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Exploring The Research Opportunities for MSMEs in Indonesia: A Bibliometric Study

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Abstract:

Micro, Small, and Medium Enterprises (MSMEs) are increasingly recognised as vital components across diverse sectors. Despite the growing scholarly and professional interest in MSME research, there has been a lack of comprehensive analyses that explore current trends and future directions, particularly within the Indonesian context. Existing reviews often limit themselves to specific conceptual or contextual aspects, such as finance or marketing, and rely on traditional descriptive methods. This study addresses this limitation by performing a bibliometric analysis of 438 articles published in Scopus-indexed journals from 2013 to 2023, employing R-programming for a robust evaluation. The review presents an updated and thorough overview of MSME research, identifying significant patterns in publication performance, author contributions, organisational roles, and journal impact. It maps out the evolving trends and potential future developments in MSME research, offering valuable insights for researchers and practitioners aiming to influence the field's trajectory in Indonesia and internationally.

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INTRODUCTION

According to Indonesia's National Statistics Bureau (BPS), exports decreased by 8.57% and imports by 7.63% between January and June 2019 (Aisyah, 2020). In response, the Indonesian government shifted its focus towards strengthening the domestic economy, particularly Micro, Small, and Medium Enterprises (MSME). During the 1998 economic crisis, MSMEs were among the few businesses to endure. At that time, the Indonesian rupiah depreciated by over 200% against the US dollar, triggering a national banking crisis; this resulted in the collapse of many large enterprises reliant on banking services and imported materials. In contrast, MSMEs, with limited dependence on imported goods and banking, were able to weather the crisis (Tambunan, 2019). Based on the experience, implementing immediate policy interventions to boost the domestic economy is recommended, emphasising that the country's export performance is influenced by specific foreign trade policies and a broader range of policies that align with these efforts. Prioritising MSME development is a strategic solution to navigate the uncertainties of global economic volatility (Myint, 1984). They argue that MSMEs drive Indonesia's economy due to their greater numbers compared to large enterprises, their widespread distribution across rural areas, and their significant potential for employment growth. As a result, MSME development can be a key component of policies aimed at job creation and income generation. Despite their role as major employers and the backbone of developing economies, MSMEs face persistent challenges (Tambunan, 2006). The 2016 World Bank Enterprise Survey, which gathered data from 119 developing countries, found that access to finance is perceived as the most significant barrier to MSME growth (Wang, 2016). Additionally, other researchers have identified common issues affecting MSME development in developing countries, including Indonesia, such as limited access to finance, production technology, human resource capacity, raw materials, and marketing (Irjayanti & Azis, 2012).

The key problem facing MSMEs in Indonesia is the lack of comprehensive, data-driven research that identifies key trends, challenges, and gaps in their development (Irjayanti & Azis, 2012). While MSMEs are vital to Indonesia's economy, insufficient research limits the ability to create effective policies and strategies to support their growth. This issue is further compounded by the vulnerability of MSMEs to global economic disruptions, as well as challenges like market access, financing, and technological adoption.

The motivation for this study is the growing importance of MSMEs in Indonesia's economy and the need for an evidence-based understanding of their development. A lack of such insights hampers the design of effective interventions to support MSMEs in a rapidly changing global landscape. By conducting a bibliometric analysis of existing research, this study aims to uncover thematic trends and highlight underexplored areas for further investigation. This research will provide targeted recommendations to enhance MSME growth, resilience, and policy development, especially in the face of external economic shocks. Ultimately, this study will contribute to shaping future research, policy, and practical interventions, offering valuable insights for academics, researchers, and policymakers seeking to foster MSME development in Indonesia.

LITERATURE REVIEW

According to Indonesian law number 20 (2008), MSMEs are defined as businesses owned by individuals or individual business units, excluding foreign-owned or foreign-invested entities, and are categorised based on their assets (excluding land and buildings) and annual sales. These enterprises also tend to have a small workforce, particularly at the micro level (see Table 1).

Table 1: The features of Indonesian micro, small, and medium enterprises (MSMEs)

| Entity | Value of Assets (Excluding Land and Buildings) in IDR | Approximate Value of Assets in USD (June 2020) |
|--------|---|---|
| Micro | Assets less than 50 million or sales less than 300 million | Assets less than \$3542.03 or sales less than \$21,255.57 |
| Small | Assets 50–500 million or sales 300 million–2.5 billion | Assets \$3542.03 to \$35,425.96 or sales\$21,255.57 to \$177,129.79 |
| Medium | Assets 500 million–10 billion or sales 2.5 billion–50 billion | Assets \$35,425.96 to \$708,519.17 or sales\$177,129.79 to \$3,542,595.83 |

Source: Indonesia law number 20 of 2008 as cited in (Picard, 2017); the National Bureau of Statistics Indonesia (BPS) and the World Bank Enterprise Survey (Burger et al., 2015)

Based on Table 1, the Indonesian (MSMEs) are categorised based on their asset value, sales, and number of employees. Micro enterprises have assets below IDR 50 million (~USD 3,542) or sales under IDR 300 million (~USD 21,256), employing 1 to 4 workers. Small enterprises have assets between IDR 50 million and 500 million (~USD 35,426) or sales ranging from IDR 300 million to 2.5 billion (~USD 177,130), with 5 to 19 employees. Medium enterprises hold assets between IDR 500 million and 10 billion (~USD 708,519) or sales from IDR 2.5 billion to 50 billion (~USD 3.54 million), employing 20 to 99 workers. As businesses scale, their economic contributions increase, reflecting a direct correlation between asset size, sales volume, and workforce, making MSME a vital part of Indonesia's economy.

Key Contributions and Challenges Faced by MSMEs in Indonesia

The contributions of MSMEs in Indonesia

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in shaping Indonesia's economy, contributing substantially to job creation, GDP expansion, and rural development. Their impact goes beyond economic figures, driving innovation and improving socio-economic conditions. The subsequent sections highlight the major contributions of MSMEs in Indonesia.

Economic Contributions

MSMEs contribute significantly to Indonesia's economy, generating over 60% of the nation's GDP and providing more than 97% of employment opportunities (Zulvikri, 2024). They also drive local economic growth by creating new business ventures and promoting economic equality (Sirait et al., 2024). Additionally, MSMEs play a crucial role in Social Impact by reducing poverty by creating jobs and boosting household incomes (Salsabila et al., 2024). Additionally, they help preserve local culture and traditions, fostering a sense of community identity and social cohesion (Sirait et al., 2024).

Challenges faced by MSMEs in Indonesia

Research on micro, small, and medium enterprises (MSME) in Indonesia identifies several significant obstacles that hinder their growth and ability to expand internationally. Major issues include inadequate access to financing, which limits their operational capacity, and a shortage of technological expertise, reducing their global competitiveness. Additionally, regulatory hurdles complicate business processes, imposing bureaucratic barriers that MSMEs must overcome. Various studies propose solutions such as adopting government policies to improve funding accessibility, offering training programs to boost ICT proficiency, and simplifying regulations to ease business operations. These findings highlight the importance of creating a supportive environment for the development and success of Indonesian MSMEs (Irjayanti & Azis, 2012; Tambunan & Tulus, 2019). The study by Tambunan (2019) investigates the effects of the 1997-1998 Asian financial crisis and the 2008-2009 global financial crisis on (MSMEs) in Southeast Asia reference to Indonesia, focusing on their crisis mitigation strategies. Using a review of experiences from various Southeast Asian countries and a survey of MSMEs impacted by the 2008-2009 crisis, the research reveals that the crises had distinct impacts on MSMEs. Key findings indicate that many MSMEs sought new customers or markets, either internationally or domestically, as a primary crisis mitigation measure, while others adjusted their workforce by reducing working days (Tambunan & Tulus, 2023). However, Rahadian (2023). aimed to explore the factors that influence the intention of Enterprises (MSMEs) in Indonesia to use fintech lending applications as an alternative source of business financing, employing the Technology Acceptance Model (TAM) as a framework. The research involved a sample of 171 MSMEs that had previously used licensed fintech lending applications. The results reveal that these applications' perceived usefulness and ease of use significantly affect the MSMEs' intention to adopt them for financing purposes (Rahadian & Thamrin, 2023).

Susanti and Sunardi (2023) investigated tax compliance dynamics among MSMEs in Indonesia's creative economy sector. The study found that increased tax knowledge generally promotes compliance, though in some cases, higher knowledge can reduce it. Trust in tax authorities was negatively correlated with compliance (Susanti & Sunardi, 2023). However, many researchers suggest enhancing business development services to improve tax compliance among MSMEs (Goyal & Kumar, 2021; Mishra et al., 2018). Moreover, Supriyati et al., (2023) examined how business strategy and Information Technology (IT) usage affect the performance of MSMEs in the ASEAN region, particularly in the aftermath of the pandemic. The research used a descriptive-analytical approach, incorporating primary and secondary data, with surveys and questionnaires targeting MSMEs. A noted limitation of the study was the reliance on self-reported data, which could introduce potential bias. The findings revealed a significant positive correlation between well-implemented business strategies and the use of IT, resulting in better performance metrics for MSMEs across ASEAN countries. However, this underscores the importance of MSMEs adopting strategic business practices and embracing IT to enhance global competitiveness (Supriyati et al., 2023).

Bibliometric Analysis: Strengths in Entrepreneurship and MSME Research.

Bibliometric analysis is a powerful and data-driven methodology used to systematically evaluate and map the academic literature on a particular subject. In the context of entrepreneurship and MSME (Micro, Small, and Medium Enterprises) research, this method provides several strengths that make it invaluable for understanding the development and trajectory of scholarly inquiry in these fields. The include strengths in entrepreneurship and MSME Research:

- 1. Understanding MSME Development: It helps track how MSMEs have been studied across various regions and periods, offering insights into factors contributing to their growth or challenges (Fajarika et al., 2024).
- 2. Innovation and Entrepreneurship: The analysis reveals how MSMEs are adapting to technological advancements and entrepreneurship practices, which drive business growth and competitiveness (Yani & Suparwata, 2023).
- 3. Policy Research: By highlighting influential studies, bibliometric analysis aids policymakers in developing evidence-based strategies to support MSMEs, particularly in areas like financing and regulatory frameworks (Banerjee, 2023).
- 4. Emerging Areas of Focus: The analysis identifies new trends in MSME research, such as digitalization, green entrepreneurship, and the role of MSMEs in achieving sustainable development goals (SDGs) (Aggarwal & Joshi, 2024).
- 5. Entrepreneurship Ecosystems: Bibliometric analysis helps understand the evolving elements of entrepreneurship ecosystems, such as financial support, regulatory frameworks, and innovation hubs, and their impact on MSME success (Kumar & Kumar, 2022)

Research Questions

This article addresses three key questions which are:

1. **RQ1:** How has research on MSME development in Indonesia evolved over time?

Purpose: This question aims to track the progression and changes in the body of knowledge concerning MSMEs in Indonesia. It aligns to map out the evolving trends in MSME research.

2. RQ2: What are the main themes and critical issues identified in the literature on MSMEs in Indonesia?

Purpose: This question seeks to identify and analyse the predominant themes and significant issues in existing MSME research. It connects to a review of the salient themes and concerns in the field.

3. **RQ3:** What are this research's theoretical and practical implications, and how does it suggest future research directions?

Purpose: This question explores the impact of the research on existing theories and practices and proposes avenues for future research. It supports the aim of understanding the work's contributions and guiding future studies.

RESEARCH METHODOLOGY

This research employs bibliometric analysis as a systematic and quantitative approach to explore the existing body of literature on MSMEs in Indonesia. Bibliometric analysis enables the evaluation of patterns, trends, and scholarly contributions, offering insights into key thematic areas and research gaps.

Bibliometric analysis is particularly useful for understanding MSME development and assessing research outputs in Indonesia, which has experienced significant economic shifts. This method helps to:

- 1. Map the evolution of MSME-related studies over time.
- 2. Identify key themes such as financial literacy, business strategy, and innovation, as seen in Indonesia's MSME landscape.

3. Highlight influential authors and institutions, shedding light on collaborative networks that advance the field.

The research followed the guidelines outlined by Moher's (2009) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, which ensured a structured and transparent approach to analysing and presenting the data by using bibliometric analysis (Liberati et al., 2009). This methodology is critical for providing a clear, replicable process for evaluating academic studies.

The terms "MSME" and "MSMEs" commonly refer to "Micro, Small, and Medium Enterprises." In this study, the researchers used the keyword "MSME" and adhered to the recommendations outlined in Moher's (2009) "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" (PRISMA) for the analysis and conclusions displayed in Figure 1.

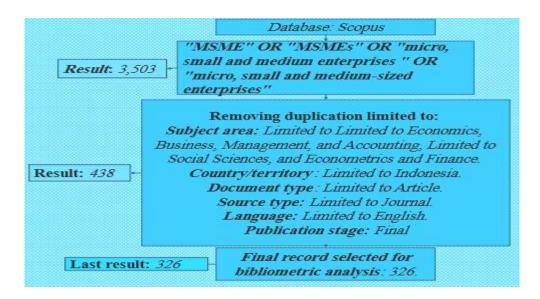


Figure 1: Research Methodology

Data Collection

The researchers gathered data for the study from Scopus, a database containing numerous randomised, peer-reviewed studies published in high-impact journals (Groff et al., 2020). They followed a systematic approach, which resulted in a final count of 326 articles, as shown in Table 1. To identify relevant English-language studies, the researchers searched using keywords like "MSME," "MSMEs," "micro, small and medium enterprises," and "micro, small and medium-sized enterprises," covering various fields. However, extracting or downloading data from online databases can sometimes introduce inaccuracies due to bibliographic and bibliometric errors (Donthu et al., 2021). As a result, the researchers undertook several steps to clean and organise the data to ensure accuracy. They adhered to the guidelines set by Donthu et al. (2021)) for visualising and interpreting bibliometric data (Donthu et al., 2021). To improve the analysis and results, they used RStudio to remove specific terms from the titles, abstracts, and keywords, converting plural nouns like "enterprises" to "enterprise" and "MSMEs" to "MSME." These cleaning steps helped maintain consistency in assessing the themes.

Selection of Analysis Technique

The researchers used quantitative methods, specifically bibliometric analysis, to analyse and quantify the text and data (Goyal & Kumar, 2021). This approach allows researchers to generate new insights from literature reviews that can be used in future research (Groff et al., 2020; Suominen et al., 2016). It is essential to write and publish biographies on

relevant themes, identify trends in a specific field, and evaluate research publications that offer an overview of the field's current state (Gao et al., 2021; Hossain et al., 2022). Bibliometric techniques such as researchers commonly use citation analysis, bibliographic coupling, co-citation, and co-occurrence analysis to explore biographic data (Donthu et al., 2021).

RESULTS AND DISCUSSION

Results

This section summarises the most productive countries/regions, organisations, journals, and authors to assist researchers in identifying reputable academics and influential journals in the field. It also includes examining network analysis and highlighting author collaborations and journal connections. This analysis tackles the first research question: RQ1: How has research on MSME development in Indonesia evolved over time?

Descriptive statistics

Based on Table 2, the dataset on MSME research from 2013 to 2023 shows rapid growth, with 438 documents and an annual growth rate of 64.71%. Most of the research is recent, with an average document age of 2.97 years, reflecting the evolving focus on MSME challenges. The research has a moderate impact, with 5.416 average citations per document and 18,964 references. The field covers diverse topics with 1,236 author-provided keywords. Collaboration is prevalent, with an average of 3.28 co-authors per document, though only 10.96% involve international co-authorships. The research primarily consists of journal articles, reflecting its scholarly focus. MSME research is expanding and diverse, responding to contemporary economic and business trends.

Table 2: Metrics Information of Selected Journals

| Timespan | 2013:2023 |
|---------------------------------|-----------|
| Sources (Journals) | 182 |
| Documents | 438 |
| Annual Growth Rate % | 64.71 |
| Document Average Age | 2.97 |
| Average citations per doc | 5.416 |
| References | 18964 |
| Keywords Plus (ID) | 139 |
| Author's Keywords (DE) | 1236 |
| Authors | 1223 |
| Authors of single-authored docs | 40 |
| Single-authored docs | 44 |
| Co-Authors per Doc | 3.28 |
| International co-authorships % | 10.96 |

Source: collected by authors through R-studio

Publication trends in the area of MSME in Indonesia

The research articles on MSMEs in Figure 2 show a clear upward trend from 2013 to 2023. Initially, there were very few articles, with only 1 in 2013 and 2 in 2014. The number of publications gradually increased, reaching 10 by 2016. A significant rise occurred in 2019, with 55 articles published, and this upward momentum continued. The most notable growth happened between 2022 and 2023, where the number of articles nearly doubled, jumping from 76 to 147. This trend suggests a growing interest in MSME-related research, likely driven by increasing recognition of the importance of MSMEs in the global economy. Gupta and Barua (2016) explored decision-making strategies, emphasising the best-worst method as a central research focus across finance, production, and marketing. Considering present trends, research on MSMEs will expand shortly (Gupta & Barua, 2016).

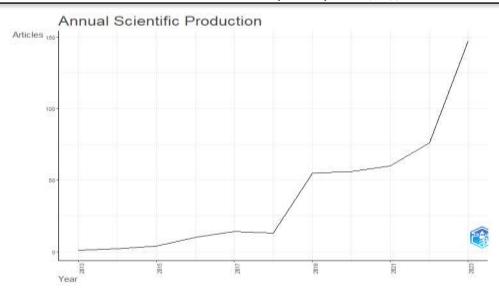


Figure 2: Publication trends in MSME in Indonesia 2013-2023

Most relevant sources:

Figure 3 presents a list of academic or professional journals and the number of articles published in each that are deemed the most relevant source. "Quality - Access to Success" Ranks Highest With 27 Articles, Followed by the "International Journal of Scientific and Technology Research" With 22 Articles, And The "International Journal of Innovation, creativity and Change" With 15 articles. Other sources include journals in finance, sustainability, business, and geographical education, with various relevant publications ranging from 7 to 14 articles. This data reflects the prominence of different journals in contributing to the topic being researched.

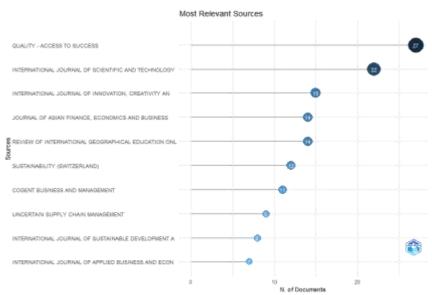


Figure 3 presents a list of academic or professional journals.

Most Relevant Author's production and citation for MSME research in Indonesia

Table 3 provides a detailed overview of the most relevant authors in MSME research in Indonesia, highlighting their publication counts and citation metrics. Soewarno N, for instance, leads with 9 articles and an impressive 134 citations, indicating a significant influence. Meanwhile, Tjahjadi B closely follows with 8 articles and 120 citations, reflecting strong research output and impact. Additionally, Sudarmiatin and Suliyanto, each with 6 articles, have lower citation counts of 9 and 80, respectively, suggesting varying levels of impact. Overall, the data reveals a mix of high publication output and impactful research, with several authors demonstrating notable citation counts relative to their number of articles.

Table 3: Most Relevant Author's production and citation for MSME research in Indonesia:

| Authors | TP | TC |
|----------------|----|-----|
| Soewarno n | 9 | 134 |
| Tjahjadi b | 8 | 120 |
| Sudarmiatin | 6 | 9 |
| Suliyanto | 6 | 80 |
| Muafi | 5 | 25 |
| Novandari w | 5 | 25 |
| Purwaningsih e | 5 | 36 |
| Suroso a | 5 | 25 |
| Anggadwita g | 4 | 213 |
| Handayati p | 4 | 26 |

Note: (TP) represents the total production, and (TC) represents the total citation

The Top Ten Cited Documents

Table 4 examines the top three cited documents that significantly contribute to the understanding and development of MSMEs in Indonesia. The most-cited paper, with 169 citations, explores how socio-cultural factors influence women entrepreneurs in Indonesia, providing insights into gender-specific challenges in emerging economies. The second paper, with 75 citations, examines the role of social enterprise models in empowering MSMEs, highlighting innovative solutions to overcome traditional barriers like access to finance and resources. The third paper, cited 70 times, analyses the impact of social media marketing on MSME performance during the COVID-19 pandemic, demonstrating the importance of digital tools in helping businesses survive and thrive during economic disruptions. Together, these studies underscore the relevance of socio-cultural dynamics, social enterprise models, and digital transformation in fostering MSME resilience and growth.

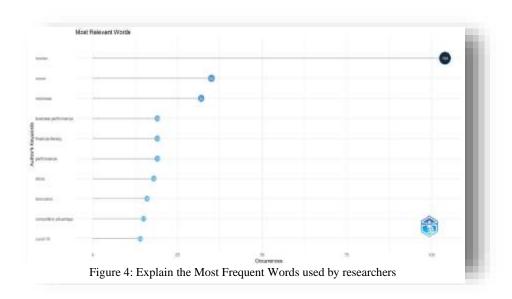
Table 4: The Top Ten Cited Documents

| Title | Source Title | TC |
|---|---|-----|
| Socio-cultural environments and emerging economy entrepreneurship women | Journal of Entrepreneurship in Emerging | 169 |
| entrepreneurs in Indonesia | Economies | |
| A social enterprise approach to empowering micro, small and medium | Journal of Open Innovation: Technology, | 75 |
| enterprises (SMEs) in Indonesia | Market, and Complexity | |
| Social Media Marketing and Business Performance of MSMEs During the | Journal of Asian Finance, Economics and | 70 |
| COVID-19 Pandemic | Business | |
| The role of green innovation between green market orientation and business | Journal of Open Innovation: Technology, | 63 |
| performance: its implication for open innovation | Market, and Complexity | |
| Business strategy – MSMEs' performance relationship: innovation and | Journal of Small Business and Enterprise | 55 |
| accounting information system as mediators | Development | |
| The impact of internal, external and enterprise risk management on the | Sustainability (Switzerland) | 51 |
| performance of micro, small and medium enterprises | · | |
| The relationships between market orientation, learning orientation, and financial | Asia Pacific Management Review | 49 |
| literacy, on the knowledge competence, innovation, and performance of small | | |
| and medium textile industries in Java and Bali | | |
| The effect of digital marketing, digital finance and digital payment on the finance | International Journal of Data and Network | 42 |
| performance of Indonesian SMEs | Science | |
| The effect of service quality, innovation towards competitive advantages and | Benchmarking | 38 |
| sustainable economic growth: Marketing mix strategy as a mediating variable | | |
| The impact of the economic crisis on micro, small, and medium enterprises and | Asia and the Pacific Policy Studies | 32 |
| their crisis mitigation measures in Southeast Asia with reference to Indonesia | | |
| The effect of digital marketing and e-commerce on financial performance and | International Journal of Data and Network | 29 |
| business sustainability of MSMEs during the COVID-19 pandemic in Indonesia | Science | |
| A nexus among strategic orientation, social network, knowledge sharing, | Journal of Asian Finance, Economics and | 29 |
| organizational innovation, and MSME performance | Business | |
| The Influence of E-Payment and E-Commerce Services on Supply Chain | Journal of Open Innovation: Technology, | 28 |
| Performance: Implications of Open Innovation and Solutions for the | Market, and Complexity | |
| Digitalization of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia | | |
| Reduction of Digitalization Policy in Indonesian MSMEs and Implications for | Juris: Jurnal Ilmiah Syariah | 28 |
| Sharia Economic Development | | |

Note: (TC) represents the total citation

Most Frequent Words

The word frequency in Figure 4 provides insight into the key themes driving MSME research in Indonesia. The high occurrence of "MSMEs" (104) and "MSMEs" (35) emphasises the central focus on micro, small, and medium enterprises. The frequent mention of "Indonesia" (32) highlights the geographical scope of the studies. The primary concerns are financial and operational performance, as reflected by terms like business performance (19), financial literacy (19), and micro-enterprises (18). Innovation (16) and competitive advantage (15) also indicate interest in MSME growth and competitiveness. The impact of COVID-19 (14) also emerges as a significant research topic, shaping discussions on MSME development in the country.



The Conceptual Structure of Author Keyword Co-occurrence Networks

Figure 5 provides a snapshot of key themes in MSME research through their conceptual structure in a cooccurrence network. "MSMEs" stands out with the highest betweenness score (685.582) in Cluster 4, indicating
it is a central theme connecting various research topics. "Innovation" and "Indonesia", with betweenness scores
of 71.82 and 63.544, respectively, also play crucial roles in linking different clusters. Furthermore, "financial
literacy" (62.093) and "business performance" (38.169) are significant in Cluster 7, reflecting their importance in
discussions on the financial aspects of MSMEs. Meanwhile, terms like "entrepreneurial orientation", "financial
technology", and "tourism" contribute to various clusters, suggesting a broad range of research focuses. Thus,
while "MSMEs" remain the most pivotal node in connecting research areas, other keywords illustrate diverse but
interconnected themes within the field.

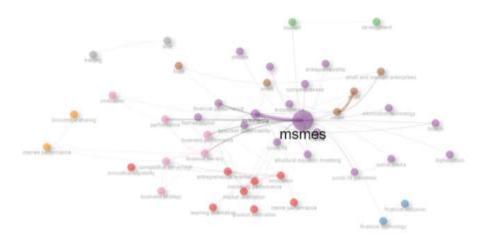


Figure 5: Author keyword co-occurrence networks map using the conceptual structure.

The collaboration between Indonesia and other countries

Based on the data in Figure 6 shows international collaboration between Indonesia and other countries in research, with the highest frequency of collaboration being with Malaysia (22 instances). Other notable collaborations include Australia (5), India (4), South Africa (3), and Thailand (3). Additionally, there are two collaborations, each with France, Germany, Macedonia, and North Macedonia, with one recorded link between Macedonia and North Macedonia; this suggests Indonesia's strong research ties, particularly with neighbouring Malaysia, while maintaining connections with a diverse range of countries across continents.



Figure 6: The collaboration between Indonesia and other countries map.

Clustering by Coupling

Using insights into thematic areas to visualize the scope and evolution of MSME research in Indonesia, the authors identify key themes and critical issues, guiding future research directions. In this section, the researchers answer the second research question, RQ2, by highlighting themes such as business strategy, financial literacy, and tax compliance, as well as pressing concerns like the impact of COVID-19 on MSMEs.

The data in Figure 7 presents various research themes related to MSMEs, categorised by group, frequency, centrality, impact, and colour. The first group, focusing on MSMEs, marketing performance, and business strategy, has strong centrality (0.577) and significant impact (1.613), highlighting the importance of business

strategy. The second group emphasises financial literacy, business performance, and entrepreneurial orientation, with balanced centrality (0.521) and high impact (1.855), focusing on the financial aspects of MSMEs. The third group centres on financial performance and MSMEs in Indonesia, showing the highest centrality (0.630) but lower impact (1.000). The fourth group, with a strong focus on Indonesia, has moderate centrality (0.441) but no recorded impact. Meanwhile, the fifth group highlights MSMEs' business and financial performance with modest centrality (0.357) and medium impact (1.403). The sixth group, focused on tax compliance and incentives, has low centrality (0.415) but the highest impact (1.986), indicating niche influence. Groups seven through ten cover specialised topics like culinary MSMEs during the COVID-19 pandemic, competitive advantage, and strategies, with varying levels of centrality and impact, contributing to the broader research landscape on MSMEs. Each group is visually differentiated by colour in the dataset.

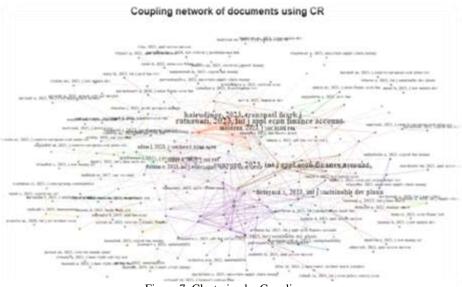


Figure 7: Clustering by Coupling.

The results summary of the bibliometric analysis highlights a significant growth in MSME research in Indonesia, especially from 2019 onwards. This surge is likely attributed to the increasing recognition of MSMEs as critical to the country's economy and their role in post-COVID-19 recovery. Despite this growth, the research exhibits a moderate impact, as reflected by an average citation count of 5.416 per document. The studies cover a wide range of themes, including financial literacy, business performance, innovation, and the impact of the COVID-19 pandemic, underscoring the multifaceted challenges Indonesian MSMEs face. Prominent authors such as Soewarno N And Tjahjadi B show considerable global influence, indicating Indonesia's significant presence in the international MSME research landscape. Additionally, while collaboration among Indonesian researchers is strong, with an average of 3.28 co-authors per document, international collaboration remains limited, with Malaysia being the most frequent partner. Key themes in the research include MSME performance, financial literacy, and innovation, highlighting the pressing issues that Indonesian MSMEs confront.

Discussion

The research related to MSME research in Indonesia and its historical development are thoroughly evaluated by bibliometric analysis. The researchers responded to RQ3, the last research question, by identifying future research directions in underexplored areas such as digital transformation and fintech adoption and for policymakers, this study provides insights into critical issues faced by MSMEs in Indonesia, such as access to finance, technology adoption, and resilience to economic shocks.

This paper discussed the contributions to the body of knowledge on (MSMEs) in Indonesia through a comprehensive bibliometric analysis of 438 articles published between 2013 and 2023. It explores key trends, challenges, and research

themes in MSME literature, focusing on areas such as financial literacy, business performance, innovation, and the impact of COVID-19. By mapping out the intellectual structure of MSME research, the study identifies influential authors, journals, and emerging topics in the field. Moreover, for researchers, this study offers a data-driven overview of MSME research, helping to identify key authors, journals, and articles that have shaped the discourse. It highlights underexplored areas, such as digital transformation and fintech adoption, which can serve as potential directions for future research. The bibliometric techniques used, including citation and co-authorship analysis, also help uncover research collaboration patterns and trends. Additionally, for policymakers, this study provides insights into critical issues faced by MSMEs in Indonesia, such as access to finance, technology adoption, and resilience to economic shocks like the COVID-19 pandemic. The findings can inform the design of evidence-based policies that support MSME growth, such as improving financial access, fostering technological capabilities, and ensuring regulatory support to strengthen MSME resilience. Finally, the uniqueness of this paper lies in its methodological approach, using bibliometric analysis to capture a decade's worth of MSME research, particularly in Indonesia. Unlike traditional narrative reviews, it offers a quantifiable and systematic perspective on MSME research trends, providing valuable insights into the development of the field over time. This novel approach, along with its focus on MSMEs in a developing economy context, distinguishes it as a valuable resource for both researchers and policymakers seeking to understand and support MSME development.

CONCLUSION AND RECOMMENDATIONS

Limitation

The study of MSME research in Indonesia reveals several limitations. Firstly, the focus is predominantly on Indonesia, which may restrict the generalizability of findings to other regions with differing economic and regulatory contexts. Furthermore, the relatively low level of international co-authorship (only 10.96%) indicates limited cross-border collaboration, potentially hindering the infusion of global best practices into Indonesian research. Although global citations are strong, local citations are relatively low, suggesting that the research might not influence Indonesian policymakers, practitioners, or local researchers as effectively as possible. Additionally, the average document age of 2.97 years implies that the field is still emerging, which means some long-term trends and impacts of MSME interventions may not yet be fully understood. The broad range of topics covered and diverse sources used also make it challenging to draw specific conclusions about the effectiveness of particular policies or interventions, with the clustering data obscuring important nuances in individual studies.

Recommendations

To address the limitations identified in this analysis, several key recommendations are proposed. For policymakers, this study will enhance local engagement with research findings by conducting targeted workshops and producing policy briefs that can be implemented by Indonesian stakeholders. Moreover, it encourages partnerships with local business associations to ensure that research insights translate into actionable strategies for MSMEs. Additionally, it is important to prioritize policy-oriented research that informs government efforts in areas such as access to finance, tax incentives, digital transformation, and resilience against economic shocks. For researchers, the study will promote greater international collaboration beyond Malaysia through regional conferences, joint funding initiatives, and collaborative projects with international organizations. Future research should focus on longitudinal studies to examine the long-term impacts of MSME policies and interventions, especially in light of post-pandemic recovery. For future studies, broadening the geographic scope of MSME research to include comparisons with other Southeast Asian nations could facilitate the identification of best practices and promote regional collaboration to strengthen the MSME sector across ASEAN. Finally, these recommendations aim to bridge existing gaps in MSME research and contribute to the sustainable development of the sector in Indonesia.

Conclusions

The bibliometric analysis of MSME research in Indonesia from 2013 to 2023 reveals a rapidly growing field characterized by diverse topics addressing contemporary challenges and opportunities for MSMEs. While the research holds significant global relevance, the relatively low impact of local citations underscores the need for better integration of findings within Indonesia's business ecosystem. This analysis contributes to the theoretical understanding of how MSMEs are framed within Indonesian research and highlights areas where further exploration is needed, particularly in relation to policy and business practice. As the field is still relatively young, future studies should focus on long-term outcomes and enhancing local engagement while fostering broader international collaboration. The research findings are crucial for informing policy, guiding business strategies, and supporting sustainable MSME growth, especially in a post-pandemic landscape.

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