EDITORIAL



Sustainability and SMEs: Opening the black box

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Abstract

In this special issue titled 'Sustainability and SMEs: Opening the black box', we compile eight articles that dissect the multifaceted relationship between small- and medium-sized enterprises (SMEs) and sustainability. This special issue promoted interdisciplinary research at the intersection of the design, management, organisation, and reporting of sustainable actions in the context of SMEs. Stemming from the need to apply different theoretical and analytical lenses to the study of sustainability in SMEs than in large corporations, each paper provides unique insights into the formal and informal approaches, drivers, barriers, and enablers of sustainable practices in SMEs. The collection not only furthers the dialogue on the role of SMEs in sustainable development but also paves the way for future research directions and practical applications in this dynamic and still underexplored field.

Keywords: sustainability; small- and medium-sized enterprises (SMEs); sustainable business models (SBMs); sustainability reporting; circular economy; digital technologies; environmental and social governance (ESG); decision-making; Sustainable Development Goals (SDGs)

Introduction

The last decade has seen an unprecedented convergence of academia, policy, and business practices around sustainability, signalling a critical shift in the global economic paradigm (Crutzen, 2006; Köhler et al., 2019). This shift has been characterised by a heightened awareness of emergent issues such as climate change, social inequity, and gender disparities, urging businesses to adopt comprehensive sustainability activities, including Corporate Social Responsibility (CSR), environmental and social governance, and adherence to the UN 2030 Agenda and the Sustainable Development Goals (SDGs) (Sachs, 2012; Schaltegger, 2018; United Nations, 2015). Policymakers, recognising the significance of these developments, have pursued an integrative approach, harmonising financial and non-financial metrics to foster a dynamic pathway towards sustainable economic progression (Bebbington & Unerman, 2020). It has become increasingly clear that private sector participation is indispensable for realising a sustainable future. This acknowledgement has spurred policymakers to foster the incorporation of sustainable and ethical principles within corporate strategies – a task underscored by its complexity and its prominence within management scholarship (Dalton, 2020; Macht, Chapman, & Fitzgerald, 2020; Pizzi, Caputo, Corvino, & Venturelli, 2020; Scheyvens, Banks, & Hughes, 2016).

In the midst of such a transformation, it is crucial not to overlook the involvement of small- and medium-sized enterprises (SMEs). Representing about 99% of all businesses within the OECD, these entities are not only the backbone of the economy but also vital contributors to employment and economic value creation. Therefore, SMEs' collective action has a profound global impact, making their response to sustainability imperatives central to our future (Dalton, 2020; OECD, 2019;

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Pizzi, Corbo, & Caputo, 2021). How SMEs are contributing and entering this sustainability transition remains a domain of intense debate and inquiry (Santini & Caputo, 2024). The closing years of the 20th century witnessed the initiation of this discourse, with researchers exploring SME awareness and engagement with sustainability, primarily through the lens of CSR (Jenkins, 2004). Initial studies examined the CSR practices implemented by SMEs and their corresponding performances, revealing a positive correlation between firm size and CSR commitment. This suggested that, in comparison to larger enterprises, SMEs exhibited a lesser degree of CSR engagement, a trend often attributed to resource constraints and a nascent comprehension of CSR business implications (Cassells & Lewis, 2011; Marco-Fondevila, Moneva Abadía, & Scarpellini, 2018; Murillo & Lozano, 2006; Russo & Fouts, 1997; Schaper, 2002).

In this context, and building on recent works published in the Journal of Management & Organization (Diacono & Baldacchino, 2024; Carle & Rayna 2024) this Special Issue endeavours to disentangle and understand the multifaceted relationship between sustainability and SMEs, challenging existing paradigms and advocating for a comprehensive theoretical and practical reimagining of this relationship. Overall, eight papers have been selected from an original pool of more than 30 manuscripts submitted to us and through these contributions, we seek to further the dialogue, research, and practical applications that will enable SMEs to embrace their role in the sustainable future we all endeavour to create.

Sustainability in the context of SMEs

Contemporary research has illustrated the determinants and outcomes associated with CSR implementation in SMEs, accentuating the informal and collaborative nature of CSR within these entities (Russo & Tencati, 2009). Scholars across various disciplines have examined the proliferation of responsible practices among SMEs and the obstacles they face in embedding such practices within their core activities (Gangi, Meles, Monferrà, & Mustilli, 2020; García-Quevedo, Jové-Llopis, & Martínez-Ros, 2020; Longo, Mura, & Bonoli, 2005; Ormazabal, Prieto-Sandoval, Puga-Leal, & Jaca, 2018). Despite the burgeoning interest and the necessity for a nuanced understanding of SMEs' role in the sustainability transition, the literature remains fragmented, offering conflicting insights and lacking a cohesive theoretical framework looking at the specificities of this category of company (Jorge, Madueño, Martínez-Martínez, & Sancho, 2015).

A crucial aspect of this discourse is the analysis of the organisational structures within SMEs and their capacity to facilitate sustainability related practices. SMEs are not a monolithic bloc; they differ greatly in terms of business models and organisational architecture. The literature has yet to provide a definitive characterisation of SMEs, especially regarding their internal structures and business models (Miller, McAdam, Spieth, & Brady, 2021). The behaviour of SMEs is significantly influenced by the psychological profile of the entrepreneur or 'owner-manager', resulting in a reliance on informal organisational frameworks with limited capabilities in management, leadership, and strategic planning. Conversely, their inherent flexibility and strategic nimbleness confer a competitive edge and foster a culture of innovation (Jenkins, 2004).

Within such organisational configurations, the concept of sustainability assumes a distinct interpretation compared to that within larger corporations. The bureaucratic and regulatory landscapes that shape sustainability practices in larger firms are less applicable to SMEs, which often operate without direct shareholder influence and are accountable to a different spectrum of stakeholders. Consequently, sustainability theories that are pertinent to large corporations do not uniformly apply to SMEs, where CSR activities may not be formally recognised and are typically the result of unplanned CSR strategies (Jenkins, 2004; Kinderman, 2020).

In the absence of explicit mandates, SMEs may engage in practices that neglect the broader societal and environmental impacts of their operations. However, it is worth underlining that SMEs, especially when clustered in specific areas, operate under the collective influence of local stakeholders. In such clusters, the intertwined lives of families and businesses foster a sociocultural and institutional fabric that prioritises local community needs and cluster growth opportunities. In these settings, local stakeholders' recognition of SMEs' adverse externalities catalyses collective efforts to embed responsible economic behaviours within the SMEs' practices (Russo & Tencati, 2009).

Jenkins (2004) has emphasised the incongruity of sustainability theories when applied to SMEs, citing stark differences in the drivers and facilitators of sustainability between large corporations and SMEs. This divergence largely stems from the informal nature of sustainability practices within SMEs and their often-under-defined business models and organisational structures (Russo & Tencati, 2009). These arguments underline the inconsistency of applying the same analytical lens to sustainability in both large corporations and SMEs (Álvarez Jaramillo, Zartha Sossa, & Orozco Mendoza, 2019; Bos-Brouwers, 2010; Cassells & Lewis, 2011; Oduro, Maccario, & De Nisco, 2021). As we reflect on the aims and scope of this Special Issue, it is evident that understanding the capacity of SMEs to conduct their businesses responsibly remains a complex puzzle that needs specific lenses.

The papers included in this special issue offer diverse insights that contribute to the advancement of the understanding of the complexities of sustainability for SMEs.

Overview of papers included in the special issue

This Special Issue endeavours to dissect and understand the multifaceted relationship between sustainability and SMEs, challenging existing paradigms and advocating for a comprehensive theoretical and practical reimagining of this relationship. Overall, eight papers have been included to pave the way to further the dialogue, research, and practical applications that will enable SMEs to embrace their role in the sustainable future we all endeavour to create.

The papers included in the special issue are organised around their focus. First, we present a set of papers investigating the transitioning phase of SMEs towards sustainable business models (SBMs) and practices. As for the SBMs, Perotti, Dhir, Ferraris, and Kliestik (2023) looks at the role of digital technologies in circular business models. Troise, Santoro, Jones, and Bresciani (2023) and Stubbs, Farrelly, Fabianke, Burch, and Ramesh (2023) investigate the transformative adoption of SBMs by SMEs. In relation to sustainable practices in action, Cristofaro, Giardino, Camilli, and Hristov (2023) look at the cognitive aspects that obstruct the development of sustainable performance management systems (SPMSs), and Valenza, Zoppelletto, and Fazio (2023) look at the distinct managerial approach characterising sustainable strategies in family firms. Finally, the last three papers look at measuring impacts and the role of reporting, with Gionfriddo and Piccaluga (2024) presenting the Prosper standard to measure and track SMEs' strides towards SDGs. Galli, Torelli, and Caccialanza (2023) introduce the concept of 'greenhushing', a strategic under-communication or omission in sustainability reporting, and Lisi, Mignacca, and Grimaldi (2023) conclude the special issue with the study of drivers, facilitators, and obstacles for non-financial reporting (NFR) in SMEs. In the following paragraphs we provide an overview of each paper.

Sustainable business models

Moving to the first article in the special issue, Perotti et al.'s (2023) study endeavours to delineate the role of digital technologies in propelling circular business models within SMEs. It crafts a comprehensive 'going circular' roadmap, delineating the progression of businesses towards circularity, accentuated by digitalisation. The research, employing an inductive and multiple case study approach, scrutinised 16 SMEs across environmentally impactful sectors such as manufacturing, chemicals, construction, fashion, food, and beverages. The empirical evidence underscores the pivotal function of digital technologies and Industry 4.0 constructs in the inception and refinement of circular products and processes. The authors present a scalable, stepwise blueprint for embracing the circular economy through digital means. This work serves as an instructive blueprint, offering strategic direction for companies navigating their transition to circular practices.

The second paper by Troise et al. (2023) sheds light on the burgeoning trend of SBM adoption among SMEs, an area of heightened interest to both scholars and industry professionals. Despite the

recognised stakeholder benefits of SBMs, the dynamics facilitating SMEs shift towards such models remain obscure. Their study probes the catalysts for SMEs embrace of SBMs, endeavouring to enhance comprehension of this emergent trend. Adopting an inductive and qualitative research paradigm, the investigation revolves around multiple case studies. The authors underscore the influence of both internal factors – such as organisational openness, mindset shifts, problemistic search, social exchange, and resource valorisation – and external elements like market evolution, technological advancement, stakeholder impact, and regulatory frameworks, as instrumental in steering SMEs towards SBMs.

In the third article of the collection, the research developed by Stubbs et al. (2023) positions the transformation of the private sector as a pivotal response to pressing global environmental and social issues. Given that SMEs represent the majority of private entities worldwide, the authors probe the strategic influence these organisations may exert in driving sustainable futures by integrating SBMs. The research aims to decode the elements that facilitate the effective assimilation of SBMs by SMEs. Through a qualitative exploratory method, incorporating interviews with SMEs that are incorporating SBMs, the study augments current understanding by spotlighting the crucial influence of supportive external conditions. It further identifies critical transformative competencies, such as resilience, determination, agility, and a proactive approach to learning and innovating, which are essential for SMEs to navigate the volatile business landscape and adapt their business models to emerging demands.

Sustainable practices in action

In the fourth paper, Cristofaro et al. (2023) investigate the pivotal role of medium enterprises (MEs) in the global economy and how integrating sustainable practices into their operations not only augments their performance but also meets stakeholder expectations. Despite the recognised benefits, sustainability adoption among MEs is not widespread, which may be attributed to managerial decision-making processes beyond just resource limitations when compared to larger corporations. Employing a mixed-method research design with 277 Italian ME managers, the study examines cognitive biases that obstruct the development of SPMSs in MEs. The authors pinpoint the most significant biases impacting SPMS development and construct an 'SPMS de-biasing funnel' framework, offering remedial strategies to mitigate the influence of these critical cognitive biases and unlock the positive potential of SPMS.

The next paper by Valenza, Zoppelletto, and Fazio (2023) delves into the sustainability strategies of family SMEs within the Blue Economy, focusing on Sicilian family firms in the COSVAP Fishing District. The study employs a qualitative approach, constructing case studies from interviews with founders and managers, with data analysis via the Gioia methodology. It surfaces three distinct managerial approaches to sustainability within these firms: the first views sustainability as a potential economic threat; the second necessitates certain trade-offs; and the third frames sustainability as an equilibrium of social, environmental, and economic objectives, presenting it as an opportunity. Theoretically, this research enriches our understanding of family SMEs' sustainability strategies while practically furnishing actionable insights for practitioners and policymakers aimed at nurturing the sustainable evolution of family SMEs, particularly within the fishing sector.

Measuring impacts: The role of reporting

In the sixth paper, Gionfriddo and Piccaluga (2024) highlighted a reticence among SMEs to engage with the SDGs due to the intricate landscape of social impact measurement frameworks. Addressing this challenge, their research examines the deployment of 'Prosper' – an independent, practical, and empirically derived standard – to measure and track SMEs' strides towards SDGs. Utilising an action research approach, Prosper was crafted to quantify SDG adherence at the micro-organisational level. They synthesised an SDG-centric standard tailored for SMEs, drawing from a comprehensive review

of esteemed social impact metrics. Prosper efficacy was honed through empirical application within five SMEs. Their endeavour to furnish SMEs with this actionable instrument seeks to dismantle prevalent sustainability obstacles and echoes the broader directive of aiding SMEs in their SDG reporting commitments.

The next paper by Galli, Torelli, and Caccialanza (2023) scrutinises the interplay and determinants that either facilitate or impede the synergy between sustainability endeavours and their reporting, particularly in the context of Italian SMEs within the meat and cured meat sector. This comparative analysis discerns the formative perspective that bridges sustainability initiatives with their subsequent communication. Utilising a qualitative interpretative method anchored in semi-structured interviews, the research casts light on the inherent strengths and limitations of substantive sustainability actions and how communication influences these initiatives. The study's outcomes have far-reaching implications for both international and sector-specific policy formulation and managerial decisionmaking. Addressing a void in SME-focused literature on sustainability reporting and action, the paper also introduces the concept of 'greenhushing' – a strategic under-communication or omission of information regarding effectively conducted sustainability practices or their noteworthy outcomes.

Finally, in their explorative paper, Lisi, Mignacca, and Grimaldi (2023) address the burgeoning discourse on NFR initiatives that encompass environmental and social dimensions, with a specific lens on SMEs. The article distils existing knowledge through a systematic literature review, elucidating the mechanisms of NFR implementation in SMEs. A thematic analysis clarifies the drivers, facilitators, and obstacles of NFR initiatives; among these, drivers such as legitimacy, competitive edge, and stakeholder involvement are prominent, while tailored guidelines and tools act as enablers. Conversely, the challenges are marked by a deficiency in capabilities and a void in standardisation. Furthermore, the authors introduce a fresh conceptualisation of NFR as a triphasic process and recommend avenues for future scholarly work in this domain.

Looking ahead and concluding remarks

Concluding this special issue on 'Sustainability and SMEs: Opening the black box', we reflect upon the significant insights garnered from the array of studies presented, each underscoring the intricate relationship between SMEs, their specificities, and their sustainability practices.

The eight papers in this special issue delve into various aspects of sustainability within SMEs, offering insights into their structure and organisational value-creation processes. Sustainability, as revealed by the examination, can either be a foundational principle integrated from the early stages or a significant challenge demanding strategic attention and the entrepreneur's attitude. At the individual level, the papers emphasise the diverse elements influencing the adoption and impact of sustainability practices within SMEs. These considerations extend to internal dynamics and multilevel factors, particularly in the context of whether these practices are formalised or operate within informal frameworks. The nuanced exploration of sustainability practices, whether they act as obstacles or enablers, necessitates a comprehensive understanding of both the formal structures and the informal dynamics within SMEs. Impact evaluation seems to be still strongly anchored to formalised practices and frameworks both internally to firms and at a multilevel (Fig. 1).

The collective research within this special issue has illuminated the multifaceted roles SMEs play in the sustainable development landscape. Whether it's through embedding sustainability in adopting digital technologies to foster circularity (Perotti et al., 2023), or advancing NFR (Lisi, Mignacca, & Grimaldi, 2023), SMEs are at the cusp of transformation. The findings reflect a spectrum of approaches, from seeing sustainability as a threat or opportunity (Valenza, Zoppelletto, & Fazio, 2023) to recognising external and internal enablers and barriers (Stubbs et al., 2023; Troise et al., 2023).

Emerging from these studies is the call for further exploration into the nuanced mechanisms by which SMEs can integrate and benefit from sustainability. For example, future research should aim to dissect the cognitive processes influencing sustainability integration in MEs (Cristofaro et al., 2023),

Formal Internal			Gionfriddo and Piccaluga (2024)	
Formal Multilevel	Stubbs, Farrelly, Fabianke, Burch, and Ramesh (2023)		Lisi, Mignacca, and Grimaldi (2023) Galli, Torelli, and Caccialanza (2023)	
Informal Multilevel	Troise, Santoro, Jones, and Bresciani (2023)	Valenza, Zoppelletto, and Fazio (2023)		
Informal Internal	Perotti, Dhir, Ferraris, and Kliestik's (2023)			
Individual		Cristofaro, Giardino, Camilli, and Hristov (2023)		
	Transitioning SMB	Transitioning Practices	Impact	→ Phase

Point of view

Figure 1. Special issue framework.

scrutinise the potential of 'greenhushing' (Galli, Torelli, & Caccialanza, 2023), and delve deeper into the roles of various stakeholders in shaping SME sustainability practices. Furthermore, several papers in this special issue emphasise the significance of examining the maturity of SMEs concerning their sustainability approaches. For example, Valenza, Zoppelletto, and Fazio (2023) observe that more mature SMEs might perceive sustainability as a threat. More research is needed to investigate the role of established practices and approaches in SMEs concerning sustainability issues and business operations.

Although the different contributions of this special issue disentangle several elements allowing us to understand the relationship between sustainability and SMEs, all papers underscore the need for more research addressing the informal nature of SME operations, emphasising the unique challenges and opportunities they face in achieving sustainability outcomes (Jenkins, 2004; Russo & Tencati, 2009).

Furthermore, it becomes evident that existing frameworks often lack adequate attention to the specificities of SMEs. The need for tailored policies and practices that consider the distinctive characteristics of SMEs should be emphasised to foster more effective integration of sustainability practices within this vital and central part of our economy.

Practitioners and policymakers are advised to take note of the specificities, enabling factors, and challenges identified, such as the significance of managerial mindset shifts and the leveraging of digital technologies. Providing SMEs with specific guidelines and tools for sustainability reporting (Lisi, Mignacca, & Grimaldi, 2023), and understanding the sociocultural dynamics within SME clusters (Valenza, Zoppelletto, & Fazio, 2023) could prove instrumental. Moreover, there is a critical need for supportive policies that acknowledge the distinct characteristics and limitations of SMEs (Álvarez Jaramillo et al., 2019; Bos-Brouwers, 2010).

This special issue not only contributes to the existing corpus of knowledge on SMEs and sustainability but also sets the stage for further empirical and theoretical development, suggesting critical elements to investigate in this underdeveloped filed of research. The discourse has been enriched, and the onus is now on both the academic and the practical worlds to continue this momentum towards a sustainable future where SMEs play a central, strategic role.

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