



The innovation capability equation: A systematic review of global determinants of SME's success

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ABSTRACT

Competitiveness and long-term sustainability are closely tied to the innovation capability of small and medium-sized enterprises (SMEs). However, a systematic understanding of the key determinants of this capability remains limited and fragmented. While prior studies have examined individual innovation factors, few have comprehensively integrated the internal and external dimensions that shape the innovation capacity of SMEs across diverse contexts. In response to recent global disruptions and rapid technological transformations, this study addresses a critical gap by conducting a systematic literature review (SLR) and bibliometric analysis of 122 high-quality empirical studies published between 2020 and 2024.

Guided by the central question—what are the most influential determinants of innovation capability in SMEs, and how do these vary over time and across regions—this review synthesizes various empirical findings. Six major determinants are identified: Knowledge and Learning Capabilities ($r = 0.98$), Organizational Structure and Culture ($r = 0.96$), Innovation Management and Strategy ($r = 0.81$), External Networks and Collaborations ($r = 0.70$), Market Orientation and Customer Insights ($r = 0.47$), and Technology and Digitalization ($r = 0.05$). Additionally, the analysis identifies cross-cutting cited factors, such as Entrepreneurial Orientation and Absorptive Capacity that emerge as enablers. SME innovation capability is thus shaped by strategic, cultural, and knowledge-based determinants, alongside these aforementioned factors.

This study adopts a hybrid method that combines a structured SLR with bibliometric coupling using VOSviewer to map thematic clusters and publication trends. The review reveals notable geographical and temporal patterns in SME innovation research, highlighting China's consistent leadership in technology-oriented studies. Moreover, Knowledge Management, External Networks, and Digital Transformation emerge as an interconnected foundation for sustainable innovation in SMEs. Compared to earlier frameworks, this study offers a key advantage by explicitly incorporating geographical and temporal dynamics into the analysis. This contextual approach deepens our understanding of how the relevance of innovation capability determinants shifts across regions and periods, enabling more targeted and adaptive strategies. Thus, this research provides a systems-oriented foundation for future longitudinal studies that examine how interconnected determinants collectively drive sustainable innovation outcomes.

Introduction

Amid accelerating technological disruption, systematic innovation has become a cornerstone of organizational resilience for firms striving to compete and grow, irrespective of their size (Agrawal et al., 2021; Khyareh & Rostami, 2021).

Although SMEs are often recognized for their entrepreneurial spirit, they frequently encounter challenges stemming from limited resources and expertise. Additionally, intense market pressures, ongoing geopolitical instability, and climate-related disruptions introduce further complexity to innovation (Sinani & Zijl, 2024). However, these limitations do not necessarily hinder innovation; rather, they serve to

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