




SME research: SMEs' internationalization and collaborative innovation as two central topics in the field

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Abstract

SMEs' internationalization and innovation activities represent fundamental economic activities that are conducive to SMEs' individual success, but likewise contribute to the economic well-being of their home region and country. Therefore, understanding how some SMEs are innovative and internationally active has attracted significant scholarly attention within and beyond the SME research community. This paper highlights selected key findings from prior literature with regard to the context factors that facilitate SMEs' internationalization and innovation. In the latter case, we focus on innovation within inter-organizational collaborations. We conclude with directions for future SME research above and beyond SMEs' internationalization and innovation.

Keywords SME · Internationalization · Innovation · Collaboration

1 Introduction

Small- and medium-sized enterprises (SMEs) are not a guarantee for economic and social success. Their ubiquity suggests that they have a large presence in countries and regions exhibiting a robust economic performance, but also in struggling and impoverished economies as well. The World Bank estimates that SMEs account for 90% of businesses and just over one-half of employment globally. In Germany, a country that is known for its mighty corporate giants, such as Volkswagen, Siemens and Daimler, SMEs account for over 99% of enterprises and more than 55% of employment (IfM Bonn, 2022). Similarly, the share of enterprises accounted for by

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SMEs is over 99% and employment is nearly 47% in the United States (United States Small Business Administration, 2022), despite the prominence of global titans, such as Google, Amazon and Facebook.

However, SMEs are equally pervasive in less successful countries, both within the context of the European Union and the OECD, as well as at all levels of economic development. Just as the poorer countries in the European Union, such as Greece or Romania, exhibit a high presence of SMEs, so too do countries at the lowest levels of economic development, such as Burundi, Somalia and Mozambique. Thus, SMEs may be necessary but certainly not sufficient. The difference lies in the nature and type of SMEs themselves and their contexts that enable value creating activities.

In particular, a rich and compelling literature has identified several key aspects accounting for the SME difference. In *Capitalism, Socialism and Democracy* (1942, p. 132), Schumpeter concluded, “Innovation itself is being reduced to routine. Technological progress is increasingly becoming the business of teams of trained specialists who turn out what is required and make it work in predictable ways.” This led to Schumpeter’s (1946, p. 106) dismal view about the role of SMEs, “What we have got to accept is that (the large-scale establishment or unit of control) has come to be the most powerful engine of...progress and in particular of the long-run expansion of output.”

However, a large body of evidence, supported by underlying theory, has found exactly the opposite – that SMEs are essential for innovative activity. In the absence of SMEs, innovation would undoubtedly be considerably less vigorous and compelling. Notably, the literature revealed that SMEs approach innovation activities in a different manner than do large firms. Specifically, SMEs rely less on internal innovation efforts, but instead engage in inter-organizational collaborations (IOC) as an essential strategy to overcome the well-known resource constraints associated with their liability of smallness when innovating (Agostini & Nosella, 2019; Zahoor & Al-Tabbaa, 2020).

A second way accounting for the SME difference vis-à-vis their larger counterparts lies in the internationalization of SMEs. In the globalized economy, internationalization underscores the ability to harness the opportunities afforded from globalization rather than succumbing as a victim of globalization. Internationalization was thought to be the province of the large enterprise, since it was determined that the firm had to achieve scale within the domestic market as a pre-requisite for internationalization (Kindleberger and Audretsch 1983). However, more recently, SMEs have been found to provide an engine for internationalization (Del Sarto, Di Minin, Ferrigno & Piccaluga, 2021).

While the spatial distribution of SMEs, statistically measured, across national and institutional contexts is remarkably even, that of innovative and internationalized SMEs is geographically concentrated. Thus, while virtually all countries and institutional contexts have SMEs, the high-performing SMEs, in terms of innovation and internationalization tend to be considerably less prevalent and exhibit a high propensity to be located in specific spatial and institutional contexts.

The purpose of this paper is to highlight selected key findings from the literature on context factors contributing to SMEs’ internationalization and innovation. Specifically, we aim to provide key insights regarding theoretical approaches and

empirically tested relationships that have been shown to enable SMEs to successfully engage in these activities despite their limited resources. We focus on SMEs' internationalization (SMEI) and innovation activities given that especially these two activities seemed to be attributed to larger organizations for a long time and SMEs seemed to be particularly disadvantaged given their limited resources rooted in the liability of smallness. However, research on SMEs' internationalization and innovation has grown rapidly over the last two decades, and has shown, that especially inter-organizational collaboration represents a highly efficacious strategy by SMEs to overcome these liabilities in general and especially in the context of these two activities (Guenther, Belitski and Rejeb, 2022; Child, Karmowska and Shenkar, 2022).

In the following, we first present the variety of SME definitions, before we illustrate (a) which biases toward certain research settings exist in the literature, and (b) which context factors have been identified to contribute to SMEs' internationalization and SMEs' (inter-organizational) innovation, respectively. The last section will identify fertile areas for future research about SMEs above and beyond the topics of collaborative innovation and internationalization.

2 SME definition

The number of studies investigating small and medium-sized enterprises have grown significantly over time. Yet, the literature has not agreed on a unifying definition or conceptualization of what actually constitutes a small and medium-sized enterprise along several dimensions.

For instance, in the context of this paper's focus, i.e., SMEs' internationalization and collaborative innovation, Child, Karmowska and Shenkar (2022) as well as Zahoor and Al-Tabbaa (2020) highlight in their recent literature reviews, that, first, there is a variety of approaches to define SMEs as a size category, e.g., in terms of the number of employees or annual revenue as performance indicators. Depending on the geographic context, among others, e.g., size categories vary between 1 and 250 employees in the EU, up to 500 in the US or even 2000 in China.

Second, various types of firms may be categorized as SMEs (Child et al., 2022). Specifically, while the label 'SME' includes firms of certain size classes, the literature remains inconclusive, e.g., whether 'international new ventures' (INV), 'born globals' (BG) or startups in general also belong to this category, given that they certainly start small, but may differ along other important dimensions from firms within this category, e.g., age, entrepreneurial and international orientation, or growth ambitions. Likewise, equating German *Mittelstand* with the label 'SME' has been questioned (Pahnke et al. 2023), as well as the observation that not every family-owned business is a small or medium-sized enterprise in terms of size. However, ownership may be decisive for the mindset and decision-making processes, thus potentially making them comparable to other SMEs even outside the specified size range.

Given the purpose of this paper to highlight key findings on SMEs' internationalization and inter-organizational innovation from the literature, we will not introduce another or unifying SME definition. Instead, we acknowledge that the definition of

SMEs might also be context dependent, and a universal definition might thus also run the risk to conceal relevant differences in research settings.

3 SMEs' internationalization and its context

SMEs tended to serve domestic markets, while international competition traditionally seemed to be in the hands of large corporations. However, this spatial separation of small and large competitors no longer captures today's global markets, as SMEs increasingly engage in international activities and undoubtedly play a significant role in international competition (Ribau et al. 2018; Dabic, Maley, Dana, Novak, Pellegrini, Caputo, 2020). However, it has been shown that SMEs differ significantly from large multinational businesses when internationalizing in terms of their capabilities and strategic approach (Ribau et al. 2018). Consequently, the specificities of SMEs' internationalization have attracted scholars' attention to understand how SMEs approach and balance the advantages of accessing market opportunities outside their national borders and the associated additional risk they expose themselves to. This became even more important in the light of increased competition, rising globalization, and accelerating technological development in the last two decades (Lee et al. 2012; Dabic et al., 2020).

In the following, we provide insights into the question which context factors contribute to SMEs' internationalization in the first place. To this end, we first provide insights on the subject of studies and theoretical approaches taken in the literature, before we present the context factors that influence SMEs' internationalization based on the recent literature reviews by Ribau et al. (2018), Dabic et al. (2020), and Child et al. (2022).

3.1 Subject of studies

Despite the prevalence of SMEs around the globe, developed countries and in particular Europe received most scholarly attention (Ribau et al. 2018; Dabic et al., 2020; Child et al., 2022). Starting in the 1990s, substantial interest in SMEs' internationalization emerged in Europe, which can clearly be attributed to the importance of SMEs in this part of the world. Ribau et al. (2018) illustrate that the United Kingdom, Italy, Spain, Finland and Sweden were the most frequently researched countries in this regard. However, from the mid 2000s SMEs' internationalization activities from Asian countries attracted increasing attention. Around the same time, the number of studies focusing on SMEs on the American continent increased and have been dominated by papers targeting the U.S. and Canada. Studies about SMEs' internationalization from Oceania and especially the African continent are comparably rare. This lack of studies focusing on African SMEs might be explained by the shortage of factor endowment confining African SMEs' international expansion, or by limited available resources in the domestic academic system to investigate the phenomenon (Ribau et al. 2018).

Moreover, Dabic et al. (2020) highlight the bias in prior research to predominately investigate SMEs in (a) high-tech settings, (b) in urban areas, (c) in developed coun-

tries, and / or (d) to focus on single country studies as opposed to generating knowledge based on multi-country and culture studies. It is therefore questionable, in how far current literature can properly advice policymakers in designing and advancing, e.g., infrastructure, regulations, and educational programs to facilitate entrepreneurship through SMEs in low-tech sectors or in rural areas or developing countries.

3.2 Theoretical approaches

Traditionally, firms' internationalization has been explained either by transaction cost arguments or the process- or stage-based Uppsala model, moving from the former country perspective to the latter microeconomic perspective over time. More recently, researchers have adopted an entrepreneurial perspective in the context of investigating SMEs' internationalization (Ribau et al. 2018; Dabic et al., 2020). According to this research stream, the established Uppsala model does not necessarily capture the constraints and opportunities in contemporary globalized markets and its competitive scenery that SMEs face. The Uppsala model implies a gradual process of acquiring and integrating knowledge and experience to develop the necessary capabilities to become increasingly active internationally. Specifically, this stepwise process assumes that firms first need to gain experience on the home market before starting export activities, establish sales subsidiaries and open production facilities abroad. Moreover, firms will start with geographically close markets before becoming active in more culturally and geographically distant markets (Johanson and Vahlne 1977, 1990). While scholars showed that established SMEs indeed commonly engage in export activities as a relatively low-risk involvement to enter international markets (Ribau et al. 2018; Child et al., 2022), it was also shown that a significant number of firms do not follow these incremental steps, but instead (aim to) operate globally from their inception, thus requiring new theoretical frameworks based on an entrepreneurial perspective, such as the 'born global' (BG) or 'international new venture' (INV) approach (Knight & Cavusgil, 1996; Coviello, 2006, Oviatt & McDougall, 1994, 2005; Kuivalainen et al., 2007; Oyna & Alon, 2018).

Next to the entrepreneurial perspective, network theory plays an important role when explaining SMEI. It is used to describe how SMEs commonly engage in and utilize networks to overcome their resource constraints (Dabic et al., 2020). In particular, it is argued that intra- and inter-organizational, formal and informal linkages are essential for SMEs to select, enter and successfully compete in international markets (Coviello and Munro, 1997; Dana, 2001; Young, Dimitratos & Dana, 2003; Acs & Terjesen, 2013; Child et al., 2022).

Lastly, the resource-based view (RBV) (Barney 1991; Penrose, 1959; Wernerfelt, 1984) is the most widespread approach in the context of SMEI (Dabic et al., 2020). It argues that organizations are bundles of resources, e.g., knowledge, organizational processes, infrastructure, or capabilities, that can be utilized to generate a (sustainable) competitive advantage, and thus serves as a valuable framework to explain how SMEs' resources enable their internationalization. These resources do not need to be owned by the SME, but may likewise be accessed by collaborating with partners, such as other firms, institutions, or organizations (Dhanaraj and Beamish 2003; Hessels and Parker 2013). This offers the opportunity to enrich the RBV perspective with

arguments from network theories or, e.g., resource dependency theory (RDT) (Pfeffer and Salancik 1978).

3.3 SMEs' internationalization context

An organization's context is a multi-faceted and multi-level phenomenon (Hitt et al. 2007; Baker and Welter 2020). In a recent review, Child et al. (2022) highlight two context dimensions that are essential to explain SMEs' internationalization decisions and processes, i.e., the SME's location (home and host country) representing the macro level and the direct organizational context as the meso level.

3.3.1 Macro level factors

The authors draw six major conclusions from the analysis of papers relating to the macro level context. First, **home country institutions** directly affect SMEI by providing resources, information and network access, and indirectly by promoting international market orientation, or stimulating compensatory behavior by SMEs to overcome institutional voids (Catanzaro et al. 2019; Adomako, Amankwah-Amoah, Dankwah, Danso & Donbesuur, 2019). Second, **host country institutions** affect SMEs market entry mode and how SMEs cope with institutional and cultural distance (Del Bosco and Bettinelli 2020). Third, while home **country's national culture** influences (international) entrepreneurial orientation and decision-making, host country's national culture affects how SMEs deal with the risk and cultural unfamiliarity (Dimitratos et al. 2011; Puthusserry, Child, & Rodrigues, 2014). Fourth, home country's **economic strength** and level of development facilitate SMEs' internationalization (Child et al. 2017). Fifth, the **political context** might support SMEs' internationalization in the case of political connections, or political risks may hinder SMEI (Adomako et al. 2020). Lastly, an SME's **industry** shapes the business model, and implies relevant markets and its regulatory system (Child et al. 2017).

3.3.2 Meso level factors

While these macro level factors do not differ significantly from those factors affecting larger organizations' internationalization activities, the authors also deduced six main findings from the literature on the meso level in their literature review (Child et al., 2022) out of which the first three are more closely linked to SMEs and their size related characteristics. First, **networks and collaborations** stimulate SMEI and innovation by providing market and technical knowledge, may help overcome the liability of smallness and of origin, as well as institutional obstacles, and may even foster foreign sales (Jonsson and Lindbergh 2010; Tajeddin and Carney 2019). Specifically, it was shown that networks may assist in overcoming political and institutional impediments, provide legitimacy and that domestic collaborations may facilitate exports. Moreover, different network connections have proven to be helpful at different stages of the internationalization process. Notably, family ownership tends to negatively moderate the relationship between inter-organizational and interpersonal networking and SMEs internationalization success (Eberhard and Craig

2013). Second, investigating **family ownership** and its direct effects more closely, reveals that it can either facilitate or impede SMEI. While high internal social capital of family relationships facilitates SMEI, family's risk aversion, paternalistic and autocratic family firm culture and financial slack negatively affect SMEI (Tasavori et al. 2018; Xu and Hitt 2020; Zaefarian, Eng & Zaefarian, 2016). Third, while globally integrated small firms do not differ significantly from larger firms in terms of their international relations (Kalantaridis and Vassilev 2011), it was shown that as **SME size** increases formal network linkages become more important than informal ones for SMEI (Idris and Saridakis 2018). Fourth, SMEs' internationalization constitutes a (learning) process, and its phases affect the SME's demand for external support (Lee et al. 2020; Child et al., 2022). Fifth, and less specific to SMEs' distinctiveness: technological capabilities may foster SMEI with regard to innovation and market access in the case of digital competences (Freeman et al. 2010). Lastly, larger distances between home and host country require entry modes with higher levels of control implying higher transaction costs (Del Bosco and Bettinelli 2020).

As already highlighted, most of these context factors influencing internationalization seem to apply to large corporations and SMEs alike. Therefore, we follow Child et al. (2022) to call future researcher to challenge this prevalent assumption, and to incorporate size-related characteristics into theory-building when investigating SMEs internationalization patterns. While research targeting international entrepreneurship has already acknowledged the relevance of size-related differences, further research can provide a more nuanced picture of how especially established SMEs differ from larger organizations in their internationalization patterns. Investigating the specific role of social capital, networks and inter-organizational collaborations may provide fertile ground to analyze how SMEs engage in internationalization by nurturing and utilizing these networks in a distinct manner.

While the review by Child et al. (2022) already highlighted the relevance of networks and inter-organizational collaborations in the context of SMEs' internationalization, collaborating with external partners especially for innovative purposes, has long been recognized (Zahoor and Al-Tabbaa 2020). These inter-organizational collaborations have been shown to not only constitute the preferred way of innovating as compared to internal R&D (Classen et al. 2012), but are beyond that also more powerful in boosting innovation than R&D (Hervás-Oliver et al. 2021). In particular, De Massis et al. (2018) showed that German Mittelstand firms often collaborate successfully with their customers. In this context, Guenther et al. (2022) showed that especially small family firms are able to manage these collaborations for innovative purposes. Their unique characteristics and superior social capital allow them to govern the complex relationships with external partners even more successfully than their non-family counterparts based on higher levels of trust and a more intense knowledge exchange. This preferential access e.g., to customer knowledge by SMEs to develop new products is not accessible for larger organizations to the same extent given that these underlying long-lasting and trustful partnerships rely on close interpersonal relationships and oftentimes joint local embeddedness of the partners. This relevance and crucial success factor of SMEs lead us to focus on inter-organizational collaborations (IOC) and their role in facilitating SMEs' innovation in the following

and present selected key findings on one of the fundamental contributors to SMEs' innovation.

4 SMEs' inter-organizational collaboration and innovation

SMEs significantly contribute to the economy and their development in many countries around the globe, not least because of their innovation performance. However, it is equally well recognized that SMEs face significant resource constraints, given their liability of smallness, that may inhibit their innovation activities. SMEs were shown to respond to these resource constraints by engaging in inter-organizational collaborations (IOC) to facilitate their innovation, and to rely less on internal R&D to foster innovation (Classen et al. 2012; Zahoor and Al-Tabbaa 2020).

In the following, we provide insights into the question which context factors contribute to SMEs' innovation in the context of inter-organizational collaborations. After describing the subject of studies, and theoretical approaches taken in the literature, we present context factors that influence SMEs' innovation in inter-organizational collaborations.

4.1 Subject of study

According to a recent literature review by Zahoor & Al-Tabbaa, (2020), IOC research is also dominated by a geographic focus on European countries, that was described in the context of SMEI. Moreover, while studies investigating SMEs' IOC in Australia rank second, the American, Asian and African continent serve significantly less often as empirical context. Consequently, the authors highlighted, that the underrepresentation of studies especially in developing countries bears the risk that, e.g., recommendations or policy measures to support IOC among SMEs to boost innovation in developing countries, cannot be derived from prior findings unconditionally. The prevalence of single-country studies and a focus on manufacturing industries likewise impose restrictions on the generalizability of prior research findings. Moreover, similar to the literature being fragmented when it comes to defining SMEs, there is also a conceptual plurality in the context of inter-organizational collaborations. In this paper, we follow the conceptualization of inter-organizational collaborations used in the review by Zahoor & Al-Tabbaa, (2020), and do not differentiate or unify these findings with the body of research that has evolved around the related concept of 'open innovation' (for a review see e.g., Hossain & Kauranen, 2016).

4.2 Theoretical approaches

Scholars in the field of IOC and SME innovation use similar theoretical approaches to those in SMEI research. Specifically, arguments from economics, the network perspective or strategic management and organizational theory are applied, with (social) network theory, the resource-based view and transaction cost theory dominating the literature stream (Zahoor and Al-Tabbaa 2020).

Taking a resource-based view perspective, scholars argue that collaboration relations are resources comparable to other internal resources such as capabilities, assets or knowledge that the organization may possess. Therefore, collaboration linkages may likewise contribute to the organization's competitive advantage if they are valuable, rare, inimitable, and non-substitutable (Barney 1991), and moreover allow SMEs to access additional resources outside their organization (Ebersberger and Herstad 2011).

The network perspective highlights that SMEs are part of a system in which different types of relationships co-exist, personal and professional, formal, or informal. It is argued that these links influence the development of economic activities, such as innovation, within this network and its individual members (Ceci & Iubatti, 2012; Karlsson & Warda, 2014). It has been shown that the variety of network relationships enhances SMEs' access to a diverse pool of information and therefore also facilitates opportunity recognition (Nordman & Tolsdoy, 2016; Zeng, Xie & Tam, 2010).

Scholars applying a transaction cost approach propose that inter-organizational collaborations may be decisive to reduce transaction costs within the innovative network, by easing search processes for partners, cost sharing for R&D, and the diffusion of innovation (Diez 2000; Fritsch 1992).

4.3 Inter-organizational collaborations, SMEs' innovation, and its context

The literature review by Zahoor & Al-Tabbaa (2020) also offers the opportunity to draw some conclusions with respect to four context levels (the individual, firm, relational, and environment-related level) of IOC and its influence on SMEs' innovation.

First, on the **individual level**, managers in SMEs play a significant role in facilitating innovation in general and within inter-organizational collaborations. Specifically, innovation will be fostered if managers (i) have an entrepreneurial mindset that allows them to accept risks and exploit opportunities, (ii) possess technical knowledge as well as partnership management experience or network competencies, and (iii) have a certain age and experience to facilitate an innovative culture within the organization (e.g., Bougrain & Haudeville, 2002; Gupta & Barua, 2016; Ritter & Gemünden, 2003).

Second, eight **firm-level** characteristics were identified by Zahoor and Al-Tabbaa (2020) that are crucial to ensure innovative outcomes in the first place, or that moderate the relationship between IOC and SMEs' innovation. Specifically, incentives to innovate, internal R&D, innovative culture and strategy are considered to directly influence SMEs' innovation performance, e.g., by developing internal technological and R&D capabilities, promoting innovation and innovative behaviour, and to approach the market and its environment strategically (e.g. Fu, 2012; Bougrain & Haudeville, 2002; De Mattos, Burgess & Shaw, 2013; Martinez-Costa, Jiménez-Jiménez & Dine Rabeh, 2019; Hadjimanolis, 2000). Furthermore, firm size, firm age, absorptive capacity and entrepreneurial orientation were identified to affect the IOR-SME innovation relationship in the following way: (i) larger firms may detect external knowledge more easily, thus reducing the need for external collaboration, (ii) SMEs possessing higher absorptive capacities to benefit more from external collaborations as it also enhances internal learning, and (iii) SMEs with weaker entre-

preneurial orientation may benefit more from IOC as it might enable them to reduce their perceived risk related to innovative activities by learning from an external role model how to deal with risks and market uncertainties (e.g. Teirlinck & Spithoven, 2013; Tsai, 2009; Baker et al. 2016).

Third, eight major **relational-level** factors were identified in the literature review by Zahoor and Al-Tabbaa (2020) that influence SMEs' innovation directly or indirectly. The literature revealed that tie strength, partner diversity, IOC proximity, and the capability to manage collaborations represent important antecedents of SMEs' innovation outcome. In particular, while strong ties are characterized by frequent and intense exchange of tailored knowledge, weak ties offer a relevant channel to access new knowledge. Moreover, SMEs are generally advised to collaborate with a diverse set of partners to expose themselves to market and technological knowledge via their customers, suppliers, competitors, or research institutions to boost innovation, although empirical evidence is inconclusive in the case of competitors. The literature on IOC proximity generally proposes that the closer the collaboration partners are in terms of geographic, cognitive, and organizational distance, the better the access to the partner's knowledge, and thus more beneficial for innovation. In terms of collaboration management capabilities, SMEs benefit from prior collaboration experience, communication skills and coordination routines to enhance their innovation from IOC (e.g., Poorkavoos, Duan, Edwards & Ramanathan, 2016; Brunswicker & Vanhaverbeke, 2015; Weterings & Boschma, 2009; Jespersen, Rigamonti, Jensen & Bysted, 2018; Lee, 2007).

Network size, interaction frequency, governance, and mutual trust were among the factors on the relationship level that moderate the IOC-SME innovation association. While network size negatively moderates the IOC-SME innovation relationship, given that smaller networks face higher resource constraints, higher levels of mutual trust, frequent interaction and appropriate governance mechanism may strengthen the relationship and thus benefit SMEs' innovation. (Wincent et al. 2010; Hanna and Walsh 2002; Bouncken, Clauß & Fredrich, 2016).

Fourth, environmental uncertainty, economic, market and industry factors were identified as **environmental-related** factors to impact SMEs' innovation output or its relationship to IOC. Specifically, while environmental uncertainty forces SMEs to innovate to survive in the first place, an economic downswing and industry dynamics and characteristics may pressure SMEs to prioritize IOC as well as appropriate collaboration partner selection, thus indirectly influencing the IOC-SMEs' innovation relationship. Likewise, technological uncertainty increases the relevance of a diverse set of collaboration partners as a channel to access a manifold pool of knowledge and other resources (Hadjimanolis 2000; Fernández-Olmos and Ramírez-Alesón 2017; Fukugawa 2006; Mu, J., & Di Benedetto, C. A., 2011).

While larger organizations are likewise influenced by individual, firm, relational and environment-related level factors in their (inter-organizational) innovation activities, SMEs are expected to be much more sensitive to these influences. Given that SMEs depend to a large extent on a few owners and / or managers, their individual influence in terms of an entrepreneurial mindset and innovative culture is much stronger than in larger organizations. Likewise, the ability and willingness to select and engage with external collaborators depends on fewer individuals and their initiative

to nurture these relationships. Moreover, given the bias in this research stream it remains underexplored, if building social capital and fostering networks takes place in the same way across the globe and settings, or whether a more context-sensitive theory-building might be needed to further advance our understanding of inter-organizational collaborations.

5 Directions for future research

Internationalization and innovation are two remarkable value creating activities that SMEs perform despite their resource constraints. This paper presented selected key findings regarding context factors that influence SMEs' internationalization and innovation activities, the latter within inter-organizational collaborations. While none of the findings may close the debate why more innovative and internationally active SMEs can be found in some countries and regions rather than in others, it highlights various context factors on intertwined levels that facilitate individual SMEs' contribution in terms of innovation and internationalization. As highlighted, given the bias in the literature, especially towards studying the European context and the manufacturing sector, it is questionable in how far recommendations to foster certain context factors to stimulate innovation and internationalization, e.g., by policy interventions, can be deduced for developing countries.

Moreover, as highlighted in the beginning, given the variety of SME definitions that seem to be context specific itself, one may question whether it is even advisable to develop a unifying definition and to streamline the recommendations from the imbalance in research settings toward a one fits all framework. Or if we should focus instead on how and what we can learn from this ambiguity of definitions e.g., to develop theory. Along these lines, theory-building in the context of SMEs in general as well as regarding their innovation and internationalization activities might strongly benefit from incorporating e.g., cross-country studies and industry-specific factors to enhance our understanding of the largest, but potentially also one of the most heterogeneous group of enterprises around the globe. In this regard, investigating how certain macro, meso and micro context factors as well as network characteristics influence specific internationalization or innovation paths among SMEs e.g., in sets of comparable countries or industries seems to be promising as well. This could likewise enable policymakers to design regulatory frameworks for SMEs in a more context-sensitive manner.

While research has been a catalyst for changed thinking about the role of SMEs concerning innovation and internationalization and how these are influenced by SMEs' context, new and fundamental questions have emerged above and beyond these topics that need to be addressed by future research. In particular, there are five key themes and topics that will drive SME research and its value to both the scholarly community as well as practitioners in the ensuing years. These five directions for future research are the static versus the dynamic role of SMEs, the organizational context, the local context most conducive to high performing SMEs, the links between sustainability and SMEs, and the ways in which SMEs impact social inclusion and the income distribution. Not only do practitioners and the scholarly

literature need answers to these questions, but they are inextricably linked together. It may not be possible to understand the full depth of one of these topics and issues without insights garnered about the others.

The first topic for future research involves the static versus the dynamic role of SMEs. Virtually all new firms are born at a small scale, making them an SME by definition. It is what happens subsequent to birth that makes the difference (Gottschalk and Müller 2022). Most of the new-firm startups do not grow and do not survive. Studies have found that the likelihood of survival is the lowest for new and young firms and decreases as the firm ages and grows (Haltiwanger 2022). However, only a minority of new firm startups are able to grow and ultimately survive (Bartoloni et al. 2022; Coad and Kato 2022). It is this transition from the static to the dynamic perspective that introduces considerable heterogeneity. While some new businesses pass through the SME stage over time en route to becoming a large, dominant firm, such as SAP, Google, TikTok and Amazon, others are able to remain competitive through innovative activity and internationalization even while abstaining from continued growth. Subsequent research would contribute considerable value by building on the pioneering research of Albach (2013) to distinguish among SMEs characterized by scale-ups and gazelles in a dynamic sense from their counterparts that are still able to contribute to innovation and internationalization without following a dynamic trajectory of rapid growth.

The second topic for future research focuses on the type of organization, and in particular the roles of ownership and management, as a salient feature shaping SME performance. While the heterogeneity of both ownership types and modes of management has been duly noted in the scholarly literature, they have yet to be systematically linked to performance differentials, particularly in the context of a dynamic and evolutionary lens. Considerable strands of literature abound documenting the performance of certain types of SMEs in a particular context, such as the *Mittelstand* in Germany. A large and robust literature provides keen insights as to how and why the German *Mittelstand*, and in particular the high performing Hidden Champions, are able to generate innovations and internationalization, even as they eschew scale-up growth (Johann et al. 2021; Lehmann, Schenkenhofer & Wirsching, 2019; Pahnke & Welter, 2019). The *Mittelstand* has exhibited a remarkable track record to sustain a long-term performance of innovation and internationalization, while remaining classified as SMEs. Is such an alternative to rapid scale-up growth, where status of an SME is only temporal and not sustainable, specific only to the German context or can it be found in the context of other countries and institutions? Here the literature has been silent.

The local context most conducive to high performing SMEs is the focus of the third topic holding promise both for scholars and practitioners. Extant research has clearly identified factors and resources as an important aspect of the local context shaping SME performance. Specific factors and resources include, but are not limited to natural resources, infrastructure, physical capital, unskilled labor, skilled labor, human capital, finance, knowledge and the creative class. Similarly, the structure and organization of economic activity at the specific place can enhance SME performance. Examples of spatial structure and organization can include, but are not limited to clusters, specialization, diversity, market power, competition, and entre-

preneurship and entrepreneurial ecosystems. Behavior and cluster can also impede or enhance SME performance. While research in the broader area of economic geography provides a well-established basis toward this end, there remains considerable research to flush out the exact ways that the human dimension shapes SME performance, there are reasons to focus on networks, linkages, interactions and interfaces; leadership, and place-based identity and image as being particularly important. Still, it is the interaction among these elements of these three different dimensions play in shaping SME performance that little is known about but bears the greatest potential.

The fourth topic for future research involves the link between SMEs and sustainability (Sanders 2022). Research has found pervasive evidence that the values of owners, managers and workers in the German *Mittelstand* companies may differ from that of their counterparts in other types of firms (De Massis et al. 2018). However, if such pervasive differences hold for or carry over to SMEs more generally remains to be seen in future research. To the extent that SMEs or certain types of SMEs involve constituents, including employees, owners and managers, but also the local community, with values that are more rooted in sustainability could endow them with the sustainability advantage. One might speculate that locally embedded SMEs and family businesses might be better equipped, and likewise inevitable, to address today's grand challenges given their intergenerational planning horizon, long-term orientation and high level of social responsibility and commitment. E.g., the well-established literature on family businesses may also provide fertile ground for shedding light on these aspects. However, such a conjecture, without the painstaking research needed to back this up, remains exactly that – a conjecture.

The fifth topic for future research involves the impact of SMEs on social inclusion and, in particular, the distribution of income. A large and detailed literature has identified the key role played by gender, along with various ethnic and immigrant groups on SMEs. However, not only does the focus of these studies tend to target one aspect of disadvantaged demographics rather than a more inclusive and general approach, but also almost exclusively on the founders and owners of SMEs but not employees (Orozco 2021). While the issue of opportunity as an entrepreneur for socially excluded demographic groups is undoubtedly important, perhaps an even greater issue is the opportunities that SMEs present for such groups, as well as their regions, and for socially excluded demographic groups.

Within the span of a generation, research has made astonishing progress about the SME difference – what separates high performing SMEs from their more mundane counterparts. However, even as valuable insights have been gained about the contribution of SMEs to innovation and internationalization, new research challenges reflecting the challenges and problems posed by our contemporary world have emerged. To meet the promise inherent in SME research, future studies can make more headway in explicitly modelling both the external context in which SMEs operate but also their dynamic context as well. SMEs are typically embedded in a broad range of contextual factors, ranging from location to institutions, cultural, technological, and global. A rich opportunity awaits research analyzing how the different dimensions of context influence SMEs. In addition, analyzing the dynamic context would shed considerable light on where SMEs come from and how they evolve over time in shaping SME performance. Specifically, while numerous growth theories have been developed, it

remains an open question if and in how far SMEs grow differently as compared to other organizations, and how these paths influence subsequent business activities. Future research may be able to verify whether it is the dynamic context combined with the other contextual factors that may ultimately yield the competitive advantage to SMEs in providing new solutions and approaches for sustainability. We look to future scholars for the requisite and meticulous research needed to begin to shed light on the contributions of SMEs in this changing world.

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