

Small and medium enterprise trends, themes, and global contributions: bibliometric analysis

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Abstract: Small and medium enterprise (SME) performance is critical to economic development, fostering innovation, employment, and sustainability. This study aims to analyze key bibliometric indicators to uncover trends, influential contributors, and thematic developments in SME performance research. Using 7,494 articles indexed in the Scopus database (1988–November 2024), the study reveals a 20.52% annual growth rate in publications. The Journal of Small Business and Enterprise Development emerges as the most productive journal, while Lubatkin et al.'s 2006 work on ambidexterity is the most globally cited. Thematic analysis identifies innovation, sustainability, and strategic management as pivotal themes, with digital transformation and big data analytics gaining prominence in recent years. Collaboration networks highlight significant contributions from the UK, China, and Indonesia, emphasizing global partnerships. This study concludes that SME performance research is dynamic and evolving, with innovation and sustainability at its core, underscoring the need for further exploration into these critical areas.

Keywords: small and medium enterprise, SME performance, bibliometric analysis, innovation, sustainability, research trends

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1. Introduction

Small and Medium Enterprises (SMEs) are pivotal to economic development globally, contributing significantly to employment, innovation, and GDP. SMEs are more effective in reducing unemployment compared to large enterprises (Ghassibe et al., 2019). Similarly, previous studies also emphasize the crucial role of SMEs in decreasing unemployment levels (Dahliah et al., 2023; Mile et al., 2022). For example, in Malaysia, SMEs account for 97.4% of business establishments and provide 59% of total employment, highlighting their role as key drivers of economic activity (Sukri et al., 2023). Their performance is critical not only for economic stability but also for fostering competitiveness and societal welfare. Enhancing SME performance is essential for sustainable growth, as seen in South Sumatra, Indonesia, where

improved business strategies and environments were shown to bolster SME outcomes significantly (Lita et al., 2018).

Moreover, performance management frameworks, such as Knowledge Management Processes, amplify SME capacities by integrating innovation, internal social capital, and effective leadership (Valdez-Juárez et al., 2016). Despite these benefits, SMEs often face challenges like slow growth and low productivity, especially compared to larger firms. Addressing these requires adopting structured frameworks like the Business Excellent Model (BEM), which focuses on leadership, customer strategies, and workforce optimization (Fok-Yew & Hamid, 2022). Thus, the strategic focus on SME performance not only supports individual businesses but also has broader implications for national economies and global competitiveness.

Enhancing the performance of Small and Medium Enterprises (SMEs) is critical yet fraught with challenges. Resource limitations, including financial constraints, insufficient technical capacity, and lack of skilled manpower, are primary barriers SMEs face globally (Indrawati et al., 2020). These issues are compounded by poor access to modern technologies, which hampers digital transformation and innovation efforts. For instance, SMEs struggle with utilizing advanced digital tools like blockchain due to implementation complexities and limited digital literacy (Omowole et al., 2024). Similarly, in international contexts, resource inadequacies often prevent SMEs from developing comprehensive business strategies, thereby impacting their global competitiveness (Prasanna et al., 2019). Furthermore, sector-specific challenges, such as the lack of proper business plans and machinery in garment manufacturing, underline the necessity for targeted interventions to address both financial and non-financial performance barriers (Rizos et al., 2016). In the UAE's service sector, intense competition, talent retention struggles, and adaptability to market trends exacerbate these issues, with social media and technology adoption emerging as potential mediators for performance enhancement (Shwedeh et al., 2023). These findings collectively emphasize that overcoming these multifaceted challenges requires coordinated support from policymakers, private stakeholders, and effective use of modern management tools.

Researching Small and Medium Enterprise (SME) performance is vital for driving economic growth, enhancing innovation, and improving societal welfare. SMEs are the backbone of most economies, contributing significantly to employment, GDP, and innovation. However, they face unique challenges such as resource limitations, lack of technological adoption, and market competition, which require tailored solutions. For example, understanding how SMEs utilize technologies like e-commerce or social media can reveal pathways to enhance their competitiveness and adaptability (Rozak et al., 2021).

Moreover, analyzing factors such as knowledge sharing and management provides insights into improving workforce productivity and

organizational responsiveness to market needs (Obeng et al., 2024). Research also identifies performance gaps, as seen in studies focusing on KPI utilization, which offers actionable strategies for optimizing operational efficiency and competitiveness (Moghadasnian & Moslehi, 2024). Without a robust research foundation, policies and interventions risk being misaligned with SME realities, limiting their effectiveness. By delving into these factors, academia and industry can develop frameworks that are scalable, practical, and sector-specific, ensuring SMEs can thrive amidst economic shifts.

However, previous studies have not sufficiently discussed the issue of SME performance, as there is a lack of literature reviews that specifically address this topic. To address this gap, the present study examines SME performance using a bibliometric analysis. Bibliometric analysis is a valuable research method that quantitatively examines academic literature to identify patterns, trends, and influential contributions within a field. This method has been successfully applied in diverse fields such as renewable energy, knowledge management, and organizational change to reveal thematic clusters, emerging trends, and key contributors (Akhavan et al., 2016; Bouckennooghe et al., 2021; Sharma & Sengar, 2024).

In this study, we aim to identify the key bibliometric indicators of SME performance, including the annual trend of publications, the most productive journals, nations, authors, and institutions, as well as the seminal publications and the most frequent keywords.

2. Literature Review

2.1. SME Performance

Research on Small and Medium Enterprise (SME) performance highlights its critical role in fostering economic growth, innovation, and employment. A major theme in the literature is the role of technology adoption and knowledge-sharing practices. For example, integrating social media marketing via the Technology-Organization-Environment (TOE) framework has been shown to significantly enhance operational efficacy in SMEs, although technological apprehensions and cost constraints remain key barriers (Abubakar et al., 2019). Similarly, strategic knowledge sharing and management positively impact worker productivity and responsiveness to market demands, showcasing the potential of internal organizational competencies to drive performance (Mataruka et al., 2023).

The influence of external environments also emerges prominently. Studies demonstrate how the alignment of business strategies with contextual factors such as market dynamics and customer needs improves sustainability and growth, particularly in competitive settings like South Sumatra's SMEs (Lita et al., 2018). Social competencies of entrepreneurs, including adaptability, impression management, and expressiveness, further link to enhanced non-

financial performance metrics such as customer satisfaction and internal business processes (Mataruka et al., 2023).

From a macroeconomic perspective, research in Gulf Cooperation Council (GCC) countries illustrates how variables like US dollar volatility and trade balances shape SME financial health. These findings emphasize the importance of stable economic policies to mitigate financing constraints (Yusuf et al., 2024). Moreover, collaborations with universities show transformative effects, particularly for SMEs with lower initial productivity, reinforcing the value of partnerships in boosting innovation and operational efficiency (Johnston & Prokop, 2024).

This diverse body of work underscores the multidimensional nature of SME performance, highlighting technology adoption, strategic management, external environmental factors, and institutional collaborations as pivotal areas for future research and practical interventions.

2.2. Bibliometric Analysis

Bibliometric analysis is a quantitative method used to analyze academic literature systematically, revealing publication trends, research networks, and emerging themes. It leverages citation analysis, co-authorship patterns, and keyword mapping to understand the intellectual structure of a research field. One prominent application of bibliometric methods is in identifying influential journals, authors, and institutions within a domain. For instance, bibliometric studies often use tools like VOSviewer, Biblioshiny, and RStudio for visualizing co-authorship networks and keyword trends (Hamid et al., 2024). These tools enable researchers to uncover thematic clusters and intellectual evolution in specific research areas.

Recent bibliometric analyses have advanced the understanding of critical domains such as innovation, digital transformation, and sustainable practices. For example, studies examining innovation in SMEs used bibliometric mapping to highlight dynamic capabilities and entrepreneurial orientations as pivotal themes (Chigori et al., 2024). Similarly, bibliometric studies on digital transformation showcased its transformative role in organizational agility and competitiveness (Marino-Romero et al., 2024). Additionally, research on green supply chain management (GSCM) within SMEs used bibliometric visualization to track growth in sustainability-oriented practices, identifying emerging themes like circular economy and human resources (Hamid et al., 2024).

One of bibliometric analysis's significant contributions is its ability to identify research gaps, guide future studies, and foster interdisciplinary collaboration. For example, bibliometric studies of finance access in SMEs revealed underexplored areas in alternative financing methods and financial inclusion policies, prompting targeted investigations (Hasan et al., 2024). Overall, bibliometric analysis offers a robust framework for understanding the

progression of research fields, enabling stakeholders to navigate and contribute effectively to academic and practical developments.

2.3. Bibliometric Analysis in SME Performance

Bibliometric analysis has emerged as a powerful method for evaluating research trends, intellectual structures, and thematic developments in SME performance studies. A study on green supply chain management (GSCM) within SMEs using bibliometric methods identified influential contributors, journals, and emerging themes, such as circular economy and human resources, reflecting the evolution of GSCM in SME contexts (Hamid et al., 2024). Similarly, the dynamic innovation models for ambidextrous SMEs, examined through bibliometric mapping, highlighted themes like entrepreneurial orientation, knowledge management, and digital transformation, which are critical for SMEs navigating uncertain business environments (Chigori et al., 2024).

In the domain of financial access, bibliometric studies have mapped dominant themes, including alternative financing, financial inclusion policies, and entrepreneurial finance, offering a comprehensive view of how SMEs address funding challenges (Hasan et al., 2024). Moreover, bibliometric analyses of digital transformation (DT) in SMEs revealed that DT strategies increasingly focus on agility and adaptation, emphasizing the role of digital technologies and organizational capabilities in reshaping SME operations (Marino-Romero et al., 2024). Research on social networking technologies through bibliometric tools identified major themes such as SME social media marketing and innovation, showcasing how digital platforms enhance SME performance and collaboration (Rakshit et al., 2023).

These studies collectively underline the utility of bibliometric methods in identifying research gaps, advancing theory, and offering actionable insights for stakeholders. They also highlight the interdisciplinary nature of SME performance research, bridging areas like supply chain management, innovation, finance, and digital transformation.

3. Methods

This study employs a bibliometric analysis to systematically review and analyze the intellectual structure, thematic trends, and research dynamics in the field of Small and Medium Enterprise (SME) performance. Bibliometric analysis provides a quantitative approach to explore the characteristics of a large volume of literature, revealing patterns in authorship, citation, and keyword usage (Saheb et al., 2021). The study follows a descriptive and analytical design to identify research patterns and thematic clusters related to SME performance.

The population of this research is the Scopus database, which is one of the most comprehensive bibliographic sources for peer-reviewed literature.

Scopus is selected for its wide coverage, robust indexing, and diverse range of academic publications spanning various disciplines. The publication period analyzed in this study covers the years 1988-2025, ensuring a comprehensive overview of SME performance research over time..

The sample comprises all publications in the Scopus database that contain the keyword ("SME performance" OR "small medium enterprise performance" OR ("sme" OR "smes" OR "small medium enterprise*" AND "*performance")) AND PUBYEAR > 1987 AND PUBYEAR < 2025 AND (LIMIT-TO (SUBJAREA , "BUSI")) in their title, abstract, or keywords. A systematic search is conducted using this keyword to ensure the inclusion of all relevant literature. The search is restricted to peer-reviewed journal articles, conference papers, and reviews published up to the current year. Data extracted includes metadata such as titles, authors, keywords, publication years, sources, and citation counts.

The bibliometric analysis is conducted using specialized software, including Bibliometrix and Biblioshiny (R package) for generating descriptive statistics, trend analyses, and scientific collaboration patterns. Microsoft Excel for cleaning and organizing raw data extracted from Scopus.

The analysis involves Descriptive Analysis: Examining the annual growth of publications, most prolific authors, affiliations, and journals. Citation Analysis: Identifying highly cited articles, influential authors, and landmark studies. Keyword Analysis: Mapping co-occurring keywords to identify dominant research themes and emerging trends. Network Analysis: Exploring collaboration networks among authors, institutions, and countries.

4. Result

Based on the results of the article search in the Scopus database using predetermined keywords, it resulted in 7494 articles. The publications used in this study were publications from 1988 to 2024. This study limits it to November 1, 2024. Of all the published articles, there were 14720 authors with co-authors per doc of 2.8.

4.1. Annual Publication of SMEs Performance Research

Annual publication refers to the number of studies published each year. Research trends show a consistent increase in the number of publications related to SME performance, with an average annual growth rate of 20.52%. Based on the data, the number of publications remained below 100 per year from 1988 to 2008. After 2008, the number of studies began to rise significantly, reaching more than 800 publications by 2024. This sharp increase may be associated with the global economic recovery and more equitable economic growth after the 2008 financial crisis, which encouraged individual entrepreneurs and small businesses to emerge and succeed. As a result,

researchers have shown greater interest in examining SME performance as a key driver of economic resilience and job creation.

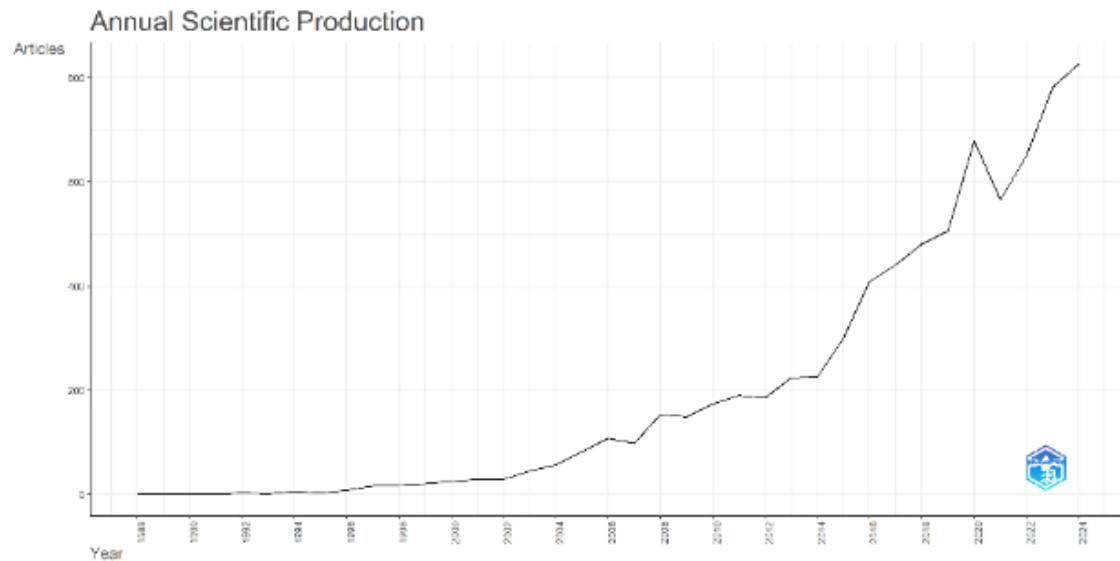


Figure 1. Annual Publication of SMEs Performance Research

4.2. The Most Productive Journal on the Topic of SMEs Performance Research

The most productive journal refers to the scientific publication that produces the highest number of research articles related to SME performance. Based on the database, a total of 1,283 journals have published articles on this topic. Overall, the Journal of Small Business and Enterprise Development is

Table 1. The Most Productive Journal on the Topic of SMEs Performance Research

Sources	Articles
Journal of Small Business And Enterprise Development	122
Journal of Small Business Management	114
Journal of Cleaner Production	110
Small Business Economics	92
Journal of Business Research	91
Cogent Business And Management	81
International Journal of Entrepreneurship and Small Business	72
Quality - Access to Success	69
Uncertain Supply Chain Management	64
Benchmarking	63

identified as the most productive journal, with 122 published articles, followed by the Journal of Small Business Management with 114 articles, and the Journal of Cleaner Production with 110 articles. This finding indicates that research on SME performance is not limited to business and management fields but also extends to sustainability and production efficiency topics. The prominence of the Journal of Cleaner Production suggests a growing academic interest in the relationship between SME performance and sustainable business practices, reflecting a global shift toward environmentally responsible entrepreneurship.

4.3. The Most Productive Author on the Topic of SMEs Performance Research

The most productive author is a researcher who publishes the most in Scopus journals with the theme of SME performance. Of the total 14,720 authors, the one who writes the most related to SME performance is Raymond. He has published 31 works, followed by Kraus with 28 articles. Next are Ahmad Nh and Ramayah T who both published 25 articles. This finding indicates that research on SME performance has been consistently advanced by a small group of leading scholars who actively contribute to the field. The dominance of these authors suggests the development of strong research networks and collaborations focused on entrepreneurship, innovation, and small business management. It also reflects the growing academic interest in understanding how SMEs contribute to economic growth and competitiveness in various regions.

Table 2. The Most Productive Author on The Topic of SMEs Performance Research

Authors	Articles
Raymond L	31
Kraus S	28
Ahmad Nh	25
Ramayah T	25
St-Pierre J	23
Le Tt	19
O'regan N	19
Saunila M	19
Wang Y	19
Adomako S	18

4.4. Most Relevant Affiliation on the Topic of SMEs Performance Research

Most relevant affiliation is the organization where the researcher works. According to the research results, the affiliation of the authors who published articles related to SME performance, the University of Utara Malaysia has the

greatest number of 142 articles. Then followed by the University of Science Malaysia with 128 articles and the university of putra malaysia with 72 articles. This dominance of Malaysian universities indicates that Malaysia has become one of the leading centers for SME research in the region. The strong contribution from these institutions may be attributed to the country's strategic focus on SME development as a key driver of national economic growth and employment. It also reflects Malaysia's active academic and policy initiatives aimed at strengthening entrepreneurship, innovation, and sustainable business performance among SMEs.

Table 3. Most Relevant Affiliation on the Topic of SMEs Performance Research

Affiliation	Articles
Universiti Utara Malaysia	142
Universiti Sains Malaysia	128
Universiti Putra Malaysia	72
Lappeenranta University of Technology	71
Jiangsu University	66
Kwame Nkrumah University of Science And Technology	62
Université Du Québec À Trois-Rivières	59
Notreported	54
University Of Padua	54
Multimedia University	51

4.5. Corresponding Authors Countries on the Topic of SMEs Performance Research

Corresponding authors' countries are the countries of origin of researchers who publish their work. The calculation of Corresponding authors countries includes multiple country publications (MCP) and Single country publications (SCP). For MCP, the country with the most correspondent authors is the United Kingdom with 179 articles, followed by China with 129 articles. In the next position is America with 88 articles. Meanwhile, for SCP, the top position is Indonesia with 332 articles, followed by India with 298 articles and the UK with 267 articles. In total, the UK is the country with the most Corresponding authors, namely 446 articles, followed by China with 376 articles and Indonesia with 372 articles.

Meanwhile, for Countries' Scientific Production, the largest number is the UK with 1803 times, then followed by Indonesia with 1750 freq and Malaysia with 1594 freq. Countries' Scientific Production measures the number of author frequencies based on country affiliation.

This distribution indicates that SME performance research has gained strong global attention, with active collaboration among developed and developing countries. The United Kingdom's high number of MCPs suggests its significant role in fostering international research partnerships, while

Indonesia's leading position in SCPs reflects the country's growing domestic research capacity and interest in SME-related issues. This trend may be influenced by Indonesia's expanding SME sector and government initiatives to support entrepreneurship as a key strategy for economic development and employment generation.

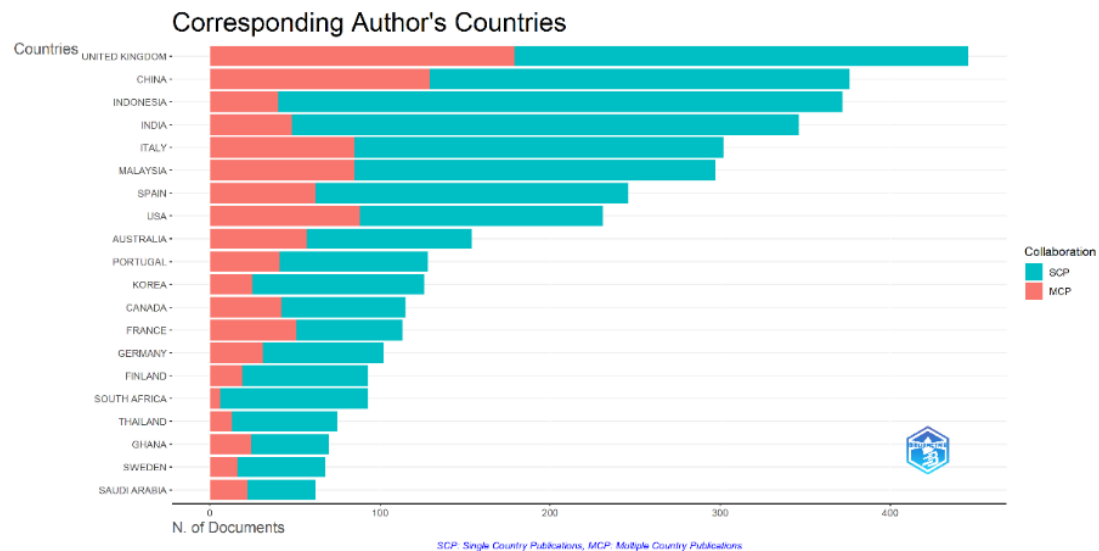


Figure 2. Corresponding Authors Countries on the Topic of SMEs Performance Research

4.6. Most Global Cited on the Topic of SMEs Performance Research

The most cited article is an article written by Lubatkin, M.H. Simsek, Z. Ling, Y., Veiga, J.F. in 2006 entitled *Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration* (Lubatkin et al., 2006). The article has been cited 1558 times. The second is an article written by Lu, J.W. and Beamish, P.W. in 2001 entitled *the internationalization and performance of SMEs* (Lu & Beamish, 2001) with a total of 1470 citations. The third is an article entitled "Is innovation always beneficial". A meta-analysis of the relationship between innovation and performance in SMEs written by Rosenbusch, N., Brinckmann, J. and Bausch, A. in 2011 with a total of 1306 citations (Rosenbusch et al., 2011).

These results indicate that highly cited studies on SME performance tend to focus on strategic management, internationalization, and innovation, three fundamental factors influencing SME success in dynamic markets. The prominence of Lubatkin et al. (2006) highlights the importance of leadership and behavioral integration in enhancing firm adaptability, while Lu and Beamish (2001) emphasize the benefits of global expansion for SME growth. Meanwhile, Rosenbusch et al. (2011) reflect a growing scholarly interest in how innovation contributes to competitive advantage. The high citation counts of

these works demonstrate their lasting influence on shaping the theoretical foundation and research direction of SME performance studies.

Table 4. Most Global Cited on the Topic of SMEs Performance Research

No	Title and author	Total citation
1	Ambidexterity and Performance in Small-to Medium-Sized Firms: The Pivotal Role of Top Management Team Behavioral Integration (Lubatkin et al., 2006)	1,558
2	The internationalization and performance of SMEs (Lu & Beamish, 2001)	1,470
3	Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs (Rosenbusch et al., 2011)	1,307
4	The Driver of Green Innovation and Green Image – Green Core Competence (Chen, 2008)	1,117
5	Green innovation and environmental performance: The role of green transformational leadership and green human resource management (Singh et al., 2020)	1,092
6	Three-dozen knowledge-sharing barriers managers must consider (Riege, 2005)	973
7	Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms (Naldi et al., 2007)	863
8	The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies (Man et al., 2002)	823
9	Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0 (Müller et al., 2018)	819
10	The Industrial management of SMEs in the era of Industry 4.0 (Moeuf et al., 2018)	814

4.7. Most Cited Country on the Topic of SMEs Performance Research

UK is the most cited country with 22,323 citations. This number is followed by China with 15,494 citations and the USA with 13,411 citations. This result indicates that the United Kingdom has played a leading role in advancing global research on SME performance, producing studies that are widely recognized and referenced by other scholars. The country's strong citation record reflects the maturity of its research ecosystem, robust academic collaboration, and emphasis on entrepreneurship and innovation as policy priorities. Meanwhile, the high citation counts for China and the United States suggest their growing influence in SME research, particularly in areas related to innovation, digital transformation, and global competitiveness. These

these clusters indicates that scholars are integrating both economic and sustainable approaches to better understand how SMEs can thrive in dynamic and globalized markets.

4.9. Trend topic on the Topic of SMEs Performance Research

Research topic trends related to MSME performance continue to develop and change. In the early 2000s, trending topics were related to quality assurance, purchasing, and computer-aided manufacturing. While the trend in research published in 2024 is related to digitalization, operation management, and big data analytics.

This shift indicates that the focus of MSME performance research has transitioned from traditional production efficiency toward technology-driven competitiveness. The emergence of digitalization and big data analytics as key themes shows how MSMEs are adapting to Industry 4.0 and global digital transformation. It also reflects the increasing importance of technology adoption and data-based decision-making in improving productivity, innovation, and market responsiveness among MSMEs.

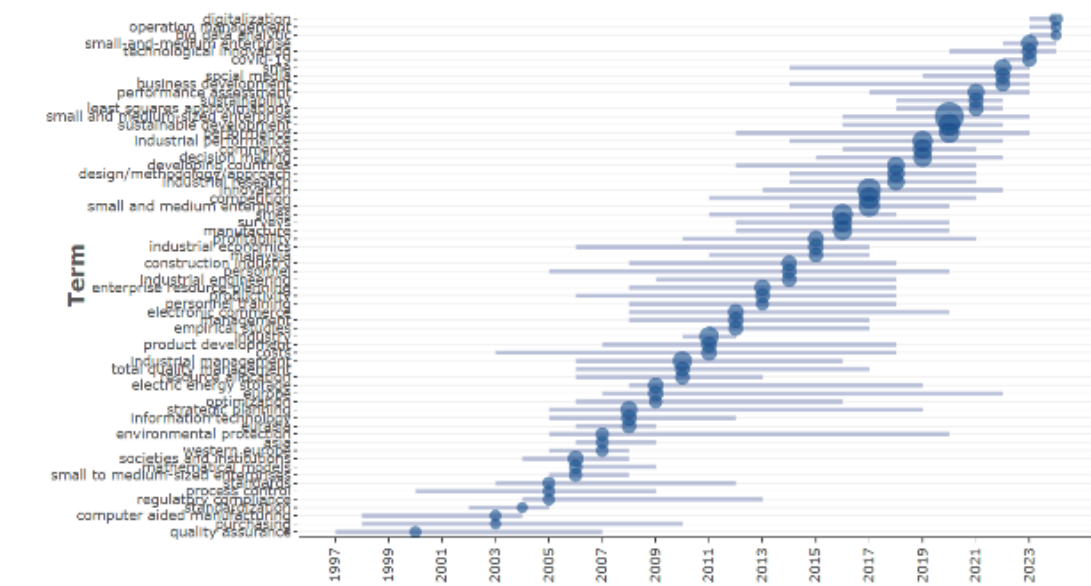


Figure 4. Trend topic on the Topic of SMEs Performance Research

4.10. Thematic Maps on the Topic of SMEs Performance Research

Thematic maps are tools in bibliometric analysis used to understand the position and relevance of themes within a research field. This map applies two main dimensions: the Relevance Degree (Centrality), which shows how important or central a theme is to the field, and the Development Degree (Density), which indicates how mature or well-developed a theme is.

Based on the thematic map, Motor Themes represent highly central and well-developed research areas, and the main keywords identified in this

category are “sustainable development,” “competition,” and “small and medium enterprise.” The Basic Themes, on the other hand, are highly relevant but less developed topics that form the foundation for future studies. These include keywords such as “small and medium-sized enterprise,” “innovation,” and “industrial performance.”

The absence of dominant keywords in the Motor Theme suggests that no single topic has yet achieved full maturity or central importance in the SME performance research field. Similarly, the lack of keywords in the Declining Theme indicates that SME performance remains a dynamic and evolving area of study. This implies that scholars are still actively exploring and refining theoretical and empirical approaches, especially in linking SME performance to sustainability, innovation, and competitiveness. The continuous development of these themes reflects the growing importance of SMEs in addressing contemporary economic challenges and advancing sustainable business practices.

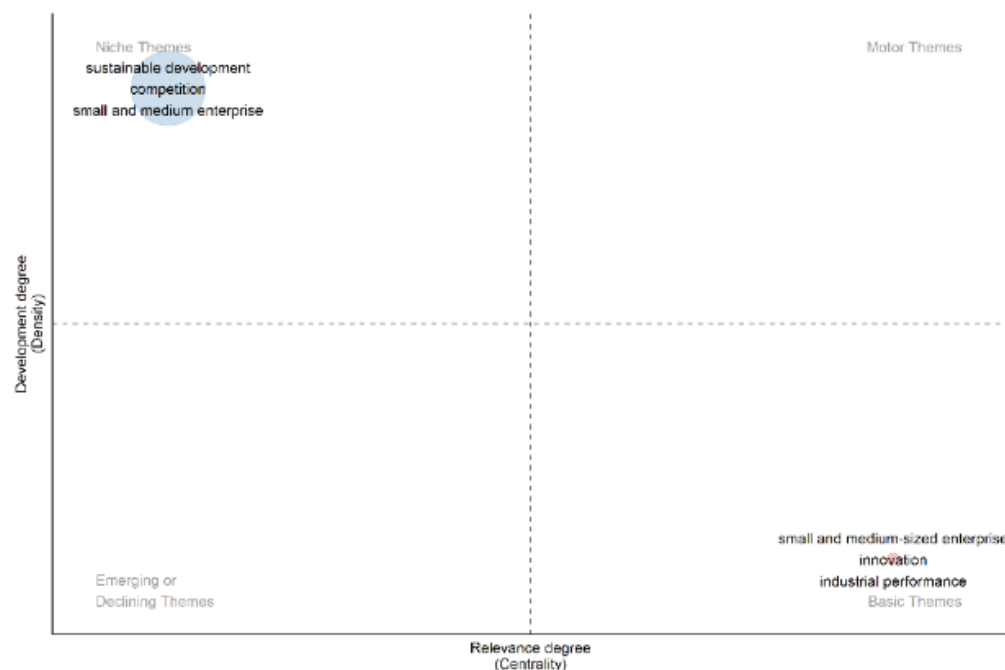


Figure 5. Thematic Maps on the Topic of SMEs Performance Research

4.11. Most Frequent Words on the Topic of SMEs Performance Research

The most frequently used words in research related to SME performance are “small and medium sized enterprise”, this word is used 503 times. Then the next is the word “innovation” which is used 241 times followed by the word “sustainable development” which is used 192 times.

This pattern indicates that the central focus of SME performance research remains on understanding SMEs as a distinct economic entity, while innovation and sustainability have emerged as key supporting themes. The

Adomako, Zhang, Li, Amankwah Amoah, and Chen. Then the second cluster consists of Kraus, Le, Hughes, Ferreira, and Jones. The third cluster consists of Raymond and St Pierre. The fourth cluster consists of Agostini and Nosela. The fifth cluster consists of O'Regan and Ghobadian. The sixth cluster is Saarenketo and Torkkeli. The seventh cluster consists of Singh, Kumar, Antony and Deshmukh. The eighth cluster consists of Ahmad, Ramayah, Halim, and Khalique. The ninth cluster consists of Dey, Chowduri and Malesios. The tenth cluster consists of Li and Afum.

This clustering pattern indicates that research on SME performance is conducted through well-established networks of collaboration among scholars from different regions and research traditions. Each cluster represents a thematic focus — for instance, Kraus and his collaborators often explore innovation and entrepreneurship, while Raymond and St. Pierre focus on technological capability and performance measurement. The diversity of author networks suggests that SME performance has become a multidisciplinary research area, integrating perspectives from management, innovation, sustainability, and international business. This also reflects the global academic interest in understanding how SMEs contribute to economic growth, competitiveness, and sustainable development.

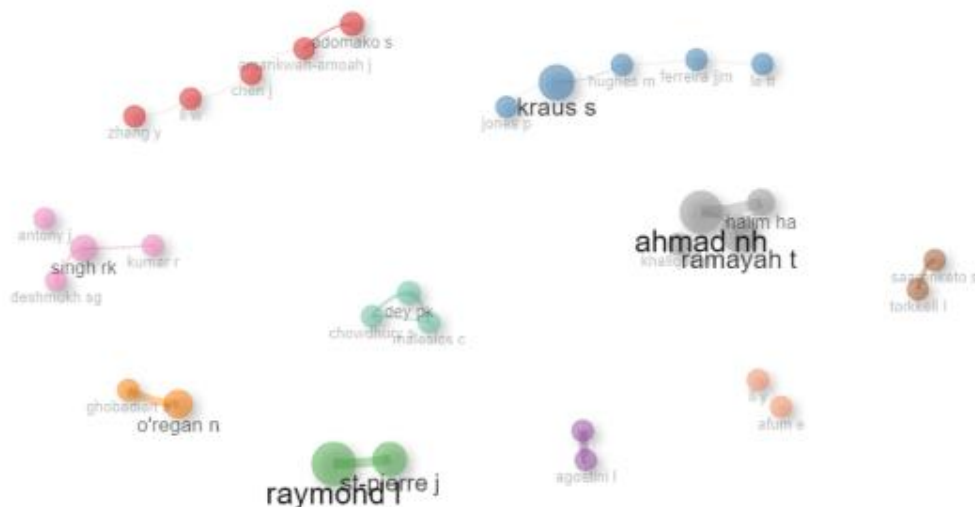


Figure 7. Author Collaboration Network on the Topic of SMEs Performance Research

4.13. Country collaboration network on the Topic of SMEs Performance Research

Among the research related to SME performance, there are research results that are collaborations between authors from various countries.

According to biblioshiny analysis, the collaboration between the UK and the USA is the largest with 50 freq, then the collaboration between the UK and China with 49 freq and the collaboration between China and the USA with 46 freq.

This pattern indicates that international collaboration plays a significant role in advancing SME performance research. The strong partnership between the UK, USA, and China suggests that these countries serve as major research hubs, combining diverse perspectives from advanced and emerging economies. Such collaborations may be driven by shared global challenges in SME developments such as innovation, digital transformation, and competitiveness in international markets. The frequent cross-country partnerships also highlight the increasing globalization of academic research, where knowledge exchange and comparative studies help enrich the understanding of SME dynamics in different economic and institutional contexts.

Table 7. Country Collaboration Network on the Topic of SMEs Performance Research

From	To	Freq
United Kingdom	USA	50
United Kingdom	China	49
China	USA	46
Indonesia	Malaysia	43
Malaysia	Pakistan	40
United Kingdom	France	39
United Kingdom	Italy	35
United Kingdom	Australia	33
China	Pakistan	32
United Kingdom	Greece	31

5. Discussion

The bibliometric analysis on the performance of small and medium enterprises (SMEs) reveals several significant trends and insights, demonstrating the depth and scope of research in this area.

In descriptive analysis, annual publication trends indicate a growing interest in SME performance research, with a sharp rise in publications after 2008 and exponential growth by 2024. This increase aligns with global shifts toward recognizing SMEs' critical roles in economic development, innovation, and sustainability. This is consistent with previous research showing that SMEs are important to economic systems because they make significant contributions to GDP, job creation, and community resilience (Adamu et al., 2019; Setiadi, 2023).

The concentration of publications in journals such as the Journal of Small Business and Enterprise Development reflects these journals' central role in advancing the discourse. Prominent authors like Raymond and Kraus, with extensive contributions, suggest the existence of influential thought leaders who guide research directions. The dominance of Malaysian affiliations highlights the region's focus on SMEs, likely due to their significant contribution to local economies. Similarly, the UK emerges as a leader in corresponding authorship and scientific production, emphasizing its role in SME research on a global scale.

Meanwhile, according to citation analysis, highly cited articles such as Lubatkin et al.'s work on ambidexterity and SME performance underscore the foundational theories that continue to shape the field. The prominence of innovation-related studies in citations suggests that performance improvement often hinges on innovation strategies. This study confirms previous findings that the ability to innovate turned business strategies into improved firm performance (Faisol et al., 2022; Finoti et al., 2017).

Keyword co-occurrence analysis reveals two dominant clusters: one focused on innovation and competitiveness, and another on sustainability and strategic management. Thematic mapping shows the emergence of sustainable development and competition as motor themes, reflecting their maturity and centrality in the research field. Sustainable competitive performance was found to be supported by the role of sustainability in boosting competitiveness (Nor et al., 2023). However, the absence of fully mature themes highlights the dynamic and evolving nature of SME performance studies, pointing to opportunities for further exploration.

Network Analysis about author collaboration networks highlights the global interconnectedness of SME researchers. The clusters formed by prominent researchers suggest niche subfields and specialized research communities. Country collaboration analysis further emphasizes the UK's central role in fostering international research partnerships, particularly with the USA and China, which enhances the richness and diversity of research outputs.

Emerging Trends indicate the shift in research focus from quality assurance and manufacturing in the early 2000s to digitalization, operations management, and big data analytics in 2024 indicates the dynamic nature of SME performance challenges. These shifts align with broader technological advancements and the increasing need for SMEs to adapt to digital transformation.

6. Conclusion

This study contributes to the creation of a visualization of the SME performance research map obtained from research data in the Scopus database. The results of the analysis show that the publication trend on the topic of SME performance research has increased by 20.52% each year. The

most productive journal is the Journal of Small Business and Enterprise Development with 122 publications. The most productive author is Raymond with 31 published works. Universitas Utara Malaysia has been the most productive affiliate for the past 36 years on the theme of SME performance research with 142 published documents. Furthermore, the UK is the country with the most corresponding author countries with 446 articles. The UK is also the most cited country with 22323 citations. The most cited article is Lubatkin's work entitled Ambidexterity and Performance in Small-to Medium-Sized Firms: The Pivotal Role of Top Management Team Behavioral Integration.

The findings of this bibliometric analysis illustrate that research on SME performance continues to grow dynamically and holds increasing academic and practical significance. The steady rise in publications, the dominance of leading authors and institutions, and the emergence of diverse international collaborations all demonstrate the global relevance of SMEs as key drivers of innovation, sustainability, and economic development. Thematic and keyword analyses reveal that contemporary studies are shifting from traditional operational and efficiency topics toward digitalization, sustainability, and strategic management, indicating the evolving role of SMEs in the modern economy. Overall, this study highlights that SME performance remains a rich and developing research area, offering valuable insights that warrant further exploration to strengthen SMEs' contribution to inclusive and sustainable economic growth.

This research provides practical and theoretical implications. Practically, the findings in the form of a research theme map can be used as a basis for scientific references in developing SME performance. Theoretically, this research shows thematic visualization as the development of a research theme map formed from publication data from 1988 - 2024.

Further research can explore SME performance using potential themes according to current trends. Trends in research published in 2024 are related to digitalization, operation management, and big data analytics. Themes "sustainable development", "competition", and "small and medium enterprise" are potential themes to be carried out in future research.

There are limitations in this research. The first is analysis relies exclusively on the Scopus database, which, while comprehensive, might exclude significant contributions from other databases like Web of Science, Google Scholar, or regional repositories. Future studies could incorporate multiple databases to capture a more holistic view, which would allow for a broader and more comprehensive understanding of SME performance research by minimizing database bias and ensuring that diverse perspectives, regions, and disciplines are adequately represented.

The second is predetermined keywords may not encompass all variations or related terms used in SME performance research. As a result, some relevant studies might have been excluded. Expanding the keyword list and using advanced Boolean operators could mitigate this limitation.

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