and different types of businesses, including family-owned firms. Finally, research focusing on CE and SDGs represents a niche, with papers that predominantly center on the examination of CE-related activities (and not CE reporting). A common aspect that pervades all three thematic areas is the lack of reporting frameworks and regulations that make ESG disclosure tools more usable for SMEs.

The above-mentioned critiques also emerge in the empirical analysis of Roberto et al., in their paper entitled "*Exploring sustainability reporting in Italian listed SMEs*". They argue that the scarce voluntary adoption of ESG reporting among Italian SMEs (only about 25% of them publish some type of report) and the inadequacy of the few published reports is associated to the lack of tailored tools and regulations that meet the specific needs of SMEs. Current SMEs' reports need to be substantially enhanced to meet emerging CSRD's requirements as well as social expectations. Assessed and scored against metrics required by GRI standards, the reports

published by SMEs listed on the Italian stock market show strong limitations especially with reference to KPIs usage and information transparency about governance aspects. In fact, Italian-listed SMEs prefer reporting more information in the social dimension, followed by the environmental dimension, while governance aspects received the least attention.

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RESEARCH ARTICLES



PASSION, CREATIVITY, AND HARD SKILLS
IN CIRCULAR ENTREPRENEURSHIP:
A MULTIPLE CASE STUDY ON ITALIAN COMPANIES

Alessandra De Chiara
University of Naples L'Orientale
adechiara@unior.it

Sofia Mauro
University of Naples L'Orientale
s.mauro1@unior.it

Anna D'Auria
University of Naples L'Orientale
adauria@unior.it

Luigi Sergianni
University of Pavia
luigi.sergianni@iusspavia.it

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Abstract

Purpose. Although the personality of the entrepreneur is considered a key determinant of a company's performance, this aspect in companies adopting circular economy practices has been little studied. Therefore, this paper aims to contribute to the literature on the personality of the entrepreneur in firms adopting circular economy practices, and his/her capabilities to manage circular practices.

Design/methodology/approach. A multiple case study method was applied to 10 companies adopting circular economy practices.

Findings. The personality of the entrepreneur is characterized by a specific trait, defined here as passion for environmental issues and interest in social issues. Such as, referring to capabilities, leadership and collaborative skills are considered essential traits.

Practical and Social implications. The elements defining the circular entrepreneur and the ability to integrate different skills as a key element of circular entrepreneurship highlighted in this paper offer policy and theoretical implications for further investigation.

Originality of the study. The study defines the personality of the entrepreneur and his/her ability to manage and sustain circular practices.

1. Introduction

During the years, different models and frameworks have been proposed to analyze entrepreneur personality, although that of the Big Five factors (John, 1990; Goldberg, 1992), namely, a representation of the entrepreneur personality traits, is one of the most adopted as a reference by scholars. The model identifies five main entrepreneur personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and is considered the pillar of the debate on entrepreneur personality and a reference within different disciplines contextualized in the psychological and sociological debate (Costa & McCrae, 1994; De Raad, 2000).

However, the present research focuses on circular entrepreneurship, as the personality of circular entrepreneur is still scarcely treated in the scientific literature, although, as stated by Suchek and colleagues (2022), “entrepreneurship represents a key factor in capturing new circular business opportunities, but research on circular entrepreneurship remains at an early phase and is correspondingly somewhat dispersed” (Suchek et al., 2022, p. 2256).

In fact, the circular economy plays, nowadays, a very important role in managing companies (Kirchherr et al., 2017) where the circularity flow of ideas, knowledge, expertise, and services promotes the emergence of new circular entrepreneurship. In addition, circular entrepreneurship creates innovation by designing goods and services needed by people, incorporating recyclable materials, and reducing waste production (Zucchella & Urban, 2019). Importantly, according to scholars and the highly recognised definition of circular economy provided by the Ellen MacArthur Foundation, companies that enable, support and encourage circular economy practices and design solutions for the circular economy can be considered as circular firms (Ellen MacArthur Foundation, 2013; Ferasso et al., 2020; Babbitt et al., 2021).

The personality of the entrepreneur concerns intangible aspects that are difficult to investigate empirically, especially if done on the basis of secondary data. Hence, apart from a literature review on these topics, the study offers an empirical deepening, useful to indicate policy and practical implications through the analysis of representative examples. In detail, the paper adopted the multiple case study method on 10 Italian circular companies to observe the aspects of the circular entrepreneur personality through semi-structured interviews (Richter, 2011).

The purpose of the study is twofold: (1) explore the entrepreneurial intention, as the main traits of the personality of circular companies' founders in their path toward sustainability; (2) define the entrepreneur's role and his/her ability to manage and support circular practices. Through the study of these elements, the paper aims to contribute to the understanding of circular entrepreneurship, in order to highlight aspects of personality and skills that can address policies in the implementation of a circular

economy and support the development of this form of entrepreneurship.

The article is organized as follows. First, the main traits of entrepreneur personality have been analyzed, with a focus on the circular entrepreneur to determine the topics detected in the debate. Then, the methodology and research process, as well as the dataset, have been described. Next, using qualitative research tools, 10 circular Italian companies have been presented as representative case studies. Finally, the results have been presented and discussed. Implications, conclusions, and limitations are provided in the last part of the paper.

2. Literature review on the entrepreneur personality

In line with the twofold purpose of the research, the literature review allowed the authors to explore the main traits of the personality of circular companies’ entrepreneurs.

The review highlighted two main research lines: the “entrepreneurial intention” (i.e., Cao et al., 2022) that includes topics related to the person rather than to the figure of the entrepreneur (for example creativity, narcissism, propensity to change, readiness, reactivity, and passion are discussed); the “entrepreneur’s role” (i.e. Bergner, 2020; Ren & Xu, 2022), focusing on aspects such as technical and scientific skills, leadership skills, and job satisfaction. The figure below summarizes the two main trajectories and the topics most discussed in the literature (see Figure 1).

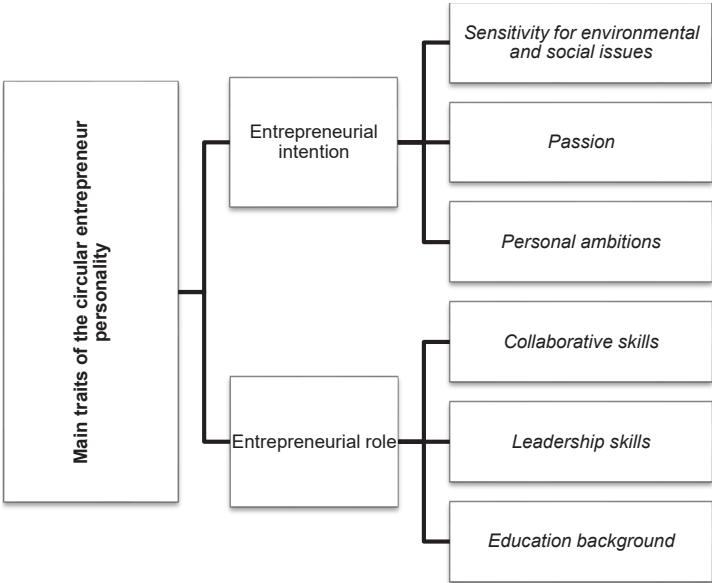


Figure 1: Main trajectories and topics in the literature on the circular entrepreneur personality

2.1 Research stream 1 - Entrepreneurial intention

The debate on the personality of the entrepreneur finds one of its main pillars in the Big Five model (John, 1990; Goldberg, 1992) which identifies the five dimensions of the personality of the entrepreneur (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism). However, scholars from different disciplines discussed the topic. For example, an interesting contribution on entrepreneur's personality is provided by Xie et al. (2018), who highlight that although the entrepreneur personality has long been talked about in both management studies and psychology and sociology studies, the negative traits of the entrepreneur personality that can affect business performance are treated only in more recent works. The aforementioned authors, for example, discuss "narcissism, overconfidence, and fear of failure" as being important aspects of a person/entrepreneur even if they are traits that can have a considerable negative impact on organizational performance, particularly for new businesses and start-ups.

On the other hand, an aspect that is considered positive and that emerges in several works among those examined is that of passion in the form of a determining element of entrepreneurial behavior. Specifically, Obschonka et al. (2019) focus on the antecedents of human behavior and, in this case, entrepreneurial behavior, asserting that such traits can strongly affect the approach adopted by the entrepreneur and the passion for his/her work: "[the] basic entrepreneurial personality character of a person contributes to the shaping of his or her entrepreneurial passion, which is relevant for actual entrepreneurial activity" (p. 1). In the same vein, Zhu et al. (2020) highlight the importance of the traits that characterize the personality of the entrepreneur, such as risk-taking and the need for achievement, when new businesses are started. Entrepreneur personality is also described in the context of different categories, such as the role of women, addressing the extremely current gender issue in the international debate, i.e., Zhang et al. (2009) and Sharma and Sahni (2020), and the approach of young entrepreneurs, i.e., Zeffane (2013), Butz et al. (2018), and Cao et al. (2022). For example, Zhang et al. (2009) investigate the genetic basis of entrepreneurship and its effects on personality, showing a strong difference between female and male entrepreneurs; in fact, according to their results, "females have a strong genetic influence and zero shared-environmental influences on their tendency to become entrepreneurs", with the opposite being true for males (p. 93). Sharma and Sahni (2020) delve into the issue of gender regarding other aspects; they assert that "males exhibited a significantly higher risk taking, openness to change, autonomy, and achievement tendencies. Interestingly, older females seemed to possess lower risk taking, creativity, and autonomy than the younger cohort of women entrepreneurs, while age had no influence on personality attributes of male

respondents" (p. 725). Finally, the role of young entrepreneurs is examined especially in psychological and educational studies, although linked to management, observing the approach of young people with regard to their desire and willingness to undertake entrepreneurial activity. In particular, many contributions focus on the need for achievement (Obschonka et al., 2011; Ryan et al., 2011; Zeffane, 2013; Vodă & Florea, 2019), and on the need for independence, the latter with special reference to developing countries (Kar et al., 2019). Scholars as Zeffane (2013) focus on psychological skills as fundamental tools for young adults to face the challenges of entrepreneurship. Other scholars stress the relevance for the young generation of entrepreneurs, to be skilled in both economics and technical fields (Vodă & Florea, 2019).

Cao et al. (2022) note that "the desire to be an entrepreneur, learning attitude, and personality traits are the leading factors in the entrepreneurial intentions of students and graduates. However, within these themes, the effect of personality traits (consistency and determination, discipline and locus of control, and risk-taking and tolerance) is found to lead to entrepreneurial intentions among young entrepreneurs" (p. 1).

2.1.1 Research stream 1 – Entrepreneurial intention in circular economy

With special reference to the circular entrepreneur personality, new aspects emerge, such as a strong sensitivity for environmental and social issues, a form of responsibility in which the entrepreneur pays special attention to environmental protection, human dignity, inclusion and social sharing and solidarity practices (Welter et al., 2017; Zucchella & Urban, 2019; Sawe et al., 2021). Some scholars recognize in the entrepreneur an interest in the protection of the natural environment as an important end in itself rather than merely a component of the economic goal (Affolderbach & Krueger, 2017).

Passion, already mentioned above, is mainly discussed in relation to the entrepreneur's attention to growth, change, competition, innovation, and social mission (Pagano et al., 2018). As concerns values, some scholars also underline the personality based on ethical values - including altogether economic, social and environmental values (Zucchella & Urban, 2019)-, solidarity (Monciardini et al., 2024), preservation of the natural environment, and climate protection (Rok & Kulik, 2021).

Furthermore, the literature highlights that circular entrepreneurs have a strong sense of personal ambition and commitment in order to offer new opportunities in highly uncertain contexts, contribute to the eradication of environmental threats, and ensure a healthy planet for future generations (Zucchella & Urban, 2019). All of these characteristics can lead to the creation of innovative products and services that can also help reduce the impact

on the environment and increase people's quality of life (Schaltegger & Wagner, 2011) while contributing to sustainable development (Lans et al., 2014).

2.2 Research stream 2 - Entrepreneur's role

Unlike the first one, the second research trajectory focuses mainly on aspects closely related to the work of the entrepreneur; in fact, job satisfaction, leadership abilities, entrepreneurial success, and business performance are the main emerging topics. Many studies agree that the leadership capacity of the entrepreneur is extremely important for the success of business performance. For example, Forster et al. (2013) highlight that leadership competencies play a major role in developing a start-up. The importance of training, education, and hard skills acquired in previous experiences emerges in several studies, highlighting the fact that leadership capacity is generally considered the result of a set of factors related not only to the behavioural approach but also to aspects built over time (Bergner, 2020). Ren and Xu (2022) discuss the links between entrepreneur, leadership and organizational technological innovation, revealing the associations between good leadership and wide-ranging technology innovation initiatives. The gender issue is also discussed in relation to leadership and leadership skills; for example, some authors deal with gender and the age of entrepreneurs, underlining how these aspects can affect the management approach (Lechner et al., 2018). The autonomy of the entrepreneur is another element that is considered of fundamental importance to both good business performance and the job satisfaction of the entrepreneur himself. In this regard, Alvarez and Sinde-Cantorna (2014) discuss the link between self-employment and job satisfaction, revealing that "the usual positive effect of self-employment on job satisfaction is due to the greater work autonomy afforded by self-employment, and not to the greater willingness of the self-employed to report higher levels of satisfaction" (p. 688). Another aspect that scholars take into account when dealing with entrepreneur leadership capacity is the context in which the company operates; Hazlina Ahmad et al. (2010) suggest that the link between entrepreneurial skills and business success is particularly evident in environments characterized by strong dynamism and competitiveness rather than in stable and apparently favourable contexts. In particular, this is investigated in small and medium-sized enterprises, more linked to the local environment, and where the role of the owner/entrepreneur is even more pivotal, highlighting that aware, motivated, and competent entrepreneurs can be concretely able to minimize or contain the negative impacts due to environmental dynamics on the company's activity. Similarly, Branicki et al. (2017) declare that, to promote the resilience of SMEs, it is necessary to "pay greater attention to building capacities to cope with uncertainty, generating and leveraging personal re-

lationships, and activating the ability to experiment and think creatively in response to crises" (p. 1244). Finally, Qureshi (2020) focuses on the relationship between employees and entrepreneurs, emphasizing the importance of emotional intelligence and the creation of empathic relationships as a lever for achieving successful performance.

2.2.1 Research stream 2 – Entrepreneur's role in circular economy

Referring to the capabilities of the circular entrepreneur, the additional element identified in the literature is represented by the collaborative skills, namely the ability to create relationships to support circular innovation (Aaboen et al., 2017; Pagano et al., 2018). Indeed, inter-organizational collaboration is considered a strategic key to support the transition to the circular economy (Den Hollander, 2018; Baldassarre et al., 2019; Greco et al., 2020; Branca et al., 2020; Eisenreich et al., 2021). Therefore, the entrepreneur's leadership skills are fundamental to develop and assess the collaborative- and system-oriented business models in the process of transition (Brown et al., 2021) and to determine how to integrate ecosystem perspectives into circular-oriented innovation (Konietzko et al., 2020).

Furthermore, some scholars highlighted the importance of social ties in the development of innovative ideas, which are essential to fostering the culture of circular economy practices (Dantas et al., 2022). In order to implement co-production practices and knowledge sharing and, therefore, to realize new circular products and services (Potting et al., 2017; Zucchella & Urban, 2019; Hettiarachchi et al., 2022), circular entrepreneur can involve various external actors such as associations, research institutes, other companies, and local authorities (Eisenreich et al., 2021).

Finally, development of relationships outside and within the company is considered one of the main responsibilities of circular entrepreneurship (Zucchella & Urban, 2019). In particular, recent studies highlighted the importance of combining different skills and education backgrounds to create new circular opportunities through collaboration (Martínez-Pérez & García-Villaverde, 2019). In addition, the debate focused on internal collaboration and multidisciplinary of knowledge and skills within a circular company which can positively influence the innovation processes (Schaltegger & Wagner, 2011).

3. Methodology and research process

The literature review allowed to identify a set of issues to be further investigated empirically. To perform the analysis, the method of the multiple case study was adopted through semi-structured interviews with a

group of Italian circular entrepreneurs. To identify the representative case studies, the authors started from the Italian Atlas of the Circular Economy, an online platform collecting information and reporting on companies, associations, and research organizations and promoting the circular economy and sustainability. This platform was chosen to observe different circular entities operating in Italy. Italy was considered a representative context since it is in a high position in terms of circular performance at an international level (Circular economy network, 2023). The Italian Atlas of the Circular Economy is based on guidelines developed and validated by the internal scientific committee supporting the platform, which, through a multidisciplinary approach, has defined a set of evaluation criteria for measuring circularity. The Atlas provides a descriptive data sheet for each organization, related to the company profile, the story, the circularity, and sustainability policy. In detail, to shape the dataset, an invitation to take part to the study was sent to all the firms listed in the Atlas (almost 200), through an email containing the objectives and summary of the study. 10 firms accepted the invitation. Each data sheet was individually analyzed by each author to limit possible mutual influences. Then, a joint evaluation was done. The analysis led the authors to detect the main characteristics of the circular enterprises (geographical location, sector, circular output/practices, target, type of reality, the age of approach).

To perform the analysis, the authors adopted a multiple case study method through semi-structured interviews, since this method allows researchers to analyze in depth and derive hidden information in each representative example (Eisenhardt, 1989). Furthermore, this methodology is considered one of the most appropriate approaches for the as-yet unexplored research topics and helps to answer the questions (Butt 2022a; Welch et al., 2011), with special reference to social science areas (Bradford & Cullin, 2012). The interviews were conducted from March to June 2023 and through online meetings. The interviews transcripts were analyzed individually by each author, to avoid any bias, and then jointly, in order to identify the key topics mentioned by the respondents in line with the categorization emerged from the literature review (see Table 1 and Table 2).

Table 1 Investigation elements

Areas	Topics	Interviews topics
Company profile	Size Turnover Sector Type of business Stage of development of circular economy Percentage of circular products offered by the company	Company information, regarding size, industry, type of business, stage at which the company became circular and circular products.

Entrepreneur/founder profile	Gender (Zhang et al., 2009; Sharma & Sahni, 2020) Age (Zeffane, 2013; Butz et al., 2018; Cao et al., 2022) Education (Zhu et al., 2020).	Personal information of circular entrepreneurs, regarding gender, age and the level of education.
Entrepreneurial intention (personality)	Sensitivity to environmental issues and social responsibility (Welter et al., 2017; Zucchella & Urban, 2019; Sawe et al., 2021). Passion: creativity propensity for change, growth competition (Obschonka et al., 2019; Pagano et al., 2018). Personal ambitions, greater autonomy and fulfillment (Zucchella & Urban, 2019; Zhu et al., 2020).	Focus on the presence of a strong sensitivity to environmental and social responsibility issues, strong passion and propensity for creativity, innovation, pursuit of changes dictated by the external environment, and personal ambitions dictated by the achievement of greater autonomy and the need for fulfillment.
Entrepreneur's role (skills/competences)	Educational background of the founders (Bergner, 2020) Collaborative skills (partner identification, collaboration management) (Schaltegger & Wagner, 2011; Zucchella & Urban, 2019; Qureshi, 2020; Eisenreich et al., 2021). Leadership skills and management of knowledge, skills and abilities in governance (Forster et al., 2013; Potting et al., 2017; Zucchella & Urban, 2019; Hettiarachchi et al., 2022; Hussain et al., 2023).	Focus on the educational background of circular entrepreneurs, and on the presence of leadership and management capabilities of various knowledge, skills and abilities present in governance.

3.1 Dataset description

In this section, the 10 circular enterprises are described in brief: these firms are located in different Italian areas and operate in various sectors, such as hygienic-cosmetic, textile-clothing, furniture, trade and flea markets, platform sharing, second raw material, and agriculture and animal husbandry. Some of them were born circular, while some others adopted a circular economy approach at a later stage. The age of approach indicates at what point in its life the company approached circularity: almost all among the companies involved in the study, with the exception of one, were born circular; while the circular output represents the type of circular practice adopted by the company, as classified by the Atlas: they mostly adopted circular production models.

In the following lines the firms involved in the study are presented, namely, Giunko, Aquafil, Ecozema, APS Maistrassà; Rifò, Reware, Terra di tutti; Lavandula, Nuove Tecnologie di Marinella Caria & C., and Ammanò.

Giunko is an innovative company in the platform sharing and mobile app exchange sector. This enterprise has developed the Junker app, which facilitates household waste collection, supporting circularity practices

through the collection and recommendation of collection/recycling/reuse points present in specific territories, also in line with the principles of the smart city. This app recognizes each product by its barcode and packaging symbols, describing its material and in which bin it should be separated according to the rules of the municipality in which it is located. Therefore, the app will provide, through localization, the exact local information. When a product is not recognized, the app allows a photo to be taken. Within a few minutes of receiving a response, the product is added to the database. Today, this app reaches five million Italians.

Aquafil operates in the second raw material sector, developing products and industrial processes with a highly innovative character. The group promotes an innovative business model based on the principles of the circular economy. Aquafil has created the Econyl® Regeneration System, a production model that allows virgin raw material of non-renewable origin to be replaced with secondary raw material derived from the recycling of various wastes including end-of-life fishing nets, carpet fluff, and others. This system makes it possible to recover waste that would end up in landfills or in the oceans, causing serious damage to the natural ecosystem, and to significantly reduce the greenhouse gas emissions associated with the production of virgin caprolactam.

Ecozema operates in the packaging and wrapping sector. Its mission is to create quality, environmentally friendly, and socially sustainable products. This idea is aimed at all sectors of activity, from the household to the catering industry, with a view toward safeguarding the planet and caring for the end consumer. The company's vision is, in fact, to help the planet be a better world to live in using biodegradable and compostable biopolymers derived from renewable plant resources, recycled plastics from post-consumer waste sorting, and green energy.

APS Maistrassà operates in trade and flea markets. It is a centre for the recovery of reusable goods otherwise destined to become waste. The 'recovered' goods are made available through a free offer to anyone who needs them or who is interested in reuse practices. The company collects furniture, household appliances, electrical and electronic equipment, bicycles, and toys that are clean, in good condition, and functioning. Furthermore, the aim of Maistrassà is the formation of job-creating micro-economies through the activities of maintenance and creative reuse.

Rifò operates in the textile and clothing industry. The company regenerates noble textile fibres such as cashmere, using a proven technology that has been present in the Prato district for more than 100 years. Rifò artisans carefully select textiles by colour. The textile scraps are then shredded, reconverted into wool fibres, and transformed into yarns, to be made into tasteful accessories with an exceptional saving of natural resources. The accessories are packaged in a manner that avoids the overstocking of raw materials, stockpiling, and incurring the error of overproduction.

Reware operates in the electronics sector. It is a social enterprise recognized within the framework of environmental prevention for its specialization in the field of scale remanufacturing of discarded computer equipment from companies. Reware intercepts decommissioned computers before they become premature waste, disassembles them, tests the components, securely erases the data, and rebuilds machines that can be used for many years. The company aims to halve the environmental impact of the waste generated by this equipment, as remanufactured computers avoid the purchase of new computers.

Terra di Tutti operates in the stationery sector. Its entire production is based on circular economy principles: All handicraft products are made from discarded materials. The procurement of materials and resources takes place by contacting private individuals and companies that donate discarded materials or objects/clothing/fabrics that are no longer used. The company produces notebooks, pencil cases, T-shirts, backpacks, bags, and various products made from regenerated broken umbrellas, chairs, and wooden objects. All products are made by refugees and vulnerable people involved in the project, using discarded materials.

Lavandula operates in the hygienic-cosmetic sector. With its products, it seeks to tell the story of the area in which it is located, namely, Cilento. The products are the result of the study of active ingredients and/or Phyto complexes to be applied to natural and eco bio cosmetic formulas. The company uses by-products from the agro-food chain to create cosmetic lines with special claims built around the active ingredient, turning what is considered waste into a resource and job opportunity for others inside or outside the company. The company's activity revolves around three areas: spontaneous officinal plants, ancient local cosmetic recipes, and the use of agro-food waste as a source of molecules for cosmetic application. Indeed, the raw materials used are ecobio and, as far as possible, km0.

Nuove Tecnologie di Marinella Caria & C. operates in the furniture sector and engages in production in an eco-friendly manner, promoting the purchase of environmentally friendly products, the restoration of furniture and furnishings, and the recovery of waste materials. The company's aim is to extend the end-of-life of products as much as possible. Everything that is considered waste, small or large offcuts, is not thrown away but, rather, sent for artistic processing. Leftover materials that cannot be used immediately are stored for future use or exchanged with other companies.

Ammanò operates in the agriculture and animal husbandry sector. Its objective is to build a rural entity of agricultural, tourist, and educational nature, in which all activities are in synergy for the creation of a self-sufficient system. Every aspect of daily and professional life is aimed at enhancing the territory where the enterprise is located, as well as its traditions and potential, with a view toward having a low environmental impact. It will be an

entity ready to welcome and disseminate cultural and social projects. In this entity, every bit of waste in agriculture is a resource for the business itself.

The table below summarizes the main characteristics of the circular enterprises. Specifically, apart from geographical location, sector, target and type of entity, the circular output represents the type of circular practice adopted by the company while the age of approach indicates at what point in its life the company approached circularity.

Table 2 Characteristics of the firms involved in the study

Category	Giunko	Aquafil	Ecozema	Maistrassà	Rifò
Geographical area	North	North	North	North	Central
Sector	Platform sharing and mobile app	Second raw material	Packaging and wrapping	Trade and flea markets	Textile and clothing
Circular output	Raw material seconds	Circular service	Circular production model	Circular service	Circular production model
Target	B2C B2B	B2B	B2C B2B	B2C	B2C
Type of entity	Profit	Profit	Profit	Non-profit	Profit
Age of approach	Early	Growth	Growth	Growth	Early

Category	Reware	Terra di Tutti	Lavandula	Nuove Tecn. Marinella Caria & C.	Ammanò
Geographical area	Central	Central	South	South	South
Sector	Electronics	Stationery	Hygienic-cosmetic	Furniture	Agriculture and animal husbandry
Circular output	Raw material seconds	Circular production model	Research project	Circular production model	Circular production model
Target	B2C B2B	B2C B2B	B2C B2B	B2C B2B	B2C
Type of entity	Profit	Profit	Profit	Profit	Profit
Age of approach	Early	Early	Early	Growth	Early

Source: Authors' elaboration on data from the Italian Atlas of the Circular Economy

4. Findings

4.1 *Company profile*

As concerns the company profile, the interviews provided further information about the size, turnover and percentage of circular products. Most of the companies analyzed are small (less than 10 employees), with a revenue of less than EUR 2 million when they became circular, apart from two companies in which the number of employees is higher (between 10 and 49 employees for the first, less than 250 employees for the second), with a revenue lower than 2 million of Euros for one company and between 2 and 10 million of Euros for the second. These companies are strongly characterized by circular economy practices. Indeed, almost all of them have more than 70% circular products in their portfolio.

Regarding the profile of the entrepreneurs, they are almost evenly distributed according to gender, and most of them are 31 to 50 years old. Many have a secondary school education, followed by a university degree and, in a few cases, also a postgraduate degree. In addition, the number of founders characterizes these circular enterprises, as the majority have five founders, followed by three and two founders.

4.2 *Entrepreneurial intention*

With reference to the entrepreneurial intention (personality) - related to sensitivity to environmental and social issues, passion, ethical values, and personal ambition - from the interviews it emerges that the circular entrepreneurs are characterized by a strong sensitivity to environmental issues and social responsibility, a trait considered essential or very important for the whole group of interviewed (apart from one respondent). As evidence of this, some quotes from the interviews are listed below (the interview transcripts have been translated from Italian to English, making the translation as adherent as possible to the original one):

- "Our guiding principle, from where all our ideas originate and come to life, is respect for the world where we live and for the people who inhabit it and will inhabit it in the future. Today we can no longer put off our commitment to safeguard the planet." (Ecozema).
- "Our planet is no longer able to sustain the unbridled pace of fast fashion. It is therefore necessary to create sustainable alternatives for a better future, and that is exactly what we do every day." (Rifò).
- "We limit environmental impact through the prevention of e-waste production, also in the context of national and international cooperation and solidarity projects." (Reware).
- "Our vision is to achieve a sustainable future through one choice at a time, driven by responsibility." (Aquafil).

Entrepreneurs are strongly driven by passion, a propensity for creativity, innovation, and propensity to follow market changes. These aspects are considered highly important. In fact, from the interviews, it emerges that:

- "We are always excited, passionate and proud to carry out our mission and to see our materials come to life in the real world. We are conscious innovators." (Aquafil).
- "We invest in research and training through innovative solutions that exceed market standards and create value and sustainability." (Giunko).
- "Innovation and creativity are at the core of our mission." (Rifò).
- "Changes in the markets have stimulated the company to continue researching and developing products that meet the needs of the catering industry, both collective and traditional." (Ecozema).
- The results of the interviews also highlight the ethical values that drive the behavior of circular entrepreneurs as solidarity with the disadvantaged and environmental protection:
- "We provide goods to socially distressed persons and/or organizations pursuing social purposes" (Maistrassà).
- "We offer programmes for the social reintegration of disadvantaged people" (Ecozema).
- "The products and services we provide leverage performance and reduce global impact, thus ensuring better environmental protection" (Aquafil).
- "We turn into a resource of what farmers considered a waste to be disposed of with high environmental and economic costs" (Lavandula).

The last aspect of entrepreneurial intention is related to personal ambitions. The analysis of this aspect allowed for detection of the entrepreneur's attitude regarding pursuit of the achievement of greater autonomy and self-fulfillment. They displayed a strong commitment to offer new opportunities in circularity. Only in three cases (Giunko, Terra di tutti, Ammàno) these aspects were not considered important. Some evidence is provided below:

- "We are down-to-earth visionaries. We want to create our history" (Aquafil).
- "I would like to be a spokesman for all natural and cultural resources, working in harmony with them, in the awareness that man is the guardian of this heritage" (Lavandula).
- "We want to revolutionize the fashion industry by making a real positive change" (Rifò).

4.3 Entrepreneur's role

As concerns the entrepreneurs' role (competences and skills), the analysis revealed several very relevant aspects; in particular, the educational background, and organizational and leadership skills.

A scientific background prevails, in some cases combined with sectoral expertise and humanistic skills, as emerging in the following quotes:

- "When I started my company's circular economy approach, my educational background was based on scientific skills and studies" (Lavandula).
- "Our educational background was scientific (engineering, chemical, etc.) and humanistic (economics, law, etc.)" (Giunko).
- "The educational background that characterized us was scientific and also related to the company's sector" (Nuove Tecnologie di Marinella Caria & C.)

In general, the interviews reveal a strong heterogeneity in the skills of circular entrepreneurs both academic and work-related, considered fundamental to the development of circular economy practices. Almost all the entrepreneurs agreed on this, except for two respondents (Ecozema, Giunko).

Regarding the leadership skills, the interviewees consider organizational skills and capabilities to be very important, with particular reference to the ability to manage the different knowledge and skills present in the governance.

Similarly, collaborative capacity, understood as identifying partners to develop circular practices and managing collaboration, is essential for all interviewees:

"With empathy and collaboration, we set new standards, inside and outside of our comfort zones. We intend to actively involve our stakeholders to create and spread a real culture of sustainability. We also want to support local communities through various collaborations with NGOs in the territories where we operate." (Aquafil).

"The values that we preserve are cooperation with both internal and external actors, and customer orientation, with whom relationships of mutual exchange and trust are established. We collaborate with a number of trade fairs and with a cooperative of disabled young people." (Ecozema).

"Our cooperative initiates collaborative programs with major players in the sector." (Reware).

"We collaborate with local artisans to increase the skills of the most disadvantaged people in the area, valuing traditional knowledge and everyone's different skills and talents. We intend to give birth to relationships, entanglements, ideas, objects." (Terra di Tutti).

5. Discussions

From the results of the analysis, some important characteristics emerge that seem to distinguish the circular entrepreneur.

5.1. *Passion, creativity, and innovation attitude*

From the results it emerges that passion, driven by a strong interest and sensitivity in environmental protection and social issues, is an essential trait of the personality of circular entrepreneurs. As underlined in the literature passion is a crucial factor that influences entrepreneurs behavior, and that pushes him/her to be ready for change, competition, and innovation, namely to do business (Obschonka et al., 2019; Newman et al., 2021; Pagano et al., 2018). In line with this, all the interviewed appear to be strongly driven by a propensity for creativity and innovation and consider it an essential trait of the circular entrepreneur. This is not surprising considering that circular companies are important actors of change and innovation and very often promote innovative solutions within the entire supply chains. In fact, the entrepreneurs involved in the study are conscious of their role, as reported by companies as Ecozema, Aquafil and Rifò, and as also highlighted in the scientific debate which describes the ability to support innovation as a responsibility of the circular entrepreneur (Zucchella & Urban, 2019).

In the interviews, commitment to preserving the natural environment is identified as a meaningful goal in its own right, rather than merely subordinate to economic activities. These personality traits emerge in the debate (Welter et al., 2017; Zucchella & Urban, 2019; Sawe et al., 2021) and confirm the presence of ethical values in the circular founders, as declared by firms (e.g. Ecozema, Rifò, Reware, Aquafil, Lavandula, Maistrassà). An interest in the environmental crisis and a sense of responsibility for implementing industrial activities respectful of social well-being and inclusive of social sharing and solidarity practices are important characteristics of circular founders as stated by Reware, Rifò, Ecozema and Aquafil, and as emerged in the scientific debate (Schaltegger & Wagner, 2011; Lans et al., 2014).

However, the research does not reveal differences in the personalities of the founders of the circular companies related to gender and age issues, as the literature on entrepreneur gender detects (i.e., Zhang et al., 2009; Sharma & Sahni, 2020), as well as for young entrepreneurs (i.e., Zeffane, 2013; Butz et al., 2018; Cao et al., 2022).

In summary, circular entrepreneurship seems to be the result of processes of passion for the topics of environmental or human dignity (Rok & Kulik, 2021). This passion elicits the will to contribute to sustainable development. Further, it allows for the integration of different knowledge, in which new ideas are fueled by the exchange of the different skills of the

founders (Martínez-Pérez & García-Villaverde, 2019), expanding the social role of companies by creating innovative initiatives as well as favoring the dissemination of knowledge and awareness of the importance of adopting a responsible and sustainable approach. Passion also encourages continuous experimentation and research into process and product solutions that can help reduce the environmental impact of industrial activities and improve quality of life.

5.2. Personal experience (skills and competences)

The research underlines the awareness of the interviewees (for example Aquafil and Ecozema) about the importance of internal and external relationships in supporting innovation. The interviewees also express the importance of leadership capacity in managing knowledge and skills within the circular company's governance. In fact, the present research shows that different technical and scientific competencies are essential in the background of a circular entrepreneur (as emerged from the interviews with Lavandula, Giunko, Nuove Tecnologie di Marinella Caria & C). This is mainly due to the high level of innovation processes that characterizes the circular companies. The importance of training, education, and skills, built over time, emerges in several studies (Forster et al., 2013; Bergner, 2020); other researchers have asserted that the capacity to integrate different competencies is a key element of circular entrepreneurship (Baldassarre et al., 2019) and multidisciplinary is a driver of circular innovation (Schaltegger & Wagner, 2011), adding that the multidisciplinary of knowledge and skills is considered fundamental to the passage from individual knowledge to the assimilation, transformation, and exploitation of knowledge at the organizational level (Schaltegger & Wagner, 2011). This aspect should be deepened in the future due to the important managerial implications deriving from it.

With reference to the empirical analysis, it emerges the relevance of collaborative skills. In fact, the inter-organizational collaboration capability is considered essential to the circular entrepreneurship (as suggested by Aquafil, Ecozema, Lavandula, Reware, Terra di tutti). Such a result is also in line with several studies. This capability supports the transition to the circular economy (Den Hollander, 2018; Greco et al., 2020; Branca et al., 2020; Eisenreich et al., 2021) as the integration of the ecosystem perspective into circular business models (Konietzko et al., 2020). Besides, it emerges that not only inter-organizational collaborations, but also social ties are essential for circular companies. Indeed, the interviewers witness the importance of enhancing ties with the local community and involving different stakeholders in supporting co-production practices, knowledge sharing, and realizing new circular products and services (Terra di Tutti,

Aquafil, Lavandula), confirming the outcomes of several studies (Potting et al., 2017; Zucchella & Urban, 2019; Hettiarachchi et al., 2022; Eisenreich et al., 2021).

6. Implications and conclusion

From this analysis, some institutional implications can be deduced regarding the actions and the policies that can be implemented to support the passion, personal experience, and innovation attitude of the circular entrepreneur. Indeed, policymakers can effectively support environmental education to raise awareness among citizens and communities about a major responsibility and to pay attention to environmental topics and good governance of territories. Also, from a larger perspective, policymakers can support the development of sustainable education and training in the common values of equity and respect for others, future generations, diversity, the environment, and Earth's resources. It can be deduced that education can encourage citizens and future entrepreneurs to focus on and develop a passion for environmental and social issues by forging them to the ethical values of sustainable development (Zucchella & Urban, 2019; Rok & Kulik, 2021; Monciardini et al., 2024). In this context, different actions are possible, from workshops, forums and public events to specific study programs in schools.

Second, policies could support the training of human capital in scientific and technological skills, i.e., many entrepreneurs have an educational background in STEM disciplines (science, technology, engineering, and mathematics) (Bergner, 2020; Zhu et al., 2020). Investing in education appears to be an essential condition for supporting the development of industrial processes based on innovation, such as circular economy models. At the same time, education represents an important premise for helping to improve the quality of life of people, reducing the environmental impact of industrial activities, and intervening with regard to inclusion and social cohesion (Welter et al., 2017; Zucchella & Urban, 2019; Sawe et al., 2021).

Finally, to support creativity and innovation propensity, the role of policies in nurturing the encounter between actors, especially within the same territory, emerges as highly relevant, above all in supporting the exchange between complementary knowledge and stimulating the development of specific skills.

The transition toward a circular economy requires entrepreneurs who implement these practices. Therefore, there is a need for studies that deepen this topic. From a theoretical perspective, the analysis highlights the opportunity to delve deeper into the weight of gender and age in the profile of the circular entrepreneur, since the scientific debate underlines the relevance of these profile factors (Zhang et al., 2009; Sharma & Sahni, 2020) but

the analysis does not reveal differences in the personalities of the founders of the circular companies related to gender and age issues, as well as for young entrepreneurs.

In addition, even if the debate and the empirical results underline the relevance of entrepreneur's skills and competences when dealing with implementing circular economy initiatives, the studies providing suggestions and recommendations to managers and professionals are still scarce and need to be deepened.

While further investigations are recommended for these aspects, our research aims at contributing to reduce this literature gap. In particular, the study had two main purposes: (1) to explore the main traits of the personality of the circular entrepreneur and (2) his/her ability to manage and support circular practices.

Based on the data collected, it can be deduced that the personality of the entrepreneur is an important element characterized by a specific trait defined herein as a passion for environmental issues and an interest in social issues. Another element of his/her personality is a focus on growth, change, and innovation. The propensity toward creativity and innovation appears marked in these entrepreneurs, though more insights are needed, including in relation to gender differences, which this analysis did not find, unlike earlier literature.

Integration of different backgrounds and skills are common elements in the cases analyzed, and the capacity to integrate different competencies inside the company is a key element of circular entrepreneurship, as the integration of the ecosystem perspective into circular business models. Hence, the study contributes to the debate by providing policy implications for circular entrepreneurship and suggesting future research trajectories aiming to enlarge the debate on the circular entrepreneur and his/her role in the development of circular economy initiatives and practices.

The results are not supported by any representative and comparable indices, which might be considered a serious limitation of this study. Also, the study covers only circular entrepreneurship based in Italy. Therefore, an in-depth analysis of proper measures and a comparable analysis of different regions might be considered in further research.

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TENSIONS IN SMES' NETWORKS FOR SUSTAINABLE ENTREPRENEURSHIP

Federico Ceschel

Università degli Studi Roma Tre
federico.ceschel@uniroma3.it

Martina Lucarno

Università Cattolica del Sacro Cuore-Milano
martina.lucarno@unicatt.it

Michela Marchiori

Università degli Studi Roma Tre
michela.marchiori@uniroma3.it

Annalisa Tunisini

Università Cattolica del Sacro Cuore-Milano
annalisa.tunisini@unicatt.it

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Abstract

Purpose. The study analyses how organisational actors overcome internal network problems and implement solutions in SMEs' network contracts focused on sustainability objectives to leverage networking value.

Design/methodology/approach. The study uses a qualitative approach to investigate possible tensions emerging in a business network with sustainability goals. Seven case studies of network contracts were analysed using the interpretative model by Tunisini and Marchiori (2020), which consists of five variables: Individual, Structural, Legitimacy, Interactions, and Governance.

Findings. The research has effectively recognised different challenges and shared methods entrepreneurs often face to overcome these critical issues. The knowledge acquired from this study can be pivotal in creating proactive or responsive approaches to tackle business network difficulties.

Legitimacy issues within variables carry significant weight, especially in sustainable networks, as they are difficult to address directly. Although external factors may be helpful during start-up, they can become uncontrollable obstacles for entrepreneurs in developing the network.

Practical and Social Implications. The paper presents research-based recommendations for SMEs to overcome tensions and achieve external legitimacy through supplier support and customer recognition of added value. It also proposes effective management practices and regulatory guidance for policymakers.

Originality of the study. While the benefits of business networking and interaction have been primarily emphasised, research on the problems and tensions in interaction and networking still needs improvement. This paper has tried to develop a deeper analysis of the concrete problems that can emerge in business networks, with particular attention paid to those SMEs networks that aim to reach sustainability goals.

1. Introduction

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 2021, the SME sector accounted for approximately 99.8% of all European enterprises and employed 66.6% of all workers (European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs., 2022).

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). What is known is that crucial business survival factors include, for example, business experience (DeChiara, 2012), the territory that provides access to new competencies, and the possibility of establishing strategic networks (Liu & Yang, 2019).

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 production and consumption processes (Roy & Singh, 2017).

This is reflected in research where increasing contributions have been devoted to implementing sustainability measures for larger enterprises (Casalino et al., 2014). However, SMEs cannot ignore their stakeholders' demand in this area (Handoko et al., 2014), though they face barriers in implementing sustainability systems (Álvarez Jaramillo et al., 2019). To this end, studies have recently highlighted sustainability challenges for SMEs (Johnson & Schaltegger, 2016).

As it is often not feasible for a single organisation or sector to have the knowledge or resources to "go it alone" (Govindan et al., 2019), identifying successful forms of sustainable collaboration is instrumental in achieving a higher degree of knowledge sharing and for building an overall competitive advantage throughout the product life cycle (Cao & Zhang, 2011; Touboullic & 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., 2020). A lack of resources, competencies or information can be overcome thanks to the skills and experiences of other actors (Snehota, 2003), for example, competitors or suppliers (Meqdadi et al., 2012). Developing and being part of business networks can be an instrument to share knowledge, costs, and risks thanks to synergies among the business network's actors (Tunisini, 2017a). European funds frequently support establishing these partnerships, providing resources to enhance SMEs initiatives, particularly sustainability initiatives, and sustaining them during the initial phase (Kulaga & Cardinali, 2022).

The literature has well-emphasised the value stemming from collaboration through interaction; however, less attention has been devoted to the constraints related to business-to-business relationships and business interaction in network contexts. Even if we have recently observed an increasing amount of literature on the “dark side” of business interaction (Abosag et al., 2016; Grandinetti, 2017; Tunisini & Marchiori, 2020), a few studies have been conducted to gain a deeper understanding of the specific problems and tensions related to business interaction. Further, few studies have analysed the drawbacks of business networks and interactions aimed at achieving sustainability goals (Ryan et al., 2012; Tura et al., 2019; Giglio et al., 2020).

(Abosag et al., 2016; Grandinetti, 2017; Tunisini & Marchiori, 2020)

For these reasons, our research investigates the formalised format of Italian business networks, called “Network Contracts” (NCs), in order to answer the following research questions: (RQ1) which are the tensions that emerge in a business network that works on 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 contributes to the literature on the dark sides of business networks, specifically those with sustainability goals. The research aims to ascertain the applicability of the theoretical framework regarding tensions within networks to strategic alliances operating in sustainability issues and to determine whether the encountered challenges are distinct. We provide research-based recommendations and advice to aid small and medium-sized enterprises in developing their business networks while proposing effective management practices and regulatory guidance to policymakers.

2. Literature review

2.1. Network and sustainability

As it is known, a vast body of literature has been produced on strategic networks and the importance of inter-organizational cooperation for firm competitiveness (Mesquita & Lazzarini, 2008; Rosenfeld, 1996; Trąpczyński et al., 2018). Indeed, strategic networks are typically considered an effective way to overcome the constraints often associated with innovation (Hilmersson & Hilmersson, 2021) or sustainability (Halila, 2007; Pesonen, 2001) thanks to the possibility of sharing resources and implementing joint activities.

Sustainable development is often defined as “the ability [...] to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p. 15). To make this definition more operational in the private sector, it has been customary to use the Triple Bottom Line (TBL) approach (Elkington, 2004), which stipulates that firms should not only focus on the economic value but simultaneously consider the social and environmental value they either add or destroy.

During the last few years, the literature has deepened the bidirectional relationship between sustainability and networks: in fact, the first cannot only be achieved through strategic alliance (Melander, 2017) but, in turn, it affects interaction dynamics within past or new relationships (Melander & Arvidsson, 2021), asking for development of different business model along all the production and supply chain (Aarikka-Stenroos et al., 2022) and involving business and non-business actors including new ones such as start-ups and entrepreneurs (Sabatini et al., 2021). Within the business actors, a significant role is played by the SMEs: they have become increasingly acknowledged as crucial actors in the development of the world economy in terms of employment and income creation, industrialisation, innovation (OECD, 2017) and sustainable growth (Ashrafi et al., 2018; Simionescu, 2015).

Based on the literature, SMEs tend to react to sustainability issues, such as adopting and defining environmental practices. They can benefit from a lean organisational structure (Bos-Brouwers, 2010), which can sometimes limit their actions (Aragón-Correa et al., 2008). However, SMEs have the potential to be more proactive rather than reactive (Klewitz & Hansen, 2014) but often lack a deep understanding of the issue, the necessary resources and capabilities, scale, and the attractiveness to receive financing.

In general, the interaction with external actors can have a fundamental role for SMEs (Klewitz, 2015): joining a business network becomes the most viable solution for SMEs to upgrade their capacity (Tajeddin & Carney, 2019; Woo et al., 2014) and overcome the limits due to their small size (Antoldi et al., 2013; Inkpen & Tsang, 2005; Lavie, 2006). In particular, networks have been described as a helpful instrument to comprehend and address sustainability challenges (Harrison et al., 2023) and to support SMEs in their path (Hilmersson & Hilmersson, 2021).

2.2 Dark sides in business interactions

Close relationships are only sometimes synonymous with good connections. This is evidenced by the fact that many of these close relationships — whether they are joint ventures or loose alliances — fail (Anderson & Jap, 2005). The notion of the “dark side” first emerged in business-to-busi-

ness literature in the mid to late 1990s and has been further developed in the new century (Barnes, 2005; Grandinetti, 2017; Grayson & Ambler, 1999; Håkansson & Snehota, 1995), suggesting '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. Some of them are linked to the features of the actors, while others are to the net and its governance: lack of commitment or trust or willingness to share information (Govindan et al., 2021), power relationship or opportunistic behaviours (Chowdhury et al., 2016), weak ties (Semrau & Werner, 2014), the network size (Burt, 2019) and inefficient coordination process (Mitrega et al., 2012) are just some examples. Another critical role is played by proximity, not only geographical but also organisational, cognitive, social, institutional (Xavier Molina-Morales et al., 2015), and relational (Nicholson et al., 2017): the lack of these elements can have adverse effects on the partnership, reducing, for example, the effectiveness or making more complicated the communication or the learning process between the members.

Often, the crisis fosters all these variables, increasing the vulnerability of the alliance, mainly when trust, a similar mindset, and a common goal are weak, and they are beaten by personal interest and opportunistic behaviour. Other times, networks become the resilience instrument (Herbane, 2019) as solutions for small, medium, and big firms are different (Polyviou et al., 2019) because SMEs are more liable to unstable demand and financial problems linked to weaker cash flow, payment delays, and fewer equity reserves (Kossyva et al., 2014).

Tunisini and Marchiori (2020) conducted a thorough review of network failure literature. They were able to organise and categorise the factors that can produce tensions and problems in business networks in order to reach their collective goals. They classified these factors as individual, structural, legitimacy, interaction, and governance issues. Specifically, according to the authors, problems in network interactions can be reconducted to:

- Individual variables refer to the actors' tendency to prioritise individual goals, the fear of losing personal control, making decisions based solely on personal gain, struggle to anticipate the outcomes of collaborative efforts, and difficulty in predicting financial outcomes (Håkansson & Snehota, 1998).
- Structural characteristics of the network concern the variations and the distance in the features of partners, including technological, cultural, dimensional, managerial and organisational characteristics (Johnsen & Lacoste, 2016).
- Legitimacy variables, following institutional theorists, are defined as

“the generalised perception that the actions of a network are desirable, proper, or within some system of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574) and that “refers to the status and credibility of the network and network activities as perceived both by members firms and outside constituents like funders and customers” (Human & Provan, 2000, p. 328). Referring to external legitimacy, the authors observe that problems in networks arise when external actors such as funders, suppliers or public institutions are not providing the necessary support as they do not recognise the legitimacy of the network (Provan et al., 2014).

- Interaction variables, one of the main challenges faced in establishing a network collaboration is the reluctance of the partners to share their knowledge (Oliveira & Lumineau, 2019). This is compounded by disagreements among the companies involved and some network partners' lack of active participation. Additionally, there may be difficulties in dissolving existing ties and changing these ties within the network. Another hurdle is the absence of any previous business exchange before the formation of the network collaboration, making it challenging to manage the partners' relationships effectively.
- Governance variables, such as network governance, “entails the structure and processes that enable organisations to direct, coordinate and allocate resources for the network and to account for its activities” (Vangen et al., 2015, p. 1244). A recent study (Reeves & Pidun, 2022) reported that “wrong governance choices” accounted for 34% of network failures. According to the prevailing literature, the main difficulties in network governance refer to the lack of coordinating skills and task-specific competencies necessary to reach network goals (Provan & Kenis, 2007), the lack of shared mechanisms to inhibit opportunism and sustain trust development among members (Hagen & Choe, 1998), the absence of a network manager or a network orchestrator (Moretti & Zirpoli, 2016).

The past literature has identified several resilience features necessary to overcome or to face the crisis, for example, the rapidness of response, agility, flexibility, redundancy (Ali et al., 2021), risk or HR management (such as employee training for crisis management) (Ortiz-de-Mandojana & Bansal, 2016) and collaboration. Some characteristics can be time-consuming and require expensive costs; others can be rapidly realised without high investment. In a network, some of the partners can ensure financial solidity or can help to design collaborative and long-term strategies (Shashi et al., 2020): the different knowledge and perspectives provide advice and support in the decision-making, mainly during a situation of adversity (James, 2000; Shaw, 2006).

However, crises can sometimes push the company to consider and de-

velop new business or strengthen the actual one (Kossyva et al., 2014): co-operation is crucial when uncertainty and risks are higher.

2.2 *The Network Contracts*

Networks can take on various forms. Formal networks typically have a defined structure that outlines goals, actors, and the commitments required from partners. Informal networks, on the other hand, lack this level of specification.

In Italy, the network concept 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 (Arrigo & Tassani, 2016). The regulations recognise two types of legal status: one is a "light" form of contractual networks ("reti contratto" according to the Italian regulation), and the other is a "heavy" form of contractual networks (named "reti soggetto") (Pastore et al., 2020; Tassani, 2011).

Heavy contractual networks have legal subjectivity separate from their members and are legally required to form a joint governance body and patrimonial fund. On the other hand, light contractual networks have fewer obligations. The government recognises them as a means of strategic alliance for enhancing individual and collective innovative capacity and competitiveness in the market while safeguarding partners' autonomy.

NCs offer opportunities for designing new projects and sharing information, resources, costs, and risks, which can reduce uncertainty and increase firms' effectiveness. This tool is highly adaptable, as it allows for goals to be set not only related to typical purchasing, production, and sales activities (Aureli et al., 2011) but also for more complex objectives such as expanding internationally (Baldo & Aureli, 2012), innovating (Belliggiano, 2019), or developing sustainable projects (Rossignoli & Lionzo, 2018). This means that NCs can be of great strategic value to Italian SMEs, helping them overcome size limitations, ensuring survival and growth, improving their performance, and even enabling entry into international markets.

Assigning a network manager and defining performance indicators in the contract is recommended to ensure that initiatives are efficient. The governance can be given to a group or a single person who will facilitate information sharing, coordinate activities and actors, reduce conflicts within the network, reinforce the vision, and find solutions to problems arising during the relationship. It is vital to find a balance between all parties involved and avoid opportunistic behaviours (Aureli et al., 2011; Grandinetti, 2017; Tunisini, 2017a) to increase trust and strengthen ties, ultimately promoting cooperation within the alliance.

Over the past decade, there has been a rise in NCs between firms from

various industries. Although extensive research has been conducted on the benefits of such contracts, there is still a lack of structured research on their weaknesses.

3. Methodological approach

We adopted a qualitative research approach to explore potential tensions that may emerge in a business network that works on sustainability objectives, and we employed an embedded multiple-case design (Scholz & Tietje, 2002; Yin, 2014). Because the current research on the dark side of sustainable business networks is at a relatively early stage, a qualitative research approach is suitable to generate a deep and detailed understanding of this complex and far-reaching phenomenon in a real-life setting (Corbin & Strauss, 2008).

We analysed seven case studies of NCs using the interpretative model developed by Tunisini and Marchiori (2020).

In light of the intrinsic limitations in conducting long and demanding in-depth interviews with NCs companies, we encountered difficulties composing a sufficiently large sample to address our research inquiries. As a viable alternative, we leveraged the data obtained from a prior survey conducted by Tunisini and Marchiori in 2020¹, coupled with subsequent desktop analysis², to fashion a representative sample that could adequately mirror the distribution of typical traits among the reference population. We used a stratified technique on the analysis variables described below to ensure representative sampling. We then selected a simple random sample within each stratum. Since some of the collected information was from 2018 and there is no official source to determine which NCs are still active and functioning, we searched their official website for indicators of their status:

- *Analysis of the network website.* NCs who keep their websites updated are considered active.
- *Date of the last event organised by the network.* The lack of communication regarding NC's participation in public events was seen as a sign of poor network functionality.
- *The last news on the website.* The lack of updates on NC's development, partnerships, and market expansion suggests network issues.

¹For a more detailed sample description, consult Tunisini and Marchiori (2020). It is important to mention that the results of the empirical studies (which had other research objectives) were used only to identify business networks that have declared sustainability objectives.

²The sample was then enriched with an update of the investigation to include new NCs identified through a desktop survey of the Chamber of Commerce's database up to 2021.

Table 1 presents the final sample consisting of seven networks³, each associated with a main respondent from a different firm. All the respondents are network managers or individuals with a significant role in their respective networks. To protect the confidentiality, the names have been anonymised.

The authors collected data using online interviews (MS Teams) between April 2021 and April 2023. Each interview lasted between 60 and 90 minutes and was conducted by at least two authors. The number of interviews (7) 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).

The semi-structured interviews consisted of six parts. The first part gathered general and contextual information, while the following five sections addressed the five categories of factors causing tensions in business networks. The obtained results were used to categorise the business networks based on the following variables:

- *Year of establishment and the life cycle stages* (Tunisini, 2015, 2017b). The classification includes four phases: (1) *preliminary phase*, companies acquire the awareness of the value of operating on the network and the effective role of the network contract; (2) *development phase*, where the network contract is signed, and there is the definition of micro-projects, the determination to achieve shared objectives and to implement the network program; (3) *implementation phase*, characterised by the development of the projects, the realisation of the program, and the definition of new objectives; (4) *evolutionary phase*, this phase can lead to the consolidation of the business network, its redefinition, or its conclusion.
- *Actual number* (and the original number) of firms.
- *Status of the network* (Tunisini & Marchiori, 2020), distinguishing among (1) active networks (with ongoing activities), (2) dormant networks (which have completed the start-up process but have encountered problems in the development phase), and (3) blocked networks (which have identified problems).
- *Type of network*, distinguishing between (1) light or (2) heavy form of contractual networks.
- *Characteristics of the network*, distinguishing among (1) vertical (member firms play different roles in the production chain) or (2) horizon-

³The sample group was initially comprised of 20 business networks selected based on their active status and declaration of sustainability objectives. However, 13 of these were excluded from the interviews due to reasons such as being unreachable or explicitly stating their disinterest or lack of time to participate in the study.

tal (member firms carry out the same activity or different but complementary activities).

- *Presence of focal firm(s).*
- *Presence of a network manager.*
- *Coordination methods, distinguishing among (1) the presence of a leading company; (2) a joint management team with representatives of all companies involved; (3) direct collaboration between administrators of individual companies; (4) the appointment of a network manager.*
- *Contribution of firms to the network's activities, distinguishing among (1) a firm contributes more than all the others; (2) some firms contribute more than others; (3) equidistributed.*
- *Geographic location of the network.*
- *Sector Product / Services.*
- *Type of sustainability objectives.*
- *Integration of sustainability objectives in the general objectives of the network.*

The analysis, based on case studies, helped us assess the relevance and significance of the analytical framework and provided new insights from real-life examples. Of course, this approach produces more robust findings as the number of cases increases (Rowley, 2002), and we are also aware that the choice of case studies can be problematic (Eisenhardt & Graebner, 2007). In this sense, it is crucial to remember that practical and logistical considerations also play a role in case selection (Seawright & Gerring, 2008).

For this reason, the selection of the cases was based on the theoretical framing approach (Yin, 2014). In setting up the multiple case studies, 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.

Tab. 1 - Sample of the networks analysed

Business Network	Year of establishment (and life cycle stage)	Actual number of firms (Original number of firms)	Status of the network	Type of network	Characteristics of the network	Presence of focal firm(s)	Presence of network manager	Coordination methods	Contribution of firms to the network's activities	Geographic location of the network	Sector	Product / Services	Type of sustainability objectives	Integration of sustainability objectives in the general objectives of the network	Informant position
A	2011 (Evolution phase)	4 (3)	Active	Light network	Vertical	Yes	No	Presence of a leading company	There are firms that contribute more than others	Lombardy (Global activities)	Mechanical and electrical engineering	Construction of optical systems	Development of observation systems in the green field (pollution analysis systems, agricultural production monitoring systems, etc.)	Partial	Network leader
B	2011 (Implementation phase)	8 + 3 "Ethical" partners + 80 Affiliated professionals (9)	Active	Light network	Horizontal	No	Yes	Common management team with representatives of all companies involved	There are firms that contribute more than others	Veneto (Activities also in neighboring regions)	Construction	Sustainable building constructions	Accelerate energy-efficient renovations for buildings to reduce greenhouse gas emissions	Full integration	Network leader
C	2020 (Development phase)	10 (9)	Active	Light network	Horizontal	Yes	No	Common management team with representatives of all companies involved	Equidistributed	Piedmont (Activities in the same region)	Construction	Sustainable building constructions	Accelerate energy-efficient renovations for buildings to reduce greenhouse gas emissions	Full integration	Network leader
D	2017 (Evolution phase)	11 (10)	Dormant	Heavy network	Horizontal	No	Yes	Common management team with representatives of all companies involved	There are firms that contribute more than others	Veneto (Activities in the same region)	Tourism	Services for cycle tourists	Use of the territory through sustainable means of transport	Partial	Network leader
E	2012 (Evolution phase)	3 (4)	Active	Light network	Vertical	Yes	No	Presence of a leading company	There are firms that contribute more than others	Lombardy (Global activities)	Research centre	Industrial and academic research on robotic systems and parallel kinematic simulation	Development of projects in the field of robotics, machine controllers equipped with AI and modeling and simulation of mechanical systems for the production of renewable energy	Partial	Network manager
F	2012 (Evolution phase)	5 (6)	Active	Light network	Horizontal	Yes	No	Presence of a leading company	Equidistributed	Lombardy (Activities in Italy)	Furnitures industry	Design and supply of wood furniture	Use of eco-sustainable materials and renewable energy. Development of sustainable packaging	Partial	Network leader
G	2020 (Development phase)	14 (5)	Active	Light network	Horizontal	Yes	Yes	Common management team with representatives of all companies involved	Equidistributed	Lombardy (Activities in the same region)	Construction	Sustainable building constructions	Lean construction	Full integration	Network manager

We have followed up with respondents via email to gather any missing details. Our study's external validity has been improved by utilising a standard and replicable interview protocol and conducting a cross-case analysis, as per Yin's (2014) recommendation.

4. Results

This paragraph presents the key findings obtained from the analysis of the in-depth interviews. It is divided into three parts as follows:

- In the first part, we precisely describe the analysed sample.
- In the second part, we report analysing the main tensions that negatively affect business networks. We focused on highlighting the critical factors that impact effective and efficient networking for sustainability. To conduct this analysis, we categorise these variables by referring to the classifications developed by Tunisini and Marchiori (2020).
- In the final part, we highlight measures and actions taken by the network actors to tackle these concerns.

4.1 *Descriptive analysis*

Table 1 shows that the selected NCs were signed within the last decade and represent various stages in the life cycle of a business contract. All NCs are currently active (this is an inclusion criterion in our study) except for network B, which is experiencing temporary development issues. However, they are actively reformulating their objectives and working methods and, therefore, meet the inclusion criteria in our study.

Based on the analysis conducted, it is evident that companies have a clear preference for adopting light networks. Only one heavy contract (network D) is chosen from all the networks. This data is significant since network D has suspended its activities to look for a new configuration and operating mode. It is noticeable that horizontal networks are more prevalent than vertical networks. In horizontal networks, member firms perform the same activity or different but complementary activities, while in vertical networks, member firms play different roles in the production chain.

Another characteristic feature of the NCs analysed, also predictable, is the presence of a focal firm, which often drove the birth of the business network and subsequently continued to guide and support it. Coupled with this is the limited use of an officially designated network manager (apart from heavy network B, which is obliged to adopt it), which only appears in 2 of the 6 light networks.

On the contrary, it is noteworthy how shared network coordination is increasingly establishing itself in almost all horizontal networks. This phenomenon indicates a growing tendency towards project and network governance collaboration. The emergence of such forms of coordination highlights the importance of sharing knowledge, resources, and expertise amongst network participants. This trend can be attributed to a desire to achieve common goals and objectives and enhance network operations' overall effectiveness. As such, it is imperative that organisations recognise the significance of shared network coordination and actively incorporate it into their network governance strategies.

The diversity of sectors in which the various National Committees (NCs) operate highlights that only in the construction sector it is plausible to envisage a complete integration of sustainability objectives within the framework of the network's goals. Although this objective has yet to be fully realised, it is nevertheless feasible. Notably, the NCs operate in different sectors, which indicates the challenges of integrating sustainability objectives in the overall framework of the network's objectives. However, the construction sector is an exception to this observation, as it presents a unique opportunity to integrate sustainability objectives comprehensively and effectively.

In conclusion, the NCs' diverse sectors of operation underscore the need for a tailored approach to integrating sustainability objectives. The construction sector stands out as a promising platform for achieving this objective despite the challenges that lie ahead.

4.2 Tensions emerged within the network

Individual variables

Individual variables refer to challenges that arise from prioritising individual goals, struggling to predict collaborative outcomes, and other factors.

During the interviews, losing control over customer management and production processes was identified as a significant concern. Autonomy is highly valued, and its absence is a major issue.

When we decided to create a single network interface for all customers, some had difficulty giving up direct control over their customers and production processes. However, we believed it was necessary to benefit the network and the services provided. (Network B)

Sometimes, people have shown selfish attitudes that prevent the development of a collaborative work approach in the network. This is usually caused by their focus on personal gains in the short term rather than considering the benefits that the network can provide in the medium and long term.

A problem arose due to an excessive desire to take on too many tasks

without seeking help from colleagues in the network who could offer assistance. This led to specific individuals hoarding work and gaining a personal advantage, which caused issues. (Network C)

Structural characteristics of the network

The structural characteristics of a network can be classified as variations in partner features, including technological, dimensional, and organisational aspects.

The interviews show that the distance between network partners is an important issue. This distance can be referred to managerial, cultural or technological issues. We can refer to how companies manage their production processes, technologies, or the physical distance between them. Different companies may have different approaches to deal with these issues.

The network E, which specialises in robotics and Artificial Intelligence research, encountered a crisis because of differences in research and development approaches and resource allocation among the original firms in the network. As a result, the network underwent a complete reorganisation, leading to a partnership between three industrial companies and a university in their area of expertise.

From the beginning, the development approach of the consortium's companies has been problematic. One company, in particular, has always allocated profits towards research activities, which has created a cultural difference and has become a more significant obstacle over time. (Network E)

The makeup of a network can also be important. When actors are similar, they can benefit from a shared technical language and deep collaboration on specific issues. However, if the actors are too alike, it can hinder innovation and reduce partners' motivation.

Surprisingly, even if the companies in a network are vastly different from each other, they can still experience similar issues or problems. Less structured companies may not have the necessary resources to effectively contribute to the project, leading to inefficiency, timing conflicts, and potential tension between members.

In order to maintain a balance between leadership and followership, patience is crucial. While leaders may push for faster progress, they need to understand and respect the pace of the group as a whole. (Network G)

Legitimacy variables

Legitimacy variables refer to the recognition of the network as an entity with its own rules (Provan & Kenis, 2007) and to the status and credibility of the network and network activities as perceived both by member firms (internal legitimacy) and outside constituents like funders and customers

(Human & Provan, 2000). External legitimacy variables thus encompass external groups such as funders, suppliers, or public institutions that may or may not provide essential support and commitment, as well as resources, that will ultimately determine the overall viability or failure of the network (Human & Provan, 2000; Provan et al., 2014).

Our research confirms the importance of external legitimacy variables in determining tensions or difficulties within the network.

Public institutions play a crucial role in driving the establishment of business networks. They provide incentives and support, particularly in the initial phase of setting up the network, by creating a favourable regulatory environment and economic subsidies / tax incentives.

The public tender for funding played a fundamental role in activating the network. What happened after that? (Network D)

After analysing several case studies, it was found that most of them reported being entirely ignored by the institutions that were supposed to be involved in various ways. Additionally, it was discovered that there are no established network support programs at different stages of the network lifecycle.

In order to keep up with the evolving network, we require a reference point and support that can provide clear solutions. We are currently facing a challenge not related to finances but rather a lack of expertise and feeling isolated. (Network C)

Some interviewees feel that merit and positive networking experiences are not valued enough. This is because economic incentives are distributed to everyone, leading to a flattening towards mediocrity. Additionally, the constantly changing regulatory context and incentives in industrial sectors make it difficult for networks and companies to plan for their future.

The uncertainty of the regulatory and legislative framework creates insecurity, ultimately hindering our network's evolution. (Network C)

Entrepreneurs and network managers often struggle with the bureaucratic approach of public institutions, which can lead to confusing and complicated problems. This is particularly challenging for individuals who have gained experience in foreign countries.

We have not heard back from the Ministry regarding our executive PhD project. However, we have confirmed that there are promising opportunities nearby in Switzerland to support innovative companies like ours. (Network E)

Interaction variables

The term interaction variables refers to partners' reluctance to share knowledge, compounded by disagreements, lack of participation, and difficulty changing existing ties within the network.

During the interviews, the interviewees identified some significant ob-

stacles, such as the poor sharing of sensitive information with network partners and the limited investment of time and effort in joint activities. It was clarified that the goal of the network should not be simply to acquire another customer but rather to construct added value for the customer through the joint activity of all companies involved in the network.

If you do not share new customers or distinctive know-how with your partners within 2-3 years, the partnership may not work. This depends on your willingness and ability to develop the network's business. (Network B)

Another critical factor to consider is the network's composition. This is often not determined by prior knowledge or established trust but rather by the regulatory context in which it is formed. For instance, a public tender might offer economic incentives to create a network.

The network was artificially created. Individuals who were strangers to one another came together at a table with the sole intention of benefiting from public funds. (Network D)

The commitment of certain members is crucial for maintaining the network's activities. Their active attitude motivates other members who may be less involved. If this commitment wavers for any reason, the entire network may be hindered.

The limited involvement of some players in the network caused conflict with "Mr X", who had a more aggressive approach, resulting in tension and misunderstandings that could potentially harm joint activities. (Network E)

Governance variables

The term governance variables refers to the challenges a network faces due to the difficulty in coordinating its activities and the absence of a network manager. The level of cooperation and coordination within a network to achieve its goals depends on the trust that exists between member companies. The density of trust relations and the level of commitment also play a significant role in achieving the network's objectives (Human & Provan, 2000). Small businesses often struggle to trust and cooperate with each other when they have not previously worked together. This can lead to a need for formal governance mechanisms, such as the appointment of a network manager, to facilitate collaboration (Human & Provan, 2000). Several authors have identified the network orchestrator as a critical governance role. The orchestrator inhibits opportunism, diffuses information, moderates processes, and promotes collaboration between member firms (Moretti & Zirpoli, 2016).

Nevertheless, in our research, a significant issue affecting network op-

erations is the network manager's lack of managerial skills or incompetence. Public institutions play a crucial role in establishing networks, but sometimes, they impose institutional subjects to oversee the control and management of the network. This negatively affects the partners who have to deal with poor commitment, limited knowledge of the industry, and inadequate managerial skills.

The promoters of the public tender imposed the network manager and, therefore, had an institutional nature, and what we complain about lies in a combination of disinterest and poor managerial skills. As a result, operations handling has been delegated to an external party who lacks real-world experience in entrepreneurship. (Network D)

The interviews reveal a surprising lack of attention and commitment from companies in identifying the network manager correctly. It seems like there is unawareness of the vital role played by this subject.

On-site work coordination typically occurred through informal discussions among suppliers and the client. The architect appointed as the network manager, responsible for serving as the sole point of contact for the client, was frequently excluded or lacked the necessary credibility with network partners and clients. (Network B)

A network manager is essential, especially for expanding networks or those with many members. This individual provides support by coordinating partners, maintaining the pace of activities, offering a vision, and resolving conflicts between members. Without a manager, a network is more vulnerable to risks.

In a network, it is essential to have a full-time network manager who serves as our link. To be effective, this manager should possess various skills, including psychological and administrative abilities. They must be a project manager but also possess strong communication and listening skills. (Network G)

Sometimes, the responsibility of managing the network is given to an individual within the company who has a significant influence or exhibits strong leadership skills. This decision is not always formal and is based on the importance of the company they represent within the network. It is clear that in the foreseeable future, there will be a tendency towards a centralised decision-making process in network governance, which may limit the participation of other partners in the decision-making process.

The whole network relies heavily on Mr X, who is like a "deus ex machina."

Initially, the other partners were also involved in making strategic decisions, but within 2-3 years, we realised that Mr X was the only one who could consistently deliver excellent results. This became an inevitable process. (Network E)

4.3 Actions taken to address and overcome the tensions

In this paragraph, we highlighted the main actions taken within the network to address the critical issues, tensions and difficulties described in the previous point.

Table 2 provides a comprehensive overview of the findings we obtained from our multi-case study analysis. In this table, we have underlined the typical tensions that emerged in the interviews. We summarised the different approaches used by the network and traced them back to the different categories of tensions that these actions aim to address.

One effective way to facilitate better relationship management within a professional network is by sharing knowledge and experiences with fellow industry professionals, particularly those who operate in the same geographic location. This approach can help foster stronger connections and create a sense of community among colleagues, ultimately leading to more successful outcomes for all parties involved.

We have been acquainted for 30 years, and our companies have been reciprocal suppliers with long-term collaborations. This has fostered a strong sense of trust between us. (Network A)

We have carefully selected and accepted only reputable and established local companies into our network to prevent potential unethical behaviour. These companies have undergone thorough scrutiny and are considered the best in their field. Additionally, a system of ongoing social monitoring is in place to ensure accountability. (Network C)

All the companies within the network are integral to the local industrial community. (Network E)

Some companies are now taking the fiduciary element seriously, with one particular network investing in this issue and implementing specific activities to raise awareness.

We have arranged team-building activities funded by the public in our network. Through sharing challenging situations and finding solutions together, we have found that these activities bring us closer together. By working as a team, we

are able to overcome selfishness and operate cohesively as individual companies within a larger context. (Network B)

This framework emphasises the importance of having companies in the network that are similar in size and production capacity. This facilitates sharing a consistent business idea among the partners, allowing them to benefit from each other's experience and work towards identical goals for future growth. Although not essential, homogeneity is undoubtedly beneficial for the network's success.

We came up with a business idea that met our expectations due to the similarity in size and turnover of the companies in our network. (Network C)

Collaborating towards a shared objective is recognised by all networks as a critical ingredient for success. This collaboration can even extend to developing a uniform product/service catalogue for the market, achieved through adopting standardised technical rules agreed upon by all participating companies.

Sharing new goals was the foundation for reviving a network that had faced years of challenges, leading to significant inactivity. (Network D)

Our products have specific rules in place that reflect our shared goals and approaches, which extend beyond our network activities. Sustainability is a critical issue that we prioritise. (Network B)

Network companies must rely on their unique skills that complement each other to achieve tangible benefits from collaborative efforts. This requires common goals and activities.

The network's strength lies in the complementarity of skills, which prevents overlapping and potential tensions. This has helped us overcome initial reluctance from some partners. (Network A)

In terms of governance, the previous paragraph discussed the negative consequences that can result from the absence or ineffectiveness of a network manager. It is clear that a skilled professional with a strong personality and leadership abilities is essential for successfully managing a business network.

Having clear and transparent roles and responsibilities for everyone involved in the system makes it easier for companies to participate and for the network to function well. Including companies in the strategic decision-making process is essential for the network's success and longevity.

ity. Providing established communication methods, rules, and a shared decision-making process is also essential to prevent low involvement or abandonment by companies.

Within our network, the President and network manager hold essential roles. These individuals possess notable competence and recognised personalities.
(Network B)

By establishing a new governance structure with well-defined roles and responsibilities acknowledged by all network partners, joint activities have been successfully reactivated. (Network D).

We hold committee meetings every six weeks, and if needed, we schedule them ahead of time. This helps us have clear communication about essential decision-making processes. (Network A)

Table 2. Tension and solutions

Specific tensions emerged	Tensions (categories)	Possible solutions to overcome tensions
Selfish attitudes	Individual variables	(Better) 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)
Distance between network partners (managerial, cultural or technological)	Structural characteristics of the network	
“Artificial” creation of networks through economic incentives	Interaction variables	
Loss of control over customer management and production processes	Individual variables	Definition of training courses (for instance, this could be related to technical, managerial, or relational issues)
Lack of resources (skills) does not allow active contribution to the project, this leads to inefficiency, timing conflicts, and potential tension between members	Structural characteristics of the network	
Loss of commitment and lack of leadership	Interaction variables Governance variables	
Poor sharing of sensitive information with network partners and limited investment of time and effort in joint activities	Interaction variables	Definition of a clear set of goals and shared quality/process standards. Proposal of a selection of common products/services

Lack of managerial skills or incompetence of the network manager. Lack of attention and commitment from companies in identifying the network manager correctly	Governance variables	Selection of a network manager with strong professionalism and soft skills
A tendency towards a centralised decision-making process in network governance, which may limit the participation of other partners in the decision-making process	Governance variables	Definition of roles and responsibilities within the network
		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. Discussion

After examining seven distinct networks with sustainability goals, we successfully addressed our initial research question (1RQ). Our analysis revealed several tensions, which we discussed in the previous paragraph. These tensions helped to validate and enhance our theoretical framework and interpretative model, as per Tunisini and Marchiori's (2020) research. Specifically, we found that the five categories of factors likely to create problems or tensions in business networks were also relevant for explaining the dynamics concerning networks with sustainability goals. This indicates that the challenges encountered by SME's networks are the same, regardless of the goal pursued.

One point we want to stress is that in the case of networks for sustainability goals, the external legitimacy of the network, as defined by Human and Provan (2020) and Provan et al. (2014), appears fundamental. External legitimacy issues can hinder the network's proper functioning, which can also reduce collaboration and increase conflicts among actors, ultimately with the risk of reducing the level of internal legitimacy that impacts the effective governance of the network. While other factors also play a role in determining potential network failures, legitimacy issues hold significant weight, mainly in networks with sustainability goals. It is important to note that public and private institutions play a crucial role in activating these networks, and the lack of support during the development phases can be detrimental to their success. With this evidence, our findings confirm what emerged in prevailing literature about the role of legitimacy as a critical factor "for explaining both early network evolution and ultimate network success" (Human & Provan, 2000).

By conducting semi-structured interviews, we utilised a qualitative methodological approach to investigate the actions taken by individual or collective decision-making processes within networks to address identified critical issues. This approach enabled us to answer the second research question (2RQ) by extracting common solutions from the experiences of entrepreneurs. These actions have proved to be "solutions" for addressing the tensions relating to one or more of the categories analysed, and they can be further qualified in preventive or reactive actions for the onset of tensions in the business network.

Among the preventive actions, selecting the appropriate companies for a network's formation is of utmost importance in coping with any possible issues arising from individual variables. In some instances, networks may be formed due to public and private incentives, resulting in unfamiliar groups of companies with no previous business relationships or common goals, leading to a lack of trust. Additionally, geographical distance can pose a challenge. Hence, careful selection of companies is crucial to avoid such problems. Furthermore, it can alleviate other concerns related to the network structure, such as different company sizes, incompatible management styles, and divergent levels of technology used in production processes.

Furthermore, establishing clear and specific objectives along with mutually accepted standards of quality and process can significantly influence how individuals engage with one another. This, in turn, can pave the way for practical and efficient resolutions, such as proposing various communal products or services that Network E can utilise.

Despite the implementation of measures after the establishment of a network, methods exist to pre-emptively mitigate potential conflicts. These methods include the appointment of a skilled network manager, the precise definition of roles and responsibilities, the utilisation of effective communication channels, and the inclusion of partners in decision-making processes. Such preventative measures can reduce tensions and promote a more cohesive and productive network.

Instead, among the reactive measures, the interviewees emphasised the importance of training. They noted a shortage of training courses available, including management, technical skills, and interpersonal relationships courses. Many attribute this to a lack of support from both public and private institutions. Training is crucial not only for individual and structural aspects of a network but also for its interactions. For example, network B has seen positive results from teambuilding initiatives.

Upon analysing the tensions and solutions, a paradox arises. The category of tensions deemed most relevant is also the one that interviewees and their networks cannot directly address. Despite external factors being beneficial during the start-up period, they become uncontrollable aspects for entrepreneurs.

Through the interviews, we discovered that external legitimacy is sometimes fulfilled by suppliers' support and customers' recognition of added value. This new finding enriches the interpretative model and strengthens the theoretical reference model.

6. Conclusions

Business networks are particularly relevant for SMEs and let these companies overcome their size limits to pursue innovation and internationalisation goals (Hilmersson & Hilmersson, 2021). Sustainable goals are becoming fundamental for SMEs' competitiveness and market positioning, but sustainability is costly and challenging to pursue. That makes increasingly effective networks for sustainability: in fact, they are an essential instrument to overcome the lack of competencies and resources, including, above all, content and process knowledge (Halila, 2007; Pesonen, 2001). While the benefits connected to business networking and business interaction have been largely emphasised, and studies are now deepening the role of the different actors, research on the problems and tensions in interaction and networking still needs to be improved (Harrison et al., 2023). This paper has tried to enter into a deeper analysis of the concrete problems that can emerge in business networks, with particular attention to those SMEs' networks that aim to reach sustainability goals. In other words, the study concentrates on sustainability networks and intends to enhance the existing knowledge on the challenges of business relationships and interdependencies from the SME's point of view to promote sustainable entrepreneurship.

First, it is still challenging to locate business networks that explicitly state sustainability goals as their objectives, particularly those that combine entirely these objectives into the network's general goals.

Furthermore, through an exploratory study based on several cases, we have identified, categorised and systematised the main variables negatively impacting the networks' efficiency and effectiveness. We have also reported on the actions taken by the companies to overcome the emerging problems. When dealing with networks, paying particular attention to external legitimacy variables is important. These factors are critical in explaining a network's emergence and successful development. Additionally, external legitimacy variables play a crucial role in influencing the dynamics of internal legitimation, ultimately affecting the stability of network interactions. These research findings can be helpful for managers and professionals involved in sustainability networking projects for SMEs.

It is crucial to highlight that in contrast to other tensions, the issue of external legitimacy holds immense significance, especially from public enti-

ties, as it plays a critical role in the sustainability of the network. However, the research has not provided any concrete solution or actions to tackle and overcome this challenge despite its importance. This calls for significant attention and further research to address the issue of external legitimacy and ensure the network's long-term sustainability.

Given the current demand for representation in government, we believe that business associations can play an important role (Bennett & Ramsden, 2007). They can do more than just advocate on behalf of their member businesses (Battisti & Perry, 2015). Business associations can work with public institutions to propose well-structured and long-term development plans for their members, which could be of great benefit to businesses that are looking to expand and flourish.

Our study can also be helpful as it develops and applies an interpretative framework on which, however, it is necessary to conduct more extensive and quantitative research. Our research has limitations in the sample's representativeness as many firms are from the construction sector, and we only interviewed one person per network. It could be helpful to extend the study to different fields and interview one respondent for each company involved in the network to compare the different perspectives. Furthermore, exploring the potential links between the sustainability goals of the network and the nature of the tensions that arise within it would be a valuable avenue of inquiry. Finally, we analysed network tensions across all stages of the lifecycle. In this respect, it could be interesting to analyse the main variables acting as enablers and the main variables acting as constraints in the different phases of the network lifecycle.

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LEVERAGING ENVIRONMENTAL, SOCIAL
AND GOVERNANCE DIMENSIONS THROUGH
THE WALKING-TO-TALK PATHWAY IN SMES:
FINDINGS FROM A LONGITUDINAL AGRI-FOOD CASE STUDY

Enzo Bivona
University of Palermo
enzo.bivona@unipa.it

Giovanni Scirè
University of Palermo
giovanni.scire01@unipa.it

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Abstract

Purpose. This study shows that the Corporate Social Responsibility (CSR) walking-to-talk pathway can effectively support Small and Medium Enterprises (SMEs) in implementing Environmental, Social and Governance (ESG) practices.

Design/methodology/approach. The authors adopted a longitudinal case-study approach and analyzed an Italian SME wine cooperative. A ten-year horizon has been investigated.

Findings. The study confirms that the CSR walking-to-talk pathway enabled the selected company to effectively leverage Environmental, Social and Governance dimensions. This study suggests that due to SMEs' peculiarities (e.g., resource scarcity), implementing ESG practices first and investing in external communication afterwards represents an ESG sound and sustainable strategy. Specifically, this study shows that the social and governance dimensions are crucial drivers in supporting an SME to pursue Sustainability. These pillars provide tangible and intangible resources, such as, members' trust and board directors and management continuity, which support the organization to meet its desired goals.

Practical and Social Implications. This study can guide similar organizations seeking legitimacy by adopting ESG practices, underscoring the importance of the walking-to-talk pathway as a sound approach to Sustainability.

Originality of the study. This study explores the effectiveness of the CSR walking-to-talk pathway in implementing ESG practices in SMEs. Due to the recent popularity of ESG, this contribution represents a new stream of research to better understand the dynamics of ESGs.

1. Introduction

To cope with ambitious Paris targets (OECD, 2022) and the complex Sustainable Development Goals set in the UN 2030 agenda (United Nations, 2015), large firms and Small and Medium-sized Enterprises (SMEs) are still struggling to select and implement sound initiatives ranging from Corporate Social Responsibility (CSR), and more recently, to Environmental, Social, Governance (ESG) practices (Berrone et al., 2013; Castro & Gradillas Garcia, 2022; de Souza Barbosa et al., 2023; Huang et al., 2023; Minutiello & Tettamanzi, 2022; Senadheera et al., 2022).

After adopting the European Union (EU) Directive 95/2014, large corporations have been at the forefront of adopting ESG initiatives (Aureli et al., 2020), and the response of SMEs remains ambiguous despite their relevance in our economies. SMEs, particularly agri-food firms, play a vital role in addressing environmental challenges, promoting social well-being, and fostering economic development (Del Baldo, 2012; Dey et al., 2022; Ooi et al., 2023; Permatasari & Gunawan, 2023; Sommer, 2017; Trequattrini et al., 2021).

Nevertheless, as documented in the literature (Castellano et al., 2022; Dasanayaka et al., 2022; Leonidou et al., 2017), most SMEs are far from adopting a holistic and successful approach to ESG implementation. They frequently build ad hoc frameworks/reports to respond to market pressures and adopt discontinued communication strategies because of perceived excessive certification costs and a lack of employee engagement and resources (Dasanayaka et al., 2022, p. 760). As this behavior leads to highly uncertain results, SMEs needing resources (Hooi et al., 2016) abandon unnecessary practices. In addition, scholars (de Freitas Netto et al., 2020; Khanchel et al., 2023; Vollero et al., 2016) have noted that some companies use CSR communication to selectively disclose positive information about their performance to divert attention from their environmental and social shortcomings. This behavior is defined as greenwashing, misleading consumers about a company's environmental practices (firm-level greenwashing) and the environmental benefits of a product or service (product-level greenwashing) (Delmas & Burbano, 2011, p. 16; Walker & Wan, 2012).

To understand how SMEs can effectively implement ESG practices over time in response to global challenges, consistent with previous studies (Schoeneborn et al., 2020; Schons & Steinmeier, 2016; Walker & Wan, 2012; Wickert et al., 2016), the authors suggest using the CSR walking-to-talk pathway developed by Schoeneborn et al. (2020). Walk practices refer to implementing strategies, structures, and procedures in the core business processes that facilitate CSR within a company and its value chain. Talk practices lead to the provision of external documentation to customers and other stakeholders. Talk practices operate in recursive logic, informing and

shaping walk initiatives and providing feedback to influence future practices. According to Schoeneborn et al. (2020), firms can adopt alternatively the talking-to-walk and t(w)alking pathways. However, the walking-to-talk pathway is here recognized as the most suitable approach to fit the peculiarities of SMEs.

Like Wickert et al. (2016), the gradual allocation of SMEs' limited resources towards ESG practices, resulting from the adoption of a bricolage approach (Hooi et al., 2016), and the presence of informal organizational systems and low coordination costs are likely to facilitate the adoption of the walking-to-talk pathway in effectively implementing ESG practices. Moreover, unlike larger firms, such an approach may help SMEs overcome potential barriers such as internal resistance (Bakos et al., 2020; Dasanayaka et al., 2022).

The authors adopted a longitudinal case study approach to test the above research proposition and analyzed an Italian SME wine cooperative. The wine industry is particularly relevant in Italy, representing more than 18% of total agricultural production (ISTAT, 2023). An SME wine cooperative represents an ideal context for conducting this analysis because the firm is strongly tied to the local community (social and governance dimensions) and the use of natural resources (environmental dimension).

This study demonstrates the effectiveness of the CSR walking-to-talk pathway (Schoeneborn et al., 2020) in steering SMEs towards ESG sustainability.

Based on case study findings, we contribute to the current debate in the literature by outlining an explanatory framework, making explicit drivers and constraints favoring and hampering SMEs' ESG practice implementation over time. This study also provides practical implications and recommendations for organizations seeking to navigate the complexities of ESG implementation and enhance firm Sustainability from a long-term perspective. Through such an approach, entrepreneurs and managers of agricultural SMEs can be supported in exploring an appropriate framework for adopting successful ESG strategies.

The remainder of this paper is organized as follows. Section 2 offers a literature review on ESG initiatives that promote Sustainability in agri-food SMEs. Section 3 offers a research proposition based on the main limitations of ESG implementation in agri-food SMEs. Section 4 highlights the research methodology. Section 5 presents the Cantine-Settesoli case study. Section 6 discusses the findings of the case study. Section 7 offers concluding remarks and discusses theoretical and practical implications. Limitations and suggestions for future research are also presented.

2. Literature Review

2.1 *Adopting ESG initiatives to promote Sustainability in agri-food SMEs.*

The concept of Sustainability, originally defined as meeting “the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 15), now includes approaches and practices aimed at creating long-term value for firm stakeholders and the company itself.

Sustainability has been largely addressed in the Corporate Social Responsibility (CSR) literature and, more recently, in ESG studies. These research streams are strictly interconnected and partially overlap (Castro & Gradillas Garcia, 2022; Gillan et al., 2021; Godelnik, 2021; Torres et al., 2023).

According to Van Marrewijk (2003, p. 102), “CSR refer[s] to company activities – voluntary by definition – demonstrating the inclusion of social and environmental concerns in business operations and interactions with stakeholders.” ESG dimensions cover three main domains: environmental, social, and corporate governance. The first domain relates to practices related to improving eco-friendly recycling, energy use efficiency, and pollution reduction. Social practices will likely encourage social well-being at work, local community cohesion, and gender equality. Lastly, corporate governance aims to promote the adoption of ethical corporate practices, thereby favoring shareholder rights (Afolabi et al., 2023; Castro & Gradillas Garcia, 2022; Minutiello & Tettamanzi, 2022; Shalhoob & Hussainey, 2022).

Sustainable practices are particularly relevant for SMEs. Recent statistics show that SMEs represent over 99% of businesses and 50% of all employment in most OECD countries (OECD, 2019) and contribute more than 70% of global pollution (Afolabi et al., 2023; Bakos et al., 2020). Due to the link between firm operations and the use of natural resources such as land and water, sustainable practices are also relevant to agri-food SMEs (Costa et al., 2022; Huntjens, 2021; Luzzani et al., 2021; Onofre, 2022; Poponi et al., 2022; Trigo et al., 2022). More specifically, scholars claim that the Sustainability and success of SME wineries are strongly intertwined with the firm’s ability to build long-lasting relationships with multiple actors involved in the agri-food chain, including suppliers, producers, and local communities (Aibar-Guzmán et al., 2022). Therefore, SME wineries cannot ignore the role of ESG in corporate Sustainability.

However, while larger firms’ strategies often focus on Sustainability and ESG (Engle et al., 2021; Gündoğdu et al., 2023; Senadheera et al., 2022), SMEs appear reticent in implementing such dimensions in their strategies (Bakos et al., 2020; Gjergji et al., 2021; Rizos et al., 2016). Furthermore, schol-

ars have recently (Bakos et al., 2020; Gündoğdu et al., 2023; Permatasari & Gunawan, 2023; Tang et al., 2021) raised the need to identify the drivers impacting SMEs' strategies to effectively respond to ESG challenges, thereby boosting their competitive position. However, extant literature often focuses on a single dimension rather than offering a holistic framework to help SMEs pursue ESG strategies.

Trahan and Jantz (2023) claimed that the environmental dimension, although easy to quantify, remains understudied. They suggested that environmental initiatives must be associated with, for instance, the effects of socio-technical changes rather than focusing only on monitoring single performances, such as CO2 emissions. Ooi et al. (2023) remark on the importance of promoting the social dimension to support SME sustainability as a process and digital innovation driver. The adoption of a CSR strategy as a result of voluntary self-regulatory reporting (Castro & Gradillas Garcia, 2022; Latapí Agudelo et al., 2019; Schoeneborn et al., 2020) in the absence of appropriate transparency may lead to greenwashing initiatives, that is, misleading practices oriented to selectively disclose only positive information about a company's performance to divert attention from its environmental and social weaknesses (de Freitas Netto et al., 2020; Lee & Raschke, 2023; Vollero et al., 2016). In addition, evidence-based studies reveal that accountability and stakeholder trust are relevant aspects for strengthening corporate Sustainability (Alsayegh et al., 2020), thereby raising the role of the governance dimension (Castro & Gradillas Garcia, 2022).

The above analysis shows a lack of understanding of how ESG practices can be effectively implemented over time in the SME context.

2.2 Developing the proposition: the ESG walking-to-talk pathway in agri-food SMEs.

To overcome the limitations of implementing ESG in SMEs, authors suggest adopting the framework Schoeneborn et al. (2020) developed to investigate the relationship between CSR practices and communication. They identified three pathways: walking-to-talk, talking-to-walk and t(w)alking. Walking-to-talk refers to implementing CSR practices before they are reported. This approach suggests that a company's actions and behaviors regarding sustainable activities precede external communication. As such, CSR talk operates in recursive logic, informing and shaping the CSR walk and providing feedback to influence future practices. This pattern differs substantially from the talking-to-walk pattern. In this case, CSR communications precede and shape CSR practices. Finally, t(w)alking embraces previous pathways in which communication and practices proceed simultaneously, steering the company towards corporate Sustainability (Schoeneborn et al., 2020).

Due to the peculiarities of SMEs, i.e., a lack of financial and human resources (Bastian & Poussing, 2023; Bianchi & Bivona, 2000; Cosenz & Bivona, 2021; Eggers, 2020; Kim et al., 2023; Permatasari & Gunawan, 2023; Purwandani & Michaud, 2021; Shalhoob & Hussainey, 2022), the CSR walking-to-talk pathway best fits with SMEs. This proposition is consistent with the conceptual CSR model built by Wickert et al. (2016). They observed that SMEs often experience more difficulty communicating external CSR practices than implementing these initiatives. This behavior also arises from adopting a bricolage approach (Hooi et al., 2016), which implies the gradual allocation of limited resources to ESG practices. Consequently, such firms tend to communicate with ESG initiatives while using personalized and informal reports in their quest for external legitimacy (DiMaggio & Powell, 1983). Maintaining and managing external legitimacy is important to SME for continuous support from external stakeholders such as customers and financial institutions (Dillard et al., 2004; Sharma & Lawrence, 2005).

More specifically, it has been observed that informal organizational systems and low coordination costs (Wickert et al., 2016, p. 1182) are more likely to facilitate the implementation of social and governance practices in SMEs than in larger firms. SMEs' ability to build strong, long-term relationships with local stakeholders (Russo & Perrini, 2010; Spence et al., 2003) is an important sustainability driver and results in higher social capital. SMEs can leverage social capital to overcome potential barriers to implementing ESG initiatives, such as internal resistance (Bakos et al., 2020).

The purpose is to contribute to enriching the current knowledge on how ESG practices can be implemented over time in agri-food SMEs; following the framework developed by Schoeneborn et al. (2020), the authors claim that an SME can effectively leverage ESG practices through the walking-to-talk pathway.

3. Research Methodology

We adopted a longitudinal case study approach to validate that an SME can effectively leverage ESG practices through the walking-to-talk pathway (Eisenhardt, 1989; Schoeneborn et al., 2020; Yin, 2018). This approach contributes to answering the recent call to conduct more empirical studies on ESG and sustainability policies in SMEs (Kim et al., 2023; Permatasari & Gunawan, 2023).

This longitudinal case study was useful for two reasons. First, as stated by Eisenhardt (1989, p. 534), "The case study is a research strategy that focuses on understanding the dynamics present in single settings." Therefore, using such an approach, the authors aim to improve understanding of the interactions between different walk and talk ESG initiatives over time.

To this end, the authors highlighted both the drivers and constraints of each ESG initiative. Second, this research strategy is widely recommended for studies that generate and test new theories that can be further explored and validated in broader contexts (De Massis & Kotlar, 2014; Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Gehman et al., 2018).

Consequently, the Cantine Settesoli cooperative, an Italian SME winery, was selected. Two criteria were used to choose Cantine Settesoli: (1) the company introduced multiple ESG initiatives in the last decade, and (2) it has expressed interest in participating in this research.

The selection of the wine industry cooperative fits well with the aims of this study. The corporate legal form and industry provide an ideal environment in which the firm is strongly tied to the local community (social and governance dimensions) and makes intense use of natural resources (environmental dimension). Cooperatives are defined as “professional associations of voluntary members who join to fulfill their economic, social, and cultural objectives commonly” (Ghauri et al., 2022; Lafont et al., 2023, p. 3). They are inspired by controlled democratic systems and distribute benefits among their members. Cooperative legal forms are widely used in the agricultural sector (Wanyama, 2014) and play a significant role in the economic Sustainability of farms and environmentally friendly practices (Candemir et al., 2021). Within this sector, the wine industry is particularly relevant in Italy, representing more than 18% of the total agricultural production (ISTAT, 2023), covering 9% of the world’s vineyard area, and positioning the country in the world ranking after Spain and France (Pomarici et al., 2021). Moreover, in 2022, Italy was the first wine producer worldwide with 50.3 million hectolitres (OIV, 2022).

As remarked in the literature (Ada et al., 2022; Candemir et al., 2021; Mojo et al., 2015), agricultural cooperatives “contribute to sustainability by improving social and economic conditions and thus help to protect the environment”. Therefore, a longitudinal case study of an Italian wine cooperative represents an appropriate context for validating that an SME can effectively leverage ESG practices through a walking-to-talk pathway.

3.1 Data Collection

Table 1: Collected Data

Data Sources	Primary or Secondary Data	Kind of Data	Qualitative / Quantitative Information	ESG Dimension
Questionnaire	Primary	Structured Questionnaire	Quantitative and Qualitative Information	All ESG dimensions
Financial Statements	Secondary	Historical Records	Quantitative Information	All ESG dimensions
Company Bylaws	Secondary	Historical Records	Qualitative Information	Governance dimension
Global Report Initiative (GRI) Sustainable Report 2022	Secondary	Online Documentation	Quantitative and Qualitative Information	All ESG dimensions
Website Documentation	Secondary	Online Documentation	Quantitative and Qualitative Information	Social and Environmental dimensions
Online News	Secondary	Online Documentation	Qualitative Information	Social and Environmental dimensions

Table 1 presents the main data sources used to gather company information. The authors collected data using a structured questionnaire for the longitudinal case study analysis. Such primary data were complemented by qualitative and quantitative information (secondary data) derived from online documentation and company reports to make the ESG initiatives of Cantine Settesoli explicit for 2012-2021 (Eisenhardt & Graebner, 2007). Following the framework developed by Schoeneborn et al. (2020), the data were distinguished in talk-and-walk initiatives. In addition, multiple financial performance measures were implemented to support the effectiveness of the ESG practices adopted by the selected firms.

The data were gathered from multiple sources (De Massis & Kotlar, 2014). The research team obtained such data through interviews with management and a structured questionnaire submitted to the company. However, additional data were extracted from the company's sustainability report, edited for the first time in 2022, online documentation and historical records. Financial statements and changes in company bylaws were also analyzed.

The use of multiple sources of information facilitates “triangulation and corroboration” (Yin, 2009, pp. 115–116) reducing potential bias.

3.2 Data Analysis

The data collected through the case study were coded and refined following the framework Schoeneborn et al. (2020) suggested to outline whether the company’s ESG initiatives lay in the walking or talking pathways. The path dependence theory (Sydow et al., 2009)¹ inspired the identified codes and aimed to capture the rationale behind Cantine Settesoli’s organizational behavior toward ESG.

Therefore, the analysis was performed in two steps. First, each ESG walk and talk practice was listed in temporal order. Second, for each ESG corporate initiative, the drivers and constraints that facilitate or hinder the implementation of such practices were identified to make path-dependent behavior explicit.

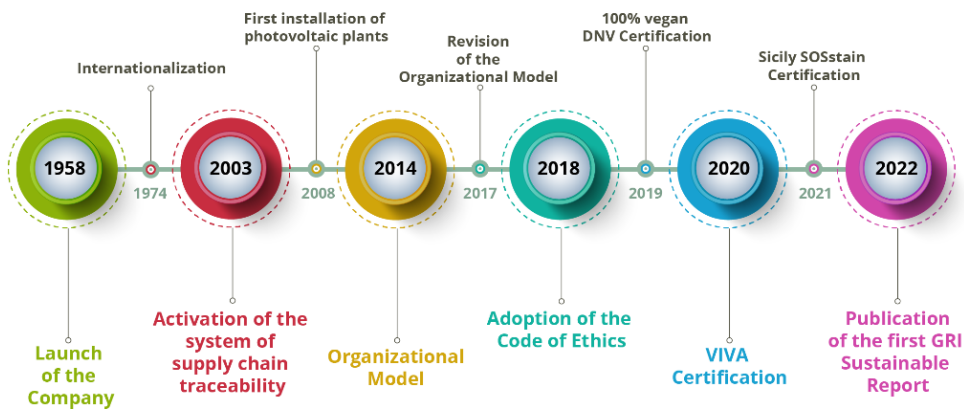
Financial performance was also considered to understand the effectiveness of the ESG path taken by the company.

4. The case of Cantine Settesoli

Cantine Settesoli is an Italian SME located in Sicily (Italy). The company was established in 1958 by a local group of vine growers as a cooperative, a form of governance well-diffused in the wine sector. This initiative was to increase the yield of the grapes produced by local vine growers who sold the grapes at a very low price to buyers primarily located in northern Italy. The company has almost 2000 members, accounting for more than 5000 hectares. Cantine Settesoli permanently employs approximately 60 people in the management and production sectors. During the harvesting and production periods from August to December, the company hired over 100 temporary workers. According to the latest financial statements, the firm recorded revenues of 50 million euros, 41% of which were traded abroad. Although the company published its first sustainability report in 2022, sustainability initiatives have covered at least the last two decades (Figure 1).

¹ The path dependence theory as defined by Sydow et al. (2009) refers to how organizations tend to repeat a given behavior in adherence to historical solutions. Such a theory is particularly useful in our study to understand the reason behind Cantine Settesoli’s ESG initiatives.

Figure 1: Cantine Settesoli Pathway towards Sustainability (authors' elaboration)



For example, since 2008, Cantine Settesoli has invested heavily in constructing solar panels, accounting for 83% of the company's total energy consumption. While the company already had an internal control system in place, in 2014, to sensitize staff and external partners (suppliers) to ethical behavior and crime prevention in business operations, the Board of Directors implemented a formal compliance program following the requirements of Italian law (Decree 231 of 2001). Several initiatives have been implemented, such as adopting the Code of Ethics, VIVA certification (a sustainability performance standard in viticulture to protect the environment and enhance territory), and the first publication of the Global Reporting Initiative (GRI) Sustainable Report.

Table 2 displays Cantine Settesoli ESG walk and talk initiatives for 2012–2021, which emerged from data collection.

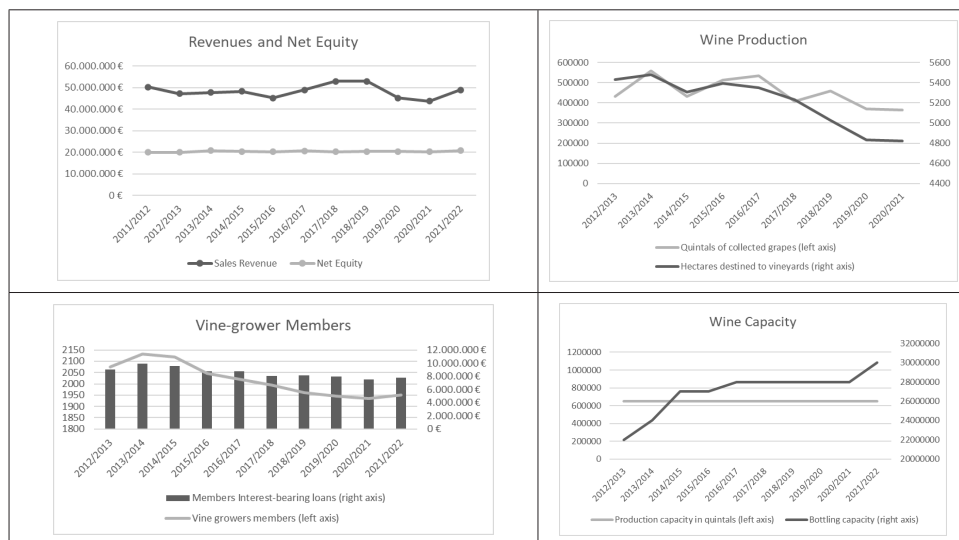
Table 2: Walk and Talk ESG Initiatives: A Longitudinal Perspective

	Walk									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
E	Investments in photovoltaics AVigere Project		Adoption of agriculture precision practices to optimize wastewater management (the Winegraft start-up) (WineGraft, 2014)		Implementation of highly energy-efficient technologies Reducing bottle weight		Adoption of an Ethical Code			Further investments in Photovoltaics High-Quality Organic Protocol Carbon neutrality Improvements in wastewater management
S	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members Funding initiatives to recover the archaeological	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members Adoption of the Code of Conduct for Cantine	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members	Mandarossa Vineyard Tour Inycon event Promoting innovative grape production practices toward vine grower members Collaboration with other Winery Com-	Promoting innovative grape production practices toward vine grower members Adoption of Covid-19 prevention measures	Promoting innovative grape production practices toward vine grower members
G	Board members and management continuity Members' financial support to company activities	tices toward vine grower members Members' financial support to company activities	sites (Selinunte Park and Cave di Cusa) Adoption of the Organizational, Management and Control Model 231 Members' financial support to company activities	Revision of the Model 231 Members' financial support to company activities	tices toward vine grower members Revision of the Model 231 Members' financial support to company activities	Settesoli suppliers Revision of the Model 231 Code of conduct for Settesoli suppliers Members' financial support to company activities	Adoption of the Ethical Code Board members and management continuity Revision of the Model 231 Adoption of an Ethical Code Members' financial support to company activities	panies and Local Authorities to promote Sicily and wine (OCM Promozione 2019 SICILIA: L'ISOLA DEL VINO) Members' financial support to company activities	Man-drachef on Tour Members' financial support to company activities	Members' financial support to company activities

	2012	2013	2014	2015	2016	<u>Talk</u> 2017	2018	2019	2020	2021
E	Organic Label (Ecogruppo Italia)		Ecofriendly 2014 Prize	Gavi "La Buona Italia" Prize (Food&Tech, 2015)		Energy Management System (ISO 50001:2018)	Quality management system (updating to ISO 9001:2015)	Environmental Management System (ISO 14001:2015)	Viva Certification (started in 2020, obtained in 2022)	Sicily SOSustain Certification Carbon Footprint – CFP (ISO 14064-1:2018-9)
							Institutional collaborations with ENEA (Creo et al., 2018)	Quality management system (ISO 9001:2015)		Water Footprint (ISO 14046:2014) High-Quality Organic Protocol
S	Organic Label (Ecogruppo Italia)						Quality management system (updating to ISO 9001:2015)	Quality management system (ISO 9001:2015)	Food safety processing certification (IFS FOOD Standard) Viva Certification (started in 2020, obtained in 2022)	Sicily SOSustain Certification
G	Organic Label (Ecogruppo Italia)						Quality management system (updating to ISO 9001:2015)	Quality management system (ISO 9001:2015) 100% Vegan (DNV-GL Certification)	Viva Certification (started in 2020, obtained in 2022)	

Figure 2 provides an excerpt of the main performance measures of Cantine Settesoli (more detailed indicators are reported in Appendix 1). During the investigated period, despite the multiple ESG initiatives executed and the investments made to increase production and bottling capacity, firms' financial performance showed a positive trend. These results could be attributed to two factors. First, although the wine market is highly competitive and unstable, Cantine Settesoli has defended its market position, maintaining a stable level of net sales over time. This result is particularly remarkable because the number of hectares designated for vineyards has decreased significantly. Second, despite the decline in hectares designated for vineyards, the volume of wine produced dropped only slightly, while the number of vine-grower members remained almost constant. The latter results from a strong cooperative member's sense of belonging that does not change over time. It emerged that among members, there was a consensus on the successful efforts provided by the board of directors and the management in pursuing satisfactory yield per hectare designated for vineyards and, in general, sustainable company results.

Figure 2: Financial and Operational Performance



5. Results and Discussion

Table 2 shows that Cantine Settesoli gradually invested in several ESG activities in 2012-2021 linked to walking practices, as defined by Schoeneborn et al. (2020). However, the company disclosed such initiatives only after the first half of this period for two reasons: internal organizational awareness of the efforts made in this area and the search to improve its image towards customers and financial institutions.

Among the main ESG practices, the company invested in constructing photovoltaic plants even before 2012, thus reducing its carbon footprint and energy costs. To improve the company's image and promote social and economic growth in the community, Cantine Settesoli has always promoted its product lines and the territory in which it operates at local, national, and international levels. These practices, such as the Mandrarossa Vineyard Tour and Inycon, have attracted a large and growing number of stakeholders, from customers to wine importers and financial institutions, and allowed them to communicate the company's values and principles externally, contributing to improving its competitive and financial position. The positive results achieved by the company over the years have created a favorable corporate environment, ensuring continuity in the Board of Directors and management, and building trust and cohesion between the company and its shareholders. Consequently, the cooperative's shareholders responded positively to the initiatives to introduce new production techniques, including different viticultural practices and better soil ma-

nagement. These practices improve the quality and profitability of grapes and use environmentally friendly strategies to combat diseases and pests. In addition, a high level of trust enables the company to rely on shareholders’ willingness to financially support its business. Shareholders retain part of their income from selling grapes in Cantine Settesoli’s bank account in exchange for a competitive interest rate. Companies benefit from lower financing costs as this rate is much lower than the financial institutions’ current rate.

Gradually introducing ESG practices does not negatively impact a company’s financial performance; it enhances its market reputation and boosts shareholder value. Such positive results enhance long-term governance stability and create a favorable setting for continuously investing in ESG initiatives.

Figure 3: The ESG Walking-to-Talk Pathway

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<u>Walk</u>										
E	xx		xx		xx		xx			xx
S	xx	xx	xx	xx	xx	xx	xx	xx	xx	x
G	xx	xx	xx	xx	xx	xx	xx	xx	xx	x
<u>Talk</u>										
E	xx		xx	xx		xx	xx	xx	xx	xx
S	xx				xx		xx	xx	xx	xx
G	xx						xx	xx	xx	

In search of external stakeholders’ legitimacy (Dillard et al., 2004; DiMaggio & Powell, 1983; Sharma & Lawrence, 2005), ranging from international customers (Huang et al., 2023) to financial investors, of the investments made in ESGs over the past few years, in 2018, the company formalized ESG initiatives through recognized certifications. Adopting these talk practices drove the firm to identify new walking initiatives. Thus, the concept of the walking-to-talk pathway is confirmed in this case study. This pathway operates in recursive logic (Schoeneborn et al., 2020, p. 12), highlighting the formative effects of communication on the identification of new walking practices (see Figure 3).

Table 3 lists the main drivers and constraints associated with Settesoli’s ESG initiative. This table evidences that walking initiatives are drivers of talking initiatives. Thus, it confirms the proposition underlying the effectiveness of the walking-to-talk pathway (Schoeneborn et al., 2020) in steering SMEs towards ESG sustainability.

Indeed, the company could not have invested in communication ini-

tatives (certifications and 2022 sustainability reports) without prior ESG walk efforts. This favorable context makes the communication of such activities more robust, leading to new ESG walking practices.

Furthermore, some ESG activities, walking and talking, are driven by the search for the legitimacy of external stakeholders (Dillard et al., 2004; DiMaggio & Powell, 1983; Lee & Raschke, 2023; Sharma & Lawrence, 2005). Finally, this table also shows the recursive logic of some recent walk activities, such as adopting the High-Quality Organic Protocol, a prerequisite for obtaining new certifications and thus for adopting new ESG talk activities.

An overarching driver favoring the adoption of ESGs is strong local rooting (Del Baldo, 2012; Solari & Gambarotto, 2014). In this regard, Cantine Settesoli has continuously nurtured collaborations with cooperative members, local communities, and public institutions.

Additional drivers may be board members and management continuity. This distinctive factor fosters trust-building processes among cooperative members and external stakeholders, facilitating environmental investment and lowering operational costs.

Possible constraints that hamper the effective implementation of the walking-to-talk pathway are worth acknowledging. In the case study, the bureaucracy was a constraint in pursuing social and cultural initiatives, as it hindered Cantine Settesoli’s funding support to recover local archaeological sites.

Table 3: ESG Initiatives: Drivers and Constraints

ESG Initiatives	Walk / Talk	First Year of adoption	Drivers	Constraints
Investments in Photovoltaics: installation of a Photovoltaic System at the packaging facility (150 kWp) and the Cannitello Winery (144 kWp)	Walk	Before 2012	Due to the favorable local environmental conditions, the company invested in photovoltaics. Initially, public incentives played a crucial role in supporting the financial performance of these investments. Rising energy costs and growing environmental concerns have motivated the company to expand such investments.	

Promoting innovative grape production practices toward vine grower members	Walk	Before 2012	These practices, designed to improve grape quality and profitability, were adopted using environmentally friendly strategies, such as cultivating grape varieties resistant to diseases.	
Board members and management continuity	Walk	Before 2012	The positive results achieved by the company over the years created a favorable corporate environment, which contributed to ensuring board members and management continuity on the one side and building trust and cohesiveness between the company and the members.	
Members' financial support to company activities	Walk	Before 2012	Previous positive financial performances created a favorable corporate environment, building trust and cohesiveness between the company and the vine grower members to enable such financial support. This financial support allowed both company and vine grower members to gain financial benefits, thus maintaining convenience in the long term.	
Mandarossa Vineyard Tour, Mandrachef on Tour and Inycon events	Walk	Before 2012	The company's strong local roots motivated the board of directors to organize events to promote the company's products and the local area. This effort also aimed to foster market reputation.	During the last years (2019-2021), the Covid-19 emergency blocked these events.

Collaborations with other Wineries and Institutions to promote Sicily and wine	Walk	Before 2012	Previous local institutional collaborations and the full engagement of co-operative members steered the management to participate in events to promote local wines and Sicily.	Many stakeholders with divergent interests have created challenges in coordination.
AVigere Project	Walk	Before 2012	After previous collaborations with other wine companies and associations, the company decided to join to "Avigere" project, which focused on the implementation of environmental best practices for energy savings (Precision Viticulture)	
Organic Label (Ecogruppo Italia)	Talk	2012	Organic product certification has been obtained to attract and raise awareness among consumers who prefer organic products.	
Ecofriendly 2014 Prize Gavi "La Buona Italia" Prize	Talk	2014	Initial ESG investments (photovoltaics and energy savings) led to some acknowledgments of the company's efforts in Sustainability.	
Funding initiatives to recover the archaeological sites (Selinunte Park and Cave di Cusa)	Walk	2014	The local community strongly supported the project due to the awareness of the historical heritage of this area.	Despite the engagement of the public local institutions, the complex normative system of the Autonomous Region of Sicily has slowed down and, in certain cases, blocked the initiative (Gabbrielli, 2015).

Winegraft start-up	Walk	2014	<p>The company's networking with other wine companies and research institutions led Cantine Settesoli to support this start-up in adopting specific precision agriculture practices. This start-up aimed to reduce 30% of vine irrigation consumption (water footprint). Cantine Settesoli employees' managerial and technical skills supported this start-up.</p>	<p>Despite the innovative adoption, there were challenges in meeting quality and quantity expectations. Financial and facility needs represented a serious constraint.</p>
Adoption of the Model 231	Walk	2014	<p>Company personnel already had the skills to allow the adoption of the 231 model.</p> <p>Adopting such a model facilitated access to public funds and loans.</p>	<p>The 231 model requires full collaboration with the relevant stakeholders. It also requires dedicated resources and substantial efforts that may switch resources dedicated to other goals. Additionally, it requires periodic monitoring and model updating to ensure compliance with regulatory changes.</p>
Implementation of highly energy-efficient technologies: Purchase of various high-energy efficiency equipment/ machinery (compressors, refrigeration systems, wastewater treatment systems, etc.)	Walk	2016	<p>Compared to the benchmark for Sicilian wineries with an average annual electricity consumption of 0.7 kWh per liter of processed wine, Cantine Settesoli achieved values ranging from 0.16 to 0.21 kWh per liter over the last six years.</p>	

Reducing Bottle weight: Weight reduction of the glass bottles by focusing on lightweight bottles	Walk	2016	Compared to the benchmark for Sicilian bottlers with an average bottle weight of 550 grams per 0.75-liter bottle, Cantine Settesoli achieved values ranging from 391 to 406 grams per 0.75-liter bottle over the last six years.	
Code of conduct for Settesoli suppliers	Walk	2017	This code has been developed to foster the Model 231. This code defines proper relationships with new suppliers	
Adoption of the Ethical Code	Walk	2018	This code has been developed to foster the Model 231. However, this code formalizes practices already adopted and accepted by the employees, suppliers, and members consistent with the company's values.	Transcribing well-defined rules can hinder the emergence of new needs and sensitivities arising from societal changes.
Institutional collaborations with ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development)	Walk	2018	Previous institutional collaborations and staff with specific skills in the environmental sector drove the company to build such collaborations.	

<p>Quality management system (updating to ISO 9001:2015)</p> <p>Environmental Management System (ISO 14001:2015)</p> <p>Carbon Footprint – CFP (ISO 14064-1:2018-9)</p> <p>Water Footprint (ISO 14046:2014)</p> <p>Energy Management System (ISO 50001:2018)</p> <p>100% Vegan (DNV-GL Certification)</p> <p>Quality management system (ISO 9001:2015)</p> <p>Energy Management System (ISO 50001:2018)</p> <p>Food safety processing certification (IFS FOOD Standard)</p> <p>Viva Certification</p>	Talk	2017	<p>These certifications, crucial to seeking legitimacy, were obtained as upgrades to prior certifications.</p> <p>The hiring and retention of highly qualified personnel contributed to achieving these certifications.</p> <p>The company's awareness to safeguard the territory, endorsed by the local community and public institutions, also played a significant role.</p> <p>The strong cohesion among cooperative members created a suitable corporate environment for obtaining these certifications.</p> <p>Several certifications were essential to obtaining the VIVA certification. Collecting these certifications is essential for competing in public fund selections.</p>	<p>Bureaucracy hindered the process of obtaining these certifications.</p>
Adoption of Covid-19 prevention measures	Walk	2020	<p>The emergency conditions due to COVID-19 have pushed the company to implement good practices to reduce the risk of contagion and ensure the continuity of company operations.</p>	<p>These measures have a contingent nature concerning national laws.</p>

Solar Photovoltaic Systems: installation of a photovoltaic system at the Puccia Winery (296 kWp)	Walk	2021	Expansion of the photovoltaic systems, in addition to the five systems installed in 2008 (one for each group location), primarily aimed at self-consumption.	
Carbon Neutrality: Three-year project on decarbonization, Sustainability, and circular economy with Enel (expected completion: 2023).	Walk	2021	2021 & 2023: Measurement of the respective carbon footprints, identification of projects to reduce the carbon footprint, increase circularity, and offset emissions. 2022: Decarbonization (implementation of initiatives from the previous point).	
Wastewater management: substantial revamping of the wastewater treatment plant at the central headquarters	Walk	2021	Installation of an innovative wastewater treatment plant (MBR - Membrane Bioreactor)	
High-Quality Organic Protocol (Promoting organic grapes with chemical levels significantly lower than legal requirements)	Walk	2021	Legitimacy was needed to access specific markets through the company to adopt such a protocol. This protocol was useful to get further certifications.	

Sustain Certification (Monteleone, 2016)	Talk	2021	Previous collaborations in Sustainability with local wine companies, adoption of previous certifications (such as VIVA), public funding support, and established environmental expertise have facilitated the acquisition of this certification.	Documentation efforts and bureaucratic procedures to be followed.
<i>Recent Initiatives</i>				
Water Consumption Reduction (Purchase of a self-generating ozone gas/ ozone water system for cleaning/ sanitizing wine vessels and wine barrels)	Walk	2022	Replacement of the previous high-pressure water cleaning system	
Solar Photovoltaic Systems: installation of a photovoltaic system at the Central Winery (130.8 kWp) and the Packaging Facility (259.2 kWp)	Walk	2022	As in the previous investments in photovoltaics, the company found the same-mentioned drivers.	
Enhancing local procurements (Suppliers of oenological products and packaging materials)	Walk	2022	The awareness of local rooting has driven the company to maintain relationships with local enterprises. Today, 87% of oenological product purchases and 39% of packaging material purchases have been made from local suppliers.	

6. Conclusions

Based on a literature review and a case study of Cantine Settesoli, this analysis shows the effectiveness of the walking-to-talk pathway (Schoeneborn et al., 2020) in implementing ESGs in SMEs. With the initial adoption of *walk* initiatives, such as investments in photovoltaics, viticultural practices, and soil management, Cantine Settesoli effectively improved operational efficiency, minimized environmental impact, and fostered its market reputation. Additionally, the stakeholders' sense of belonging (Dillard et al., 2004) strengthened their relationships with the local community and fostered the socio-economic growth of the local territory (Del Baldo, 2012; Solari & Gambarotto, 2014). These initiatives include vineyard promotion events, support projects to recover archaeological sites, and new collaborations with public authorities. The company's ability to adopt talk initiatives, such as obtaining various sustainability certifications, demonstrates its commitment to transparency and stakeholder communication. These certifications validate the company's efforts, strengthen its competitive position, and attract more environmentally conscious customers. Finally, similar to Schoeneborn et al. (2020), such certifications stimulate new sustainable practices to be implemented using recursive logic.

The findings of this study also show valuable theoretical and practical implications.

Consistent with previous research (Alsayegh et al., 2020; Bakos et al., 2020; Castro & Gradillas Garcia, 2022; Costa et al., 2022; Engle et al., 2021; Ooi et al., 2023), this study examines the role played by social and governance dimensions as pivotal drivers in supporting SME in leveraging ESG practices. In the investigated case, the social and governance pillars provide tangible and intangible resources, such as members' trust, board directors and management continuity, effectively supporting the firm in meeting its desired goals. These remarks can also guide similar organizations seeking legitimacy (Dillard et al., 2004; DiMaggio & Powell, 1983) by adopting ESG practices.

Regarding practical implications, the walking-to-talk pathway represents a robust time-ordered sequence (Sydow et al., 2009) in which agricultural SME entrepreneurs and managers can learn from adopting successful ESG strategies. In addition, this study supports the implementation of ESG initiatives by other SMEs with environmental, governance, and social similarities.

This study has limitations that pave the way for further development.

This study focuses on a single case. Therefore, we suggest extending the effectiveness of the ESG walking-to-talk pathway to include multiple cases. Moreover, the analysis investigates non-profit organizations in the agri-food industry. To test the robustness of the suggested pathway, it would be worthwhile investigating profit organizations in different industries.

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Appendix 1 Financial and Operational Collected Information

	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
<i>Sales Revenue</i>	€50,312,672	€47,240,242	€47,816,386	€48,321,802	€45,194,170	€48,894,261	€52,960,208	€52,960,208	€45,213,811	€43,714,829	€48,921,565
<i>Permanent employees</i>	38	47	49	50	58	59	56	60	59	57	58
<i>Seasonal employees</i>	not available (n.a.)	26,091 workdays	28,349 workdays	26,301 workdays	25,809 workdays	25,939 workdays	25,017 workdays	25,770 workdays	24,766 workdays	24,948 workdays	26,958 workdays
<i>Debt-to-equity ratio</i>	2.44	2.44	2.30	2.53	2.61	2.58	2.60	2.34	2.23	2.23	2.25
<i>Members Interest-bearing loans</i>	n.a.	€9,064,636	€9,893,631	€9,548,999	€8,797,422	€8,744,107	€8,054,382	€8,176,634	€7,936,641	€7,567,707	€7,813,913
<i>Net Equity</i>	€19,940,186	€19,967,504	€20,821,642	€20,320,471	€20,167,093	€20,580,945	€20,219,155	€20,300,735	€20,332,017	€20,293,906	€20,811,629
<i>Bottling capacity</i>	n.a.	22,000,000	24,000,000	27,000,000	27,000,000	28,000,000	28,000,000	28,000,000	28,000,000	28,000,000	30,000,000
<i>Production capacity</i>	n.a.	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q	650,000 q
<i>Changes in fixed assets</i>	€3,328,784	€3,198,775	€3,165,566	€5,675,023	€2,791,647	€1,854,280	€3,873,356	€304,248	€3,338,139	n.a.	n.a.
<i>Vine grower members</i>	2,104	2074	2133	2119	2047	2,022	1,995	1,961	1,946	1,934	1,950
<i>Hectares destined for vineyards</i>	n.a.	5,430	5,479	5,307	5,394	5,349	5,232	5,027	4,835	4,821	5,181
<i>Quintals of collected grapes</i>	412,127	431,496	559,823	431,747	512,606	533,390	407,849	457,987	369,462	363,972	n.a.
<i>Average price per quintal</i>	€ 46	€ 47	€ 38	€ 41	€ 36	€ 36	€ 43	€ 38	€ 41	n.a.	n.a.

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SUSTAINABILITY REPORTING PRACTICES IN SMES. A SYSTEMATIC STUDY AND FUTURE AVENUES

Daniela Cicchini
Sapienza University of Rome
daniela.cicchini@uniroma1.it

Maria Luisa Cotana
University of Perugia
marialuisa.cotana@dottorandi.unipg.it

Maria Rita Filocamo
University of Naples Federico II
mariarita.filocamo@unina.it

Rubina Michela Galeotti
Roma Tre University
rubinamichela.galeotti@uniroma3.it

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Abstract

Purpose. The aim of the research is to analyse the current state of the art of the debate on sustainability reporting practices tailored specifically for SMEs.

Design/methodology/approach. We applied a systematic literature analysis using Scopus and Web of Science as leading databases in searching studies. The initial sample was composed of 85 articles. After the screening process, we selected a final sample of 33 papers that we investigated under the lens of Alvesson and Deetz (2000) providing insights, criticisms and transformative redefinition.

Findings. We retrieved three research areas: (i) IR and SMEs; (ii) CSR reporting and SMEs; (iii) SDGs reporting, circular economy and SMEs. Our results highlight the pros and cons of the adoption of these sustainability reporting models by SMEs, offering critical issues and future avenues.

Practical and Social Implications. This study provides both theoretical and practical implications. The theoretical implications refer to its contribution to advancing the research field by providing valuable insights for future investigations. From a practical standpoint, this study can serve as a catalyst for SME managers to embrace sustainability reporting models.

Originality of the study. The originality of this study derives from the first-time to draft what are sustainability reporting practices in SMEs. This paper is directed to academic and practical communities.

1. Introduction

Corporate sustainability practices have been increasing over the decades (Berrone et al., 2013; de Villiers and Alexander, 2014). This urgency is underscored by the latest United Nations climate change report on emissions (UN, 2022), as well as the heightened attention towards green financial instruments in the finance world, which prioritize Environmental, Social, and Governance (ESG) issues (Chiaramonte et al., 2020; Gianfrate and Peri 2019; Zerbib 2019). Furthermore, many governments around the world have mandated the disclosure of non-financial information (Haji et al., 2023). In this context, the promotion of socially responsible small and medium-sized enterprises (SMEs) is becoming increasingly significant (Vives, 2022). Nowadays, not only large companies are called to pay attention to ESG problems. As a result, many regulators are asking SMEs to also disclose their impact on society and the environment in general (Calace, 2014; Del Baldo, 2012).

It is noteworthy that the European Union implemented Directive No. 2014/95 (replaced by Directive 2022/2464/EU), mandating the compulsory integration and disclosure of non-financial data, with a specific emphasis on sustainability reporting, across all European countries. However, this requirement deliberately excluded companies with a workforce below the annual average of 500 employees, making it inapplicable to European SMEs. In December 2022, the new directive on sustainability reporting, the Corporate Sustainability Reporting Directive (CSRD), was published. It stipulates that only listed SMEs are required to disclose sustainability information, while it remains optional for unlisted SMEs, despite being the majority of businesses in Europe.

According to Smith et al. (2022), if considered individually, SMEs have a small and limited economic, social, and environmental impact. However, collectively, their impact far exceeds that of a large enterprise. SMEs have a crucial impact on economic growth and development due to their contributions in areas such as innovation, job creation, entrepreneurial capabilities, and enhancing the competitive position of clusters, regions, and even entire countries (Van Tulder and Da Rosa, 2019).

Nevertheless, information regarding the development of sustainability strategies by SMEs is scarce for several reasons, both internal and external (Girella et al., 2019). Firstly, SMEs are characterized by limited resources and lack the necessary information to implement new reporting practices (Girella et al., 2019; Pan et al., 2023). Conservative organizational governance may further impede the development of sensitivity towards sustainability issues. Externally, the fear of disclosing strategic information to competitors or potential entrants can also discourage engagement in sustainability or integrated reporting practices (Girella et al., 2019). Indeed,

according to Corazza (2019), managers of large firms possess significantly greater tools, resources, and knowledge to implement responsible sustainability strategies compared to SMEs.

Therefore, the motivation behind our research concerns the growing adoption of sustainability practices by SMEs, as also highlighted in the Small Business Special Issue “Connecting environmental, social and governance (ESG) aspects with the creation of value in small and medium-sized enterprises”. The aim is to analyse the current state of the art of the debate on sustainability reporting practices tailored specifically for SMEs. Thus, this paper aims to review the existing literature on Integrated Reporting (IR), Corporate Social Responsibility (CSR) reporting, and Sustainable Development Goals (SDGs) reporting for SMEs.

We adopted a qualitative method through the Systematic Literature Review (SLR) approach (Kraus et al., 2020; Lombardi et al., 2022; Massaro et al., 2016; Petticrew and Roberts, 2008; Tranfield et al., 2003) using Scopus and Web of Science (WoS) databases. The first search returned 85 articles¹. After several refinements, a final sample of 33 articles was obtained. Additionally, we adopted Alvesson and Deetz’s (2000) framework based on three critical management tasks: insight, critique, and transformative redefinition.

We identified three emerging research areas: (i) IR and SMEs; (ii) CSR reporting and SMEs; (iii) SDGs reporting, circular economy (CE), and SMEs. Our results show that the adoption of IR by SMEs depends on the company’s perception of costs and benefits. There are further implications concerning the legislative support that SMEs must have to adopt CSR practices. Additionally, the value of SMEs and the satisfaction of stakeholder interests are increased when reporting on SDGs. These findings offer valuable insights and critical evaluations to practitioners, professionals, and academics, shedding light on the sustainability reporting practices adopted by SMEs. Moreover, they establish a solid foundation for tackling forthcoming challenges through transformative redefinition.

The paper makes several contributions: from a theoretical point of view, being based on an SLR, the in-depth assessment of SMEs in the context of sustainability reporting practices provides an overall map and describes the existing body of literature. The three emerging themes allow us to emphasize the role of SMEs regarding sustainability reporting practices, highlighting current limitations and consequences arising from three distinct ways of approaching sustainability reporting. Moreover, the analysis contributes to the advancement of this research field by outlining insights for

¹ In the initial stage of searching, we decided not to follow any journal classification hierarchy considering that it does not necessarily capture the best research in the field (Barrick et al., 2019; Northcott et al., 2010).

future research. Regarding the practical implications, the results of the SLR could potentially encourage SME managers to explore the best CSR practices within their companies. The originality of this study derives from the first time drafting sustainability reporting practices in SMEs. This paper is directed to academic and practical communities.

The article pursues the following roadmap: after the introduction, Section 2 describes the methodology adopted. Section 3 provides insights and critically examines the literature. Section 4 presents the conclusion, offering implications involving transformative redefinition, discussing limitations and proposing future research areas.

2. Methodology

We used a qualitative method through the Systematic Literature Review approach (Kraus et al., 2020; Lombardi et al., 2022; Massaro et al., 2016; Petticrew and Roberts, 2008; Tranfield et al., 2003). SLR helps to examine and reflect upon the existing academic literature (Massaro et al. 2016) ensuring clarity and consistency (Tranfield et al. 2003). According to Manes Rossi et al. (2020) when aiming to explore a specific topic, an SLR enables for a comprehensive analysis and evaluation of the existing studies surrounding it. The main quality that is claimed of this type of review is the fact that it is based on a reproducible protocol (Boell et al., 2015; Rao et al., 2023; Sengupta et al., 2018).

Similar to previous studies to ensure the rigour and replicability of the analysis, the paper adopted a procedure based on three phases (Kraus et al., 2020; Rao et al., 2023; Sengupta et al., 2018). The analysis is underpinned by Alvesson and Deetz's (2000) three foundational elements of insight, critique, and transformative redefinition. Providing insight entails grasping the fundamental knowledge on a topic and engaging in thoughtful reflection, thereby enabling the observation of aspects that may not be readily observable. Critique refers to the act of questioning or problematizing the prevailing meanings, material structures, and social arrangements (Alvesson and Deetz, 2000). Furthermore, the purpose of transformative re-definition is to fundamentally transform existing thought processes and construct novel insights, fresh approaches to reality, and innovative practices.

The first step identifies why the SLR is needed (Kraus et al., 2020). This method is a useful tool to obtain a good synthesis of what has been already studied and new foundations for further research (Kraus et al., 2020; Snyder, 2019). Then, the process consists of the development of a protocol that outlines the criteria for defining the sample of analysis. It concerns the formulation of the research query, the choice of databases, the exclusion and inclusion criteria and so on (Kraus et al., 2020; Pittaway et al. 2014).

Firstly, the selection of sources to conduct the SLR involved exploring scientific articles from two databases: Scopus and WoS. In WoS, the operator

used was “TS”, enabling the search to be performed exclusively on titles, abstracts, and keywords. On the other hand, for Scopus, the operator applied was “TITLE-ABS-KEY”. Therefore, we identified the most appropriate keywords for our analysis. Keywords were selected also considering the Small Business Special Issue “Connecting environmental, social and governance (ESG) aspects with the creation of value in small and medium-sized enterprises”.

Following several refinements, the selected keywords are: “Integrated report*” OR “Corporate social responsibility report*” OR “CSR report*” OR “Sustainable Development goals report*” OR “SDGs report*” OR “IR” AND “SME*” OR “Small enterprise*” OR “Medium enterprise*” OR “Small sized enterprise*” OR “medium sized enterprise*” OR “Benefit corporation*” OR “Small and medium-size enterprise*” OR “Small-size enterprise*” OR “Medium-size enterprise*” OR “hybrid firm*” OR “smaller firm*” OR “small firm*” OR “medium firm*” OR “small compan*” OR “medium compan*” OR “benefit firm*”. The query employed also the ‘NOT’ Boolean operator to exclude specific keywords, i.e. “industrial revolution*” OR “industrial relation*”, aiming to define the sample and narrow down the analysis. Specifically, studies containing the acronym ‘IR’ were selectively included, focusing on those explicitly referred to title, abstract, and keyword in connection to the integrated report. The research was performed on 13 July 2023 with no time restriction. Additionally, the authors excluded all the documents not available in English.

The initial sample included only articles and reviews, not considering conference papers and working papers due to the unreliability of the “grey literature” (Harrison et al., 2016; Kraus et al., 2020). Moreover, we collected documents belonging to the field “Business, Management and Accounting”. This search returned 64 documents from Scopus and 21 documents from Wos. Next, the observed sample was further refined.

This corpus of 85 articles was carefully reviewed by each author to assess the appropriateness of the articles and determine whether any should be excluded. Before the screening process, two papers were removed from the sample due to the unavailability of the full text. We removed 13 articles that were identified as duplicates from the union of the results from the two databases (i.e. Scopus and WoS). After individually reading the title, abstract and if necessary, the full texts, 37 articles were excluded due to their lack of relevance or only partial alignment with the subject of this SLR. In particular, we excluded from the sample articles that did not cover sustainability reporting practices (i.e. CSR reporting, SDG reporting, or IR) in SMEs. Of the 85 documents only 33 are included in the final sample for review (Tab. 1). The data from these articles, including information about authors, geographic areas and thematic areas, were analysed using the Biblioshiny software (Aria and Cuccurullo, 2017).

Tab. 1 - Sample of analysis

AUTHORS	YEAR	TITLE	SOURCE TITLE
Pigatto G.; Cinquini L.; Tenucci A.; Dumay J.	2023	Serendipity and management accounting change	Meditari Accountancy Research
Pan X.; Chen X.; Sinha P.	2023	Navigating the haze: Environmental performance feedback and CSR report readability	Journal of Business Research
Dawar G.; Polonsky M.J.; Bhatia S.	2023	Responsabilità sociale d'impresa: un'analisi cluster delle imprese manifatturiere in India	Social Responsibility Journal
Qaderi S.A.; Chandren S.; Abdullah Z.	2023	Integrated reporting disclosure in Malaysia: regulations and practice	Journal of Financial Reporting and Accounting
Geoghegan H.J.; Jensen F.W.; Kershaw T.; Codinhoto R.	2022	Innovation realisation for digitalisation within Dutch small architectural practises: State of the art and future needs	Proceedings of Institution of Civil Engineers: Management, Procurement and Law
Elalfy A.; Weber O.; Geobey S.	2021	The Sustainable Development Goals (SDGs): a rising tide lifts all boats? Global reporting implications in a post SDGs world	Journal of Applied Accounting Research
Zhang L.; Shan Y.G.; Chang M.	2021	Can CSR Disclosure Protect Firm Reputation During Financial Restatements?	Journal of Business Ethics
Albitar, K; Al-Shaer, H; Elmarzouky, M	2021	Do assurance and assurance providers enhance COVID-related disclosures in CSR reports? An examination in the UK context	International Journal Of Accounting And Information Management

Rossi A.; Luque-Vílchez M.	2020	The implementation of sustainability reporting in a small and medium enterprise and the emergence of integrated thinking	Meditari Accountancy Research
Scarpellini S.; Marín-Vinuesa L.M.; Aranda-Usón A.; Portillo-Tarragona P.	2020	Dynamic capabilities and environmental accounting for the circular economy in businesses	Sustainability Accounting, Management and Policy Journal
Discua Cruz A.	2020	There is no need to shout to be heard! The paradoxical nature of corporate social responsibility (CSR) reporting in a Latin American family small and medium-sized enterprise (SME)	International Small Business Journal: Researching Entrepreneurship
Dey P.K.	2020	Value relevance of integrated reporting: a study of the Bangladesh banking sector	International Journal of Disclosure and Governance
Gerwanski J.	2020	Managers' incentives and disincentives to engage with integrated reporting or why managers might not adopt integrated reporting: an exploratory study in a nascent setting	Qualitative Research in Accounting and Management
Girella L.; Zambon S.; Rossi P.	2019	Reporting on sustainable development: A comparison of three Italian small and medium-sized enterprises	Corporate Social Responsibility and Environmental Management
Morsing M.; Spence L.J.	2019	Corporate social responsibility (CSR) communication and small and medium sized enterprises: The governmentality dilemma of explicit and implicit CSR communication	Human Relations

Amirrudin M.S.; Abdullah M.; Aris N.A.; Mohammed N.F.	2019	Are SMEs ready for integrated reporting? The Malaysian experience of accountability	International Journal of Financial Research
Dias A.; Rodrigues L.L.; Craig R.; Neves M.E.	2019	Corporate social responsibility disclosure in small and medium-sized entities and large companies	Social Responsibility Journal
Rua O.; França A.; Fernández Ortiz R.	2018	Key drivers of SMEs export performance: the mediating effect of competitive advantage	Journal of Knowledge Management
Del Baldo M.	2017	The implementation of integrating reporting <IR> in SMEs: Insights from a pioneering experience in Italy	Meditari Accountancy Research
Corazza L.	2017	The standardization of down-Streamed Small Business Social Responsibility (SBSR): SMEs and their sustainability reporting practices	Information Resources Management Journal
O'Connor A.; Parcha J.M.; Tulibaski K.L.G.	2017	The Institutionalization of Corporate Social Responsibility Communication: An Intra-Industry Comparison of MNCs' and SMEs' CSR Reports	Management Communication Quarterly
Śmiechowski K.; Lament M.	2017	Impact of Corporate Social Responsibility (CSR) reporting on pro- ecological actions of tanneries	Journal of Cleaner Production
Szczanowicz, J; Saniuk, S	2016	Evaluation and reporting of CSR in SME sector	Management-Poland
Thorne L.; Mahoney L.S.; Manetti G.	2014	Motivations for issuing standalone CSR reports: A survey of Canadian firms	Accounting, Auditing and Accountability Journal

Nardo M.T.; Veltri S.	2014	On the plausibility of an integrated approach to disclose social and intangible issues	Social Responsibility Journal
Chiloane-Tsoka E.; Rasivetshele A.M.	2014	Corporate social responsibility: A toolkit for SMEs efficiency in Tshwane, South Africa	Problems and Perspectives in Management
van Tulder, R; da Rosa, A	2014	Multinationals and small- and medium-sized enterprises (SMEs): a linkages perspective on inclusive development strategies	International Business And Sustainable Development
Galabova L.; McKie L.	2013	"The five fingers of my hand": Human capital and well-being in SMEs	Personnel Review
Ciemleja G.; Lace N.	2011	The model of sustainable performance of small and medium-sized enterprise; [Smulkiuju ir vidutinių įmonių darnios veiklos modelis]	Engineering Economics
Hou J.; Reber B.H.	2011	Dimensions of disclosures: Corporate social responsibility (CSR) reporting by media companies	Public Relations Review
Goetz K.S.	2010	Encouraging sustainable business practices using incentives: A practitioner's view	Management Research Review
Tseng Y.F.; Wu Y.-C.J.; Wu W.-H.; Chen C.-Y.	2010	Exploring corporate social responsibility education: The small and medium-sized enterprise viewpoint	Management Decision
Fassin, Y	2008	SMEs and the fallacy of formalising CSR	Business Ethics-A European Review

Source: authors' elaboration

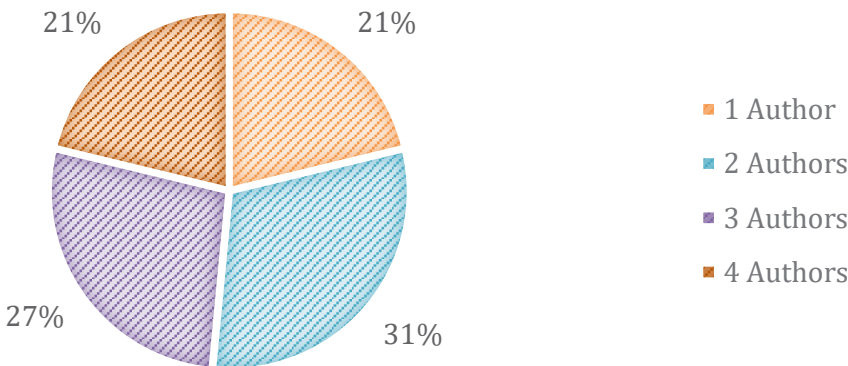
3. Research Insights and Critique

In this section, we provide insights and critique of the literature adhering to the framework proposed by Alvesson and Deetz (2000). Our analysis is focused on the 33 selected articles, with a specific focus on key parameters, including the number of authors, research methodologies employed, the geographical distribution of scientific production, most relevant sources, and thematic mapping.

3.1 Authors

In our analysis of authorship dynamics, we concentrate on discerning the collaborative patterns within the sampled articles. Through the use of Biblioshiny, we identified a total of 81 authors contributing to the 33 articles, translating to an average of 2.45 authors per article (Aria and Cucurullo, 2017). As shown in Fig. 1, only seven articles within our dataset stand as single-authored documents, constituting 21% of the total. The predominant composition involves articles composed by two authors, constituting 10 articles and representing 31% of the sample. Following, there are nine articles collaboratively written by three authors, making up 27% of the dataset. Meanwhile, articles characterized by the collaboration of four co-authors represent 21% of the sample.

Fig. 1 - Number of authors for articles

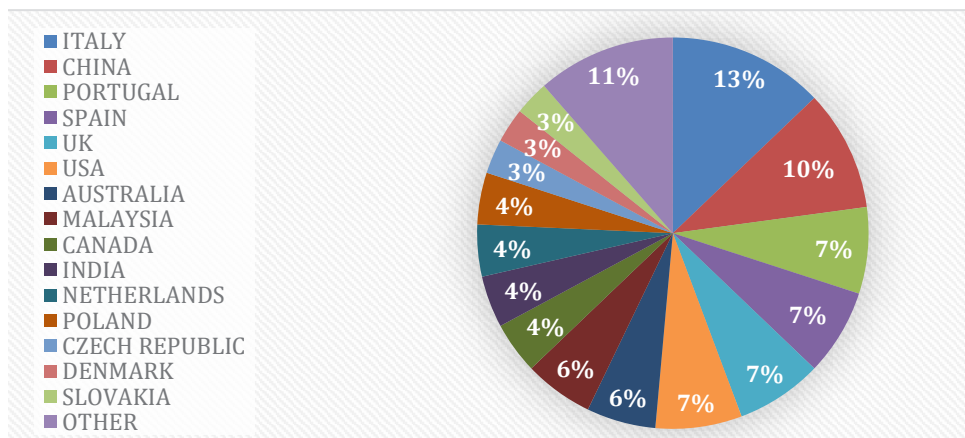


Source: authors' elaboration with the use of Biblioshiny software

3.2 Geographic area

Referring to the geographic area, we identify the main countries of scientific production as reported in Fig. 2. In particular, the highest percentage is represented by Italy (13%), followed by China (10%) with a scientific production of 7 articles. Subsequently, there are four countries with a percentage of 7% each: Portugal, Spain, the UK, and the USA. However, Malaysia and Australia present a scientific production equal to 6%. Canada, India, the Netherlands, and Poland have a scientific production of 3 articles each, amounting to a percentage of 4%. Lastly, the Czech Republic, Denmark, and Slovakia present a percentage of 3% each and a scientific production of 2 articles. The residual category, named 'other', includes countries with a scientific production consisting of only a single article, amounting to a percentage of 11%.

Fig. 2 - Countries' scientific production



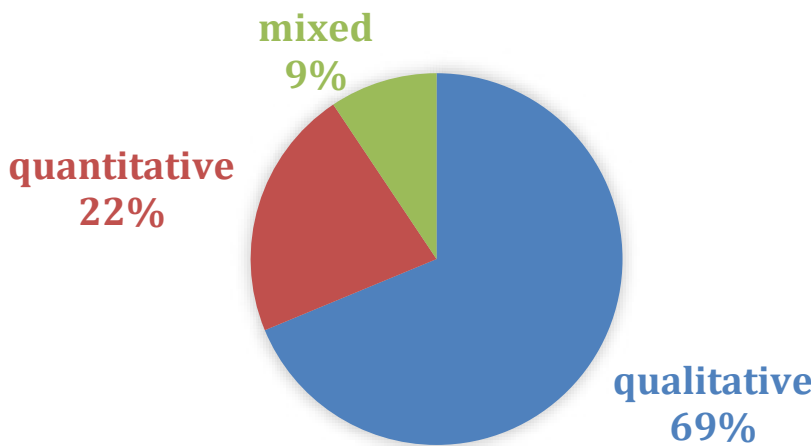
Source: authors' elaboration

3.3 Research method

Analysing the research method employed in the articles, we discovered that qualitative methodologies predominate, constituting 69% of the sampled studies as shown in Fig. 3. In particular, among the diverse qualitative approaches, the predominant method is the case study, employed both in the form of a single case study and in the form of multiple-case study. On the other hand, studies adopting a quantitative method account for 22% of the corpus, while the residual 9% is attributed to three articles using a mixed methodology. Therefore, this qualitative point of view underscores a comprehensive exploration of this subject area.

Nevertheless, quantitative studies can enhance the existing body of literature in the field, particularly in light of the evolving requirements outlined by the CSRD. Integrating diverse methodological approaches can contribute to a more robust and nuanced understanding of the subject. This alignment helps bring the research landscape in line with contemporary regulatory demands.

Fig. 3 - Research Method



Source: authors' elaboration

3.4 Sources

In the context of our dataset comprising 33 articles sourced from 29 journals, only two sources exhibit an article count surpassing 1, specifically totalling 3 articles for each source as illustrated in Tab. 2. These noteworthy journals are “Meditari Accountancy Research” and “Social Responsibility Journal”. The remaining journals each contribute a solitary published article.

Tab. 2 - Most relevant sources

Source	Number of articles	CABS	ANVUR	ABDC	SJR	Scopus coverage from
Meditari accountancy research	3	1	A	A	0,793	2012
Social responsibility journal	3	1	S	B	0,817	2005

Accounting, Auditing and Accountability Journal	1	3	A	A*	1,727	1988
Management Decision	1	2	A	B	1,345	1967
Corporate social responsibility and environment Management	1	1	A	C	2,134	2003

Source: authors' elaboration

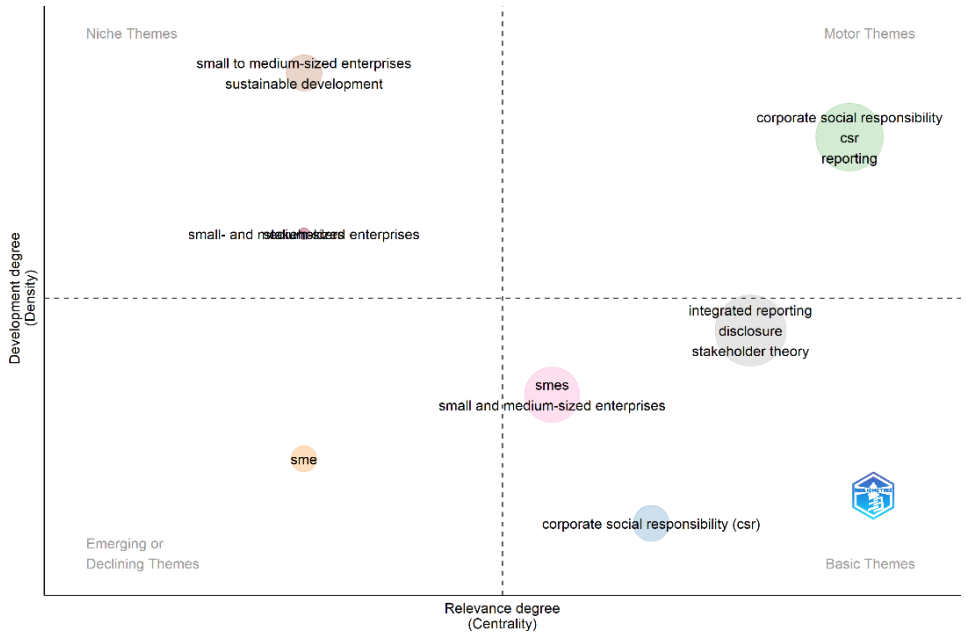
Tab. 2 presents the five most significant sources, detailing the number of published articles for each along with various metrics such as CABS, ANVUR, ABDC, and SJR. The journal boasting the highest Scimago Journal & Country Rank (SJR) is “Corporate Social Responsibility and Environmental Management”, with a score of 2.134, earning it a place in category A of the ANVUR list. Notably, the sole journal categorized as A* in the ABDC list is “Accounting, Auditing, and Accountability Journal”. The earliest journal indexed by Scopus is “Management Decision”, first published in 1967.

From these data, preliminary conclusions can be drawn. Given the prominence of these sources and their respective positions in diverse rankings, the sample’s quality substantiates the viability of conducting a robust systematic literature review. Ultimately, this comprehensive examination will contribute to a deeper understanding of the theme.

3.5 Thematic areas

Using the Biblioshiny software, we conducted a comprehensive analysis of various thematic areas (Aria and Cuccurullo, 2017). As shown in Fig. 4, the upper right quadrant delineates the motor themes, which in our case are represented by the following research areas: corporate social responsibility, csr, and reporting. Conversely, the lower right quadrant illustrates the basic themes, featuring three prominent thematic areas: (i) integrated reporting, disclosure, and stakeholder theory; (ii) CSR; and (iii) SMEs. This quadrant stands out as the most extensive, denoting the prevalence of these foundational topics. Moving to the upper left quadrant, niche themes, such as small and medium-sized enterprises and sustainable development, find representation. These nuanced areas contribute to the diversity of our analytical framework.

Fig. 4 - Thematic map



Source: Biblioshiny software

Following the analysis using Biblioshiny software, manual adjustments were made to refine the thematic map and delineate the prominent areas of investigation. Thus, the subsequent identification includes three specific research areas as reported in Tab. 3: (i) IR and SMEs; (ii) CSR reporting and SMEs; and (iii) SDGs reporting, CE and SMEs.

Tab. 3 - Documents grouped into clusters according to their research area

Research area	Authors	Years	Title	Citations
Research Area 1 - IR and SMEs	Pigatto et al	2023	Serendipity and management accounting change	0
	Qaderi et al.	2021	Integrated reporting disclosure in Malaysia: regulations and practice	4
	Dey	2020	Value relevance of integrated reporting: a study of the Bangladesh banking sector	15
	Gerwanski	2020	Managers' incentives and disincentives to engage with integrated reporting or why managers might not adopt integrated reporting: an exploratory study in a nascent setting	14
	Rossi and Luque-Vílchez	2020	The implementation of sustainability reporting in a small and medium enterprise and the emergence of integrated thinking	11
	Amirrudin et al.	2019	Are SMEs ready for integrated reporting? The Malaysian experience of accountability	4
	Girella et al.	2019	Reporting on sustainable development: A comparison of three Italian small and medium-sized enterprises	45
	Del Baldo	2017	The implementation of integrating reporting <IR> in SMEs: Insights from a pioneering experience in Italy	53

Research Area 2 - CSR reporting and SMEs	Pan et al.	2023	Navigating the haze: Environmental performance feedback and CSR report readability	0
	Dawar et al.	2022	Corporate social responsibility: a cluster analysis of manufacturing firms in India	1
	Zhang et al.	2021	Can CSR Disclosure Protect Firm Reputation During Financial Restatements?	51
	Albiatar et al.	2021	Do assurance and assurance providers enhance COVID-related disclosures in CSR reports? An examination in the UK context	30
	Corazza	2019	The standardization of down-streamed Small Business Social Responsibility (SBSR): SMEs and their sustainability reporting practices	13
	Discua Cruz	2019	There is no need to shout to be heard! The paradoxical nature of corporate social responsibility (CSR) reporting in a Latin American family small and medium-sized enterprise (SME)	22
	Morsing and Spence	2019	Corporate social responsibility (CSR) communication and small and medium sized enterprises: The governmentality dilemma of explicit and implicit CSR communication	56
	Śmiechowski and Lament	2017	Impact of Corporate Social Responsibility (CSR) reporting on pro-ecological actions of tanneries	23
	O'Connor et al.	2017	The Institutionalization of Corporate Social Responsibility Communication: An Intra-Industry Comparison of MNCs' and SMEs' CSR Reports	38
	Szczanowicz and Saniuk	2016	Evaluation and reporting of CSR in SME sector	17
	Van Tulder and Da Rosa	2014	Multinationals and small- and medium-sized enterprises (SMEs): a linkages perspective on inclusive development strategies	3
	Thorne et al	2014	Motivations for issuing standalone CSR reports: A survey of Canadian firms	143
	Chiloane-Tsoka and Rasivetshale	2014	Corporate social responsibility: A toolkit for SMEs efficiency in Tshwane, South Africa	6
	Nardo and Veltri	2013	On the plausibility of an integrated approach to disclose social and intangible issues	11
	Galabova and McKie	2013	"The five fingers of my hand": Human capital and well-being in SMEs	26
	Hou and Reber	2011	Dimensions of disclosures: Corporate social responsibility (CSR) reporting by media companies	79
	Ciemleja and Lace	2011	The model of sustainable performance of small and medium-sized enterprise	29
	Tzeng et al.	2010	Exploring corporate social responsibility education: The small and medium-sized enterprise viewpoint	22
	Goetz	2010	Encouraging sustainable business practices using incentives: A practitioner's view	15
	Fassin	2008	SMEs and the fallacy of formalising CSR	172

Research Area 3 - SDGs reporting, CE and SMEs	Geoghegan et al.	2022	Innovation realisation for digitalisation within Dutch small architectural practises: State of the art and future needs	2
	Elalfy et al.	2021	The Sustainable Development Goals (SDGs): a rising tide lifts all boats? Global reporting implications in a post SDGs world	44
	Scarpellini et al.	2019	Dynamic capabilities and environmental accounting for the circular economy in businesses	112
	Dias et al.	2018	Corporate social responsibility disclosure in small and medium-sized entities and large companies	50
	Rua et al.	2017	Key drivers of SMEs export performance: the mediating effect of competitive advantage	90

Source: authors' elaboration

3.5.1 IR and SMEs

In this research area, academics explore the adoption of IR by SMEs. The literature has emphasized both the challenges and opportunities associated with implementing IR in the context of SMEs. IR is a useful tool for SMEs to improve transparency and better understand their strengths and weaknesses (Amirrudin et al., 2019). Furthermore, as also underlined by Del Baldo (2017) through a single-case study method, the author points out the benefits derived from IR implementation, such as improving strategic decision-making and risk management, enhancing brand value and reputation, and ultimately increasing employee loyalty and lender trust.

One further benefit of adopting IR is its potential contribution to reducing the cost of capital. IR is also a way for firms to provide a clear picture of themselves. Pigatto et al. (2023) analysed how one small Italian company adopted IR and other management accounting tools (e.g., the Balanced Scorecard) in an Italian SME. The authors used a single-case study to understand why companies choose integrated reporting, developing a “serendipitous drift framework.” The IR analysis brings together financial and non-financial information to show how the company creates value and adheres to market goals, values, and needs, thus serving as a foundational tool for communicating with stakeholders (Pigatto et al., 2023).

Nevertheless, the adoption of IR by SMEs also presents challenges. Del Baldo (2017) argues that the benefits associated with this reporting choice mainly come from participation in NIBR (Italian Business Reporting Network). The author points out the difficulties SMEs face in the reporting process and highlights the threat of applying the IIRC Framework to SMEs. In addition, the over-focus on financial capital providers can restrict the

information needs of other stakeholders. Gerwanski (2020) highlights factors that discourage SMEs from adopting IR, such as lack of interest from stakeholders, the complexity of IR, and the associated reporting costs. Despite the potential benefits for SMEs, particularly in terms of cost savings, as emphasized by Girella et al. (2019), there is still a long way to go for the widespread implementation of IR by SMEs.

Further highlighting in this area of research is the integration of sustainability reporting within SMEs. Rossi and Luque-Vílchez (2020) investigate the process of integrating sustainability reporting into an SME's accounting procedures and protocols. The authors show that this process consists of two stages: "initiating sustainability integration in accounting practices and the first stages of diffusion of SER practices" (Rossi and Luque-Vílchez, 2020, p. 13). They support an integrated approach to CSR disclosure, highlighting the potential contribution of institutional regulatory, normative, and cognitive aspects to this process. Pigatto et al. (2023) also highlight the importance of an integrated approach to sustainable disclosure, which can increase transparency and address resource constraints.

Qaderi et al. (2021) analyse CSR disclosure practices in Malaysia, noting differences between large enterprises and SMEs. While large firms often adopt IR to increase legitimacy, SMEs approach it voluntarily. Similarly, Amirrudin et al. (2019) discuss the potential benefits of IR adoption by SMEs, such as using a single report for financial and non-financial data. Dey (2020) analyses the factors influencing the adoption of IR (i.e., board size, presence of female board members, board independence) and their connection with firm value and liquidity in Bangladesh banking firms, while Gerwanski (2020) examines the perception of IR among German SME managers, identifying barriers such as the absence of stakeholders' interest; the IR's inability to address user requirements due to the length and the complexity; and the lack of resources to address reporting costs. Thus, the discriminant factor identified in combination with the need for a user-friendly version of the IR framework for SMEs may be addressed in the low usability of this reporting tool. The integration of sustainability reporting and the adoption of IR offer SMEs an opportunity to increase transparency and optimize resource use.

In this field of research, several studies explore the Italian context through case study methods (Girella et al., 2019; Rossi and Luque-Vílchez, 2020; Pigatto et al., 2023). While the Italian landscape has been extensively examined with this approach (Del Baldo, 2017; Girella et al., 2019; Pigatto et al., 2023), fewer studies delve into European countries, such as Gerwanski (2020), or non-European countries, such as Qaderi et al. (2021), Dey (2020), and Amirrudin et al. (2019). However, this emphasizes that there is still a considerable path ahead to raise awareness and promote the implementation of IR for SMEs. Hence, it can be useful to explore other coun-

tries, especially European ones, and adopt diverse research methodologies to gain further insights.

3.5.2 CSR reporting and SMEs

To systematize the main research stream, the second area of study involves a comprehensive investigation into CSR reporting practices in SMEs. Szczanowicz and Saniuk (2016) highlight the advantageous market position that SMEs can attain due to their small size and flexible organizational structures, enabling them to promptly undertake socially significant actions. Additionally, as analysed by Fassin (2008), the absence of reporting requirements does not necessarily indicate a lack of responsible behaviour in SMEs. Furthermore, Van Tulder and Da Rosa (2014) underscore how larger companies involve smaller ones in their CSR policies.

Some authors underline how CSR reporting is affected by the size of the companies, showing that SMEs attach less importance to CSR than larger companies (Hou and Reber, 2011; Tzeng et al., 2010). Various elements of CSR reports in SMEs have been explored, such as the preference of large enterprises to publish their CSR report as a standalone document rather than SMEs, because they are more susceptible to external control (Thorne et al., 2014); the benefit of integrating CSR and intangible assets (i.e., intellectual capital) in the Italian context, characterized by a high presence of SMEs (Nardo and Veltri, 2013); and the factors that push small businesses to adopt CSR reports (Goetz, 2010). Corazza (2019) emphasizes that CSR by Italian SMEs is managed more effectively through integrated management systems employing formalized and standardized processes. He finds that the geographical proximity between companies and stakeholders positively contributes to the implementation of CSR.

Scholars analyse CSR in various countries, including India, Gauteng, and China, revealing that the adoption of CSR is influenced by diverse factors such as regulations and education or is concealed behind the intricate readability of the reports (Chiloane-Tsoka and Rasivetshale, 2014; Dawar et al., 2022; Pan et al., 2023). On one hand, Dawar et al. (2022) examined the CSR model for medium-sized manufacturing enterprises, which refers to ISO 26000 and India's National Voluntary CSR Guidelines. The authors appear to underscore the influence of Indian norms in prompting companies to formalize their consideration of CSR. On the other hand, in Gauteng, SMEs are still far behind in CSR (Chiloane-Tsoka and Rasivetshale, 2014). Chiloane-Tsoka and Rasivetshale (2014) suggest there is a need to educate SMEs on the importance of CSR, and this result is closely tied to the context. The lack of awareness and education emerge as the primary obstacles hindering the widespread adoption of CSR. In a sample of Chinese SMEs, Pan et al. (2023) analysed the link between CSR report readability and en-

environmental performance, noting that “firms receiving negative or positive feedback tend to produce reports with low readability” (Pan et al., 2023, p. 1). This management technique, as evident in the less readability of reports, has the potential to deceive stakeholders by creating an impression of favourable and efficient environmental performance while concealing the truth. Thus, this outcome may not be closely tied to the context.

In the context of a family business, Discua Cruz (2019) seeks to gain insights into the dynamics of CSR reporting tensions within the context of a Honduran SME, focusing on their emergence and management. The author explains the factors that can generate tension, i.e., the role of religious intensity in a family context, and influence CSR reporting, emphasizing the critical importance in this context of a standardized normative framework for CSR reporting to become a widespread practice. Zhang et al. (2021) discover that firms enhance their CSR disclosure quality following financial restatements, noting that consistent CSR disclosure mitigates reputational damage. Other scholars have analysed how environmental, health and safety, and philanthropy practices associated with CSR can have benefits for employees and the industry community (O'Connor et al., 2017). Śmiechowski and Lament (2017) underline that although SMEs do not have CSR reporting requirements, it does not mean that they do not take pro-ecological actions.

Academics are also focused on the strategic role of SME managers in using people's attitudes, willingness, and competence to maintain their sustainable competitive advantage (Galabova and McKie, 2013). Ciemleja and Lace (2011) highlight how SMEs can be influenced by the performance measurement system, particularly on sustainable development. Morsing and Spence (2019) analyse the potential role of CSR communication by SME owner-managers which “are embedded in a network of expectations on their CSR engagement, which potentially challenges and forestalls their contribution.” (Morsing and Spence, 2019, p. 1941). Additionally, Albiatar et al. (2021) examined how through CSR reports it's possible to indirectly communicate information to stakeholders.

In this second research area, several critical considerations have emerged. Firstly, some studies highlight that the size dimension of companies is a relevant aspect of CSR reports, taking into account the vulnerability to external controls (Thorne et al., 2014). Academics also stress the necessity of providing incentives to engage SMEs more actively and raise awareness of the importance of CSR reports (Goetz, 2010).

Secondly, the literature on CSR reports and SMEs is predominantly concentrated in developing countries (Chiloane-Tsoka and Rasivetshela, 2014; Dawar et al., 2022; Pan et al., 2023). This concentration of research suggests that cultural factors, such as religious beliefs, and the family business context, can sometimes hinder progress and create tensions (Discua Cruz, 2019). Therefore, it becomes crucial to shift the focus of CSR reporting

analysis towards European SMEs, especially considering the impact of the changes introduced by CSRD. Additionally, the need for an international framework for SMEs is essential to prevent the risk of using CSR reports solely to mask negative results and to maintain transparency (Albaitar et al., 2021; Pan et al., 2023).

Lastly, in this research area, scholars frequently utilize the case study methodology, further confirming its prevalence within the sampled articles (Albiatar et al., 2021; Discua Cruz, 2019). Inizio modulo

In summary, this research area underscores the significance of company size in CSR reporting, the cultural and contextual factors influencing CSR adoption in SMEs, and the necessity for standardized frameworks and international guidelines to ensure transparency and accountability. Moreover, the prevalence of case study methodologies in this research domain further highlights its importance.

3.5.3 SDGs reporting, CE and SMEs

Ultimately, this area of research regarding SDGs reporting, CE, and SMEs is less investigated. Scarpellini et al. (2019) explore the environmental capabilities of firms adopting the CE model. Through the dynamic capabilities theoretical approach, the authors focus on the role of environmental competencies (i.e., environmental management systems, CSR reporting) impacting CE. Then, they state that “this methodological approach provides metrics that allow firms, including SMEs, to measure and report on CE-related activities, and these metrics can be partially applied depending on those practices that have been introduced in each firm” (Scarpellini et al., 2019, p. 1149).

On the other hand, Geoghegan et al. (2022) debate the digitalization for sustainability in SMEs’ construction industry, focusing on environmental aspects and CE. The authors focus on the limited literature on the subject and the importance of digitizing SMEs in light of the recent EU policy for the construction industry. Elalfy et al. (2021) explore the incorporation of SDGs into reporting based on GRI guidelines to emphasize the determinants affecting the adoption of SDGs. The authors show differences in reporting concerning the size of the companies. They argue that “...SMEs report significantly less about the SDGs” (Elalfy et al., 2021, p. 565). Hence, they emphasize the need for additional resources to enhance sustainability reporting for SMEs.

Dias et al. (2018) explore the reporting practices of SMEs and large firms in Portugal, showing a lower reporting frequency. The authors highlight common CSR practices in SMEs, discovering that the practices most extensively investigated concern employees. On the other hand, within the same context, Rua et al. (2017) underscore the crucial significance of intangible resources in fostering sustainable value within SMEs.

Therefore, several crucial issues have come to light. Firstly, a limited number of studies focus on investigating SDG reporting for SMEs (Elalfy et al., 2021). Furthermore, existing research predominantly centres on examining CE-related activities, the impact of environmental aspects, and digitalization (Dias et al., 2018; Geoghegan et al., 2022). Given the restricted exploration of the topic and the overall underutilization of sustainable reporting tools by SMEs, it may be more straightforward for them to initially embrace an SDGs report (Elalfy et al., 2021; Scarpellini et al., 2019). This approach holds the potential to bolster stakeholder engagement and effectively communicate their pro-ecological initiatives. In systematizing the main outcome of this research area, it becomes apparent that there is a notable gap in the investigation of SDGs reporting for SMEs compared to other aspects such as CE practices and digitalization for sustainability.

4. Transformative redefinition, conclusions, limitations and future avenues

The literature review provides insights and critique into the adoption and practices of sustainability reporting in the context of SMEs concerning IR, CSR, and SDGs reporting. This section is divided into two parts following the framework of Alvesson and Deetz (2000). The first part summarizes the “Insight and Critique”. The second is related to the “Transformative Redefinition” of the emerging knowledge to guide future research efforts.

The main insights in the previous section can be summarized in three areas. The first area concerns the adoption of IR by SMEs. IR, as extensively highlighted by Del Baldo (2017), has many internal and external benefits for SMEs. The adoption of IR is strongly influenced by factors such as board size, company size, and the industry in which the SME operates (Dey, 2020). Indeed, larger companies frequently adopt IR disclosure (Qaderi et al., 2021).

Managers also have a strong impact on whether or not IR is adopted. Among the elements Gerwanski (2020) highlighted is the lack of resources to address reporting costs. On the other hand, IRs are a viable option over other models, even given the limited resources that SMEs have at their disposal (Rossi and Luque-Vílchez, 2020). SMEs use various reporting models, including sustainability reports and IRs, as noted by Girella et al. (2019). There is a significant amount of differentiation among these models. Thus, the first implication concerns the adoption of IR by small and medium-sized enterprises: SMEs’ adoption of IR is moderated by firms’ perceived costs/benefits.

The second area concerns CSR reporting practices in SMEs. Firm size has a key role. On the one hand, SMEs’ small size provides an advantage

given by: “direct contact with the local community, so they can respond quickly by taking socially meaningful actions, thus building positive relationships and a competitive advantage” (Szczanowicz and Saniuk, 2016, p. 106). On the other hand, partly due to the absence of reporting requirements, some small firms might consider CSR less important than larger firms (Hou and Reber, 2011; Tzeng et al., 2010).

The geographical context where firms operate and the role of the SME managers are crucial for corporate reporting regardless of legislative obligations. Despite the absence of reporting requirements, some SMEs have adopted CSR reporting practices and voluntary guidelines, as experienced, e.g., in Italy and India (Corazza, 2019; Dawar et al., 2022). However, in several developing countries, including South Africa, a “nightmare” scenario is evident in the context of CSR, primarily due to the perceived costs associated with its implementation (Chiloane-Tsoka and Rasivetshale, 2014, p.1). The second implication relates to CSR reporting practice by SMEs: SMEs, regardless of size, must be supported by the legislature through a standardized regulatory framework to adopt CSR practices and reports.

The third area concerns SDGs reporting, CE and SMEs. SMEs disclose the SDGs much less; the use of the SDGs in reporting is related to size, type of organization, industry sector, international standards, and GRI reporting characteristics (Elalfy et al., 2020). The lack of standardized regulations and the difficulty of understanding the benefits of the topic means that implementing sustainable practices (e.g. CE) is postponed to enterprise capacity (Scarpellini et al., 2019). The factor that most affects CSR is the sector it belongs to, especially when considered in consumer proximity (Dias et al., 2018). The last implication relates to the integration of SDGs in SME practice: Reporting on the SDGs increases SMEs’ value and organizational legitimacy with stakeholders.

Thus, the diffusion of CSR within the corporate culture of SMEs has benefits and advantages for both the companies and their stakeholders. On the other hand, legislators must recognize the limitations of CSR adoption by SMEs and act to homogenize regulations and make them more usable for small and medium-sized enterprises. There is a need for cultural, legislative, and policy support and a thorough study of the European context because of the new CSRD reform that will involve SMEs over time.

This paper contributes to the existing literature and poses questions for future research, furthering the academic literature by providing an overview of sustainable reporting practices in the context of the SME literature. This leads to a “redefinition of practice development of critical knowledge and relevant managerial practices that enable change and provide skills for new ways of operating” (Alvesson and Deetz, 2000, p. 19), translating the literature review into the formulation of “normative arguments about which future research avenues and questions may have potential implications for practice, educa-

tion, policy and/or regulation.” (Massaro et al., 2016, p. 776). Accordingly, we have identified crucial aspects of this transformative redefinition based on findings that emphasize the future of sustainability reporting practices specifically tailored to SMEs. Potential future directions that we believe will be important for sustainable reporting research in the SME context are represented in Tab. 4.

Tab. 4 - Future research questions in SMEs

Topics for future research	Research questions	Future Directions	Key articles
IR trends	<p>Are there any cost advantages for SMEs implementing IR?</p> <p>How do SMEs develop and implement effective strategies to integrate financial and non-financial information in their reports, aligning with IR principles?</p> <p>What are the best practices in the SME sector for implementing the IR Framework?</p> <p>What specific challenges and issues do SMEs face in IR, and how can these be better understood through comprehensive surveys incorporating SMEs' opinions?</p> <p>How can integrated reports cater specifically to the resource constraints and reporting capacities of SMEs in diverse European regions?</p>	<p>SMEs' challenges in adopting IR underscore the gap between theoretical frameworks and practical implementation. Future research may evolve pragmatic and resource-efficient models tailored to SMEs, considering their constraints and unique features.</p>	<p>Pigatto et al., 2023;</p> <p>Qaderi et al., 2021;</p> <p>Dey 2020;</p> <p>Gerwanski 2020;</p> <p>Rossi and Luque-Vílchez, 2020;</p> <p>Amirrudin et al., 2019;</p> <p>Girella et al., 2019;</p> <p>Del Baldo 2017</p>

CSR reporting	<p>How do cultural factors impact CSR reporting practices in SMEs?</p> <p>What are the differences in CSR reporting practices between SMEs in developed and developing countries?</p> <p>How do CSR reporting dynamics evolve SMEs?</p> <p>How do SMEs integrate CSR into their performance measurement systems?</p> <p>Can technology and digitalization help European SMEs improve their CSR disclosure despite having fewer resources?</p> <p>What are the specific barriers preventing or facilitating CSR reporting in European SMEs?</p>	<p>The varying impact of CSR reporting in different countries and company sizes indicates the need for context-sensitive research. Future studies could focus on how different cultural, economic, and regulatory contexts influence CSR practices and strategies, particularly in SMEs.</p>	<p>Pan et al., 2023; Dawar et al., 2022; Albaitar et al., 2021; Discua Cruz 2019; Śmiechowski and Lament 2017; Thorne et al., 2014</p>
SDGs reporting and CE	<p>How does digitalization contribute to sustainability efforts in SMEs?</p> <p>How does the adoption of SDGs reporting by SMEs influence stakeholder engagement?</p> <p>What are the key determinants influencing the adoption of SDGs in reporting among SMEs?</p> <p>What are the long-term impacts and outcomes of SMEs adopting SDGs reporting?</p> <p>What metrics and measurement approaches can be developed to assess the adoption and impact of circular economy practices in SMEs?</p>	<p>The literature on SDGs and circular economy aspects in SMEs appears relatively restricted. Future research can explore how these topics can be integrated effectively and carried over into SMEs, potentially leading to innovative practices that contribute to sustainable development.</p>	<p>Geoghegan et al., 2022; Elalfy et al., 2021; Scarpellini et al., 2019; Dias et al., 2018; Rua et al., 2017</p>

Source: authors' elaboration.

The theoretical contribution of this study is to outline the current state of research on SME sustainability reporting. In the analysis, the main gaps and weaknesses of the studies reviewed have emerged, with the hope that future

research can fill these gaps and address the identified weaknesses, thus contributing to a deeper relevance to practice. Additionally, research directions, beyond those presented in Tab. 4, can include:

- Specific European context-focused research due to the introduction of new legislation (e.g., CSRD), underscoring the need for more in-depth exploration of the topic and potential generalizations in the European context, identifying potential differences between countries or pinpointing developed best practices. This would contribute to a more targeted understanding of adopted practices by businesses in the European sector, with practical implications for SMEs approaching this topic;
- The predominance of qualitative methodologies, especially case studies, suggests the potential for growth in more quantitative and mixed approaches to provide a more holistic view of sustainability for SMEs. Future research ought to attempt to balance between methodologies to ensure a comprehensive understanding;

The present research has limitations concerning the journals analysed and the databases chosen; the research was conducted only through Scopus and WoS. Both databases are highly reputed and contain a wide range of peer-reviewed journals, but the exploration could be extended further using additional databases. Moreover, SLR is a starting point (Massaro et al., 2016). Indeed, the articles selected were 33, some specific by sector or geographical area, and used both single case study and quantitative methodology. The debate on IR, CSR reporting, and SDGs reporting for SMEs is an ongoing topic that needs to be further investigated by academics.

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EXPLORING SUSTAINABILITY REPORTING IN ITALIAN LISTED SMES

Fabiana Roberto
University of Napoli Federico II
fabiana.roberto@unina.it

Salvatore Principale
Sapienza University of Rome
salvatore.principale@uniroma1.it

Luigi Andrea Carello
Sapienza University of Rome
luigiandrea.carello@uniroma1.it

Paolo Conte
Sapienza University of Rome
paolo.conte@uniroma1.it

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Abstract

Purpose: The Corporate Sustainability Reporting Directive (CSRD) requires European listed small and medium-sized enterprises (SMEs) to report environmental, social, and governance (ESG) information starting from 2028. The research aims to explore the extent of sustainability reporting in Italian listed SMEs and to evaluate the determinants that may have influenced the level of disclosure.

Design/methodology/approach: An OLS regression was conducted on 65 GRI-based sustainability reports of Italian listed SMEs to assess determinants of the level of ESG disclosure.

Findings: The study found that most of the analyzed reports inadequately documented information at the indicator level, with limited improvement in less substantial areas such as social and local community-related disclosures. The findings highlight the need for Italian SMEs to enhance the quality and completeness of their sustainability reporting to meet emerging regulatory requirements and societal expectations. Moreover, the size and sector could be determining factors that influenced the level of disclosure.

Practical and Social Implication: This study contributes to understanding SMEs' sustainability reporting practices within the context of evolving standards and regulations.

1. Introduction

In recent decades, stakeholder demand for companies to demonstrate greater social and environmental responsibility (Carroll and Buchholtz, 2015, Erin et al., 2022) and to disclose sustainability-related information has continued to grow and evolve within the global business community (Folkens and Schneider, 2019; Gray, 2006; Orzes et al., 2020), driven by increased awareness of responsible business behavior and the pursuit of sustainable development principles (Adams et al., 2016; Ottenstein et al., 2022; Stefanescu, 2022) which aim to balance economic growth, environmental protection, and social well-being (Carroll and Shabana, 2010).

The United Nations' 2030 Agenda for Sustainable Development and its associated Sustainable Development Goals (SDGs) emphasize the importance of disclosures regarding ESG activities and policies (Bebbington and Unerman, 2018). This emphasis is crucial for firms to be accountable to their stakeholders and society (Cicchiello et al., 2023).

In this context, there has been a notable increase in corporate practices involving the voluntary and mandatory disclosure of ESG information over the years. On the voluntary front, a range of principles, frameworks, and guidelines has been established to assist companies in reporting ESG information. Among these, the Global Reporting Initiative (GRI) stands out as the most widely accepted and adopted standard globally (Castilla-Polo and Guerrero-Baena, 2023; Larrinaga et al., 2018; IFAC, 2023; KPMG, 2022). On the other hand, recent attention from regulators has been directed towards the topic of sustainability reporting (SR) (La Torre et al., 2018; Lombardi et al., 2022).

Particularly, the European Union (EU) has made significant progress in taking a leading role in this regard compared to other contexts (Esteban-Arrea and Garcia-Torea, 2022).

Examples in the realm of reporting include Directive 2014/95/EU (Non-Financial Reporting Directive) and its recent update, the Corporate Sustainability Reporting Directive (CSRD - Directive 2022/2464/EU). The CSRD broadens the scope of mandatory non-financial reporting by introducing more comprehensive reporting obligations and standardizing SR across the EU. Companies subject to the CSRD will be obligated to report according to European Sustainability Reporting Standards (ESRS). Furthermore, the directive extends the reporting requirements to encompass approximately 50.000 companies, including large non-listed companies and listed SMEs.

Notably, existing literature on SR has primarily focused on large companies, leaving a research gap in the context of SMEs' SR practices. A recent literature review has indeed highlighted this gap and encouraged accounting scholars to address the topic of SR in SMEs (Dinh et al., 2023).

SMEs, constituting the majority of global businesses, play a crucial role in advancing the SDGs (Corazza, 2018; Maglio et al., 2021). Scholars argue that SR can effectively integrate sustainability into SMEs' operations, encouraging the adoption of socially responsible practices over the medium to long-term (Lee et al., 2018).

To address this gap, our study targets Italian-listed SMEs to conduct an empirical investigation. The research aims to assess the extent of sustainability information disclosure in their SR with consideration of the GRI guidelines. Additionally, the study seeks to examine various factors influencing the transparency of ESG information. We performed an OLS regression on 65 SRs that adhere to the GRI Standards. Based on GRI (2016a) elements we developed an index to measure the disclosure level of SRs among Italian listed SMEs.

This research responds to the call for further investigation into SR and SMEs within the framework of current standards and regulations (Bikefe et al., 2020; Ortiz-Martínez and Marín-Hernández, 2020). Our results reveal a generally inadequate level of reporting, with many of the analyzed reports lacking comprehensive documentation at the indicator level.

Based on legitimacy theory, the study provides evidence suggesting the impact of company size and belonging to environmentally sensitive sectors on the ESG transparency of Italian listed SMEs.

This paper's first contribution is to shed light on the practice of Italian listed SMEs voluntarily issuing sustainability reports according to the GRI. By delving into this area, our research offers a different perspective to a field traditionally centered on large companies.

The rest of our paper is organized as follows. Section 2 comprises a literature review, focusing on the regulatory landscape of SR and its importance for SMEs. Section 3 outlines the data and methodology used, introducing the SR Index that we have developed. Section 4 presents and discusses the empirical findings, while Section 5 presents the conclusion, the implications of the research and provides suggestions for future research.

2.Literature Review

2.1 Sustainability reporting regulation: an ongoing process

Companies are increasingly expected to demonstrate increased accountability and transparency to stakeholders concerning their economic, environmental, and social impacts (Erin et al., 2022). Therefore, SR has gained substantial attention in recent years becoming an essential part of corporate sustainability strategies (Stefanescu, 2022). However, despite this emphasis, several studies have highlighted the inadequate transparency of the

disclosed sustainability information over the past two decades, prompting scholars to call for regulatory intervention to enhance SR practices (Korca et al., 2021; Mio et al., 2021; Ottenstein et al., 2022).

Over the years, legislators have increasingly demanded ESG information (Cupertino et al., 2022), resulting in the introduction of different regulations aimed at encouraging companies to integrate sustainability information into their annual reports. In comparison to other regions, the European Union (EU) has demonstrated a strong commitment to sustainability (Schönborn et al., 2019), taking a leading role in SR efforts (Esteban-Arrea and Garcia-Torea, 2022).

In this regard, the EU has developed several guidelines and directives in alignment with the broader legal framework on sustainable finance (Lombardi et al., 2021-2022; Venturelli et al., 2018), thereby supporting the European Green Deal's ambition to achieve climate neutrality by 2050 (EC, 2021; Ortiz-Martínez et al., 2022). The enactment of the DIRECTIVE 2014/95/EU (so called NFRD) in 2014 required large companies and groups, including listed firms and non-listed entities above certain thresholds of assets, turnover, and employees, to disclose non-financial and diversity information in the management report or in a separate document starting from 2017 (García-Benau et al., 2022; Garcia-Torea et al., 2020). Therefore, the NFRD stands as the first supranational regulation mandating companies to adhere to specific criteria for disclosing non-financial information encompassing social, environmental, ethical, and corporate governance aspects through SR (Venturelli et al., 2018; EU, 2014).

Nevertheless, the NFRD still provides companies broad discretion in determining the extent and content of the SR, selecting frameworks, and seeking assurance (Dinh et al., 2023). In response to some limitations of the first version of the NFRD, on 14 December 2022 the European Parliament approved the CSRD (Directive 2022/2464/EU), introducing several new elements aimed at broadening the scope of obligated entities and reducing firms' discretion through specific reporting criteria and standards. In this domain, the European Commission has tasked the European Financial Reporting Advisory Group (EFRAG) with issuing the EU Sustainability Reporting Standards (ESRS) (Aureli et al., 2020; EFRAG, 2021). Furthermore, the European Commission has outlined plans for progressive expansion of obligated organizations by reducing the size thresholds of the previous directive and including SMEs as well (Esteban-Arrea and Garcia-Torea, 2022).

With a focus on SMEs, Europe is advancing sustainability practices and reporting, through a combination of mandatory and voluntary measures, encompassing both listed and non-listed SMEs (EFRAG, 2023). Under the CSRD, listed SMEs are mandated to adopt the ESRS by the calendar year 2027, using data from the financial year 2026. Recognizing the unique characteristics of SMEs, the European Commission plans to adopt delegated

acts within the next year to provide SR standards that are proportionate and relevant to SMEs' capacities, characteristics and the scale and complexity of their operations (EU Directive 2022/2464). Consequently, EFRAG is developing the simplified LSME ESRS as a standalone document, building upon the initial set for large enterprises and adjusting it as necessary.

On the other hand, unlisted SMEs are indirectly affected by the CSRD. Although they are not directly obligated to produce and publish sustainability reports under the CSRD, they may find themselves required to provide specific information to their business partners, particularly if they are part of the value chain of a large company subject to the CSRD's requirements. Notably, the CSRD mandates companies to report on sustainability matters not only within their own operations but also across their entire value chain, and stakeholders such as banks or investors may require them to disclose information about the sustainability of their business and along their value chain (Dinh, et. Al., 2023). As a result, SMEs exempt from reporting obligations under the CSRD have multiple voluntary SR options. In addition to various international standards, they can opt for the simplified ESRS or the voluntary ESRS tailored for SMEs.

2.2 Sustainability reporting for SMEs

In recent years, there has been a growing recognition that SMEs, like other organizations, must not only prioritize short-term economic profits but also consider the environmental and social value they create or destroy (Caputo et al., 2017; Ottenstein et al., 2022). Undoubtedly, SMEs can exert a significant impact on the environment and society through the cumulative effect of their activities (Corazza, 2018), similar to large companies (Morsing and Perrini, 2009; Shields and Shelleman, 2020). For instance, within Europe, SMEs are estimated to account for 60-70% of industrial pollution (OECD, 2018). As a result, the responsible conduct of SMEs, particularly regarding their environmental footprint, is now a critical element in fostering a greener economy and achieving a more sustainable planet (Isensee et al., 2023). Therefore, ensuring the long-term sustainability and growth of SMEs is paramount, given their potential to bolster national economic stability and advance national SD objectives (Das et al., 2020).

Unlike their larger counterparts, SMEs face greater challenges in allocating explicit resources to sustainability due to their limited resources (Trianni et al., 2019) and a lack of awareness and expertise necessary for effective sustainability integration (Trianni et al., 2019). Furthermore, a common trend among SMEs is to prioritize the economic dimensions of sustainability, addressing environmental and social aspects primarily to meet regulatory requirements imposed by stakeholders (Choi and Lee, 2017; Trianni et al., 2019).

Engaging in SR can offer SMEs several advantages, including the de-

velopment of risk management strategies, the enhancement of responsible business practices, and the exploration of new opportunities in the global marketplace. Additionally, SR can facilitate the integration of sustainability into SMEs' operations and encourage them to adopt a long-term perspective (GRI, 2016b). However, existing literature have underlined that SMEs disclosure of sustainability practices is not always straightforward (Lee et al., 2018). Most sustainability management and reporting tools have been tailored for and by large companies, presenting challenges for SMEs in their adoption (Johnson and Schaltegger, 2016).

Moreover, the lack of suitable guidelines and the absence of mandatory SR requirements for SMEs (Dias et al., 2018; Mahoney and Thorne, 2014) may explain the lower levels of reporting observed in these companies compared large counterparts (Lee et al., 2018). Possible reasons for this gap include SMEs limited financial and managerial resources for reporting, their relatively lower visibility in comparison to larger firms (Dienes et al., 2016), the perception that their social and environmental impacts are insignificant (Cantele and Zardini, 2020), minimal external pressure from stakeholders (Scagnelli et al., 2013), or a lack of awareness regarding the benefits of reporting (Revell and Blackburn, 2007).

Despite the growing body of literature on corporate sustainability and SR, there has been a lack of attention on the practice of reporting sustainability-related issues within SMEs (Dinh et al., 2023; Massa et al., 2015). Thus, it is crucial to examine the non-financial information provided by SMEs, particularly in Europe where they constitute the majority of companies (Ortiz-Martínez and Marín-Hernández, 2020), serving as the backbone of member countries' economies (Cicea et al., 2019; EC 2021-2023).

2.2.1 Development of the hypotheses

Accounting scholars employed various theories to explore companies SR, with the stakeholder theory and legitimacy theory being prominent among them (Lombardi et al., 2022).

The legitimacy theory suggests that organizations recognize the importance of aligning their operations with societal and stakeholder expectations to establish and maintain legitimacy (O'Donovan, 2002). Legitimacy, within this framework, refers to the perception that an organization acts fairly and appropriately within society, thereby warranting its existence. This theory emphasizes that organizations must address societal expectations while balancing the pursuit of their objectives and meeting external demands.

In the context of SR, the legitimacy theory suggests that companies are driven to disclose sustainable information to uphold their legitimacy in the view of stakeholders and society (Guthrie and Parker, 1989). A lack of

transparency regarding sustainable practices could jeopardize an organization's legitimacy, thereby impacting public perception and stakeholder trust (Belal et al., 2015).

Several studies suggest that firm size can significantly impact its SR practices. The prevailing consensus in the literature is that larger companies tend to disclose higher quality information and exhibit greater transparency (Karaman et al., 2018). Some authors emphasize that larger companies possess more resources at their disposal compared to smaller ones, making them more inclined to allocate resources towards providing comprehensive information. Furthermore, larger companies may need to satisfy a larger number of stakeholders in terms of information dissemination.

Even among SMEs, dynamics similar to those recognized in the literature for large enterprises may hold proportional significance. A recent study conducted on a sample of manufacturing companies showed that size can be a determinant of sustainability disclosure to a degree comparable to that observed in large companies (Cardoni et al., 2023). Consistent with recent evidence, we hypothesize that larger SMEs may be more transparent regarding ESG issues.

Hp1: There is a positive relationship between Size and ESG information transparency in SMEs

Several studies have underscored the importance of the industry sector regarding the extent and transparency of ESG information (Busco et al., 2019). Some scholars argue that companies directly impacting the environment and society may be more sensitive to these issues. Such organizations encounter substantial pressures from various stakeholder groups due to their operational activities. Drawing on legitimacy theory, these studies suggest that companies respond to significant external pressures by providing more ESG information (Bhatia et al., 2020). SR serve as a strategic tool to manage stakeholder expectations, demonstrate a commitment to sustainable practices, and maintain corporate legitimacy in contexts with high environmental and social exposure. In line with the prevailing view, we argue that environmentally sensitive companies would tend to disclose more ESG information to address external pressures. Therefore, we developed the following hypothesis:

Hp2: There is a positive relationship between Environmental-sensitive industries and ESG information transparency in SMEs

3. Research method

3.1 Sample and data

The study analyzes a sample of listed SMEs, selecting Italy as the study's focal point among various European countries. Within the EU, Italian SMEs hold a prominent position, representing the highest number of such enterprises. Additionally, Italy has demonstrated significant commitment to sustainability and environmental responsibility, making it a relevant choice for investigating SR practices (Rossi and Luque-Vílchez, 2021). Furthermore, Italian SMEs have shown a strong interest in developing and adopting sustainable practices (Del Baldo, 2017). Our study focuses on Italian listed SMEs that voluntarily provide sustainability reports based on GRI standards.

The selection of the company sample was carried out following the steps outlined below. The Aida database by Bureau Van Dijk was employed to identify Italian-listed companies that meet the size requirements of SMEs according to the European legislation (EU recommendation 2003/361). Aida is widely used by scholars in the fields of business and accounting due to its comprehensive coverage of financial data for Italian companies. The output from Aida revealed the presence of 300 listed SMEs. Subsequently, the coders verified which companies had published a sustainability report, resulting in a reduced sample of 72 firms. Among these, companies that had not adopted the GRI standard were excluded. The final sample consists of 65 companies.

Table 1 displays the geographical distribution of the main headquarters of the companies in the sample. The table indicates that, excluding 16 companies situated in Campania and Lazio, the legal headquarters of the remaining 75% of companies are in the central-northern regions of the Country.

Table 1 Geographical location of the sample SMEs

Region	Sample SMEs
Campania	6
Emilia-Romagna	8
Lazio	8
Liguria	2
Lombardia	28
Marche	1
Piemonte	3
Toscana	4

Veneto	5
Total	65

Source: own elaboration

3.2 Methodology

We adopted a quantitative approach, specifically performing an OLS regression, which is a common method in accounting studies. Additionally, to analyze the sustainability reports, we conducted a content analysis (Krippendorff, 2018), a method frequently used by accounting scholars to examine texts or documents, particularly in the context of information disclosure through corporate reports (Lu et al., 2017). Content analysis involves systematically categorizing and interpreting the content of the reports to identify key themes, trends, and patterns related to sustainability practices and disclosures. It enables researchers to gain insights into the companies' ESG performance and their commitment to sustainability initiatives. Through the application of content analysis, the study aims to draw meaningful and objective conclusions from the information presented in the sustainability reports of the selected SMEs.

Before coding the sustainability reports, the coders convened to establish the criteria for the analysis. Once the research protocol was defined, the coders underwent a training period using a sample of companies to minimize potential discrepancies and ensure reliability.

To assess the level of ESG disclosure among SMEs, we developed a disclosure index composed of three sub-indexes concerning the Environment, Governance and Social dimensions of sustainability information.

The methodological approach proposed by Helfaya and Whittington (2019) guided the adoption of the scoring index to assess the extent of the disclosure in SMEs sustainability reports. The construction of these three indicators utilized metrics derived from the GRI. This methodological approach enables a comprehensive evaluation of sustainability disclosures, aligning with established frameworks to facilitate a rigorous and standardized analysis of the reports. Table 2 presents the topics for the three dimensions. Specifically, the E dimension consists of 41 items, the S dimension contains 40 items, and the G dimension has 25 items, resulting in a total of 106 items per company. Each item can take a value of 0 or 1 depending on

the absence or presence of the corresponding GRI indicator in the analysed sustainability reports. The final indicator for each company is derived using the following formula:

$$ESGscore = \sum_{i=0}^{41} E_i + \sum_{i=0}^{40} S_i + \sum_{i=0}^{25} G_i$$

Table 2 ESG Disclosure Measurement Scheme

Environmental (E) (41 items)	Social (S) (40 items)	Governance (G) (25 items)
Material Energy Water Emission Effluents and Waste Environmental Compliance Supplier Environmental Assessment	Employment Labor/Management relation Occupational Health and Safety Training and Education Diversity and Equal Opportunity Local communities Supplier Social Assessment	Governance structure Conflicts of interest/Risk management Stakeholder engagement Remuneration

Source: own elaboration

Table 3 reports the independent and control variables. To evaluate hypotheses 1 and 2 we selected the variables Size (natural logarithm of total assets) and environmentally sensitive (if the company belongs to an environmentally sensitive sector) (Karaman et al., 2018; Cardoni et al., 2023; Peters and Romi, 2013). Some control variables were included in the model based on good practices present in the literature. Specifically, leverage, ROA, ROE, cash and cash equivalents were considered in the model (Cardoni et al., 2023; Qian and Xing, 2018). By accounting for these financial and operational factors, we aim to isolate the relationship between firm size, sector sensitivity to environmental issues, and ESG disclosure.

Leverage, measured as the ratio of debt to equity, is included to account for the financial structure of the firm, as higher leverage may indicate greater financial risk (Tsuruta, 2017; Lu et al., 2017). ROA and ROE are important financial performance indicators that cap-

ture the efficiency of resource utilization and the profitability of the firm, respectively (Venturelli et al., 2021). Based on literature, including these variables allows us to control for variations in financial performance that may influence ESG disclosure practices.

Furthermore, the inclusion of cash and cash equivalents as control variables helps to capture the liquidity position of the firm, which can impact its ability to invest in sustainable practices and meet environmental compliance requirements (Cardoni et al., 2023; Cowling et al., 2020).

Table 3 Description and measurement of the variables

Abb.	Variable	Measure	Reference
ESG	ESG score	Scoring 0-106 items	Own elaboration
Gov	Governance score	0-25 items	Own elaboration
Soc	Social Score	0-40 items	Own elaboration
Env	Environmental score	0-41 items	Own elaboration
Size	Company Size	Natural log of total assets	(Karaman et al., 2018)
Lev	Leverage	Leverage ratio	(Lu et al., 2019)
ROA	Return of Assets	Return on Assets	(Buallay et al., 2020)
ROE	Return on Equity	Return on Equity	(Alvarez, 2012)
Cash	Cash and cash equivalents	Natural logarithm of cash and cash equivalents	(Cardoni et al., 2023)
ESI	Environmentally sensitive sector	1 if the company operates in an environmental sensitive industry, 0 otherwise	(Peters et al., 2013)

4. Results

Table 4 presents the average results for the three dimensions across the entire sample. On average, Italian listed SMEs disclose ESG information at a level of 0.45 (on a scale from 0 to 1). Although this figure cannot be considered positive, it aligns with the findings of previous studies. Due to their size and lack of skills, SMEs face challenges in embarking on a path toward full transparency in sus-

tainability reporting (Trianni et al., 2019).

Analyzing the three dimensions, the results show that Italian listed SMEs reported more information in the S dimension (0.54), followed by the E dimension (on average 0.47), and the G dimension (0.27). Despite the minimal difference between the E and G dimensions, this finding contrasts with previous studies that investigated the disclosure of larger companies in the Italian context. Those studies revealed that Italian companies tended to disclose more environmental information than social-related topics (Leopizzi et al., 2020).

Table 4 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ESG	65	.454	.198	.094	.84
Env	65	.473	.263	.025	1
Soc	65	.547	.249	.073	.902
Gov	65	.272	.16	0	.96
Size	65	12.289	1.856	9.162	18.191
Lev	65	117.276	118.401	0	563.505
ROA	65	1.476	5.722	-24.514	11.517
ROE	65	1.826	23.749	-119.986	33.333
Cash	65	9.761	1.929	4.421	13.619
ESI	65	.273	.449	0	1

The table 5 presents the average results for each topic within the three dimensions. Concerning dimension E, except for the Waste topic (average 0.62), there are no significant differences among the remaining topics. SMEs, on average, reported fewer pieces of information regarding Water (0.44), Emission (0.45), and Supplier (0.46). The lower emphasis on emissions is not surprising due to the high costs, both in terms of financial resources and organizational efforts, required to continuously map emissions along the value chain (Lee et al. 2018). Similarly, the mapping of environmental impacts of Suppliers requires resources typically available to larger companies (Meqdadi et al., 2012). Given their wider financial, human, and technological resources, larger companies can allocate more resources and investments to conduct comprehensive assessments of their suppliers' environmental impacts. On the other hand, SMEs often operate with limited resources, both financial and human, and may lack access to the same advanced technologies and knowledge used by larger companies to map supplier environmental impacts. Consequently, they face difficulties in gathering and analyzing the necessary data to evaluate supplier environmental impacts and imple-

ment sustainability measures in the supply chain.

Regarding dimension S, companies, on average, provided more information on Diversity and Equal Opportunity and Employment. The increasing attention towards Diversity is positive, especially considering the SDGs, particularly Goal 5 “Gender equality”. Similar to the E dimension, information disclosed by companies on their suppliers in the S dimension is also lacking. An unexpected finding was the low amount of information on local communities. Italian SMEs are often family-owned businesses, and the literature has highlighted the strong link between family SMEs and the communities in which they operate (Venturelli et al., 2021).

Finally, the G dimension received the least attention from companies. Most of the information focuses on stakeholder engagement (average 0.77), with few or no details on governance structure (0.09), risk management (0.09), and remuneration (0.07). International standards and regulators are increasingly pushing for better governance practices in handling ESG issues. This trend is evident in the CSRD which, unlike the NFRD, mandates reporting on the G dimension. Following the path set by the Task Force on Climate-related Financial Disclosures (TCFD), the IFRS foundation, through standards S1 and S2, also requires information on governance’s attention to ESG topics (e.g., climate-related information in IFRS S2). Furthermore, the lack of information on risk management is a significant issue. Unlike large companies, SMEs may not be aware of the importance of a well-structured risk management system or may be limited in resources to implement risk management systems. Consequently, they often neglect documentation and disclosure of risk management activities.

However, it is crucial to emphasize that risk management is a fundamental component for the sustainability and resilience of SMEs. In an ever-changing economic environment with uncertainties, effective risk management can help SMEs prevent and mitigate potential negative impacts on their businesses, reducing the likelihood of financial or reputational losses. Moreover, proper risk management can provide competitive advantages by enhancing an organization’s ability to navigate market changes and adapt to new opportunities.

Table 5 Average ESG disclosure by sub-dimensions

E		S		G	
Material	0.47	Employment	0.65	Governance structure	0.26

Energy	0.54	Labor/Management re- lation	0.43	Risk management	0.09
Water	0.44	Occupational and Safety	Health 0.62	Stakeholder ment	engage- 0.77
Emission	0.45	Training and Education	0.57	Remuneration	0.071
Waste	0.62	Diversity and Opportunity	Equal 0.68		
Environmental compli- ance	0.56	Local communities	0.35		
Supplier Environmental Assessment	0.46	Supplier Assessment	Social 0.45		

Before conducting the regression analysis, a correlation analysis was performed to assess the goodness of the model. As evident from table 6, no value exceeds 0.7, thus ruling out the presence of multicollinearity phenomena.

Table 6 Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) ESG	1.000									
(2) Gov	0.305	1.000								
(3) Soc	0.896	0.103	1.000							
(4) Env	0.936	0.156	0.763	1.000						
(5) Size	0.501	0.086	0.428	0.502	1.000					
(6) Lev	0.077	-0.148	0.141	0.024	0.121	1.000				
(7) ROA	0.111	0.108	0.130	0.009	0.168	-0.142	1.000			
(8) ROE	0.026	0.036	0.095	-0.074	0.163	-0.071	0.592	1.000		
(9) Cash	0.346	0.020	0.246	0.390	0.856	-0.040	0.273	0.236	1.000	
(10) ESI	0.002	-0.006	0.030	-0.002	-0.013	-0.206	0.232	0.223	-0.053	1.000

Table 7 displays the results of linear regressions. The outcomes highlight the confirmation of Hp1. In all four models, the Size variable positively impacts the three dimensions: environmental ($\beta=0.272$, $p<0.01$), social ($\beta=0.422$, $p<0.01$) and governance ($\beta=0.130$, $p<0.05$). Additionally, in model 4, the variable also has a positive and significant coefficient ($\beta=0.278$, $p<0.01$). Hp2 is partially confirmed.

The significance in all the conducted models underscores the relevance of company size in terms of information transparency. Larger SMEs may

have greater resources and could use them to enhance ESG information transparency (Cardoni et al., 2023). These businesses might leverage their increased resources to position themselves against competitors, thereby benefiting their reputation (Venturelli et al., 2021).

Only in Model 1 the ESI variable is significant and has a positive coefficient ($\beta=0.0365$, $p < 0.05$). As highlighted by other studies, Italian SMEs belonging to environmentally sensitive sectors would also tend to provide more information about environmental issues (Pizzi et al., 2021). These companies, due to the direct impacts on the environment, might use reporting as a tool to legitimize themselves in the eyes of stakeholders.

Table 7 Regression Results

	(1)	(2)	(3)	(4)
	Env	Soc	Gov	Inesg
Size	0.272** (0.006)	0.424** (0.001)	0.130* (0.120)	0.278** (0.001)
Lev	-0.000309 (0.663)	0.000293 (0.751)	-0.000834 (0.175)	-0.0000969 (0.872)
ROA	0.0404 (0.182)	0.0474 (0.229)	0.0325 (0.212)	0.0465 (0.072)
ROE	-0.0130 (0.071)	-0.00784 (0.397)	-0.00569 (0.355)	-0.0108 (0.077)
Cash	-0.0907 (0.302)	-0.251* (0.032)	-0.109 (0.156)	-0.144 (0.056)
ESI	0.0365* (0.844)	0.0122 (0.960)	-0.101 (0.529)	-0.00199 (0.990)
_cons	-3.194*** (0.000)	-3.792*** (0.000)	-1.829*** (0.001)	-2.921*** (0.000)
N	65	65	65	65
R ²	0.278	0.251	0.092	0.281
adj. R ²	0.193	0.163	-0.017	0.197

p-values in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.00$

4.1 Robustness test

Following best practices in the literature, we conducted an additional test to corroborate the results of Table 7. A logistic regression was performed, constructing 4 dependent variables for each model. In all 4 models, the dependent variables take a value of 1 if the value

of the 4 dimensions exceeds the standard deviation, and 0 otherwise. The results of Table 8 appear to confirm Hp1. The coefficients of the Size variable are positive and significant in the first 3 models. Hp2 also seems partially confirmed in this analysis. The coefficients of the ESI variable are significant and positive in Model 1 ($\beta=0.140$, $p < 0.05$) and model 4 ($\beta=0.984$, $p < 0.05$).

Table 8 Logistic regression

	(1)	(2)	(3)	(4)
	Env	Soc	Gov	lnesg
Size	0.103* (0.51)	0.262** (1.30)	0.478* (1.90)	0.238 (0.93)
Lev	-0.000665 (0.26)	0.00501 (1.50)	0.00437 (1.17)	0.0111 (1.58)
ROA	0.394* (2.31)	0.135 (1.21)	0.736** (3.00)	0.506* (2.20)
ROE	-0.0801 (-1.91)	-0.0234 (-0.86)	-0.372** (-3.23)	-0.195* (-2.04)
Cash	-0.176 (-0.07)	0.194 (0.07)	-0.122 (-0.03)	-0.227 (-0.79)
ESI	0.140* (-0.18)	1.237 (1.57)	0.566 (0.65)	0.984* (0.93)
_cons	2.261 (0.89)	-3.234 (-1.33)	-4.057 (-1.38)	-1.800 (-0.57)
N	65	65	65	65
Log-likelihood	-31.52	-38.825	-23.074	-19.90

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5. Implications, conclusions, and Future Research Agenda

Sustainability reporting is becoming increasingly widespread among companies, extending to SMEs as well. The CSRD, compared to the previous NFRD, introduced novelties in terms of types of information and extended the obligations to additional companies, including listed SMEs. This study aims to investigate the state of the

art of SR among Italian listed SMEs and the determinants of their level of transparency on ESG issues. The results highlight the challenges faced by Italian SMEs in undertaking virtuous sustainability disclosure processes. Currently, approximately 75% of listed SMEs do not voluntarily publish sustainability reports, and those that do so exhibit inadequate levels of transparency. Information related to governance is particularly lacking, while contrary to findings from studies on large Italian companies (Venturelli et al., 2021), SMEs on average disclose more information in the S pillar than in the E pillar. In line with legitimacy theory, the paper provides evidence of a positive relationship with the company size and partially of the sector to which it belongs.

The paper has significant theoretical and practical implications. We contribute to studies on SR by providing evidence on the behavior adopted by listed SMEs. The highlighted results on determinants are not dissimilar from the context of large companies. It is worth noting, however, that the analyzed sample consists of companies that tend to align more with large companies rather than small ones. In addition, the results offer valuable evidence on the level of disclosure among Italian listed SMEs and serve as a foundation for future studies. Furthermore, it can contribute to a better understanding of the challenges and opportunities faced by SMEs in pursuing sustainable practices, leading to the development of tailored tools and regulations to meet their specific needs.

The results also have practical implications for preparers and regulators. Preparers can learn from the best practices of Italian SMEs in sustainability reporting and adapt them to their specific needs and resources, thereby enhancing the quality and effectiveness of SR. On the other hand, regulators can benefit from the findings as they reveal that the European Commission's decision to delay obligations for SMEs until 2028 and provide elements of simplification for smaller companies was appropriate. EFRAG's task should now be to provide guidelines suitable for SMEs' specificities and serve as a useful support tool to enhance corporate transparency.

The study does have some limitations that future research could address. The analysis only examines disclosure for a single year; future studies could observe and measure the phenomenon over multiple years. Our study does not account for potential impacts on SMEs involved in supply relationships with companies directly affected by the CSRD. Future studies could delve into this aspect for a more comprehensive understanding.

Additionally, the study focuses exclusively on Italian listed SMEs; future research could explore the topic in other contexts to gain insights in different settings. In this regard, a comparative analysis across regions could be of interest. Finally, further studies could investigate the determinants of the level of transparency of SMEs.

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DIGITAL-BASED CRITICAL SUCCESS FACTORS IN THE ITALIAN HOSPITALITY BUSINESS

Giacomo Del Chiappa

University of Sassari
gdelchiappa@uniss.it

Md Salamun Rashidin

University of Sassari
m.rashidin@phd.uniss.it

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Abstract

Purpose: Small and medium enterprises (SMEs) are the backbone of the economies of many countries around the world. In recent years, the debate around the digital transformation of the European tourism industry has gained huge attention from both academia and industry.

Approach: Despite their importance, there is still a dearth of research devoted to analysing the digital-based critical success factors (DCSFs) for the successful operation of small-scale hotel businesses and comparing them with those of larger hotels. This study aims to deepen the scientific debate around this somewhat overlooked research area by presenting and discussing the results of an empirical study conducted on a sample of 367 Italian hotel businesses.

Finding: Results of exploratory factor analysis indicate that the main DCSFs are "internet and social media", "virtual reality", "robots", and "artificial intelligence in data analytics". Moreover, a series of ANOVA independent t-tests reveals that significant differences exist in the hotel managers' and owners' views about DCSFs based on the hotel size (SMEs versus large hotels) and their level of education and work experience.

Implications: Contributions to the current body of knowledge and managerial implications are discussed, and suggestions for further research are derived.

1. Introduction

The tourism industry is highly fragmented, being characterised by many SMEs (Dredge, 2006). Italy is unquestionably one of the many nations in the world where small tourism operators constitute the foundation of the economy (Avcikurt, Altay & Oguzhan Ilban, 2011; Coles, Warren, Borden & Dinan, 2017). According to Morrison, Carlsen, and Weber (2010), SMEs are particularly important for the tourism industry in developing nations, rural areas, and underdeveloped areas (Yeh & Fotiadis, 2014). The engagement of academics in research connected to SMEs in tourism can still be deemed limited, even though the literature on SMEs has greatly evolved over the past few decades (Halla, Assaker & O'Connor, 2013). Particularly, both academia and industry have devoted a lot of attention to the adoption of new technologies (El-Gohary, 2012) and have widely concurred that digital technologies are a key to success in the tourism and hospitality industries (Teodoro, Dinis, Simões & Gomes, 2017; Vladimirov, 2015). The tourism industry in Italy is experiencing an impressive post-pandemic recovery (WTTC, 2023). According to ISTAT, the Italian National Statistics Office, Italy registered 63,427,781 arrivals in 2022, with the tourism sector expected to contribute 195BN euros to the Italian economy in 2023 (WTTC, 2023).

In this scenario, given the crucial role of hotels within the ecosystem of tourism destinations (Inversini, Saul, Balet & Schegg, 2023), deepening our understanding of the critical success factors (CSFs) in the hospitality business is pivotal. CSFs are defined as “the small number of areas in which good results would ensure successful competitive performance for individuals, departments, or organizations” (Bullen & Rockart 1986, p. 385). According to Leidecker and Bruno (1987), CSFs are “those features, conditions, or variables that, when correctly sustained, maintained, or managed, can have a significant impact on the success of a firm competing in a given industry” (p. 333). Critical success factors may be internal or external and may have a positive or negative impact on a business success (Brotherton, 2004; Beaver, 2002). They are based on perceptions and differ from person to person (Lumpkin & Ireland, 1988). Despite the fact that CSFs have been widely analysed in the area of SMEs in several sectors (Haktanir & Harris, 2005), the majority of studies have only been conducted in the United States (Geller, 1985), the United Kingdom (Brotherton & Shaw, 1996), the Netherlands (Bortherton, Heinhuis, Miller & Medema, 2003), Turkey (Avcikurt et al. 2011), and the United Arab Emirates (Ahmad, 2014), with few studies devoted to the hotel sector and no attention given to the Italian hotel context. Even fewer studies have focused on digital-based success factors, which is surprising, given the remarkable growth of technologies 4.0 in recent years (artificial intelligence, robotic, virtual reality, etc.). Numerous studies call the attention of researchers to deeply investigate factors such as

the lack of information and communication technologies (ICTs) adoption, poor use of the internet, and social media marketing, in analysing SME failure (El-Gohary, 2012; Karanasios & Burgess, 2008; Lawason, Alcock, Cooper & Burgess, 2003).

While existing literature tends to widely concur that SMEs and big hotels differ in terms of their marketing and management approaches (Brown & Kaewkitipong, 2009; Lee-Ross & Johns, 1997; Moriaty, Jones, Rowley & Kupiec-Teahan, 2008), it remains unclear whether individuals managing hotels of different sizes differ in terms of their views regarding the CSFs for their particular sector, thus the potential of this study to fill this research gap (Avcikurt et al. 2011). This study was therefore carried out to deepen the scientific debate about this overlooked research area. Specifically, it aims to contribute to the current body of knowledge by answering the following research questions:

RQ1: What are the digital-based CSFs that hotel managers and owners consider necessary for their business to be successful?

RQ2: Do hotel managers and owners' views with respect to digital-based CSFs differ significantly according to hotel size (small, medium, and large)?

RQ3: Do hotel managers and owners' views about digital-based CSFs significantly differ according to their level of education and work experience?

For the purposes of the study, 367 responses from managers operating in the Italian hotel sector were collected in the period September–October 2021; the data was subjected to factor analysis and a series of ANOVA and independent *t*-tests. The research findings are helpful to enhance the scientific understanding of the digital-based CSFs in the hotel sector, and to ascertain whether the subjective characteristics of the hotel managers and owners (level of education and work experience) and their organisation's characteristics (*i.e.*, hotel size) significantly moderate their views. The findings are beneficial to policymakers, destination marketers, hospitality schools, and universities that seek to support the digital transformation of the hotel sector.

2. Literature review

Existing literature provides several definitions of SMEs. According to Atkins and Lowe (1997), 40 different definitions of SMEs have been record-

ed in the literature, and there typically seems to be very little uniformity in the standards used to describe these businesses across different countries (Thomas, Shaw & Page, 2011; Thomas, 2000). The widely used definition of small firms proposed by the European Commission in 1996 that emphasizes the number of employee classifications of micro (0–9), small (10–49), medium (50–249), and large (250) is one of many that Thomas (2000) thoroughly analyses and explains. Regarding the hotel sector, the World Tourism Organization (2000) defines a small hotel as one that normally offers fewer than 50 beds, hires fewer than ten workers, and serves the bottom end of the market. According to Moutinho (1990), and Buhalis (1995), small and medium hotels have fewer than 50 rooms and employ fewer than 10 workers. Yet, according to Ingram, Jamieson, Lynch and Bent (2000) and Ahmad (2015), a small hotel has fewer than 50 rooms, a medium-sized hotel provides 51–100 rooms, and a large hotel offers more than 100 rooms. Other researchers suggest that, when classifying businesses, quantitative indicators (e.g., number of rooms and employees, gross profit, etc.) should be complemented by qualitative, intangible, characteristics (such as ownership structure, business orientation, and motivation) (Jay & Schaper, 2003; Morrison & Conway, 2007). For the purpose of our study, we will use quantitative indicators (*i.e.*, number of rooms), following the definitions provided by Ingram et al. (2000) and Ahmad (2015).

Several studies have been conducted to analyse the CSFs in the hotel sector (Ahmad, 2014; Avchikurt et al. 2011; Putra & Law, 2023; Wang, Wang & Horng, 2015). Typically, owning a website and effectively using social media have been considered important and effective factors in determining success (Cioppi, Curina, Forlani & Pencarelli, 2016; Pencarelli, Cioppi & Forlani, 2015); in fact, the online presence and visibility, for example, was found to influence the hotel occupancy rates significantly and favourably (Teodoro et al. 2017). Marais, Du Plessis & Saayman (2017) identified seven CSFs, namely, home atmosphere, room facilities, other facilities, service, cleanliness, location, and value for money. Putra and Law (2023), and Manthiou and Klaus (2022) suggested that marketing promotion strategies, client relationships, training, innovation strategies, human resource development, hotel operation management, capital expenditures, and property management systems should be considered the CSFs for virtual hotel operators who partner with small- to medium-sized hotels. Yet, Avchikurt et al. (2011) identified efficient use of the internet and social media, service quality, financial performance, and marketing as the CSFs for small hotels. The author also found that hotel managers have different views about CSFs based on their level of education and work experience. The relevance of the internet as a marketing tool for the hotel sector is corroborated by Öğüt and Onur Taş (2012), who found that roughly 80% of hotels advertise their properties online. Similarly, they are consistent with a recent survey con-

ducted by *Internet Week*, which shows that more than two-thirds of travel and hospitality organizations consider the internet a significant competitive weapon in their industry, and almost 60% describe it as a significant tool for attracting new clients (Li, Peng, Jiang & Law, 2017; Li, Wong & Luk, 2006). Internet usage also provides hotels with the opportunity to reduce their dependence on intermediaries, allowing them to become nimbler, more flexible, and more effective in identifying and creating niche-market products (ILO, 2001) and getting in touch with their target markets.

In recent years, all industries, including tourism, hospitality, and culture, have experienced the uprise of the so-called 4.0 technologies (Internet of Things devices, big data analytics, location-based services, artificial intelligence, blockchain, robots, virtual assistants, chatbots, augmented reality, virtual reality, and mixed reality), with all of them having contributed to a shift in the way businesses function and in the way the customer experience can be shaped (Hoyer, Kroschke, Schmitt, Kraume & Shankar 2020; Ivanov, Seyitoğlu & Markova 2020; Stankov & Gretzel, 2020).

The extent to which people will embrace VR and AR has been investigated in several settings (Han, Tom Dieck & Jung, 2019a; Jung, Lee, Chung & Tom Dieck 2018; Vishwakarma, Mukherjee & Datta, 2020). Existing literature considers VR to be a powerful hotel marketing tool (Pestek & Sarvan, 2021) and training platform (Fiala et al., 2022; Rohlíková et al 2021; Velez & Zlateva, 2017). Several studies have analysed how VR, AR, and mixed reality (MR) affect consumers' decision-making and related responses, as well as their role in enriching the consumption experience and advertising efforts (Han, Weber, Bastiaansen, Mitas & Lub, 2019b). For example, in the specific context of the hotel sector, VR has been found to facilitate greater information retrieval, with consumers considering it to be particularly helpful in pre-purchase information gathering (Murphy, Hofacker & Gretzel, 2017). Other studies have found that the use of the virtual hotel experience increases the probability that the customer will book their travel accommodations (Israel, Zerres & Tscheulin, 2019). Additionally, VR advertising has been found to produce better immediate effects than traditional commercials (Leung, Lyu & Bai, 2020). While extensive research has been conducted on consumers' views and attitudes towards VR and AR, less attention has been devoted to investigating the opinions hotel managers hold regarding the extent to which these technologies can be considered as CSFs.

The service sector is not certainly new to automation and roboticization (Wirtz et al., 2018). According to existing literature (Belanche, Casaló, Flavián & Schepers, 2020; Orea-Giner, Fuentes-Moraleda, Villacé-Molinero, Muñoz-Mazón & Calero-Sanz, 2022;), automation increases productivity, service capacity, provides consistent service quality, reduces costs, improves financial results, and increases business competitiveness. Compa-

nies in the tourism and hospitality industries have begun to deploy robots for a variety of jobs, including cleaning, room service, entertaining guests, or informational tasks (Ivanov & Webster, 2019a; Lukanova & Ilieva, 2019). Similarly, hotels are relying - even if to a lesser extent when compared to organizations in other sectors (Ukpabi, Aslam, & Karjaluo 2019) - on chat-bots to plan and implement their service design and to be in touch with their guests (Gursoy & Chi, 2020; Ivanov et al. 2020; Lasek & Jessa, 2013), as well as on artificial intelligence (AI) to manage data analytics (e.g., automating big data analytics, using AI-based revenue management systems to support pricing strategies, etc.) (Brotherton & Mooney, 1992; Smrutirekha, Sahoo & Kark, 2022). A relatively recent study adopting a supply-side perspective (Ivanov et al. 2020) in the hotel sector has reported hotel managers being convinced that robots could be appropriate for certain tasks but not for others, where human employees cannot be replaced. The study also found that certain subjective characteristics of respondents (*i.e.*, age, work experience) and objective characteristics of the business (*i.e.*, star category) play little role in their perceptions of service robots and robots' potential impact on a hotel's business. Additionally, it found the managers of the largest properties to be a bit more sceptical toward the application of robots for some tasks than the managers of smaller hotels. Compared to their counterparts in smaller hotels, the managers of bigger hotels were more concerned about the fact that robots could, in fact, decrease the quality of the service they provide.

3. Methodology

The Italian hospitality sector has been severely impacted by COVID-19, as it has happened in any other part of the world (Del Chiappa, Bregoli & Fotiadis, 2021; Fabiani, Schivardi & Trento, 2005; Godovykh, Baker & Fyall, 2022). According to ISTAT, in 2019 the Italian hotel sector counted a total of 97,798,618 arrivals and 280,937,897 overnight stays, while in 2020 the sector registered 39,026,874 arrivals and 123,266,144 overnight stays.

This said, the Italian overall hotel supply declined by 621 hotels in 2021 when compared to 2020 (Table 1), with the highest decline being registered by hotels with up to 24 rooms (Table 2).

Table 1. Italian hotel sector by number of establishments and rooms

SL	Number of Establishments (2020)	Number of Rooms (2020)	Number of Establishments (2021)	Number of Rooms (2021)
1 star	2,597	33,236	2,398	30,816
2 stars	5,451	90,575	5,110	84,371
3 stars	15,128	460,376	14,837	446,714
4 stars	6,074	388,039	6,217	390,782
5 stars	554	39,036	601	41,224
Hotel residence	2,926	81,496	2,946	79,685
TOTAL	32,730	1,092,758	32,109	1,073,592

Source: Italian National Statistics Office (www.istat.it)

Table 2. Number of hotel establishments by size

SL	2019	2021	Variation 2019-2021
≤24	17,772	17,432	-340
25-99	13,500	13,232	-268
≥100	1,458	1,445	-13
TOTAL	32,730	32,109	621

Source: Italian National Statistics Office (www.istat.it)

As Table 2 shows, the Italian hotel sector is predominantly made up of SMEs (around 95.5%, both in 2019 and 2021). Furthermore, according to Horwath (2022), it is also characterized by a weak presence of chain hotels in the market (3.9%).

3.1 Measurement Scale and Questionnaire Design

For the purposes of the study, the survey instrument was developed according to a two-step structured approach. First, digital-based items were sourced from existing studies devoted to DCSFs in the hotel sector, namely Avcikurt et al. (2011). Second, a group of hotel managers and owners were consulted to verify and validate the survey and to suggest potential integrations and changes to acknowledge the uprising of 4.0 technologies, thus allowing them to adopt a theory-in-use approach (Zaltman, LeMasters & Heffring, 1982). By doing this, a list of 17 different digital-based CSFs was identified. The survey was divided in two parts. In the first part, individuals were asked to provide general information about their sociodemographic (*i.e.*, gender, age, level of education) and professional profile (*i.e.*, organizational position and experience in the hotel sector), as well as the

business they work in (*i.e.*, hotel category, room number). The second part asked participants to assess the importance they give to a list of statements used to identify the 17 different digital-based CSFs; a 5-point Likert scale was used to indicate their answers (1 = not at all important, 5 = extremely important). The original English version was translated into Italian, and then translated back into English (Fotiadis, Yeh & Huan, 2016; Van de Vijver & Tanzer, 2004). Data collection took place in the period September–October 2021. The survey was distributed via email to 5,000 hotels in all 20 regions of Italy. At the end of the data collection, a total of 367 completed questionnaires were returned, thus representing a response rate of 7.34%, which can be considered acceptable given that response rates of less than 10% are considered the norm in SMEs-related data collection (Jay & Schapper, 2003). The data were coded and analysed using SPSS (version 19.0), and then descriptive analysis, factor analysis, and a series of ANOVA analyses and *t*-tests were run for the purposes of the study.

4. Findings

4.1 Characteristics of Respondents and Hotels

Table 3 provide general information about the sample. Most respondents in the sample were male (54.5%). Nearly half (48.4%) were between the ages of 46 and 55, with those between the ages of 36 and 45 coming in second (24.4%). Most respondents (45.4%) had a bachelor’s degree, then a master’s or doctorate (9.8%), high school (3.8%), and other (3.4%).

In terms of employment status, the sample includes general managers (23.9%), midlevel managers (18.2%), hotel owners (51.6%), and others (6.3%). Regarding work experience, 87% of respondents reported having a work experience of five years or more, followed by 8.2% with three to five years of experience and 4.8% with fewer than three years of experience. In addition, the bulk of hotels (50.7%) had three stars, followed by four stars (34%), two stars (9%), five stars (5.2%), and one star (1.1%).

Table 3. Characteristics of the sample

Variable	%	Variable	%
Gender			
Male	54.5	General Manager	23.9
Female	45.5	Mid-level manager	18.2
Age		Other	6.3
18-25	3.6	Experience	

26-35	16.4	< 3 years	4.8
36-45	24.4	3-5 years	8.2
46-55	29.0	> 5 years	87
56-65	21.9	Hotel category	
66 or above	4.7	1 star	1.1
Level of education		2 stars	9.0
Secondary school	3.8	3 stars	50.7
High School	45.4	4 stars	34
University Degree	37.7	5 stars	5.2
Master / PhD	9.8	Hotel size (rooms)	
Other	3.3	< 50 (small)	66.5
Management position		51-100 (mid-size)	23.1
Owner	51.6	101-150 (big)	10.4

Most hotels own fewer than 50 rooms (66.5%), followed by hotels with 51 to 100 rooms (23.1%), and last, hotels with 101 to 150 rooms (10.4%). Table 4 shows the mean value and the standard deviation for each item depicting DCSFs.

Based on the study findings, it appears that the most important DCSFs are the Internet and social media, online review management, and big data analytics. The usage of artificial intelligence (both in revenue management systems and in automating big data analytics) and virtual reality (virtual tours on the official hotel website, in-room virtual tours, and virtual tours at fairs and exhibitions) are just slightly considered relevant for business success (Revfine, 2020). Ultimately, respondents appear to assign little relevance to using virtual reality to train employees or to using chatbots, smart concierges, and service robots to automate certain hotel operations.

Table 4. Critical Success Digital Factors: Mean Importance Ratings and Standard Deviation

Description	M	SD
A1. Accessing customer via internet	4.80	0.511
A2. Internet usage level	4.55	0.667
A3. Degree of internet usage for communication	4.41	0.763
A4. Using websites for promotion	4.21	0.884
A5. Accessing target market directly by e-mail	4.17	0.996
A6. Using social media	4.10	0.893
A7. Managing online comments and reviews	3.89	1.173
A8. Using Big Data analytics to support decision making	3.80	1.017
A9. Using artificial intelligence-based revenue management systems	3.45	1.138
A10. Using artificial intelligence to automatize Big Data analytics	3.35	1.148

A11. Virtual tours to enhance the website's user experience	3.27	1.146
A12. In-room virtual tours to promote tour and activities in the destination	3.26	1.178
A13. Virtual tours to promote the hotel at fairs & exhibitions	3.25	1.180
A14. Using virtual reality to train employees	2.46	1.200
A15. Using chatbot	2.33	1.158
A16. Using smart concierge	2.20	1.158
A17. Robot usage to automatized certain hotel operations	2.13	1.140

All this seems to suggest that hotel managers and owners are far from fully recognizing the role that technology 4.0 might play in making their businesses successful.

Exploratory factor analysis (principal components analysis, – PCA) was conducted to reveal the underlying factors in the data. This procedure allowed us to identify four factors explaining 59.12% of the total variance (Table 5).

The KMO index (Kaiser_Myer_Olkin = 0.875) and Bartlett's test of sphericity (chi-square = 2674.810, p-value <0.0001) confirm that the results are appropriate to explain the data. Cronbach's alpha was then calculated to test the reliability of the extracted factors; all values are 0.7 or higher, thus suggesting that the factors are reliable (Hair, 2010). Two items were eliminated because of their low factor loadings (i.e., < 0.60: Hair, Anderson & Tatham, 1998), namely: "Managing online comments and reviews" and "Using virtual reality to train staff."

"Internet and social media usage" (35.6% of total variance) includes items related to the usage of the internet to get in touch with target markets (i.e., "Accessing Customers Via the Internet," "Internet Usage Level," "Internet Communication Usage," "Using Websites for Promotion," "Accessing Target Market Directly Via E-mail," and "Using Social Media.").

Table 5. Results of Exploratory factor Analysis (EFA)

	Factor Loadings	Eigenvalues	Variance Explained (%)	Cumulated Variance (%)	Cronbach's Alpha
F1 – Internet and social media		5.815	35.61	35.61	0.774
A2. Internet usage level	0.716				
A3. Degree of internet usage for communication	0.709				
A1. Accessing customer via internet	0.674				
A4. Using websites for promotion	0.632				
A6. Using social media	0.432				
A5. Accessing target market directly by e-mail	0.422				
F2 – Virtual reality		2.204	11.04	46.65	0.904
A12. In-room virtual tours usage promote tour and activities in the destination	0.797				
A13. Virtual tours usage to promote the hotel at fairs & exhibitions	0.777				
A11. Virtual tours usage to enhance the website's user experience	0.727				
F3 – (Ro)bots		1.144	5.88	52.53	0.835
A16. Using smart concierge	0.860				
A15. Using chatbot	0.742				
A17. Robot usage to automatized certain hotel operations	0.647				
F4 – Artificial intelligence in data analytics		1.127	6.59	59.12	0.871
A10. Using artificial intelligence to automatize Big Data analytics	0.858				
A8. Using Big Data analytics to support decision making	0.684				
A9. Using artificial intelligence-based revenue management systems	0.676				
KMO: 0.875 - Bartlett test – Chi-squared: 2674.810; p-value: 0.000					

“Virtual reality” (11.04% of the total variance) includes items related to the use of virtual tours as B2C and B2B marketing tools, namely: “Virtual tour usage to enhance the website’s user experience”, “In-room virtual tour usage to promote tours and activities in the destination,” and “Virtual tour usage to promote the hotel at fairs and expositions.”

“(Ro)bots” (5.88% of the total variance) consists of three components: “using smart concierge,” “using chatbots,” and “robot usage to automate certain hotel functions.”

“Artificial intelligence in data analytics” (6.59% of the total variance) consists of three items, namely: “Using big data analytics to support decision making,” “using artificial intelligence to automate big data analytics,” and “using artificial intelligence-based revenue management systems.” However, it is interesting to note that respondents rated (ro)bots as the least relevant factor for business success. This occurs even though AI assistants, smart booking systems, and AI-based customer decision assistance are considered digitally-based key factors for the SME hotel business (Hall, 2009; Ivanov & Webster, 2019b). In fact, using efficient automated information, decision-making support, and an effective management system can help the business increase their market share and client demand (Ivanov et al., 2020; Revfine, 2019), increase customer satisfaction (Javed, Rashidin & Jian, 2021; Samala, Katkam, Bellamkonda & Rodriguez, 2022) and make the business successful.

Echoing existing literature (Brown & Kaewkitipong, 2009; Lee-Ross & Johns, 1997; Lee, Kim, Choi & Lee, 2009), our findings show that hotel managers and owners working in hotels of different sizes have different views about the relevance of DCSFs. Specifically, those working in mid-size and big hotels scored higher than their counterparts for all the items. However, when the data was subjected to an ANOVA test (both for the factor score and the mean value of each item), significant differences based on the hotel size were reported, just regarding the views towards “artificial intelligence in data analytics” ($F=3.257$, $p\text{-value}= 0.040$) and one of its related items, namely, “using artificial intelligence to automate big data analytics (A10 - $F=4.062$, $p\text{-value}= 0.018$) (Table 6).

Table 6. ANOVA by Size

	Small hotels	Mid-size hotels	Big hotels	F	Sig.
F1 – Internet and social media				1.166	0.313
A2. Internet usage level	4.51	4.65	4.55	1.522	0.220
A3. Degree of internet usage for communication	4.38	4.46	4.50	0.634	0.531
A1. Accessing customer via internet	4.77	4.81	4.92	1.406	0.246
A4. Using websites for promotion	4.15	4.36	4.26	1.868	0.156
A6. Using social media	4.07	4.15	4.24	0.765	0.466
A5. Accessing target market directly by e-mail	4.09	4.37	4.16	2.656	0.072
F2 – Virtual reality				1.282	0.279
A12. In-room virtual tours usage promote tour and activities in the destination	3.22	3.23	3.58	1.549	0.214
A13. Virtual tours usage to promote the hotel at fairs & exhibitions	3.18	3.32	3.51	1.523	0.219
A11. Virtual tours usage to enhance the website's user experience	3.27	3.19	3.47	.795	0.452
F3 – (Ro)bots				1.189	0.306
A16. Using smart concierge	2.15	2.37	2.19	1.119	0.328
A15. Using chatbot	2.25	2.47	2.53	1.699	0.184
A17. Robot usage to automatized certain hotel operations	2.04	2.33	2.24	2.178	0.115
F4 – Artificial intelligence in data analytics				3.257	0.040
A10. Using artificial intelligence to automatize Big Data analytics	3.22	3.54	3.66	4.062	0.018
A8. Using Big Data analytics to support decision making	3.72	3.89	4.08	2.621	0.074
A9. Using artificial intelligence-based revenue management systems	3.37	3.57	3.71	2.133	0.120

ANOVA tests were also run to check whether significant differences exist based on the work experience respondents own in the hotel sector (experienced: > 5 years, mid-experienced: 3-5 years, and less experienced: < 3) (table 7).

Results indicate that significant differences exist just for the factor “internet and social media” ($F = 4.468$, $p\text{-value} = 0.005$) and four of its items, namely: degree of internet usage for communication ($F = 4.181$, $p\text{-value} = 0.16$), using websites for promotion ($F = 5.876$, $p\text{-value} = 0.003$), using social media ($F = 5.810$, $p\text{-value} = 0.003$) and accessing the target market directly by email ($F = 3.727$, $p\text{-value} = 0.25$) (Table 7). More specifically, experienced managers and owners scored higher for all the items when compared to their counterparts.

While hotel managers' and owners' views did not differ significantly

regarding (Ro)bots, significant differences were found for one of its items, namely, “using chatbots” ($F = 3.312$, $p\text{-value} = 0.038$). Specifically, experienced managers and owners scored higher ($M=2.78$) than their counterparts ($M=2.70$, $M=2.27$). Overall, these findings confirm that even in the specific context of DCSFs, work experience matters, thus confirming prior findings from studies analyzing CSFs in the hotel sector (Avcikurt et al., 2011; Ngai, Chemg & Ho, 2004; Seyitoğlu & Ivanov, 2021).

Table 7. ANOVA by experience

	Experi- enced	Mid- experi- enced	Less experi- enced	F	Sig.
F1 – Internet and social media				4.468	0.005
A2. Internet usage level	4.67	4.67	4.53	0.900	0.407
A3. Degree of internet usage for communica- tion	4.72	4.70	4.37	4.181	0.016
A1. Accessing customer via internet	4.89	4.93	4.78	1.595	0.204
A4. Using websites for promotion	4.67	4.57	4.15	5.786	0.003
A6. Using social media	4.61	4.43	4.04	5.810	0.003
A5. Accessing target market directly by e-mail	4.33	4.60	4.12	3.727	0.025
F2 – Virtual reality				2.287	0.103
A12. In-room virtual tours usage promote tour and activities in the destination	3.61	3.07	3.26	1.204	0.301
A13. Virtual tours usage to promote the hotel at fairs & exhibitions	3.61	3.27	3.22	0.928	0.396
A11. Virtual tours usage to enhance the web- site’s user experience	3.61	2.93	3.29	2.142	0.119
F3 – (Ro)bots				0.525	0.592
A16. Using smart concierge	2.44	2.10	2.20	0.508	0.602
A15. Using chatbot	2.78	2.70	2.27	3.312	0.038
A17. Robot usage to automatized certain ho- tel operations	2.39	2.00	2.13	0.660	0.518
F4 – Artificial intelligence in data analytics				2.169	0.116
A10. Using artificial intelligence to automa- tize Big Data analytics	3.56	3.66	3.31	1.478	0.229
A8. Using Big Data analytics to support deci- sion making	4.00	4.17	3.75	2.647	0.072

Finally, a series of independent *t*-tests was run to investigate whether significant differences exist based on the level of education of respondents (*i.e.*, “with a university degree” versus “without a university degree”) (table 8).

Results revealed that significant differences exist just regarding “internet and social media” ($t=2.065$, $p\text{-value} = 0.04$) and one of its related items, namely, “accessing customers via the internet” ($t=2.988$, $p\text{-value}= 0.003$).

Table 8. Results of independent t-test by education

	With University	Without University	t	Sig.
F1 – Internet and social media			2.065	0.04
A2. Internet usage level	4.59	4.52	0.982	0.327
A3. Degree of internet usage for communication	4.46	4.37	1.118	0.264
A1. Accessing customer via internet	4.88	4.72	2.988	0.003
A4. Using websites for promotion	4.21	4.21	-0.015	0.988
A6. Using social media	4.07	4.14	-0.754	0.451
A5. Accessing target market directly by e-mail	4.17	4.16	0.108	0.914
F2 – Virtual reality			-3.021	0.003
A12. In-room virtual tours usage to promote tour and activities in the destination	3.11	3.4	-2.407	0.017
A13. Virtual tours usage to promote the hotel at fairs & exhibitions	3.09	3.39	-2.436	0.015
A11. Virtual tours usage to enhance the website’s user experience	3.13	3.41	-2.322	0.021
F3 – (Ro)bots			-1.157	0.248
A16. Using smart concierge	2.07	2.34	-2.204	0.028
A15. Using chatbot	2.33	2.34	-0.06	0.952
A17. Robot usage to automatized certain hotel operations	2.09	2.17	-0.686	0.493
F4 – Artificial intelligence in data analytics			-0.617	0.537
A10. Using artificial intelligence to automatize Big Data analytics	3.25	3.43	-1.491	0.137
A8. Using Big Data analytics to support decision making	3.79	3.8	-0.086	0.932
A9. Using artificial intelligence-based revenue management systems	3.45	3.46	-0.059	0.953

Specifically, respondents with a university degree scored higher on this item. Moreover, significant differences were reported to exist in regard to “Virtual reality” ($t=-3.201$, $p\text{-value}=0.003$) and all its composing items, namely: “in-room virtual tours usage to promote tours and activities in the destination” ($t=-2.407$, $p\text{-value}= 0.017$), “virtual tours usage to promote the hotel at fairs and exhibitions” ($t=-2.436$, $p\text{-value}=0.015$) and “virtual tours usage to enhance the website’s user experience” ($t=-2.322$, $p\text{-value}= 0.021$). Specifically, respondents with a university degree are more convinced about the relevance of using in-room virtual tours to promote

tours and activities in the destination ($M=3.11$) when compared to their counterparts ($M=3.4$). However, respondents with a higher level of education scored lower regarding the items related to the usage of virtual tours to promote the hotel at fairs and exhibitions ($M= 3.39$ *versus* $M=3.09$) and to enhance the website's user experience ($M=3.41$ *versus* $M=3.13$). While hotel managers' and owners' views did not differ significantly regarding "(Ro)bots" as a factor, significant differences were found regarding one of its items, namely, "using smart concierge" ($t= -2.204$, $p\text{-value} = 0.028$). Specifically, respondents with the lowest level of education scored higher ($M=2.34$) than their counterparts ($M=2.07$). These findings confirm that the level of education is a crucial aspect in determining and implementing digital-based CSFs (Chiappetta Jabbour, Mauricio & Jabbour, 2017).

5. Conclusion

The CSF approach is a top-down methodology for planning based on the key information requirements of top management (Hansen & Eringa, 1998). Such an approach has been applied in this study to a sample of 367 hotel managers in Italy. Most of the existing studies devoted to analysing the critical success factors in the hotel sector from a supply-side perspective have been conducted in the US, UK, Asia Pacific region, The Netherlands, and Turkey and have neglected to compare the views of hotel managers working in hotels of different size categories (Martin, 2004; Morrison et al. 2010). This study contributes to the current body of knowledge by presenting and discussing the findings of empirical research conducted on a sample of Italian hotels with the aim of ascertaining whether the subjective characteristics of the hotel managers and owners (level of education and work experience) and the organisational characteristics (*i.e.*, hotel size) can significantly moderate their views towards different digital-based CSFs.

Based on the respondents' assessments, the study findings show that the most important aspects determining hotel success are the Internet and social media, online review management, and big data analytics. The usage of artificial intelligence (both in revenue management systems and in automating big data analytics) and virtual reality (virtual tours on the official hotel website, in-room virtual tours, and virtual tours at fairs and exhibitions) are considered to be slightly relevant for business success. Similarly, little importance is given to virtual reality to train employees, and even less importance is awarded to using chatbots, smart concierges, and service robots to automate certain hotel operations. Hence, the study suggests that hotels suffer from a kind of marketing myopia in recognizing the role that the 4.0 technologies might have for their business success.

Furthermore, the study identified four digital-based critical success fac-

tors, namely: "Internet and social media usage," "Virtual reality," "(Ro) bots," and "Artificial intelligence in data analytics".

While the views of the hotel managers towards the aforementioned DCSFs vary depending on their subjective and organisational characteristics, only a relatively small number of differences were found to be statistically significant differences based on these variables.

Specifically, significant differences based on the hotel size were reported to exist just regarding the views towards "artificial intelligence in data analytics" and one of its related items, namely, "using artificial intelligence to automate big data analytics (Alma Çallı, Çallı, Sarı Çallı & Çallı, 2023). This highlights that hotel managers hold quite similar views toward DCSFs regardless of hotel size, thus somehow contradicting previous studies suggesting that SMEs and big hotels differ in terms of marketing and management (Brown & Kaewkitipong, 2009; Del Chiappa, 2022; Lee-Ross & Johns, 1997). Yet, this study finds that hotel managers are fully aware of the importance of the internet and social media, regardless of the size of the business within which they work (Li et al., 2017); this appears to be in line with previous studies highlighting that hotel size matters somewhat in investing in internet and social media but not to a significant extent (Cioppi et al., 2016; Pencarelli et al., 2015).

Furthermore, these findings somewhat support prior literature (Ivanov et al. 2020), which found that hotel managers' perceptions of robots rarely differ significantly based on the hotel size. Yet, as found in prior studies devoted to non-digital-based critical success factors (Avcikurt et al., 2011; Prakash, 2007), several significant differences were observed among respondents with respect to different levels of education and work experience, with hotel managers having higher education and longer work experience in the sector being more aware of the relevance of DCSFs. This result somewhat echoes prior studies, which found that the work experience of hotel managers significantly moderated their views about the relevance of robotics in their business (Ivanov et al. 2020). It could be assumed that higher levels of education and work experience might also render individuals working within the sector more trained. In this vein, our findings seem to offer further evidence that the adoption of digital technologies and the awareness of their relevance as competitive weapons depend on adoption, and novel technology (robots) depends on the training of personnel (Vladimirov, 2015; Wang et al., 2010).

Theoretical contribution

From a theoretical point of view, our findings deepen the scientific debate on CSFs (Avcikurt et al. 2011), more precisely on DCSFs related to

different types of technologies, explicitly contrasting the views that hotel managers own based on their subjective characteristics (*i.e.*, level of education and work experience) and the size of the business in which they work. In doing so, the study also adds to the existing literature analyzing the influence that the company size might have on marketing and management approaches (Brown & Kaewkitipong, 2009): in this, it shows that the hotel managers' views toward DCSFs are, after all, quite similar regardless of hotel size (Cioppi et al., 2016; Ivanov et al., 2020; Pencarelli et al., 2015). Broadly, the study advances our knowledge into the present state of digital transformation in the hospitality sector (Lam & law, 2019) shedding light on a country (*i.e.*, Italy) that is understudied in this regard. Thus, our findings suggest that it is important that managers realize the importance of information and communication technology and 4.0 technologies, especially certain types, to maintain and increase their market share and business efficiency and success. In particular, our findings indicate that while the digital transformation is widely discussed both in academic research and in society as being relevant for business success across sectors, many of its tools are not yet appreciated (*e.g.*, Busulwa, Pickering & Mao, 2022) by Italian hotel managers as key success factors. Hence, investment in these areas should be a top priority.

Managerial implications

Overall, the study results are also beneficial to policymakers, destination marketers, vocational training centres, hospitality schools, associations, and universities attempting to support the digital transformation of the hotel sector. First, our findings seem to suggest the need for these stakeholders to make a synergetic effort to further create and promote education and training programs, attempting to make actual and prospective hotel managers more aware of the key role that 4.0 technologies play in business success, thus helping to close the gap between research and its practical implementation. For example, although there are some excellent examples, Italian universities need to incorporate 4.0 technologies more actively in their curricula. For example, they might develop a separate Master program on tourism and hospitality 4.0, a master's program in Hospitality Management with a specialization in 4.0 technologies, a stand-alone module taught at undergraduate and master's levels, or a module targeted at practitioners. Furthermore, considering that not all the factors perceived as critical may remain constant over time and space (Avcikurt et al. 2011), our study also suggests that hotel managers' views towards DCSFs must be monitored over time. Since the hotel managers may be discouraged by the perception that the new technologies might be unaffordable, our findings

also suggest an opportunity for policymakers to reduce these financial barriers, whether real or perceived (e.g., by providing financial resources, offering grants, fiscal incentives and credit facilitation, etc). Destination Management Organizations (DMOs) and/or hotel associations might consider the possibility to negotiate the prices of certain technologies (e.g., sentiment analysis tools, dig data analytics and platforms, etc) with suppliers to gain the possibility to offer them at lower and more convenient prices to their hotel associates. Lastly, DMOs, hotel associations, and individual hotels might consider the opportunity to partner with hospitality schools, universities, and technical institutes to create internship opportunities, which would help recruit employees who are highly trained in the use of different types of technologies and who recognize the importance of these tools for competitive advantage.

Limitations and future research directions

Besides its contribution to both the current body of knowledge and practice, the study has several limitations. First, the study is based on a convenience sample and is site-specific (*i.e.*, Italy), thus rendering the findings hardly generalizable. Future studies might attempt to achieve a representative sample by collecting data from different countries to conduct cross-country analyses. Further, the study was conducted during a period somewhat impacted by the COVID pandemic. Considering that the COVID pandemic has been considered an accelerator of digital transformation (António & Rita, 2021), the study could be replicated over time to assess whether the views of the Italian hotel managers and owners have changed over time (Schengennis, 2023). Moreover, this study did not check whether significant differences might exist based on other business characteristics (e.g., budget hotel versus luxury hotel, leisure versus business hotel, hotel culture, life stage of hotels, star category) which, as suggested by extant literature (Avci et al., 2011; Cioppi et al., 2016; Peters & Buhalis, 2013), might moderate the hotel managers' and owners' views towards DCSFs. Similarly, the study did not measure the moderating effect of subjective variables, such as the respondents' familiarity with the different types of technologies; considering such a moderating effect would have also helped to eliminate/reduce the possible bias that the survey might have introduced when asking hotel managers to assess technologies that are to some extent known and already used (e.g., the official website) and those that are still unused and not properly widespread (e.g., robots). Future studies should be conducted to properly incorporate these variables. Finally, this study analysed the perceptions of Italian hotel managers regarding DCSFs but neglected to consider the customers' and employ-

ees' views. A comparative analysis of DBCSFs from supply- and demand-side perspectives could be conducted in the future to ascertain whether a "tuning gap" (external and/or internal) exists in the way hotel managers, owners, employees, and customers perceive the relevance of such DCSFs.

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THE IMPACT OF COWORKING SPACES ON KNOWLEDGE
SHARING, INNOVATION,
AND SUSTAINABILITY FROM THE PERSPECTIVE
OF THE MICRO-CLUSTER MODEL

Xhimi Hysa

POLIS University

xhimi_hysa@universitipolis.edu.al

Esmir Demaj

edemaj@epoka.edu.al

EPOKA University

Deivi Hysa

University of Applied Sciences Mainz

deivi.hysa@students.hs-mainz.de

Savino Santovito

University of Bari Aldo Moro

savino.santovito@uniba.it

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Abstract

Purpose. This study aims to determine the impact of coworking spaces (CWS) on knowledge sharing, innovation, and sustainability. Furthermore, it aims to determine whether Tirana has the necessary infrastructure to implement the micro-cluster model, which provides dynamics like industrial clusters but on a micro-level.

Design/methodology/approach. The data collection methods include semi-structured interviews and in-field observations of the events organized by CWS in Tirana. The qualitative research follows the exploratory design approach.

Findings. The research findings are in line with previous international studies. They show that the impact created by CWS in Tirana in terms of knowledge sharing and innovation is quite positive by encouraging new business ideas and new innovative projects. However, findings show that CWS business model sustainability in Tirana is still unclear and under development. Factors like, for example, homogeneity and diversity in terms of the composition of the members of CWS play an essential role in determining the business sustainability of CWS.

Practical and Social implications. Regarding the implications of CWS in knowledge sharing, innovation, and sustainability, CWS are encouraged to be more selective in terms of the composition of members to ensure the longevity of the positive attributes provided by this new form of working. Therefore, CWS are encouraged to create clustered structures. The background from member to member needs to be complementary rather than too diverse. However, a certain degree of diversity is needed in CWS, which makes the process challenging to find the balance between diversity and homogeneity.

Originality of the study. This study follows a previous one applied in Tirana, but this time it considers the micro-cluster perspective which makes the study unique. Therefore, the research model and the research findings provide this study with a distinctive appeal.

1. Introduction

The phenomenon of coworking spaces (CWS) started around 1995 in Berlin, but today's current model emerged in 2005 in San Francisco. Compared to more developed societies, in developing countries like Albania, coworking remains a new phenomenon. Capdevila (2013) emphasizes that CWS-s create dynamics like clusters in terms of the professional development of the members. Thus, CWS-s encourage knowledge-sharing and innovation. In addition, under the proper conditions, they create a sustainable business model that provides value to society. Cities like Barcelona are seeing results in the professional development of CWS members, by arranging dynamics like cluster formation but at a micro-level. Hence, not focusing on the cluster formation of big international companies, instead of using the same model for developing such CWS-s that are in proximity together, which make possible the creation of professional benefits to its members like knowledge creation, innovation, creativity, and sustainability.

Tirana offers a good environment for the development of such a model, especially due to the closeness that CWS have with each other. Most of CWS-s are in the central area of "Blloku", which is the most vibrant part of the city. The composition of CWS in Tirana comes from professionals in the field of digital marketing, programming, design, freelancers, and self-employed professionals in general.

With regards to Tirana, and similarly to the Western Balkans, the literature at hand currently lacks studies regarding the impact that CWS-s have on knowledge sharing, innovation, and sustainability. Moreover, the micro-cluster model has never been used in the context of Tirana.

Tirana has been declared the European Youth Capital for 2022¹. This reputable award came with the responsibilities of empowering youth organizations where start-ups and CWS play a crucial role. Also, Tirana has been receiving much attention lately from digital nomads, which consider the city as an excellent place to settle for a specified amount of time (Demaj et al., 2021).

This study strives to determine the impact that CWS-s have on knowledge sharing, innovation, and sustainability in the context of Tirana. Furthermore, it aims to determine whether CWS-s in Tirana have the necessary tools to develop the micro-cluster model like developed cities such as Barcelona (Capdevila, 2014). Hence, this research investigates the phenomenon of coworking in Tirana and whether Tirana can implement the micro-cluster model as recommended by Capdevila (2013). Four research questions are developed for this study:

¹For more information: (https://youth.europa.eu/news/tirana-european-youth-capital-2022_en)

- i. How do CWS-s in Tirana affect knowledge sharing, innovation, and sustainability?
- ii. What external and internal factors can accelerate or slow down the increasing trend of new CWS-s in Albania?
- iii. How do internal and outer factors affect the process of a sustainable business model for CWS-s in Tirana?

2. Literature review

Nowadays, western economies rely on industrial clusters to facilitate economic development (Pohulak-Żiołędowska, 2008). Electronics in Silicon Valley, high fashion in Milan, and the banking industry in Frankfurt are just a few examples of clusters worldwide (Rosenfeld, 1997). The business cluster concept was first introduced by the well-known economist Michael Porter in 1990 (Porter, 1990). Porter emphasized that the economic development of the modern economy would be dependent on innovation and competitive advantage instead of the classic factors of production, land, labor, and capital (Porter, 1998). In Europe, the leading economic model is oriented toward clusters (Sternberg & Litzenberger, 2004; GTAI, 2018).

Clusters can be defined as the geographic concentration of companies, distributors, producers, and employees in a particular region. The economics of agglomeration explores the benefits that arise when economic activities are clustered together in a particular geographic area. Clusters and the economics of agglomeration are often studied in the context of regional economics, industrial organization, and economic geography (Tödtling & Trippel, 2005). Scholars like Michael Porter have extensively discussed the competitive advantages that clusters can provide to firms and regions (Porter, 1990). According to Wennberg and Lindqvist (2008), clusters contribute to entrepreneurial initiatives by creating jobs, providing higher wages, and consequently, higher tax payments.

The economic benefits obtained from cluster creation are various. However, most of the research in this field is focused on big international organizations that operate in powerful economies. On the other hand, developing countries and economies are not to be neglected. According to Schmitz & Nadvi (1999), these economies can still develop clusters, but a positive impact is not likely since several factors need to be well-established. Such factors can include the human capital, financial capital, and policies taken by the government to ensure a suitable environment for such development. Hence, countries that lack such resources do not have the assurance that a particular process would provide positive results. Western Balkans is one of these cases facing high rates of migration, lack of financial capital, and very debatable government policies towards foreign investments (The

Aspen Institute Deutschland e.V, 2020). Data from 2022 show that Albania is ranked fourth in the migration of professionals and skilled labor force (Kutuk, 2022; Oberhaus, 2019). Thus, the situation does not look very promising for using the human capital in the case of Albania, which is a significant factor in cluster development.

Capdevila (2013) introduces coworking spaces as an alternative to obtain similar results with the development of clusters. Accordingly, coworking spaces can be theorized as mini clusters, creating similar dynamics at a micro-level. Consequently, a mini cluster can serve as a shared environment in which entrepreneurs, small firms, digital nomads, and freelancers can create a degree of cohesiveness in knowledge co-creation. The term “micro-clusters” is intended here to describe the concentration of small companies, freelancers, and professionals in a cohesive environment. Such collaboration between these professionals leads to higher expertise within a geographic region (Michael, 2007).

The literature on co-working spaces and micro-clusters explores how these spaces contribute to the formation and development of small, specialized business ecosystems. Researchers emphasize the role of co-working environments in fostering micro-clusters —geographically concentrated groups of interconnected businesses, particularly startups and small enterprises (Huggins & Thompson, 2015). Co-working spaces act as catalysts, bringing together diverse professionals, encouraging knowledge exchange, and facilitating collaboration within these micro clusters (Von Hippel, 2018).

Studies suggest that the spatial proximity and shared resources in co-working spaces contribute to the emergence of micro-clusters, promoting innovation and entrepreneurial activities (Bouncken & Reuschl, 2018; Laukkanen & Tura, 2020). The supportive infrastructure provided by co-working environments enhances the networking and synergies among businesses within these micro clusters, leading to increased competitiveness (Huggins et al., 2018).

However, challenges such as competition for resources and potential conflicts among businesses may impact the sustainability of micro-clusters within co-working spaces (Radziwon & Bogers, 2019). 15). Despite these challenges, the literature underscores the significant role of co-working spaces in nurturing micro-clusters, ultimately fostering economic development and innovation in localized contexts.

The concept of CWS is complex, and it affects a variety of fields besides economics, such as urbanism and social sciences Rittel & Webber, 1973); therefore, many theories exist regarding CWS. However, the basis of this study relies principally on economic theories. The first theory this research is based on is the cluster theory which was first developed by Michael Porter (Porter, 1990). This theory emphasizes the role that clusters play in in-

novation creation and competitive advantage acquired from the member companies in a cluster (Kuah, 2002). Like Capdevilla (2013) shows in his work, CWS-s share similar characteristics with clusters. Therefore, the application of clusters theory might be interesting to see the impact of CWS on innovation.

The literature on co-working spaces and innovation highlights their pivotal role in fostering creativity, collaboration, and knowledge exchange among diverse professionals. Scholars argue that the flexible and dynamic nature of co-working environments contributes to an open innovation culture, encouraging idea generation and experimentation (Hysa & Themeli, 2022). Co-working spaces serve as hubs for interdisciplinary interactions, promoting cross-pollination of ideas that can fuel innovative initiatives (Radziwon & Bogers, 2019). Research suggests that the social dynamics within co-working spaces create a conducive environment for serendipitous encounters, leading to the emergence of novel solutions (Spinuzzi, 2012). Additionally, the accessibility of resources, networks, and expertise in co-working settings facilitates the innovation process for startups and entrepreneurs.

Previous research conducted in Netherlands has considered traditional clustering theories to develop CWS-s as micro-clusters of innovation, achieving cooperative attitudes, a sense of community, the foundation of start-ups, and soft competition among co-workers (Cuérel et al., 2019). Another research conducted for Norwegian start-ups has shown that CWS-s foster open innovation, emphasizing again the Capdevilla's (2013) analogy between CWS-s and micro-clusters (Sperindé and Nguyen-Duc, 2020). Desk research performed in Milan showed that location patterns of co-working spaces resemble those of service industries in urban areas, being like the so-called "creative clusters" that have high propensity towards innovation and creative economy (Mariotti et al., 2017; Moriset, 2013). However, challenges such as competition for resources and potential distractions may impact innovation within co-working spaces (Fosstenløyken, 2019). A multiple case study research has shown that the CWS model is more complex, offering at the same time opportunities and threats for both learning and innovation (Marchegiani and Arcese, 2018). Despite these challenges, literature underscores the positive correlation between co-working spaces and innovation, positioning them as catalysts for entrepreneurial creativity and breakthrough ideas.

Despite the current literature that shows several studies which link CWS with innovation, Western Balkans region stands far behind. This is because CWS is a new regional phenomenon. With regards to Tirana (the capital city of Albania), there is only one study that links CWS with open innovation (Hysa and Themeli, 2022), however neglecting the micro-cluster perspective that is core in the present study. Consequently, a first research gap

for the region and especially Tirana is the influence of CWS-s on innovation based on the cluster theory.

Co-working spaces have gained prominence as collaborative environments fostering knowledge sharing among diverse professionals (Bouncken & Reuschl, 2018; Hendriks, 1999). The phenomenon of knowledge sharing can be described as a process through which individuals, organizations, or communities exchange information, expertise, and insights to enhance collective understanding and problem-solving (Wang & Noe, 2010). In an organizational context such as CWS, knowledge sharing involves the voluntary contribution of (inter-) organizational members to share their tacit and explicit knowledge, fostering a collaborative culture that supports innovation and continuous learning (Bock et al., 2005). This view recalls Chester Barnard's systems perspective, where Barnard defines organizations (e.g., CWS-s) as "cooperative systems" (Barnard, 1838). The degree of cooperation has been identified as a significant determinant for knowledge sharing within organizations. Research by Nahapiet and Ghoshal (1998) emphasizes the importance of cooperation, facilitated by trust and social capital, in fostering knowledge sharing. Also, the culture of an organization plays a crucial role. A cooperative organizational culture, one that values collaboration and teamwork, encourages employees to actively engage in knowledge sharing (Cabrera & Cabrera, 2002). Cooperation is not limited to within an organization; inter-organizational cooperation, as highlighted by Inkpen and Tsang (2005), is also vital for knowledge sharing. The latter makes the case for the so called inter-organizational co-working spaces.

At the cornerstone of Cluster theory is the Proximity theory, which notes the importance of "closeness" for an innovative production process (Gertler, 1995). Likewise, this theory can be applied to other aspects, not only in traditional production. An essential trait of CWS is the proximity among members. As human interactions are catalysts for increasing knowledge exchange and knowledge sharing, then, the proximity theory and community theory can be used to measure the impact that interactions between CWS members have on knowledge sharing (Daña et al., 2020; Spinuzzi et al., 2019; Oldenburg, 1999). Scholars emphasize the role of physical proximity and shared workspaces in facilitating spontaneous interactions, leading to knowledge exchange (Parrino, 2015). A recent study conducted in São Paulo has demonstrated how social proximity facilitates knowledge sharing (KS) in CWS-s by building a sense of community and a viable network of communication among members (Nakano et al., 2023). Nonetheless, the authors warn that too much proximity might derail the knowledge exchange due to a flattening of differences between coworkers; thus, the phenomenon of conformity or groupthink might happen.

Research suggests that the sense of community within co-working

spaces promotes informal learning and expertise sharing (Gandini, 2015). Moreover, the flexible and open nature of co-working spaces encourages cross-disciplinary collaboration, enhancing the transfer of tacit knowledge (Spinuzzi, 2012; Wijngaarden et al., 2020). Social interactions, facilitated by the co-working environment, contribute to a rich knowledge ecosystem. Additionally, the technology-infused nature of these spaces supports virtual knowledge sharing, extending collaboration beyond physical boundaries.

Research has also connected CWS, KS, innovation, and creativity under the same framework. Thus, Rese et al. (2020) have shown that for creativity and innovation to happen within CWS it is needed to have a strong attitude towards KS and likewise a sharing behavior. The latter factors (both) are dependent on the level of collaboration orientation that on its side is independent on the agreeableness atmosphere within CWS. Consequently, a lower collaborative orientation, despite other moderating factors, might cause a low KS intention.

However, challenges such as potential knowledge hoarding and competition among members may hinder optimal knowledge sharing in co-working spaces. Despite these challenges, co-working spaces continue to be recognized as dynamic hubs fostering knowledge creation and dissemination among a diverse community of professionals. Again, this perspective is missing in the current body of literature with regards to the Western Balkans area, and especially Albania.

The third perspective is that of sustainability. Co-working spaces have increasingly been examined through the lens of sustainability, acknowledging their potential impact on environmental, social, and economic dimensions. Scholars highlight the role of co-working in fostering sustainable work practices, such as reduced commuting and resource-sharing initiatives (Mariotti et al., 2023). The shared infrastructure of co-working spaces aligns with sustainability goals by optimizing space utilization and minimizing ecological footprints. Here, the environmental dimension of sustainability is coupled with the economic one. The economic perspective of sustainability revolves around the idea that the usage of resources nowadays should be reasonable so we can preserve these resources in the future (Spangenberg, 2005). CWS-s serve this purpose by sharing space and resources, and consequently affecting the organizational dynamics.

From the social sustainability viewpoint, CWS-s, by sharing knowledge and fostering innovation support interaction and engagement of coworkers. In an environment of interorganizational coworking, this means stakeholder engagement.

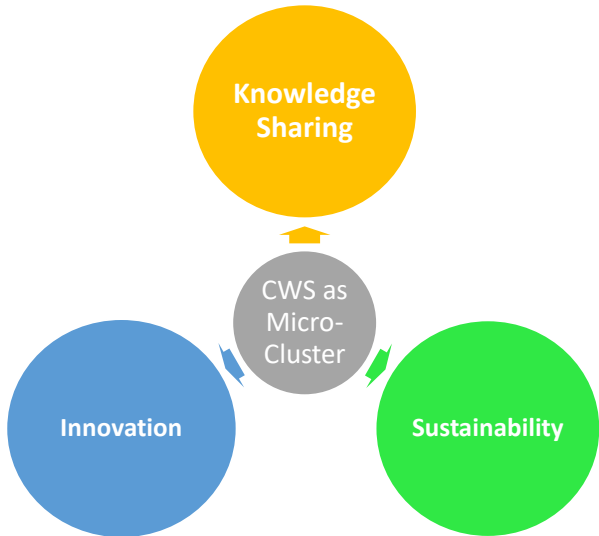
Additionally, research emphasizes the importance of sustainable design in co-working spaces, considering energy efficiency, waste reduction, and eco-friendly materials (Rogers & Yik, 2019). Co-working environments that

incorporate sustainable practices not only contribute to environmental conservation but also attract individuals and organizations with a shared commitment to sustainability values.

However, challenges exist, including the need for more standardized sustainability practices across co-working spaces and addressing potential greenwashing concerns (Kopplin, 2022). Despite these challenges, the literature suggests that co-working spaces, when designed and operated with sustainability in mind, can serve as catalysts for fostering environmentally conscious work practices and community engagement.

Based on the research gaps identified through the analysis of literature, the following conceptual model in figure 1 is designed to represent the influence of CWS-s on innovation, knowledge sharing and sustainability.

Fig. 1: The conceptual model of this study



3. Methodology

Methodologically, this work finds inspiration on Capdevila (2013) – referring to CWS as micro-clusters and analyzing knowledge dynamics in localized communities – and Hysa & Themeli (2022) – regarding the enhancement of knowledge co-creation, resilience, and open innovation while trying to attenuate complexity in CWS-s located in Albania. In one side, we are interested in CWS-s from a micro-cluster perspective, involving knowledge exchange, innovation, and sustainability. On the other side, we aim to explore such dynamics in the Western Balkans area, and particu-

larly Albania, since studies of this genre are almost completely missing.

The study follows an exploratory research approach, searching for qualitative data through semi-structured interviews and in-field observations. The location of this study is Tirana, the capital of Albania and the only city that offers CWS-s in Albania.

The sample size includes 8 CWS-s, which participated in this research, showing a high degree of collaboration and availability. The sample size in this study is not a large one due to the low presence of CWS-s in Tirana, although according to sample size parameters in qualitative research this study exceeds by far the threshold, guaranteeing the data saturation by combining a reasonable number of interviews with natural observations (Dworkin, 2012; Vasileiou et al., 2018). Since the investigated CWS-s were the most available and accessible ones (among other co-working spaces), then the sampling criterion was that of *convenience sampling*, which according to Corbetta (1999, p.352) “is a group of persons [or entities] chosen with the sole criterion that are the most easily accessible”. The CWS-s that participated in this research were: Destil Coworking, Coolab, Dutch Hub, TUMO Tirana, Inno Space Tirana, Hotspot Tirana, Oficina Hub Tirana, and OMA coworking space. In total, 26 respondents participated in the semi-structured interviews. Thus, on average three participants were asked in each of the CWS-s. The educational background was diverse, including professionals from different fields like architecture, consulting, design, programming, and marketing.

Interviews were divided into three main sections (see appendix 1). Each section had the purpose of collecting data regarding CWS and the impact on knowledge sharing, innovation, and sustainability. Each section had between 7 and 9 questions, including sub-questions like background and education. The structure of the questions involved multiple-choice, binary, rating, and open-ended questions.

Another tool used for data collection was the in-field observations. Observations were based on the interaction between CWS members in different events to study participants’ behavior toward each other in a natural environment. The observations were focused on several criteria like the interactions between members, the participation in discussion, and the event’s attendance. Four events were attended, each of these events at a different CWS. Each of these events was different in terms of the purpose it served. The first event was attended at Destil, and it involved a workshop for graphic design. The second event was held at OMA, and it involved a workshop on online marketing. The third event was organized at TUMO Tirana, focusing on computer programming. The final event attended was at Coolab, and it involved open discussions through different successful entrepreneurs. Natural observations served to crosscheck with the data obtained from interviews. For example, one of the interview questions was

related to the organization of events from each CWS and the respective attendance from CWS members. As mentioned above, four events were attended, and this confirms the willingness of CWS-s and their participants to engage in experience sharing. During the observations, moments of collaboration and creativity were captured, aiming expertise development, knowledge co-creation, and innovation. Additionally, the focus on sustainability was almost constant. There were cases in which “sustainability” as a keyword was not mentioned, but indirectly the participants referred to actions and behaviors which recall the sustainable development goals.

4. Findings

The data analysis on the impact of CWS on knowledge sharing, innovation, and sustainability, is performed through deductive thematic analysis (Terry et al., 2017). In interview-based studies, themes emerge after data coding, but in this research, themes have been deductively created (i.e., knowledge sharing, innovation, and sustainability). Therefore, the interview transcripts supported by observation notes were analyzed to find similar patterns directly classified under the pre-established themes.

The impact of CWS on knowledge sharing, innovation, and sustainability, has been evaluated on a scale 1-4 (“low impact”, “average impact”, positive impact, and “very positive impact”. This evaluation is based on the score on each variable being studied. Each participating CWS has been attributed with a letter for privacy reasons (A to H). These letters were assigned randomly to each CWS.

The semi-structured interviews and the in-field observations revealed the composition of CWS-s with young professionals from 19-38 years old. This shows insights into the typology of the professions of CWS members. As can be seen from table 1, the dominant professions are programming, digital marketing, graphic design, and freelancers. Most of participants are females, indicating a good trend for the development of creative communities with no gender restrictions.

Tab.1 – General information on participants

Age range	19-38 years old
Gender	15 females 9 males
Nationality	21 Albanians, 3 Kosovo, 2 Italians
Occupation	Programming, Marketing, Graphic Design, Freelancers

4.1 Impact on Knowledge sharing

As shown in table 2, the CWS engages in a high degree of cooperation.

Tab.2 – Yes or no question responses on the degree of Knowledge Sharing

	Yes	No
Do you cooperate with other members of the CWS?	(A,B,C,E,F,G,H)	(D)
Do you share work-related insight with other members?	(A,C,E,F,G,H)	(B,D)
Have you worked together for a particular project, assignment, or any other work-related activity?	(A,B,C,E,F,G,H)	(D)

Seven out of eight CWS-s responded with a “yes” when asked whether the cooperation exists in these CWS-s or not. The responses to the second question are also in line with the answers to the first question. Thus, when these CWS-s were asked about sharing work-related insights within the CWS-s, six out of eight responded “yes”. It is crucial to consider that one of the CWS that responded with “no” answered with a lack of cooperation in the first question. The last question shows similar results to the two previous questions. Seven out of eight CWS-s responded with “yes” when asked about working together on projects or other work-related activities.

Besides yes or no questions, the participants were asked rating-scale questions to measure the impact of Knowledge Sharing. Table 3 summarizes the results.

Tab. 3 – Participants assessment from 1 to 4, in terms of Knowledge Sharing in CWS

	Low	Average	High	Very High
The degree of cooperation between members		(D)	(B, E)	(A,C,F,G,H)
Sharing of work-related information (insights, recommendations)	(D)	(B)	(E,H,C,A)	(G,F)
Participants assessments in terms of collaboration with each other on projects	(D)	(B)	(E,F,C,A)	(G,H)

The participants’ assessment of cooperation between members falls mainly into the very positive category. Five out of eight CWS-s chose “four”, which means that their experience in terms of cooperation between members is very high. Two out of eight responded with “three”, representing a high degree of cooperation between members. One CWS responded with “two”, representing average cooperation. However, there are differences in terms of information sharing frequency among CWS members.

One out of eight states that the frequency is low. Another CWS responded with two, which represents an average frequency. Half of the CWS argue that the level of intensity in terms of information sharing is high among CWS members, and the rest express a very high level of frequency. The last question the section asked the participants regarding their assessment of the collaboration on projects and assignments within the CWS. Thus, whether this experience was positive or negative for the members of CWS, one out of eight provided a low evaluation of specific group experiences. Another CWS provided an average evaluation, while four out of eight CWS-s argued for a high level of satisfaction in joint projects. In addition, two out of four emphasized a very high level of satisfaction with previous CWS projects.

The participants were also asked open-ended questions regarding the experience that members CWS members had when working together. As shown in table 3, most CWS-s give a positive evaluation of these experiences. When asked about the factors that trigger such a high level of satisfaction, their answers fall into categories like *"teamwork"*, *"more creative ideas"*, *"innovative processes"*, and *"learning something new"*. Nevertheless, some of the CWS-s participating in this study show that such joint projects *"might get complicated and not provide the desired outcome"*. When asked about some of the reasons for such negative experiences, the participants pointed out factors like the *"lack of cohesion between members"*, *"failure of communication"*, and *"failure to find a mutual solution"*. When asked to elaborate more on the topic regarding the cooperation within CWS, the representers of CWS "D" attributed this negative evaluation to the *"lack of cohesion between members"*. According to them, it comes from the *"diversity in the composition of members"* of these CWS. Thus, according to representatives from CWS "D", the previous structure of the CWS involved professionals from different backgrounds, which brought problems in communication and perspectives. Therefore, this CWS decided to reformat the CWS and the composition of the members by attracting professionals with identical or more similar backgrounds.

4.2 Propensity for Innovation

The participating CWS evaluate themselves as being open to new ideas and projects (see table 4).

Tab. 4 – Yes or No questions answered by CWS-s

	Yes	No
Based on previous experiences, is your CWS open to new ideas and projects?	A,C,E, F,G,H	(B,D)
Have you ever developed new products or services with members of CWS?	A,C,F, H,G	(B,D,E)
Do you think that the environment in CWS encourages creativity?	A,C,F,H, G,B,E	(D)
Do you have a CWS strategy to promote collaboration?	(A,C,F,H, G,B,E	(D)

Six out of eight CWS argue that there is a certain “*degree of openness to new ideas and suggestions*”. Most argue that they have been involved in “*developing new products and solutions*”. Three out of eight express that the development of products has not been the main goal for them, and they have not been involved in such activities. However, almost 88% of the participants emphasize that “*CWS is an environment in which creativity and innovation are encouraged*”. Seven out of eight further point out that they operate according to an innovation strategy that encourages collaboration between members by fostering innovation.

As shown in table 5, the semi-structured interview results indicate that these CWS evaluate themselves as proactive in encouraging creativity and innovation.

Tab. 5 – CWS assessment in terms of innovation

	Low	Average	High	Very high
To what extent is your CWS open to new ideas?		(D)	(B,E,F,A)	(C,G,H)
To what extent does your CWS encourage innovation and creativity?			(B,D,A)	(C,E,F,G,H)
To what extent do you collaborate within CWS to develop new products?		(D)	(A,B,C,F)	(E,G,H)
To what extent you collaborate with other CWS on developing new products, services, or projects?	(D)	(B)	(A,C,F,H)	(E,G)

However, one of these CWS-s does not include collaboration among members or developing products within the CWS. As mentioned in the first section, the manager of this CWS experienced not very pleasant previous coworking experiences. Nevertheless, the other CWS-s seem to rely a lot on the innovation strategy within the CWS to encourage new ideas and innovative business solutions. An important point is collaboration with other CWS-s on developing projects or new products. Six out of eight CWS-s showed a high and very high degree of collaboration.

Moreover, in-field observations noted a high degree of cooperation between CWS-s. The evidence for that is the attendance of the events by members of other CWS-s. In field-observation results show that the events organized by these CWS involve a high degree of attendance from members of other CWS-s. Furthermore, from the asked open-ended questions, the participants mentioned the *“organization of joint activities”*. Thus, they join forces together for the organization of different events. When asked about the reason for organizing this kind of event, the answers varied. A vast majority emphasized *“diversity in terms of new ideas”*. Other reasons include *“innovation and shared interests”* between CWS-s. An additional reason mentioned by one of the managers of CWS is that *“these joint events provide a less heavy financial burden”*. Therefore, through collaboration, the CWS-s can significantly reduce the cost of events, such as rent, invitation of guest speakers, and equipment needed for the event.

4.3 Impact on Sustainability

Twenty-six participants in this study provided answers based on their awareness of creating a sustainable business model for their CWS (see table 6).

Tab. 6 – Yes or No Questions regarding Sustainability answered by the participants.

	Yes	No
Does your CWS have a homogenous composition in terms of members?	(D, B, E)	(A,C,F,G,H)
Did your CWS open before the global pandemic?	(A,B,C,D,E)	(F,G,H)
Did your CWS close or reorganized during the pandemic?	(A,B,C,D,E)	(F,G,H)
Have the members of CWS changed during the years?	(B,C,D,E,G,F)	(A,H)

Their answers were grouped according to the CWS that they represent. The criteria for a sustainable business model were taken from the previously cited literature, considering the homogeneity of the professional and

academic backgrounds of members. CWS-s were asked whether the CWS had a diverse or homogeneous composition in terms of members. 5 out of 8 CWS responded that the composition of CWS-s involved professionals from different backgrounds. Three CWS-s answered by having a homogeneous composition of the members. To measure the response towards external factors, CWS-s were asked about the Covid-19 pandemic effect. Five out of eight CWS-s responded that Covid-19 had a profound effect. Furthermore, two CWS-s added that their business was closed during the pandemic.

Therefore, they organized two different CWS-s after the situation became a little easier regarding the pandemic. In addition, the other CWS-s say there was a reorganization in office structure and in the members since some members were afraid to work in such spaces due to viruses. The turnover rate of members leaving CWS has been a problem since before the pandemics, as shown in table 6. Only two out of eight CWS-s have not experienced problems with member turnover rate. When managers of these CWS were asked about the reasons for such turnover rate, they gave different answers like *“members moving to another country”*, *“closing their activities”*, etc.

Participants reflected average and low levels of homogeneity in their CWS-s, except for CWS-s “D” and “B”, which have a narrower focus; therefore, the composition of CWS is more homogeneous (see table 7).

Tab. 7 – Participants assessment regarding Sustainability of the CWS

	Low	Average	High	Very High
How would you evaluate the homogeneity of your CWS (in terms of members)?	(G,H)	(A,C,E,F)	(D,B)	
How would you evaluate the cooperation with NGO-s?		(D)	(A,B,E,F)	(C,G,H)
How was the impact of COVID-19 on your CWS?			(A,B,C,D,E,F)	(G,H)
To what extent do members of CWS leave the CWS?		(B,D,A)	(C,E,F,G,H)	

Based on the business model of the CWS outside of Albania, like in Barcelona or Berlin, the CWS-s rely a lot on cooperation with different NGO-s. In the development phase, a sustainable CWS needs to have a mission. Therefore, NGOs are essential partners in joint projects and provide a long-term solution for these CWS-s. Regarding this perspective, most of these CWS-s have close relations with the NGO-s. This finding can also be noticed through in-field observations. The events that were observed were

all done in collaboration with certain NGO-s. Typically, the NGO-s are the ones that decide on the event, guest speakers, and the CWS offer the right environment for the event to occur. Only one of eight CWS answered with average cooperation with NGO-s. In addition, CWS-s were sensitive to outside factors since the turnover rate is between average and high.

4.4 CWS impact on three levels

Table 8 is a summary of CWS' impact on innovation, knowledge sharing, and sustainability taken all together.

Tab. 8 – The impact of CWS in Tirana in Knowledge sharing, Innovation and Sustainability

	Low	Average	High	Very High
Knowledge Sharing	(D)	(B)	(A,C,E)	(F,G,H)
Innovation		(D)	(A,B,C,F)	(E,G,H)
Sustainability		(A,D,G,H)	(B,C,E,F)	

It shows that CWS-s impact on knowledge sharing is relatively high. Six out of eight scored a high and very high degree of knowledge sharing based on collaboration among the members, sharing work-related recommendations, and collaboration in terms of specific projects or ideas. The innovation variable shows an even higher score than knowledge sharing since only one CWS scored a moderate degree of effect in innovation.

From in-field observations, it can be identified that members of these CWS are open to collaboration within the CWS and other entities such as NGO-s or other CWS. However, the impact on a sustainable business model is not very high. The results are divided between the average degree of impact and high impact. However, from open-ended questions on the semi-structured interviews, it can be noticed that these CWS are sensitive structures by being affected to a high degree by internal factors. It includes factors like members turnover rate or outside factors, such as reliance on collaboration with different entities such as NGO-s.

5. Discussions

This section of the research involves interpreting the results obtained from this research in compliance with the literature. In addition, it aims to provide answers to research questions. A further consideration is attributed to the development of the research that can serve as a starting point for future research about CWS-s in Albania and Western Balkans. Thus,

the research is not only for academic reasons but also to further contribute to future research regarding CWS-s in the case of Tirana since it is an exciting phenomenon that can accelerate in Tirana with the right tools. The analysis of the results in the context of Tirana will also include some inter-organizational tools that can help to achieve the mini-cluster model, which is used in developed cities like Barcelona. As a last step of the research, an explanation of future steps to develop a sustainable model is done.

The findings of this study show how CWS-s affects knowledge sharing, innovation, and sustainability. It should be mentioned that CWS-s in Tirana are composed mainly of relatively young professionals, which makes it easier to provide a more proactive environment in which knowledge sharing and innovation can happen more quickly.

The members of these CWS-s showed a high degree of willingness in terms of knowledge sharing, involving sharing work-related information with each other in the form of insights and recommendations. Furthermore, CWS-s involved the members in joint projects by further stressing the cooperation among individuals. This finding is supported by Capdevila (2014, 2015), as stated by Hysa & Themeli (2022), where coworkers in Barcelona used collaborative techniques to generate new knowledge and resources. Thus, individuals from different backgrounds work together on a particular project and share their perspectives with the other members in their field of expertise. This fact further contributes to the personal and professional development of each of the members of the CWS and expands their network. The latter finding is in line with Parrino (2015) where a diversity in professions, status and affiliation contributes to value cocreation. Nonetheless, other research states that too much diversity can harm CWS-s. According to Goermar et al. (2020), CWS-s need a certain degree of homogeneity. CWS managers addressed this concern by trying to include their CWS members from similar professional backgrounds but still involving a sense of diversity. Thus, not by involving professions unrelated to each other like data analysts and graphic designers. Instead, a more common trend is to involve professionals whose background complements other members' backgrounds, like a graphic designer in a CWS composed mainly of digital marketing specialists. Findings of this study derived from in-field observations show that members of these CWS-s tend to work with individuals from similar or complementing backgrounds.

On the other hand, innovation was the variable that had the higher score in terms of the CWS impact in Tirana. As mentioned earlier, the composition of CWS, mainly of young professionals, makes possible the incubation of new innovative ideas and projects. The participants showed a very positive approach towards innovations. The results show that in many instances, the members of the CWS get inspired by the coworking environment and decide to collaborate on innovative joint projects. It is essential

to mention that most CWS members are self-employed, and they have the flexibility to join different projects. 75% of the participants in this study showed that these CWS have a very positive impact in terms of innovation.

In-field observations of the events organized by these CWS confirm this statement. In the events organized by CWS, a very positive approach from the members could be observed towards new ideas. Observations were based upon specific criteria like the level of proactiveness between members, the attendance of the events, and the generation of new ideas. Some CWS-s even joined forces together to develop such events to have a larger attendance of professionals, which leads to more ideas and a more considerable degree of creativity. Thus, creating a sense of community among CWS-s creates the essential foundation for approaching the micro-cluster model, which consists of more professional interaction between members of the CWS community. This finding is coherent with previous research conducted in Berlin by Blagoev et al. (2019).

An unexpected result in this research was the low score of the sustainability variable, which was the variable with the lowest score. Even though the concept of sustainability can be used in many contexts, the focus of this research was to find out how sustainable is the business model that CWS-s have in Tirana. The criteria used for measuring the level of sustainability included inner and outer factors. Thus, events like pandemics profoundly affected these CWS-s by closing some of these working spaces. However, Covid-19 was a phenomenon that closed other many consolidated structures than CWS. In addition, most CWS-s are small businesses; therefore, the sensitivity toward external factors can be understood. Additional outer factors include socio-economic factors in Albania like the migration of professionals or the lack of entrepreneurial initiatives.

Nevertheless, from this research, CWS-s in Tirana are also very vulnerable due to internal factors. The results show a high degree of professionals that leave these CWS. Some of the reasons are not related to the CWS environment; however, these CWS can take specific actions to reduce the high turnover rate. One of these reasons includes the composition of the CWS-s in terms of members' backgrounds. Nevertheless, this is hard to achieve since the owners of the CWS need to generate income from this activity instead of carefully selecting the members of the CWS. Therefore, considering the context of Tirana, we see CWS-s have the positive effect of having a high impact in terms of knowledge sharing and innovation. Yet, they do not provide a very sustainable business model due to internal and external factors. Because these CWS-s were reopened after the Covid-19 pandemic and considering the operation of these structures in a developing country like Albania, CWS-s in Tirana have shown that they are resilient and can provide a certain degree of sustainability.

Research results are in line with the literature in the field of CWS. The

micro-cluster model emphasized by Capdevila (2013) provides innovation and creativity to the place being implemented. As can be seen from the results, the CWS-s positively impact knowledge sharing between the members by contributing to their personal and professional development. It is also reflected by Rese et al. (2020), which further emphasizes the importance of CWS in knowledge sharing. Furthermore, he stresses the aspect of proactiveness between members, which was high in the events observed in Tirana. Sperindé and Nguyen-Duc (2020), affirm that CWS-s can be used as incubators for the development of creative and innovative ideas. The approach toward innovation and creativity in Tirana is very positive, and there is a sense of collaboration between members and between different CWS.

Furthermore, the community within CWS can connect creative entrepreneurs with different organizations in Albania by encouraging creativity in more influential organizations, which are a little bit traditional for new ideas and projects. Firstly, the sustainability of the CWS business model must start with the positioning that the CWS has, thus, whether it is an incubator or whether it has an environmental approach. According to Oswald & Zhao (2020), the incubator model offers the best chance to develop a sustainable business model. Even though it is hard to distinguish the focus that CWS in Tirana have, their features mostly resemble incubators by providing a model which has more significant changes for a sustainable business model.

5. Conclusions

The favorable location and the proximity between these CWS-s create a suitable environment for the micro-cluster model to be implemented. Moreover, the composition in terms of members is diverse enough to develop creative communities, which is one of the main purposes of the micro-cluster model.

Referring to the conceptual framework, sustainability is the main prerequisite to provide the longevity of benefits provided in the present to CWS-s in Tirana like knowledge sharing and innovation. Tirana is fulfilling the prerequisite of innovation, which is the first step on the development of creative communities. Secondly, the score in terms of knowledge sharing is very good, which shows the willingness and the motivation that members of these CWS-s must share their know-how with other members. However, the factor of sustainability shows that if CWS-s do not take certain actions, the benefits provided from innovation and knowledge sharing will not last for a long-time. Since CWS-s as micro-clusters yield similar benefits to industrial clusters, sustainability is in the cornerstone of the micro-cluster model. However, the differences between these two models

need to be evaluated as well. Industrial clusters, since they focus more on macro-level, provide a higher degree of security as the main actors are the governments and big international companies. Micro-cluster model by the other hand, does not have such security, because CWS-s are a much more fragile business model, therefore the level of sustainability and assurance they need is much higher than in the case of industrial clusters, which are much more solid structures.

Although the concept of coworking is new for Tirana, it has shown a very positive trend for the future. It is early to speak about a micro-cluster model, thus creating the dynamics of the clusters in terms of members' personal and professional development. But, considering the impact on knowledge sharing and innovation, Tirana, as a city approaching coworking recently, is making extensive progress. The CWS-s in Tirana are affecting the knowledge sharing between the members by increasing the cooperation between them in terms of sharing insights and recommendations and encouraging collaboration on joint projects. On the other hand, innovation is being affected positively through these CWS-s by being used as incubators to develop new ideas, products, or projects. It is worth mentioning the collaboration between CWS-s, which have made possible the development of a creative and innovative community within these CWS-s, primarily through the development of events like workshops or training.

To claim these benefits to be continued in the long run, outer and internal factors need to be considered. External factors are challenging to be managed in the context of Tirana since issues like migration and socio-economic factors are difficult to control. However, the CWS can control the internal factors. The CWS-s need to be more selective in the composition of the members inside the CWS because only in this way the micro-cluster model can be achieved. It is vital to have diversity within the CWS. However, a sense of homogeneity is needed for a more sustainable business model. Hence, it is the responsibility of managers and owners to create the balance between innovative ideas through the diversity of members and ensure a sense of reliability and assurance by creating a sustainable business by having a degree of homogeneity in terms of members. Despite the positive effects on knowledge sharing and innovation, which are affected positively by CWS, more emphasis and attention should be attributed to the sustainability factor.

Appendix 1: Semi-Structured Interview

Section 1: CWS and Knowledge Sharing

1. What is your academic, professional background?
 - 1.1. What is your age? (optional)
2. How were you informed about the existence of this Co-working space?
3. What are the factors that attracted you to make use of this Co-working space?
4. In a scale of 1 to 5, what is the degree of cooperation between you and other members of CWS?
 - 4.1 In a scale of 1 to 5, to what degree you share work-related insight (data, professional advice, recommendation) with other members of CWS.
 - 4.2 Do they share this kind of insight with you too?
 - 4.3 Have you worked together for a particular project, assignment, or any other work-related activity?
 - 4.4 If yes, how would you evaluate the level of this collaboration?
 - a. very negative
 - b. negative
 - c. acceptable
 - d. good
 - e. very good
5. Does your CWS organize activities that help in the bonding, or regarding collective learning between the members?
 - a. Yes
 - B. No
 - 5.1 If yes, can you mention any of the events organized?

Section 2: CWS and innovation

6. Based on your experience in CWS, do you think that the environment is open towards new ideas, solutions, products?
 - a. yes
 - b. no
7. Have you ever collaborated with the other members of CWS, on developing new products, project, or service?

- a. yes
- b. no

8. Do you feel like the environment in this CWS, encourages creativity and innovation?

8.1 If yes, to what extent?

- a. very low
- b. low
- c. normal
- d. high
- e. very high

9. Is any of CWS, a client or partner in terms of your professional activities?

9.1 If yes, do you include them in the process of developing new products, services, or projects?

9.2 Do these clients or partners reciprocate to you?

Section 3: CWS and Sustainability

10. Based on your information, do the members of CWS come from a similar background?

- a. similar
- b. different

10.1. How can you classify the purpose of your CWS?

- a. Social
- b. Environmental
- c. Incubator
- d. Limited to professions
- e. Mix

11. Does your CWS have a homogenous composition in term of professions?

11.1 If yes can you show the background of members?

11.2 From 1 to 4, how would you evaluate the homogeneity of CWS in terms of members background?

12. Do you cooperate with different NGO-s

12.1 From 1 to 4, to what extent?

13. Did your CWS open before Covid-19?

13.1. If yes, from 1-4 can you measure the impact that it had on your CWS.

14. How long since your CWS has opened?

14.1. For how long CWS members have been part of your CWS?

14.2. Have the members of CWS changed frequently during these years?

14.3 From 1 to 4, how would you measure the substitution of members in your CWS?

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BOOK REVIEW:

**V. RATTEN (EDITED BY), COVID-19 AND ENTREPRENEURSHIP,
CHALLENGES AND OPPORTUNITIES FOR SMALL BUSINESS,
ROUTLEDGE, 2021**

Gail Denisse Chamochumbi Diaz
University of Urbino
gail.chamochumbidiaz@uniurb.it

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Abstract

The book is one of the first attempts to examine the links between the Covid-19 pandemic and entrepreneurship by focusing on small businesses. Taking a holistic approach, the authors suggest different strategies that firms might adopt to meet the challenges and seize the opportunities presented by the crisis. Another issue that the authors tackle is how institutional structures and policies can either promote or impede growth. It is a timely multidisciplinary analysis which offers entrepreneurs, practitioners, and policy makers considerable food for thought as to what 'doing business' means in an uncertain environment.

Review

First of all, the authors highlight the crucial role played by small businesses in promoting the sustainable development of society and the economy. The environmental context changed radically in the course of the Covid-19 crisis and this led inevitably to the development of a Covid entrepreneurship quite different from general entrepreneurship: in this new context the innovation is an imperative which no entrepreneur can sidestep. Social distancing, quarantine, smart working are some of the preventive measures adopted by governments to mitigate the spread of the virus. Their effect has been to bring about a change in the lives of all of us, including entrepreneurs. New ways of working, new requirements, new behavior patterns have defined the preconditions – along with digital transformation – for a new model for doing business, for being an entrepreneur.

Bearing in mind the specifics of small businesses, the authors examine the challenges which they face in this complex, uncertain environment. Financial constraints, lack of knowledge, inadequate skills, limited structures, etc. make it extremely difficult for these businesses to react promptly to sudden market changes. However, characteristics such as flexibility, independent nature, specialization in niche markets, closer connections to communities can nonetheless help these businesses to seize the new opportunities which have emerged from the crisis. From an entrepreneurial viewpoint, the authors offer an interesting examination of the real need to be aware of the difficulties and dilemmas faced by small businesses in ensuring continuity and future growth.

The following chapter focuses on the need to adopt an open innovation approach to knowledge sharing, with the aim of responding to emerging needs and encouraging entrepreneurship. Open innovation means that the flow of knowledge is not limited to a single organization but is wide-ranging, selecting and combining ideas from different organizations. With this in mind, the authors stress the importance of social innovation – intended as a fresh response to social issues and one which creates social value for the community. It fosters relationships between different categories of economic actors, such as consumers, entrepreneurs, suppliers etc., enabling them both to collaborate and to compete. It is, indeed, through this process of coopetition that organizations are able to access innovation and thus bring about change more quickly and easily. In the Covid-19 context, which saw such sudden and drastic changes, the authors insist on the relevance of coopetition since it creates the conditions for an ecosystem which stimulates knowledge sharing and new entrepreneurship.

The third chapter explores the most significant aspects of the Covid-19 crisis for small businesses. The authors highlight the inequalities between small and large businesses – i.e. financial constraints and informal struc-

ture – in order to explain the greater vulnerability of the former. The implications of the crisis for businesses of this kind are examined from different viewpoints: entrepreneurship, entrepreneurial opportunities, workplace changes, social policies, and risk management. Moreover, the authors turn a critical eye on the action taken by governments. Policy makers, they argue, should be able to manage the economic and health emergencies in terms of mitigation, preparation, response, and recovery. In doing so, governments should adopt an approach based on collaborative interaction with various components of society: this would result in a more closely targeted response and more effective policies.

The fourth chapter provides an interesting account of the effects of the pandemic and the action taken by the government to counter it in one of the world's largest emerging economies: India. Covid-19 exposed the weaknesses of Indian entrepreneurship: scant innovation, minimal bargaining power by comparison with the big players, low productivity, limited access to loans, and so on. In an attempt to help firms during the pandemic, policy makers resorted to numerous measures, such as opening emergency credit lines, implementing e-marketplace programs, restricting global tenders to local businesses; but despite these efforts, the authors argue that substantial doubts remain as to the firmness and adequacy of the Indian government's commitment to ensuring, not just the survival of these firms, but their medium and long-term growth.

The next chapter treads a path through the intricacies of digital transformation during the Covid crisis. For small businesses to cope effectively with the radical, unforeseen changes occasioned by the pandemic, and to seize the opportunities arising from it, they need to rethink their value propositions based on emerging market needs. Digital transformation plays a key role in helping firms to achieve this, so there is simply no alternative to developing digital capabilities. From a business perspective, the authors argue that Covid-19 entrepreneurship is significantly different from general entrepreneurship because the new context impacts the dynamics and logic of new business creation and entrepreneurship: Covid-19 has reshaped the entrepreneurial activities of small businesses. The authors cite sports digital marketing as an example of the use of digital technologies to create immersive experiences for local and global audiences, away from the playing fields.

The sixth chapter looks at the social implications of Covid-19 from a psychological viewpoint. The focus is on well-being, not just in the individual sphere, but considered as a state which is liable to be influenced by the context surrounding the individual. Affects points to the affective dimension of the concept of subjective well-being; it refers to emotions such as fun, satisfaction, anger, worry, depression, etc. In the experience process, emotions and feelings surface, and this interferes with how the individual feels, thinks and behaves. The authors examine the impact of lived experi-

ences on affects during the Covid-19 pandemic by conducting an empirical analysis in Portugal. Findings confirm that the disruptive experiences lived through during quarantine had an influence on affects. This study has both practical and theoretical implications and points the way towards ambitious future research areas.

The topic of the following chapter is how small businesses can build and maintain customer relationships through digital marketing during the Covid-19 pandemic. The crisis proved to be a trigger factor in accelerating the use of new digital technologies for customers. A great opportunity, but also a challenge. Following an agile approach, in order to continue to attract and maintain their customers, businesses need to reshape their marketing strategies by including new technologies. Digital strategy proved to be a winner during Covid-19, showing that a firm's adaptability is crucial. It means exploring new web and social media channels in order to keep up relations with customers.

The final chapter offers a critical analysis of the links between the Covid-19 emergency, entrepreneurship and small businesses. The authors examine possible ideas for future research as well as more specific research openings tailored to particular areas of entrepreneurship. They argue that there is an urgent need for an in-depth understanding of the role of entrepreneurship during the pandemic. Covid-19 entrepreneurship is distinguished from general entrepreneurship in terms of origins, features, outcomes, and also as regards social and financial goals. The authors maintain that it offers real opportunities for further study and new research directions. There is a strong case for experimenting with new methodologies and theories in order to gain a better understanding of the evolution of Covid-19 entrepreneurship from a number of points of view. The authors also discuss the implications of Covid-19 entrepreneurship from a societal, managerial and policy angle.

This is one of the first books to explore the relation between small businesses, the Covid-19 crisis and entrepreneurship. And the key players are seen to be the small businesses thanks to their economic clout and social role. The Covid-19 crisis is about the challenges and opportunities which small businesses in particular face from changed environmental conditions: the pandemic transformed individual needs, behaviors, and habits. It shaped a radical, new Covid-19 entrepreneurship, different from what had gone before. Success for small businesses means rethinking their business models, methods of production and distribution, and the way firms compete. Each chapter of this book examines different aspects of these topics, offering useful empirical and theoretical contributions to future research on Covid-19 entrepreneurship. In addition, policy-makers are furnished with a number of suggestions as to what promotes or impedes the growth of small businesses. It is an engaging, stimulating book which can be warmly recommended to scholars, practitioners and entrepreneurs alike.

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