

New Product Development Strategy and its Impact on MSME Growth: A Bibliometric Analysis

Loso Judijanto¹, Weda Febriyanto², Supriandi³

¹ IPOSS Jakarta, Indonesia and losojudijantobumn@gmail.com

² Telkom University and weda.febriyanto@gmail.com

³ Telkom University and supriandi@student.telkomuniversity.ac.id

ABSTRACT

This study provides a comprehensive analysis of the research landscape surrounding New Product Development (NPD) strategies and their impact on the growth of Micro, Small, and Medium Enterprises (MSMEs). Through a bibliometric analysis using VOSviewer, key themes and trends were identified, including the centrality of SME growth, the critical role of finance and government policy, the importance of resilience in response to external shocks like COVID-19, and the strategic focus on marketing and competitive advantage. The findings suggest that tailored financial products, supportive government policies, and an emphasis on digital transformation are essential for enhancing SME growth. Additionally, fostering an innovative and customer-oriented business culture is crucial for maintaining a competitive edge. These insights provide practical implications for policymakers, business leaders, and financial institutions, emphasizing the need for a comprehensive approach to supporting SME development in dynamic market environments.

Keywords: SMEs, SME Growth, New Product Development, Bibliometric Analysis, VOSviewer

1. INTRODUCTION

Micro, Small, and Medium-Sized Enterprises (MSMEs) play a crucial role in economic growth since they generate employment, foster innovation, and diversify the economy. They are the backbone of economies around the world, especially in emerging nations where they frequently make up a sizable share of the labor force and the overall economy. The International Finance Corporation estimates that in developing countries, MSMEs account for over 40% of GDP and up to 60% of all employment [1]. MSMEs, however, confront a number of obstacles that prevent them from growing and becoming sustainable, including restricted access to capital, poor infrastructure, and regulatory limitations [2]. MSMEs' approach to new product development (NPD) is a vital factor determining their growth and performance, as it can have a substantial impact on their survival and competitiveness in the market.

A key tactic for MSMEs looking to expand their market presence and adjust to shifting consumer expectations is new product development, or NPD. MSMEs may set themselves apart from rivals, adapt to changing market demands, and seize new possibilities by being innovative and producing new products [3]. Idea generation, concept development, product design, and market introduction are some of the phases that make up effective NPD strategies. Each of these steps involves meticulous preparation and execution [4]. MSMEs can increase their chances of success and achieve sustainable growth by adopting an organized approach to NPD. But the relationship between NPD tactics and MSME growth is still complicated and little understood, thus further research into the ways in which various NPD techniques affect MSME performance is required.

Recent research has brought attention to the significance of NPD in the context of MSMEs, highlighting the role that it plays in fostering innovation and competitive advantage. In terms of

revenue growth and market share increase, for example, research by [5] indicates a positive correlation between NPD activities and business performance. Further research has demonstrated that increasing the NPD process's inclusion of market trends and customer feedback improves both customer satisfaction and product success rates [6]. Notwithstanding these observations, more thorough studies are still required to fully examine the range of NPD tactics and their unique effects on MSME expansion in various sectors and geographical areas.

In a given topic, bibliometric analysis has proven to be an effective method for analyzing research trends and pinpointing important areas of interest. This research seeks to give a systematic assessment of the current knowledge base and identify gaps that require additional exploration by analyzing published literature on NPD tactics and MSME growth. Researchers can evaluate the impact of various studies and track the evolution of important concepts over time by using bibliometric approaches like co-citation mapping and citation analysis [7]. Scholars, practitioners, and policymakers can gain important insights from this method, which provides a solid foundation for comprehending the development of NPD research and its consequences for MSMEs.

The precise impact of different NPD tactics on MSME growth remains underexplored, despite strong evidence relating NPD activities to improved business performance. Studies that have already been done tend to concentrate on large businesses or specialized industries, which leaves a vacuum in our knowledge of how various NPD strategies impact MSMEs, especially in diverse and emerging markets. By performing a bibliometric review of the literature on NPD tactics and MSME growth, this study seeks to close this gap by highlighting important findings, trends, and directions for further investigation. The study will include a thorough summary of the body of knowledge already in existence as well as insights into how MSMEs might use NPD tactics to achieve long-term growth.

This study's main goal is to use bibliometric techniques to methodically evaluate the literature on NPD strategies and MSME growth. The study's specific objectives are to: (1) classify and identify the most important NPD strategies that have been documented in the literature along with their effects on MSME growth; (2) trace the history of NPD research in the context of MSMEs and identify noteworthy contributions and trends; and (3) identify research gaps and suggest future directions. The attainment of these objectives would facilitate a more profound comprehension of how MSMEs might leverage NPD techniques to augment their growth and competitiveness.

2. LITERATURE REVIEW

2.1 *Overview of New Product Development (NPD) Strategies*

New Product Development (NPD) is a critical process for firms aiming to maintain competitiveness and achieve growth. It encompasses a series of stages from idea generation to product launch, each requiring strategic planning and execution [4]. The NPD process is generally divided into several phases: idea generation, screening, concept development, business analysis, product development, testing, and commercialization [8]. Effective NPD strategies are essential for creating products that meet market demands and deliver value to consumers. According to [9], a structured approach to NPD can significantly enhance a firm's ability to innovate and respond to market changes.

Varying NPD methods can have varying effects on a firm's performance, according to research. For example, compared to technology-driven strategies, market-driven NPD strategies, which prioritize knowing and satisfying customer demands, frequently yield greater success rates [6]. Market-driven tactics can lead to increased customer satisfaction and product success since they proactively seek out client feedback and modify products to meet current trends. Conversely, technology-driven strategies prioritize technological discoveries and developments, which may result in groundbreaking goods but also carry a greater degree of risk and uncertainty [10]. Thus, a company's performance and growth can be greatly impacted by its choice of NPD approach, especially MSMEs that may have particular opportunities and constraints.

2.2 NPD and MSME Growth

Micro, Small, and Medium-Sized Enterprises (MSMEs) play a critical role in economic development; yet, they frequently face obstacles to their expansion, including restricted access to markets and resources [11]. Effective NPD strategies can help MSMEs grow by giving them the ability to take advantage of market possibilities and compete with larger companies. MSMEs who participate in systematic NPD activities see improved performance outcomes, such as higher revenue and market share, according to research by [5]. This is especially true in fast-paced markets where survival depends on creativity and adaptation.

The relationship between NPD and MSME growth is influenced by several factors, including the firm's ability to manage innovation and the external environment. For example, the presence of supportive infrastructure, such as access to funding and skilled personnel, can enhance the effectiveness of NPD activities [3]. Conversely, constraints such as limited financial resources and inadequate market knowledge can impede NPD efforts in MSMEs [12]. Thus, understanding the interplay between internal capabilities and external conditions is crucial for assessing how NPD strategies impact MSME growth.

2.3 Bibliometric Analysis of NPD Research

Bibliometric analysis provides valuable insights into the trends and developments within a research field by analyzing published literature and citation patterns [7]. This approach helps identify key topics, influential studies, and research gaps, offering a comprehensive overview of the state of knowledge. In the context of NPD, bibliometric studies have revealed several key areas of focus, including the impact of NPD on firm performance, the role of different NPD strategies, and the challenges faced by MSMEs in implementing these strategies.

Recent bibliometric analyses have highlighted a growing interest in understanding how various NPD strategies affect different types of firms, including MSMEs. For instance, a study by [13] utilized bibliometric methods to analyze research on innovation management and found that the focus has shifted towards understanding how different NPD approaches influence firm performance across various industries. Similarly, research by [14] explored the evolution of NPD research and identified key trends, such as the increasing emphasis on digital technologies and their impact on product development processes.

One notable trend in the literature is the increased attention to customer-centric NPD strategies. Studies such as those by [15] have shown that incorporating customer insights into the NPD process can significantly enhance product success rates and market performance. This trend reflects a broader shift towards understanding the role of customer feedback and market orientation in driving innovation and growth. However, despite these advancements, there remains a need for more research specifically focused on MSMEs and how they can effectively leverage NPD strategies to overcome their unique challenges.

3. METHODS

The literature on new product development (NPD) techniques and their effects on the expansion of micro, small, and medium-sized enterprises (MSMEs) is examined in this study using bibliometric analysis. There are multiple crucial steps in the process: Initially, a thorough search on Google Scholar will be carried out with pertinent keywords like innovation, MSME growth, and NPD methods. Numerous academic publications, including theses, journal articles, and conference papers, will be found using this search. Second, the bibliometric analysis will be carried out using VOSviewer, with an emphasis on co-authorship networks, citation patterns, and keyword co-occurrences. By making it easier to see and analyze these connections, VOSviewer will aid in the discovery of significant studies, new trends, and areas in need of further investigation. Third, to provide a structured picture of the research landscape, the results will be categorized thematically. Ultimately, by identifying significant themes and outlining potential avenues for future research, the synthesis findings will shed light on how various NPD tactics impact the success of MSME's.

4. RESULTS AND DISCUSSION

4.1 Research Data Matriks

Table 1. Research Data Metrics

Publication years	: 1990-2024
Citation years	: 34 (1990-2024)
Paper	: 890
Citations	: 104556
Cites/year	: 3078.12
Cites/paper	: 117.59
Cites/author	: 55812.84
Papers/author	: 457.93
Author/paper	: 2.47
h-index	: 176
g-index	: 315
hI,norm	: 128
hI,annual	: 3.76
hA-index	: 49
Papers with ACC	: 1,2,5,10,20:661,576,449,319,192

Source: Publish or Perish Output, 2024

A thorough summary of the research metrics for publications about MSME growth and New Product Development (NPD) strategies is given in Table 1 for the years 1990–2024. 890 papers totaling 104,556 citations are included in the dataset; this translates to an average of 117.59 citations per paper and 3,078 citations year. The high citation metrics indicate significant recognition and

impact in the field. With an average of 457.93 papers contributed, authors have an impressive production with an average of 55,812.84 citations per author. A sizable number of highly cited publications are highlighted by the h-index of 176 and g-index of 315, which indicate the productivity and significance of the research. The h_{annual} of 3.76 and the h_{norm} of 128 indicate steady research quality and applicability over time. The most frequently cited works' persistent impact is shown by their hA-index of 49. Furthermore, a robust citation distribution and the research's wide influence are demonstrated by the number of articles that achieve different citation thresholds: 661 papers with at least one citation, 576 with at least two, 449 with at least five, 319 with at least ten, and 192 with at least twenty.

4.2 Network Visualization

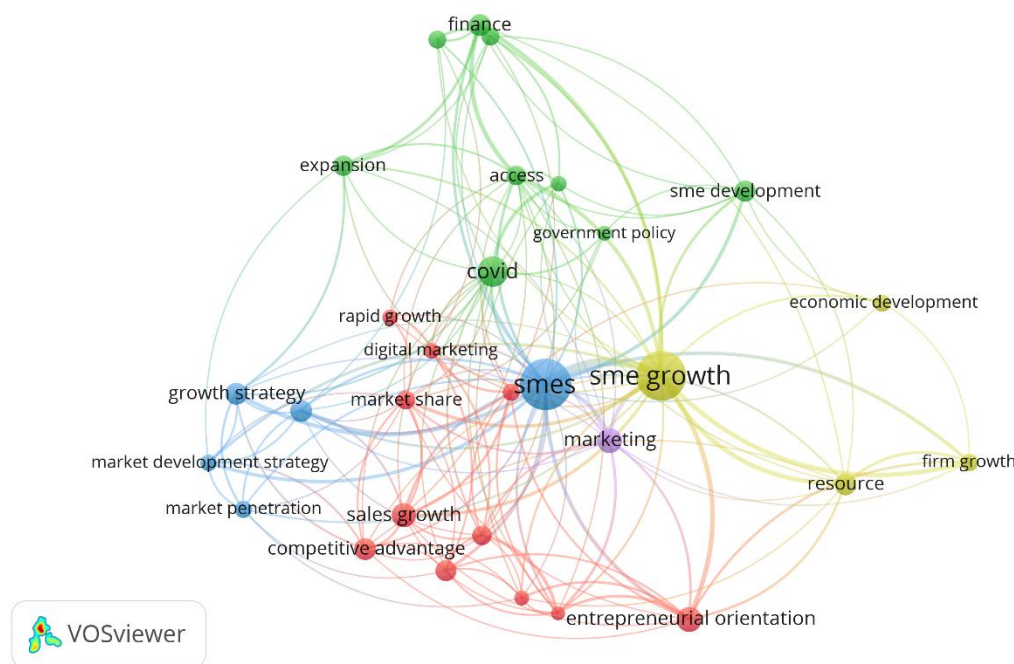


Figure 1. Network Visualization

Source: Data Analysis Result, 2024

The figure presents a VOSviewer keyword co-occurrence network related to research on SMEs (Small and Medium Enterprises) and SME growth. The visualization is composed of nodes representing keywords, with the size of each node indicating the frequency of occurrence in the analyzed literature. The connections (edges) between the nodes indicate the co-occurrence of keywords in the same documents, with thicker lines representing stronger connections. The nodes are also grouped into clusters, represented by different colors, which suggest thematic areas within the broader research topic.

The green cluster primarily focuses on financial and policy-related aspects of SME growth. Keywords such as "finance," "access," "government policy," and "SME development" are prominent in this cluster, indicating a strong emphasis on the role of financial resources and government policies in facilitating the growth and development of SMEs. This cluster suggests that access to finance and supportive government policies are critical drivers of SME growth, and these factors are often studied together in the literature.

The red cluster highlights themes related to marketing and competitive strategies. Keywords like "marketing," "entrepreneurial orientation," "competitive advantage," and "sales growth" are central to this cluster. This suggests that research in this area focuses on how SMEs can leverage

marketing strategies and entrepreneurial practices to achieve competitive advantage and drive sales growth. The connections between these keywords indicate that these concepts are frequently discussed together, emphasizing their interrelatedness in the context of SME growth.

The blue cluster centers around growth strategies and market expansion. Keywords such as "growth strategy," "market development strategy," "market penetration," and "market share" dominate this cluster. This indicates a focus on how SMEs implement various growth strategies to expand their market presence and increase their market share. The presence of terms like "rapid growth" and "expansion" further suggests that studies in this cluster often explore the mechanisms and outcomes of aggressive growth strategies within SMEs.

The yellow cluster captures themes related to the impact of external factors on SME growth. Keywords like "economic development," "resource," and "firm growth" are prominent, indicating that research in this cluster often examines how broader economic conditions and resource availability influence the growth of SMEs. The presence of "economic development" alongside "SME growth" suggests that the growth of SMEs is often studied in the context of its contribution to overall economic development, highlighting the broader implications of SME success.

4.3 Overlay Visualization

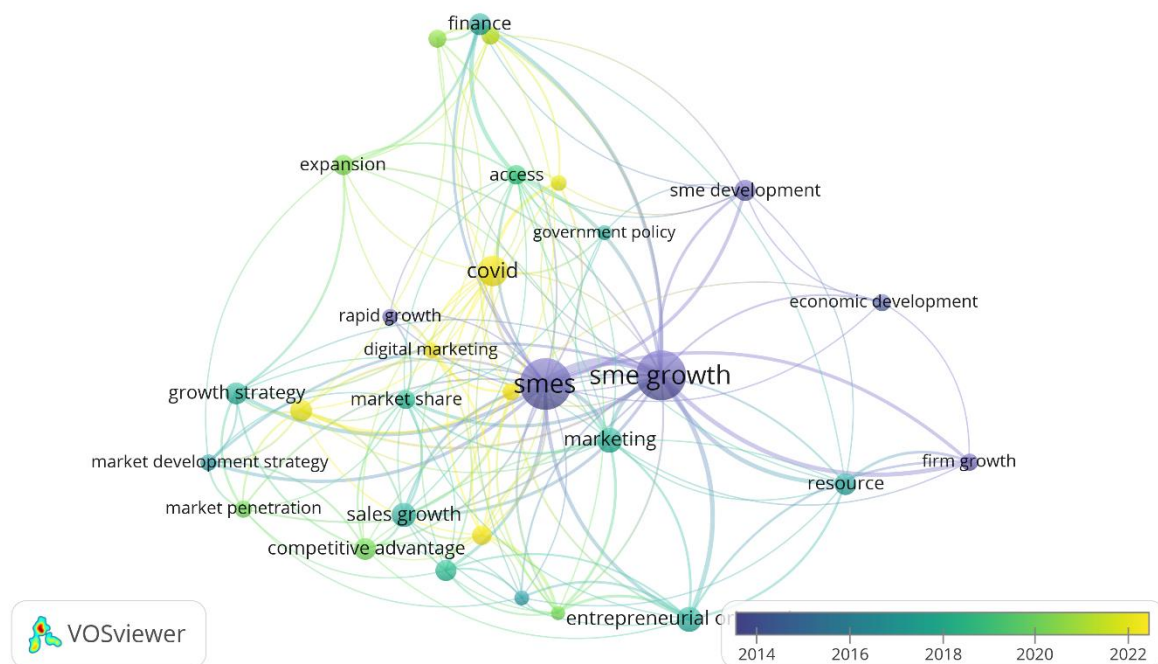


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2024

The figure presents a VOSviewer network visualization with a temporal overlay, showing the evolution of research keywords related to SMEs (Small and Medium Enterprises) and SME growth from 2014 to 2022. The nodes represent keywords, with their size indicating the frequency of occurrence in the literature. The color gradient, ranging from blue (older) to yellow (newer), represents the average publication year of the studies associated with each keyword. The connections between the nodes indicate co-occurrence relationships, with thicker lines representing stronger connections.

The central keywords "SMEs" and "SME growth" are shown in a dark blue to purple hue, indicating that they have been central topics of interest throughout the analyzed period, particularly in the earlier years of the dataset (2014-2016). Surrounding these central nodes are terms like

"marketing," "entrepreneurial orientation," and "firm growth," which also appear in darker shades, suggesting that these themes have been consistently important in SME research over the years. These keywords are heavily interconnected, reflecting their fundamental role in discussions of SME growth strategies. In contrast, newer themes are represented by keywords in lighter shades, such as "COVID," "digital marketing," and "access," which are displayed in yellow. These terms indicate more recent research trends, emerging prominently around 2020-2022. The keyword "COVID" is particularly notable, highlighting the pandemic's significant impact on SMEs and its inclusion as a critical factor in recent studies. The presence of "digital marketing" suggests an increasing focus on technology-driven strategies to support SME growth in the post-pandemic era.

4.4 Citation Analysis

Table 2. The Most Impactful Literatures

Citations	Authors and year	Title	Findings
3634	[11]	Small and medium-size enterprises: Access to finance as a growth constraint	This study found that access to finance is one of the biggest constraints on SME growth. The research emphasizes the importance of improved financial systems and supportive policies to help develop SMEs.
2395	[16]v	Issues in SME development in Ghana and South Africa	This study identified key issues in SME development in Ghana and South Africa, including regulatory barriers, access to finance, and infrastructure deficits. The findings suggest that specific strategies are needed to overcome these challenges.
1619	[17]	The internationalization of new high-potential US ventures: Antecedents and outcomes	The research found that factors such as strategic planning, market entry strategies, and the international environment play crucial roles in the success of the internationalization of high-potential U.S. ventures. The findings highlight the importance of these factors in determining the global success of SMEs.
1603	[18]	Entrepreneurship and marketing strategy: The SME under globalization	The study found that adaptive marketing strategies are essential for SMEs to succeed in the global market. The research underscores the need for innovation and responsiveness to global trends to maintain SME competitiveness.
1575	[19]	Theory and practice in SME performance measurement systems	This research found that performance measurement systems are critical for SMEs to manage and improve their operations. The findings provide insights into best practices for effectively implementing these systems.
1566	[20]	SME internationalization research: past, present, and future	The study found that networking, resource allocation, and strategic planning are crucial factors in the success of SME internationalization. The research reviews the evolution of this field and identifies key factors influencing SME success in international markets.

Citations	Authors and year	Title	Findings
1500	[21]	Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view	This study found that innovation practices are a key driver of competitiveness and performance in SMEs, particularly in the manufacturing sector. The findings support the idea that innovation is crucial for success, especially in resource-constrained environments.
1294	[22]	Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach	The research identified the main obstacles to SME growth in South Africa, such as access to finance, regulatory issues, and market conditions. The findings provide insights into how these obstacles can be mitigated.
1203	[23]	The convergence of planning and execution: Improvisation in new product development	The study found that successful new product development (NPD) often requires a balance between planned strategies and the ability to adapt or improvise based on emerging circumstances. The findings highlight the importance of improvisation in the NPD process.
1162	[24]	Small firms, R&D, technology and innovation in the UK: a literature review	This research found that while SMEs play a crucial role in innovation, they face significant challenges in leveraging R&D due to resource constraints. The study concludes that SMEs need tailored support to maximize their innovative potential.

Source: Publish or Perish Output, 2024

4.5 Author Visualization

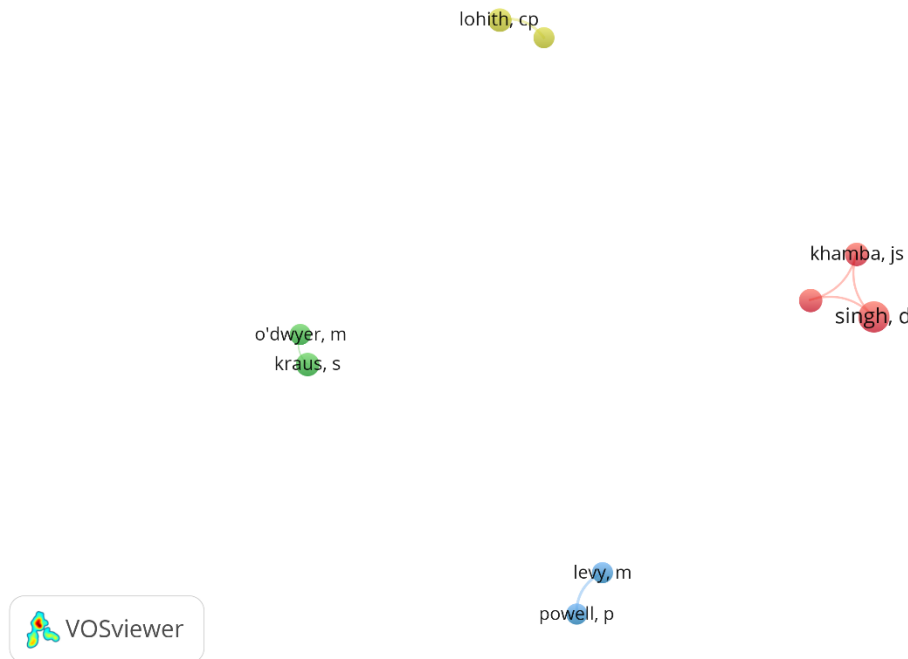


Figure 3. Author Visualization

Source: Data Analysis Result, 2024

In this visualization, we can observe several distinct clusters. The red cluster, which includes authors like "Khamba, JS" and "Singh, D," indicates a tight-knit group of researchers who frequently collaborate with each other. The green cluster, represented by "O'Dwyer, M" and "Kraus, S," also shows a collaborative group, but with fewer connections than the red cluster. The blue cluster with "Levy, M" and "Powell, P" shows another small group of collaborators, while "Lohith, CP" in the yellow cluster appears to have fewer connections, indicating less frequent collaboration with other authors in this dataset. The relative isolation of some authors and the clear grouping of others suggest that while some researchers in this field work closely with specific colleagues, others may work more independently or within smaller, isolated networks. This network visualization provides insight into the collaborative patterns within the research community studying SME growth.

4.6 Density Visualization

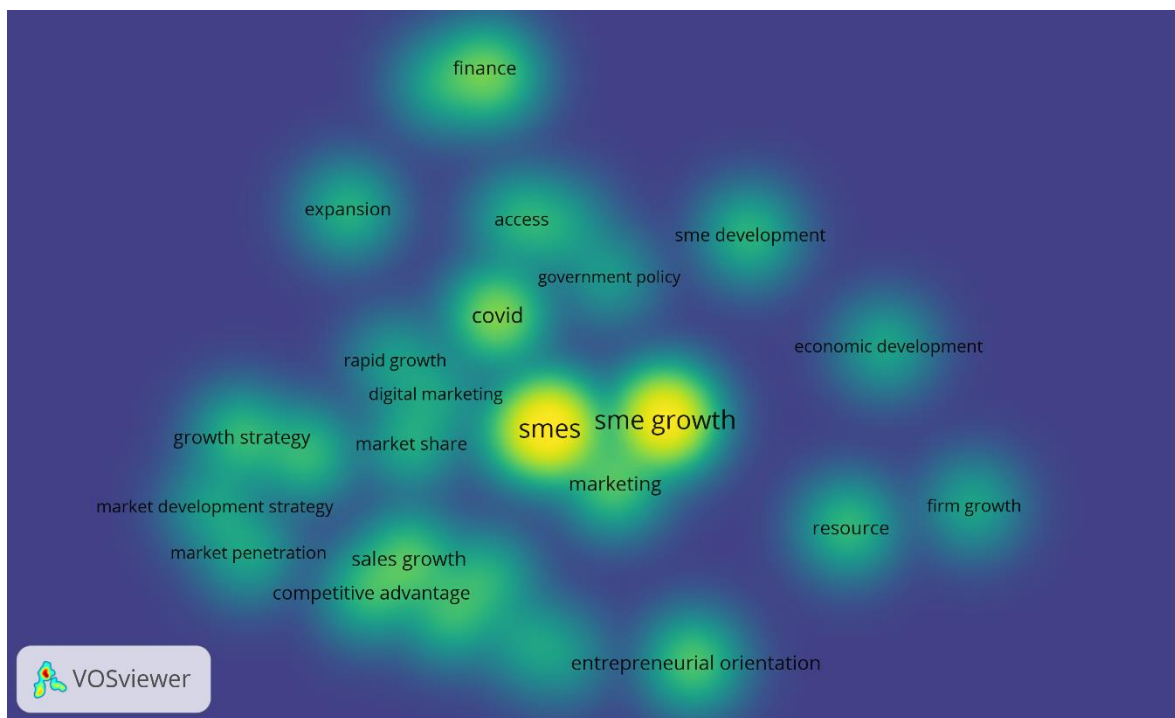


Figure 4. Density Visualization

Source: Data Analysis Result, 2024

The figure presents a heatmap generated by VOSviewer, displaying the density of keyword occurrences related to research on SMEs (Small and Medium Enterprises) and SME growth. The intensity of the color in the heatmap represents the frequency of keyword occurrences, with brighter (yellow) areas indicating higher concentrations of research focus and darker (blue) areas showing lower concentrations. The central keywords "SMEs" and "SME growth" are highlighted in bright yellow, signifying that these are the most frequently discussed topics in the dataset, forming the core of the research landscape.

Surrounding the central themes, other keywords such as "marketing," "finance," "COVID," and "entrepreneurial orientation" are visible with varying intensities. These areas, shown in lighter green, indicate significant but somewhat less central areas of focus within the research community. The presence of keywords like "finance," "growth strategy," and "government policy" in relatively brighter regions suggests that these topics also receive considerable attention, likely due to their critical role in influencing SME growth. The heatmap provides a visual representation of the concentration of research efforts, showing where the bulk of scholarly attention is focused and highlighting the key themes that drive research in the field of SME growth.

Practical Implication

The centrality of "SMEs" and "SME growth" in the research indicates that these topics are fundamental to understanding the broader economic impact of small and medium enterprises. For practitioners, particularly policymakers and business consultants, this emphasizes the need to focus on growth strategies as a core component of SME support programs. Ensuring that SMEs have access to the necessary resources, including finance and marketing expertise, is crucial for their expansion and contribution to economic development. Tailoring support mechanisms to enhance SME growth should remain a top priority for stakeholders involved in economic planning and development.

The significant attention given to finance and government policy highlights their critical roles in enabling SME growth. For financial institutions and government bodies, this suggests a need to design financial products and policies that are accessible and tailored to the unique challenges faced by SMEs. Ensuring that SMEs have the necessary financial support, especially in terms of easy access to credit and favorable regulatory environments, can significantly enhance their ability to innovate and expand. Policymakers should focus on creating a conducive environment that reduces bureaucratic hurdles and encourages entrepreneurship, while financial institutions should develop more inclusive lending practices that consider the specific needs of SMEs.

The emergence of "COVID" as a significant keyword reflects the impact of external shocks on SME operations and growth. For business leaders and managers, this underscores the importance of resilience and adaptability in business strategy. SMEs need to be prepared for sudden disruptions by diversifying their markets, embracing digital transformation, and maintaining flexible business models. The emphasis on digital marketing as a response to the pandemic indicates that adopting technology is no longer optional but a necessity for survival and growth in a post-pandemic world. Business strategies should include contingency planning and digital integration to ensure sustainability in the face of future crises.

The focus on marketing and competitive advantage suggests that SMEs must prioritize strategic marketing initiatives to differentiate themselves in increasingly competitive markets. For SME owners and marketers, this implies the need to invest in market research, customer engagement, and branding to build a strong market presence. Developing a clear and compelling value proposition, supported by effective marketing strategies, can help SMEs achieve sustained growth and secure a competitive edge. Additionally, the research highlights the importance of entrepreneurial orientation, indicating that fostering an innovative and proactive business culture is key to driving long-term success.

CONCLUSION

Ultimately, the thorough examination of studies pertaining to small and medium-sized businesses and their expansion indicates that comprehension of these subjects is essential for appreciating the larger economic influence of these businesses. In order to facilitate the development of SMEs, growth strategies, financing, and government policy are emphasized. This emphasizes the necessity of customized financial products and policies that are supportive of SME development. Resilience and adaptation are crucial components of company strategy, especially in light of digital transformation, as seen by the growing prominence of COVID-19 as a study focus. SMEs need to put innovation and customer interaction first in order to succeed in competitive marketplaces, according to the strategic focus on marketing and competitive advantage. Together, these observations offer financial institutions, business executives, and legislators insightful advice on how to best assist SMEs in their long-term development and prosperity.

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