

## **The Effectiveness of Fintech in SME Financial Management: A Systematic Literature Review**

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### **Abstract**

This study aims to systematically review the effectiveness of Financial Technology (Fintech) in the financial management of Small and Medium Enterprises (SMEs). SMEs are a vital sector in the Indonesian economy, but they often face challenges in financial management and access to formal financing. The development of Fintech has offered innovative solutions to overcome these barriers through services such as peer-to-peer lending, digital wallets, and financial management applications that can improve SMEs' access to capital and business efficiency. This study employs a systematic literature review methodology. Relevant literature was collected and analyzed using the Publish or Perish tool to extract bibliometric data and the VOS viewer for visualization and clustering analysis. The selected studies focus on the relationship between fintech services and financial performance indicators of SMEs, including financial literacy, financial inclusion, and financial management. The results demonstrate that fintech contributes to improving financial transparency and facilitates more accessible access to financing for SMEs. However, the success of fintech adoption heavily depends on the levels of digital literacy and user trust among SME operators. The findings highlight the importance of enhancing digital literacy and fostering user trust as critical enablers of fintech adoption. The study has significant implications for policymakers and practitioners. There is a need for educational programs to improve financial and digital literacy among SMEs to maximize fintech utilization.

**Keywords:** fintech, SMEs, financial management, financial literacy, financial inclusion, systematic review.

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### **INTRODUCTION**

Small and Medium Enterprises (SMEs) are one of the main pillars of the Indonesian economy, significantly contributing to national economic growth. Based on data from the Ministry of Cooperatives and SMEs, as of 2022, SMEs in Indonesia accounted for approximately 61.07% of the Gross Domestic Product (GDP) and absorbed around 97% of the total national workforce, making them essential drivers of job creation and poverty alleviation (Murti et al., 2022). Moreover, SMEs play a pivotal role in enhancing the competitiveness of the national economy

through product and service innovations that cater to diverse community needs across various sectors (Pratiwi et al., 2023)

.Despite their significant contributions, SMEs face persistent challenges in financial management, which impede their sustainability and growth. One of the most critical issues is limited access to formal financing (Aritonang et al., 2023). According to data from the Financial Services Authority (OJK), in 2022, only around 12.2 million SMEs had access to funding from formal financial institutions out of a total of 64.2 million SMEs operating in Indonesia (Murti et al., 2022). Additionally, SMEs struggle with cash flow management, debt handling, and inadequate financial reporting capabilities (Aritonang et al., 2023). These challenges are often attributed to limited knowledge and access to financial technology (Kurniawati et al., 2021), leaving SMEs vulnerable to stagnation or business failure.

In recent years, financial technology (Fintech) has emerged as a promising solution to address these issues. Fintech encompasses a wide range of technology-driven financial services designed to improve access to financing, streamline financial management, and enhance business efficiency (Kurniawati et al., 2021). The fintech industry in Indonesia has experienced remarkable growth, with a transaction value of IDR 396.65 trillion in 2022, marking a significant increase from previous years (Financial Services Authority, 2024). Fintech services such as peer-to-peer (P2P) lending, digital wallets, and financial management applications provide SMEs with tools to access capital, manage finances effectively, and monitor business performance in real time.

However, despite its potential, the adoption of fintech by SMEs remains limited, highlighting the urgency of research to explore its effectiveness. This study seeks to address this gap by systematically reviewing the impact of fintech on the financial management, operational efficiency, and business growth of SMEs in Indonesia. By analyzing various literature, empirical data, and case studies, this study aims to provide a comprehensive understanding of fintech's role in overcoming the financial challenges faced by SMEs.

The novelty of this research lies in its focus on identifying specific factors that influence fintech adoption by SMEs and its implications for inclusive financial policies in Indonesia. Unlike existing studies that primarily explore fintech adoption at a macro level, this research delves deeper into the micro-level dynamics of SMEs, examining the barriers and enablers specific to this segment.

The findings of this study are expected to offer significant benefits, including practical insights for policymakers, fintech service providers, and SME owners. For policymakers, the study provides a basis for developing inclusive financial policies that facilitate wider fintech adoption. For fintech providers, it offers an understanding of SME-specific needs, enabling tailored solutions that enhance usability and accessibility. Lastly, for SMEs, the research highlights best practices and strategies to leverage fintech for sustainable growth, ultimately contributing to strengthening the resilience and competitiveness of SMEs in Indonesia's economy.

## RESEARCH METHODS

This study uses a systematic approach through the Publish or Perish tool to collect and analyze literature data related to the effectiveness of fintech in SME financial management. Keywords used in literature searches include ("fintech" OR "financial technology" OR "digital financial services") AND ("SME" OR "small business" OR "MSME") AND ("financial management" OR "financial records"). This study focuses on literature published in the last five years to ensure the relevance and accuracy of the analysis results. From the search results, 974 data were taken from Google Scholar and 7 Scopus-indexed journals to get a broader and in-depth view of this research topic.

Furthermore, to identify the relationship between concepts and trends in the literature, the VOS viewer device was used to perform a bibliometric analysis (Iliescu, 2021). With the help of VOS viewer, common patterns, keyword clusters, and research trends related to fintech and SMEs are analyzed based on citation networks and the emergence of frequently used keywords. This analysis helps to unravel the relevance of the existing literature. It provides a comprehensive overview of the rapidly growing research areas and gaps that are still untapped in academic studies related to fintech and SME financial management.

## RESULT AND DISCUSSION

The results of a systematic analysis of the effectiveness of fintech in SME financial management will be described. Based on the visualization from VOS viewer, 38 items are divided into 6 clusters, with 211 links and 481 total link strength. This analysis shows the linkages between the main literature on fintech and SMEs, especially in relation to access to financing, digital financial management, and financial literacy. This study underscores how fintech has played an important role in improving SMEs' access to financial services, as well as the challenges that arise in the adoption of this technology. Further findings will elaborate on the impact and potential of fintech on SME financial management in the digital era.

The Network Map Visualization

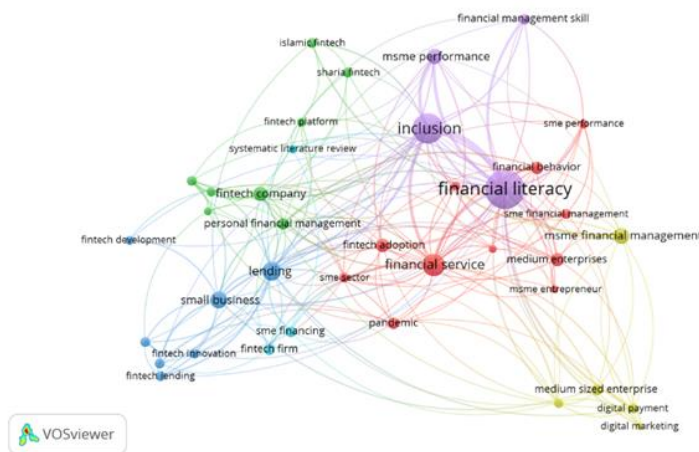


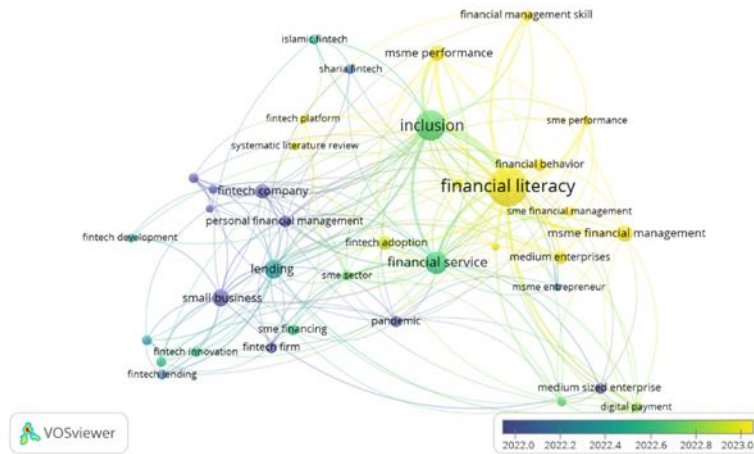
Fig 1. The Network map visualization using VOSviewer

The results of the VOSviewer visualization above show the relationship between various topics in the analyzed literature, with a focus on financial literacy, financial services, and inclusion. Financial literacy emerged as a central theme that is closely related to the financial management of MSMEs (MSME financial management) and the financial services they use. Large nodes such as financial literacy, inclusion, and financial services show that the literature discusses a lot about how financial literacy affects access to financial services, especially in the context of MSMEs.

In addition, some clusters show a strong link between the literature on fintech and lending, with topics such as fintech companies, lending, and small business. This cluster illustrates the role of financial technology in facilitating loans and supporting the growth of small businesses. In another part, the fintech theme also includes Sharia fintech (Sharia fintech, Islamic fintech), which illustrates the focus of the literature on the development of Sharia-based fintech.

Some of the other themes identified are fintech adoption and the impact of the pandemic on financial services. This shows how the pandemic has affected the way MSMEs adopt fintech to meet their financial needs. On the other hand, the literature also discusses digitalization in MSME management through digital payments and digital marketing, which shows the trend of digital transformation in the small and medium business sectors. Overall, this visualization illustrates the strong link between financial literacy, financial inclusion, and the role of financial technology, including sharia fintech, in supporting financial services for MSMEs.

### The Network Map Evolution of Research Topics



**Fig. 2** The Network map evolution of research topics using VOSviewer

This VOSviewer visualization image shows the evolution of the research topic from 2022 to 2023 with temporal analysis. The colors in the image indicate the period in which the topics were studied. Topics that are yellow, such as financial literacy, MSME financial management, inclusion, and financial behavior, show increased attention in the latest research in 2023. This reflects that financial literacy and financial management of MSMEs have become increasingly relevant in recent years, especially related to the financial inclusion and financial behavior of MSMEs.

On the other hand, topics such as fintech companies, lending, fintech development, and fintech innovation, which are blue and purple, were more discussed at the beginning of the period (2022). The focus on the development and innovation of financial technology and its role in facilitating loans and supporting small and medium-sized enterprises was discussed more intensively at the beginning of the research period. As time goes by, topics related to financial literacy and fintech adoption among MSMEs begin to dominate.

Research in 2023 also shows increased attention to digital transformation through topics such as digital payments and digital marketing, which reflects the adoption of technology in MSME business management. Overall, this visualization illustrates the shift in trend from focusing on fintech innovation in 2022 to more intensive financial literacy, MSME financial management, and financial inclusion in 2023.

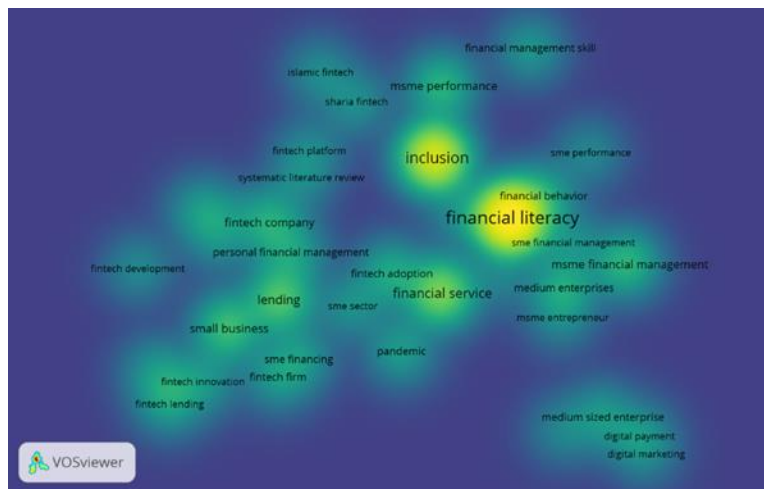


Fig. 3 Density Map Using Vos Viewer

The image produced by VOSviewer uses heatmaps to show the density of research topics related to financial literacy, fintech, and MSMEs. Lighter colours, such as yellow, signify higher density or focus of research, while green and blue indicate lower density.

The interpretation of this figure shows that financial literacy is the most dominant centre of attention in the literature, followed by financial service and inclusion. The area in yellow on this topic shows that many studies focus on aspects of financial literacy, financial inclusion, and financial services used by MSMEs. In addition, MSME financial management and financial behaviour are also important parts that are closely related to financial literacy, which reflects that financial management and MSME behaviour are topics that receive great attention.

On the other hand, areas with green and blue colours, such as fintech companies, lending, and small businesses, indicate that although these topics are covered, they have a lower density compared to the main topics. This shows that research on fintech companies, lending, and the role of technology in small businesses is still growing, but not as much as the focus on financial literacy. Overall, this heatmap illustrates that financial literacy and financial services related to financial inclusion are the focus of the literature, while topics related to fintech, innovation, and MSMEs are at a lower density level but remain relevant.

### **The Importance of Financial Literacy in SME Financial Management**

VOSviewer visualization reveals that financial literacy is one of the main topics that is often discussed in the literature related to fintech and SMEs (Jennifer & Widodoatmodjo, 2023). Financial literacy, which includes a basic understanding of financial principles such as budgeting, cash flow management, as well as long-term financial planning, plays a central role in the success of SME financial management (Rahayu et al., 2023). SMEs with a good level of financial literacy are more likely to understand the risks and opportunities that come with the application of fintech, such as the use of digital-based lending platforms or online payment services (Khasanah & Irawati, 2022).

For SMEs, the adoption of financial technology is not just about access to digital tools but also about understanding how to utilize the technology to optimize financial management (Nugraha et al., 2022). Financial solid literacy allows SME owners to make more informed decisions about financing, debt management, and investment and understand the implications of any financial action they take through fintech (Nur Hamidah et al., 2020). This helps reduce the risk of bankruptcy that many SMEs face, especially in an uncertain economic situation.

In addition, research shows that financial literacy plays a role in increasing the effectiveness of fintech among SMEs (Widiawati et al., 2023). Without a sufficient understanding of how to properly utilize fintech, there is a possibility that SMEs will not fully experience the benefits of this technology, such as more accessible access to financing or transaction efficiency. Therefore, the integration of financial literacy with fintech adoption is a crucial element in a more sustainable SME development strategy (Winarsih et al., 2020). Financial literacy training and education are important so that SMEs can understand not only the function of fintech tools but also how to utilize them for long-term business growth and stability (Nur Hamidah et al., 2020). Thus, financial literacy not only supports fintech adoption but also prepares SMEs to face challenges and take advantage of the opportunities offered by financial technology to improve their competitiveness and efficiency.

### **Financial Inclusion as a Supporting Factor for Fintech Effectiveness**

In the visualization generated by VOSviewer, the topic of financial inclusion stands out as one of the important factors in the literature that discusses fintech and SMEs (Cahyawati et al., 2023). Financial inclusion refers to efforts to ensure that all individuals and businesses, especially those previously underserved by the formal financial system, have equal access to a wide range of financial products and services (Seo & Yoo, 2020). The use of fintech in the context of SMEs is closely related to increased financial inclusion, where financial technology provides wider and easier access to services that were previously difficult to reach, such as loans, insurance, and digital payments (Dwijayanti et al., 2022).

Many SMEs fall into the underbanked or even unbanked category, meaning they have limited or no access to traditional financial services such as banking (Pambudianti et al., 2020). Through fintech, these SMEs can obtain more affordable, fast, and practical financial services without having to rely on formal financial institutions such as banks (Erlianta et al., 2021). For example, fintech lending platforms allow SMEs to obtain funding through a peer-to-peer lending

mechanism, where they can apply for loans with a more straightforward process and more flexible terms compared to traditional bank loans (Dwijayanti et al., 2022).

Financial inclusion is one of the important indicators in assessing the effectiveness of fintech because one of the main goals of fintech is to expand financial access for segments of society that the formal financial system has not well served (Erlianta et al., 2021). The more SMEs that are connected to financial services through fintech, the greater the potential for growth and development of these SMEs. Therefore, in this systematic review, financial inclusion should be considered as a key aspect that not only supports fintech adoption but also affects the positive impact that SMEs can feel. With increasing financial inclusion, SMEs can develop their businesses further, increase competitiveness, and gain access to a range of financial resources that are essential for long-term growth.

### **The Role of Financial Management and Financial Behavior**

The topic of SME financial management and financial behavior is an important part of the literature that discusses fintech (Agustina, 2023) (Handayani, 2023). The effectiveness of fintech in supporting SMEs is highly dependent on how this technology affects critical aspects of SME financial management, such as financial planning, financial record-keeping, and cash management (Nugraha et al., 2022). Fintech presents various tools that help SMEs to be more structured and transparent in managing their finances (Winarsih et al., 2020). Through fintech applications, SMEs can record their finances in real-time, monitor cash flow more efficiently, and gain access to more accurate financial data for business decision-making (Chen et al., 2019).

In addition, fintech also offers ease in cash and working capital management, for example, by providing access to digital lending platforms, automatic payments, or faster invoicing solutions (Seo & Yoo, 2020). Thus, this technology helps improve the operational efficiency of SMEs and reduce the administrative burden that is often a bottleneck in traditional financial management (Agustina, 2023).

The effectiveness of fintech depends not only on the availability of technology but also on the financial behavior of SMEs themselves (Prasetyani & Vikaliana, 2020). Financial behavior encompasses how SMEs make decisions regarding spending, debt management, and financial investments (Nasir, 2021). Research highlights that disciplined financial practices significantly impact the optimal utilization of financial technologies. Similarly, studies by Handayani (2023) emphasize that a lack of discipline in cash flow management or indiscretion in loan utilization can hinder the full potential of fintech. Therefore, supportive financial behaviors, such as consistent financial reporting and prudent financial resource management, are crucial factors in ensuring fintech's effectiveness in SME financial management. These findings are consistent with prior research, which indicates that financial literacy and positive financial behavior not only enhance fintech adoption but also contribute to improved business performance and strengthened financial stability for SMEs (Handayani, 2023).

## **CONCLUSION**

Based on the results of the visualization analysis from VOSviewer and discussions related

to the effectiveness of fintech in SME financial management, it can be concluded that fintech plays an important role in improving financial literacy, financial inclusion, and financial management efficiency for SMEs. Financial literacy has proven to be a key factor in making optimal use of fintech services, while expanded financial inclusion through fintech allows SMEs to gain access to formal financial services that were previously difficult to reach.

In addition, fintech lending and fintech platforms help provide faster and more flexible access to capital for SMEs, especially amid challenges such as the pandemic. However, fintech's effectiveness is also highly dependent on financial behavior and SMEs' ability to adopt technology. Thus, fintech adoption requires a comprehensive approach that includes not only the provision of technology but also financial education and increased user trust in technology.

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