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The Future of Small and Medium-Sized Enterprises (SMEs): Trends, Challenges, and Strategic Pathways

Rico. J. Baldegger, Professor
Sawyer Business School, Suffolk University

Abstract

Small and medium-sized enterprises (SMEs) play a crucial role in the global economy, representing over 90% of businesses and accounting for more than half of global employment. As the business landscape evolves due to technological advancements, changing market dynamics, and socio-environmental pressures, small and medium-sized enterprises (SMEs) must adapt to maintain long-term competitiveness and resilience. This contribution examines the outlook for SMEs, discussing emerging trends, key challenges, and strategic approaches that can support sustainable growth and innovation.

Introduction

Small and medium-sized enterprises (SMEs) drive economic growth, foster innovation, and create employment opportunities. However, they encounter distinct challenges in adapting to rapid technological changes, globalization, and rising demands for sustainability. Understanding the trends and challenges shaping the future of small and medium-sized enterprises (SMEs) is crucial for policymakers, business leaders, and stakeholders seeking to foster a resilient and inclusive economic environment.

The 21st-century economy demands a shift from growth at any cost to balanced development, where entrepreneurship benefits markets, individuals, and the planet. Entrepreneurial ecosystems—comprising entrepreneurs, institutions, universities, capital providers, governments, and civil society—must be structured to facilitate value creation that is both economically viable and socially equitable while also being environmentally responsible. Ecosystems that flourish in the coming decades will prioritize sustainability, innovation, and human dignity

as core performance metrics rather than peripheral aspirations.

Emerging Trends and Key Challenges for the Next Decade

The primary challenges mentioned by SME executives include talent acquisition and retention (52.5% of respondents), growth and expansion (43.8%), funding and access to finance (35.7%), a non-supportive policy environment (21%), and the challenge of maintaining a strong culture along with a clear company purpose and values (20%) (OECD, 2021a).

Digital Transformation

Digital technologies, including artificial intelligence, cloud computing, and e-commerce platforms, are leveling the playing field for small and medium-sized enterprises (SMEs). Digitally advanced small and medium-sized enterprises (SMEs) are more productive, innovative, and more likely to export (Chen et al., 2025). However, many SMEs struggle with digital adoption due to limited resources and skills. The OECD highlights that while SMEs typically digitize general administration or marketing functions first, the gaps widen as technologies grow more sophisticated, such as data analytics or enterprise resource planning systems (OECD, 2021a, 2024).

The challenges for SMEs include barriers to technological adoption and cybersecurity risks. *Technological Adoption Barriers*: Limited expertise and high initial costs prevent many small firms from fully integrating digital solutions. The OECD highlights that SMEs lag behind larger firms in adopting digital tools, with significant gaps in combining business processes and advanced technologies (OECD, 2021b, 2025).

Cybersecurity Risks: The increased digitalization of SMEs exposes them to numerous cyber threats, many of which they are unprepared to address. The OECD emphasizes that SMEs often invest less in digital security and have a limited understanding of the consequences of these threats (OECD, 2021b).

Open Innovation

Open innovation practices—collaborating with external stakeholders such as universities, larger corporations, start-ups, or innovation hubs—are increasingly being adopted by SMEs to supplement their limited R&D resources and accelerate product development. Digitalization supports open sourcing and open innovation, with large firms contributing to the transformation of business ecosystems through business accelerators and innovation labs that provide start-ups and innovative SMEs with access to resources and markets (OECD, 2019). The question is how SMEs can function within an open innovation system and play a crucial role in it.

Green Transition and Sustainability

As regulatory and consumer pressure for sustainable business increases, SMEs must adopt environmental, social, and governance (ESG) practices. Access to green financing and involvement in circular economy initiatives will be key drivers of competitiveness. The OECD notes that SMEs play a crucial role in transitioning towards more sustainable economies and

societies, given their significant environmental footprint and potential to develop and implement eco-innovations and greener business practices (OECD, 2022).

SMEs often lack the competence to manage sustainability; however, this competence can be sourced externally and significantly enhance innovation (World Economic Forum 2021). The big question is, what should we do or how can we improve to better introduce sustainable models into SMEs and, through these SMEs, to the markets in which they operate?

Changing Wowrkforce Dynamics

Flexible work models, upskilling needs, and the entry of Gen Z into the workforce are shifting SME talent strategies. Businesses must cultivate digital literacy and inclusive work environments to attract and retain top talent. The OECD emphasizes that continuous upskilling and reskilling are essential in a rapidly evolving digital landscape, particularly with the rise of data-driven business models (OECD, 2021b). Many highly talented individuals are not working in SMEs and prefer high-growth start-ups, larger corporations, or public organizations. Therefore, the challenge is to create jobs in SMEs to engage the younger generation.

Market Uncertainty and Global Supply Chain Resilience

The uncertainty of markets, characterized by rapidly changing regulations, trade dynamics, and customer expectations, requires continuous strategic realignment. SMEs, which are often part of the global value chain and frequently serve as suppliers, tend to have less independence in their strategic choices. Typically, their international strategy aligns closely with that of larger corporations, and SMEs follow their lead in adopting a global approach.

Recent global disruptions, such as the COVID-19 pandemic and geopolitical tensions (e.g., the Ukraine war and the Gaza conflict), have highlighted the need for more resilient and localized supply chains. SMEs are reevaluating their dependencies and investing in agility and risk management to enhance their resilience. Many SMEs reported that before experiencing disruptions, they had limited formal risk management frameworks in place. However, exposure to crises prompted a shift toward a more structured approach to identifying and mitigating risks.

Access to Finance

Despite support measures, many SMEs encounter funding gaps, particularly in innovation and digital transition projects. The OECD notes that SMEs are disproportionately impacted by market failures, trade barriers, policy inefficiencies, and the quality of institutions (OECD, 2019).

The World Bank emphasizes the crucial role of SMEs in global economic development, noting that they comprise approximately 90% of businesses and account for more than 50% of employment worldwide. The report also discusses the significant financing gap faced by SMEs, estimated at $5.2 trillion annually in developing countries (World Bank 2019).

Strategic Pathways for Future

Success

Policymakers, investors, educators, and community leaders must unite to redesign entrepreneurship support systems so that profit, people, and the planet are in harmony. By reimagining ecosystems with a focus on sustainability, innovation, and humanity, we can create economies that better serve everyone (ILO, 2021). Governments play a crucial role in nurturing SME-friendly ecosystems through tax incentives, digital infrastructure, and innovation grants. The OECD emphasizes that policymakers play a vital role in helping SMEs adapt their culture and processes to the digital world.

Strengthening the Integration of SMEs in Entrepreneurial Ecosystems

Building networks with corporations, academia, and public institutions can provide SMEs access to knowledge, markets, and innovative resources. Digitalization supports open sourcing and open innovation, with large firms contributing to the transformation of business ecosystems through business accelerators and innovation labs (OECD, 2019).

The concept of an entrepreneurial ecosystem has gained significant traction in recent years as a framework for understanding the spatial and institutional configurations that support entrepreneurial activity (Isenberg, 2010; Stam, 2015). Traditionally, studies on entrepreneurship have emphasized quantitative indicators, such as startup density, access to venture capital, and the performance of high-growth firms. However, emerging global challenges—such as the climate crisis, social inequality, and digital divides—require a more holistic and ethical approach to entrepreneurship.

Entrepreneurial ecosystems have emerged as strategic frameworks for driving economic development, fostering innovation, and facilitating societal transformation. As global challenges such as inequality, climate change, and technological disruption intensify, there is a growing need to reframe energy and environmental systems as purpose-driven, human-centered, and resilient. Therefore, a forward-thinking approach to entrepreneurial ecosystems that embeds environmental, social, and ethical values into their core structure is essential.

On the one hand, interdependent networks of actors, institutions, and cultural norms foster the creation of new ventures (Spigel, 2017). Classical models (e.g., Isenberg, 2010; Acs et al., 2017) stress tangible inputs—such as capital, talent, markets, and infrastructure—while more recent frameworks (Stam, 2021) introduce layered attributes, including social capital, support systems, and governance. However, critiques have highlighted the under-theorization of non-economic values (Cohen, 2006; Shwetzer et al., 2019), such as sustainability, social impact, and equity. Entrepreneurial ecosystems have transformative potential—not only to accelerate economic growth but to do so with integrity, inclusion, and long-term value.

The future demands ecosystems that support purposeful entrepreneurs, regenerative business models, and inclusive innovation. Entrepreneurial ecosystems designed to foster humane ventures require institutional alignment with values of fairness, partici-

pation, and impact measurement that extend beyond GDP. Furthermore, women are both underrepresented and underserved in entrepreneurial ecosystems (Hayter, 2018; Audretsch, 2021). Barriers include limited access to funding, inadequate mentorship, and socio-cultural constraints. However, women entrepreneurs are more likely to lead in sectors related to education, health, sustainability, and social innovation (Abazi-Alili et al., 2024). Their inclusion enhances diversity, system adaptability, and community relevance (Ferreira et al., 2023).

Fostering a Culture of Continuous Learning and Humane Leadership

Lifelong learning initiatives and entrepreneurial education are essential for future-proofing small and medium-sized enterprises (SMEs) against technological and market shifts. Continuous upskilling and reskilling are vital in a rapidly evolving digital landscape (Percy et al., 2018). Therefore, prioritizing people and adopting a humane entrepreneurial approach is necessary. Humane entrepreneurship is founded on principles of equity, purpose, well-being, and human rights. The concept of humane entrepreneurship challenges the traditional profit-maximization paradigm. Grounded in stakeholder theory and human development approaches (Sen, 1999), humane entrepreneurship highlights dignity, inclusion, ethics, and societal welfare (Guerrero & Siegel, 2024).

SMEs need to encourage the integration of young people into their environments; particularly ambitious young talents play a key role in this group. SMEs can and must be mobilized by these young talents, as they are capable of driving sustainability and prosperity. However, the relationship between young talents and SMEs is often overlooked, even though SMEs could act as a training ground or playground for young talents to gain managerial and entrepreneurial experiences or to view SMEs as a future career step. The connection between large companies and start-ups regarding technology scanning and innovation processes is not clearly defined. We do not focus enough on how SMEs can benefit from young talents – and vice versa – in promoting their innovation processes (Hume et al., 2021).

Ambitious young talents must identify challenging projects within SMEs, and projects related to Sustainability and Technology could play a crucial role here. Alternatively, they can pursue their dream of owning a company by becoming a future owner, entrepreneur, CEO of an SME, or successor entrepreneur. To stray slightly from the main point, such a focus on sustainability is likely also to enhance diversity, as it appeals to women, among others.

Embracing Agile, Scalable, and Sustainable Business Models

From subscription-based services to remote operations, agility in business model design enables small and medium-sized enterprises (SMEs) to respond swiftly to market changes (Leung, 2007). Innovation is often narrowly defined as technological advancement. However, inclusive ecosystems must promote institutional and social innovation, such as new governance models, public-private partnerships, and community-driven solutions (Audretsch et al., 2019; Guerrero & Siegel, 2024). Innovation becomes not only a market function but also a mechanism of systemic change. For SMEs, it emphasizes devel-

oping innovation capabilities for sustainable business models and fostering entire markets that can implement the UN's 17 Sustainable Development Goals (SDGs).

Focusing on scalable business models with a long-term perspective is essential, even though it can be a challenging task. This involves not only innovative business models but also those that can scale, support successor entrepreneurs in existing SMEs, and prioritize impact over technology.

The European Commission is launching a strategy to support start-ups and scale-ups, focusing on enhancing access to finance, markets, and talent (Press release, 28 May 2025). The plan aims to create an innovation-friendly environment and bridge the innovation gap within the European Union. It emphasizes assisting innovators, founders, and investors in choosing Europe by improving conditions for start-ups and scale-ups, allowing them to thrive. Key actions are centered on promoting innovation-friendly regulation, enhancing access to finance, accelerating market uptake and expansion, attracting and retaining top talent, and facilitating access to infrastructure, networks, and services.

Navigating an Open System and Cultivating Technology Intelligence

Most small to medium-sized enterprises (SMEs) effectively conduct research and development (R&D). However, much of the R&D is performed internally, and SMEs are generally hesitant to adopt open innovation concepts. If these SMEs were encouraged to share their innovations beyond their boundaries, they could enhance their ideas and competencies through contributions from external sources. Open Innovation is an innovation strategy that has been widely debated in management research over the past two decades (Chesbrough, 2003; Gassmann, 2006; West & Gallagher, 2006). In contrast to the old paradigm, which assumes that innovations should be developed within a company's boundaries, the Open Innovation paradigm embraces external ideas and pathways to market (Chesbrough, 2003, 2006). It emphasizes the importance of knowledge and information flows across a firm's boundaries, both inward and outward. Through these flows, companies can utilize external knowledge to create new offerings and leverage internal expertise by collaborating with outside partners within new business models. Thus, it allows firms to explore more opportunities through these inward and outward flows, as globalization and information technology have facilitated the exchange of information sources worldwide (Chesbrough, 2003).

Open innovation plays a crucial role in technology intelligence, enabling the development, capture, and delivery of intelligence. On the one hand, it discusses how companies can identify knowledge; on the other hand, it explores how knowledge can be transferred within firms. Technology intelligence maps a process from the input, which includes technology gaps and needs, to the output, which is intelligence for decision-makers within a firm. Furthermore, empirical evidence demonstrates that companies implementing Open Innovation necessitate the establishment of extensive networks of inter-organizational relationships with numerous external parties, including research institutions and universities (Perkmann & Walsh, 2007), users (von Hippel, 2005),

and suppliers (Chiaroni et al., 2011) to access sources of innovation: technology scouting, listening posts, crowdsourcing, user innovation, industry-research collaboration, and start-ups to tap into sources of innovation. Technology Intelligence is a significant organizational activity that keeps employees well-informed about technological developments. To enhance the company's ability to perform technology innovation successfully, technology scouting practices and listening posts in innovation clusters are encouraged (Dang et al., 2010).

Capturing and delivering technological data is defined by the concept of technology intelligence. The purpose is to integrate this process into the firm's strategy to enhance knowledge of technological threats and opportunities (Kerr et al., 2006). By establishing effective technology intelligence processes, firms can quickly identify and respond to radical trends (Lichtenthaler & Ernst, 2007). Technology intelligence illustrates how companies capture and process information to provide actionable insights. It is facilitated by a conceptual process that encompasses all the necessary steps to operate a technology intelligence system. This process is iterative and encompasses various phases. The firm's employees assigned to these tasks document their findings and disseminate the knowledge throughout the organization to assist decision-makers (Kerr et al., 2006; Mortara et al., 2009).

Architecting Adaptive Organizations: Strategic Leadership and Self-Organizing Systems

To address these future challenges, decision-makers—CEOs, board members, founders, and managers—in small and medium-sized enterprises (SMEs) require a holistic management approach. Adopting a comprehensive strategy for controlled interventions by entrepreneurs and managers is essential, even though the core strategy of cybernetic management prioritizes self-regulation and self-organization. This is because self-regulation and self-organization are embedded within the structures of natural systems, unlike those of technical or social systems. Enterprises are designed to manage and regulate themselves whenever possible. The principles of self-organization and self-regulation should be applied in practical situations. Other steering and regulatory mechanisms should be utilized if these principles cannot be implemented. In this context, the leadership role in SMEs must be clearly defined. From a holistic perspective, handling complex management situations requires a system of problem-solving processes, the design, direction, and development of the enterprise as a social system, and the constant consideration of environmental relationships, as well as management as social functions (Baldegger 2025).

Leading an SME into the future requires the ability to efficiently manage a system of problem-solving processes with the appropriate tools and resources. As in any profession, using the right tools is critical for success. Decision-makers in SMEs must utilize a diverse range of management techniques and tools across various technical and functional areas in multiple forms. Management techniques support corporate management's problem-solving efforts and help navigate the complex system. A comprehensive set of methods is consistently provided by finance and accounting. Furthermore, there are many

tools, including several newly developed ones, that go beyond the traditional accounting approach.

Conclusion

The future of SMEs depends on their ability to adapt and innovate in a rapidly changing global landscape. Digitalization, sustainability, and collaborative innovation will form the foundation for achieving a competitive advantage. Although the road ahead presents challenges, a proactive strategy, supportive ecosystems, and a resilient mindset can help ensure that SMEs remain vital engines of inclusive economic growth. The future relies on their capacity to generate economic value, tackle systemic problems, and operate within planetary boundaries while also incorporating diverse voices. By re-centering ecosystems around sustainability, humane values, and gender equity, we can cultivate entrepreneurial landscapes that foster both economic vitality and social progress.

Innovation as a systemic driver is essential. However, it must extend beyond product development to include both technological advancements and the transformation of mindsets, processes, and social norms, thus creating a lasting impact. Therefore, only entrepreneurial leaders with a systems mindset, strategic thinking, and humane values can navigate the complexities of a VUCA world.

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