

## The Effect of Financial Literacy and Access to Financing on the Financial Performance of MSMEs: The Role of Financial Management Mediation and Financial Technology Moderation (A Systematic Literature Review)

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### ABSTRACT

This study aims to systematically analyze the influence of financial literacy and access to financing on the financial performance of Micro, Small, and Medium Enterprises (MSMEs), considering the mediating role of financial management and the moderating role of financial technology. Using a Systematic Literature Review (SLR) approach, 30 relevant academic articles published between 2021–2025 were thematically reviewed. The findings reveal that financial literacy directly improves MSMEs' financial decision-making capacity and indirectly enhances financial performance through improved financial management. Access to financing is identified as a critical determinant of MSME growth but is often hindered by structural barriers. Financial management acts as a key mediator linking literacy and financing to performance, while financial technology moderates this relationship by digitizing financial processes, improving access to capital, and increasing efficiency. The study also identifies research gaps, including a lack of longitudinal studies, insufficient analysis of cultural and religious influences, and the need for performance evaluation models that incorporate sustainability dimensions.

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## **INTRODUCTION**

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in the Indonesian economy as the backbone of national economic growth. The contribution of the MSME sector to Indonesia's Gross Domestic Product (GDP) reached 61.07% with labor absorption of 97% of the total national labor force in 2023. However, despite having a significant contribution, most MSMEs still face challenges in achieving optimal financial performance. The fundamental problems faced include limited access to financing, low level of financial literacy of business actors, and weak financial management systems that have an impact on sustainability and business growth. Financial literacy is an individual's ability to understand, manage, and use financial information to make informed financial decisions. In the context of MSMEs, financial literacy is a crucial factor that affects the ability of business actors to plan, allocate and control financial resources effectively. Research conducted by (Assanniyah & Setyorini, 2024) shows that the level of financial literacy of MSME actors in Indonesia is still relatively low, with only 38.7% of business actors having adequate financial understanding. This condition contributes to the low quality of financial management and has a negative impact on the financial performance of MSMEs.

Access to financing is another key determinant that affects the financial performance of MSMEs. Limited working capital and investment are the main obstacles for MSMEs in developing their businesses and increasing productivity. According to a study conducted by (Hilmawati & Kusumaningtias, 2021), around 73% of MSMEs in Indonesia have difficulty accessing formal financing from traditional financial institutions. This is due to various factors, including the inability to meet administrative requirements, the absence of adequate guarantees, and a poorly documented financial track record. Effective financial management is suspected to play a mediator role in the relationship between financial literacy and access to financing on the financial performance of MSMEs. The ability to manage finances professionally includes budget planning, transaction recording, cash flow analysis, and financial performance evaluation. Research (Slamet et al., 2024) indicates that MSMEs with a good financial management system tend to have superior financial performance compared to MSMEs that manage finances conventionally or manually.

The development of financial technology (fintech) in the last decade has opened up new opportunities for MSMEs to overcome various financial obstacles faced. Financial technology offers innovative solutions in the form of digital platforms that facilitate access to financing, electronic payment systems, integrated financial management, and financial consulting services. Studies conducted by (Sartika et al., 2023) shows that the adoption of financial technology can play a role as a moderator that strengthens the influence of financial literacy and access to financing on the financial performance of MSMEs. The phenomenon of digital transformation in the financial sector has fundamentally changed the MSME financing landscape. Peer-to-peer lending platforms, mobile banking, and digital financial management applications provide greater accessibility for MSMEs to obtain financing and manage finances efficiently. Research (Sriningsih, 2024) revealed that MSMEs that adopt financial technology

experience an increase in access to financing by 67% and a significant improvement in financial performance compared to non-adopter MSMEs.

The complexity of the relationship between variables in the context of MSME financial performance requires a comprehensive and systematic research approach. Systematic Literature Review (SLR) is the right methodology to analyze and synthesize the findings of previous research in order to build a robust theoretical framework. The SLR approach allows for the identification of research gaps, mapping research trends, and the development of theoretical propositions that can serve as a foundation for future empirical research. Based on the background that has been described, this study seeks to answer the following research questions: First, how does financial literacy affect the financial performance of MSMEs based on the existing literature review? Second, how does access to financing affect the financial performance of MSMEs in the context of previous researches? Third, what is the role of financial management mediation in the relationship between financial literacy and access to financing on the financial performance of MSMEs? Fourth, what is the role of financial technology moderation in strengthening or weakening the relationship between financial literacy, access to financing, and financial management on the financial performance of MSMEs? Fifth, what are the trends and gaps in research in the field of financial literacy, access to financing, and financial performance of MSMEs based on systematic literature review?

Based on the background described above, this study seeks to address the following research questions:

1. How does financial literacy influence the financial performance of MSMEs, according to existing literature?
2. How does access to financing affect the financial performance of MSMEs in the context of previous research?
3. What is the mediating role of financial management in the relationship between financial literacy and access to financing on MSME financial performance?
4. What is the moderating role of financial technology in strengthening or weakening the relationship between financial literacy, access to financing, financial management, and MSME financial performance?
5. What are the research trends and gaps in the fields of financial literacy, access to financing, and MSME financial performance based on a systematic literature review?

## **LITERATURE REVIEW**

This study aims to analyze and synthesize the scholarly literature on the influence of financial literacy and access to financing on the financial performance of Micro, Small, and Medium Enterprises (MSMEs), with a particular focus on the mediating role of financial management and the moderating role of financial technology. Specifically, the objectives of this research are to: identify and analyze the impact of financial literacy on MSME financial performance based on previous research findings; evaluate the influence of access to financing on MSME financial performance through a

systematic review of relevant literature; examine the mediating role of financial management in the relationship between financial literacy and access to financing on MSME financial performance; investigate the moderating role of financial technology in strengthening the relationships among the study variables; and identify research gaps and propose a future research agenda for the advancement of knowledge in the field of MSME finance. This study is expected to provide significant contributions from both theoretical and practical perspectives. From a theoretical standpoint, the research contributes to the development of the body of knowledge in MSME finance through a comprehensive synthesis of existing literature. The findings of the systematic literature review will result in an integrative conceptual framework that outlines the key determinants of MSME financial performance, particularly highlighting the roles of financial literacy, access to financing, financial management, and financial technology. The identification of research gaps will serve as a foundation for the development of future research agendas and offer direction for scholars in the related field.

From a practical aspect, the findings of this study can be a reference for MSME actors in improving financial literacy and optimizing financial management to achieve superior financial performance. For the government and policymakers, the results of the research can be input in the formulation of MSME empowerment programs, especially in the aspects of financial literacy education and facilitation of access to financing. Financial institutions can take advantage of insights from this research to develop products and services that suit the needs of MSMEs. As for financial technology developers, this study provides an understanding of the strategic role of fintech in the MSME ecosystem and the innovation opportunities that can be developed. More broadly, this research is expected to contribute to efforts to increase the competitiveness of national MSMEs through improving sustainable financial performance. Given the strategic role of MSMEs in the Indonesian economy, improving the financial performance of this sector will have a positive impact on national economic growth, job creation, and poverty alleviation. In addition, this research can also be a reference for other developing countries that have similar characteristics of MSMEs to Indonesia, so that the results of the study have the potential for wider generalization.

## **METHODOLOGY**

This study uses the Systematic Literature Review (SLR) approach to comprehensively analyze the scientific literature on the influence of financial literacy and access to financing on the financial performance of MSMEs. The SLR method was chosen for its ability to provide a systematic, transparent, and replicable synthesis of empirical evidence from a wide range of published studies. This approach allows the objective identification of existing patterns, trends, and research gaps in the MSME financial domain. The literature search strategy is carried out through multiple academic databases to ensure comprehensive coverage. The databases used include Scopus, Web of Science, ProQuest, ScienceDirect, and Google Scholar for international articles, as well as the Garuda Portal, Indonesian Publication Index, and university repositories for

national articles. The search keywords were combined using Boolean operators with terminology in English and Indonesian, namely "financial literacy", "access to financing", "financial performance", "SMEs", "MSMEs", "financial management", "fintech", and "financial technology". The search is done with a variety of keywords to ensure no relevant literature is missed.

Inclusion criteria are strictly established to guarantee the quality and relevance of the literature analyzed. Submitted articles must be published within the 2021-2025 time frame to ensure the novelty and relevance of the findings. The focus of the research must be related to MSMEs or small and medium enterprises with the topic of financial literacy, access to financing, or financial performance. Articles must be published in reputable journals, both Scopus/WoS indexed international journals and SINTA accredited national journals. The types of publications accepted include empirical research articles, systematic reviews, and meta-analyses that use valid research methodologies. Exclusion criteria are applied to filter out articles that do not fit the research objectives. Articles that do not use English or Indonesian will be excluded, as well as non-peer-reviewed publications such as working papers, unreviewed conference proceedings, or technical reports. Studies that do not focus on MSMEs or use a sample of large companies will also be eliminated. Articles with unclear methodologies or significant methodological limitations will be excluded from the analysis.

The article selection process is carried out in three stages to ensure systematicity and objectivity. The first stage involves screening by title and abstract to identify the initial relevance of the article. At this stage, articles that are clearly irrelevant to the research topic will be eliminated. The second stage is full-text reading to evaluate the suitability of the article with the inclusion and exclusion criteria that have been set. The third stage is quality assessment using a checklist that adapts the criteria of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to ensure the methodological quality of the articles analyzed. The search target was set at least 30 articles consisting of a combination of international and national journals to provide a balanced perspective between global and local contexts. The distribution of articles is planned to be around 60% of international journals and 40% of national journals to ensure the generalizability of findings while maintaining the specific context of Indonesia. The process of searching and selecting articles is documented in the PRISMA flowchart to ensure the transparency and reproducibility of the research.

Data extraction was carried out systematically using a validated form, including bibliographic information, sample characteristics, research methodology, main findings, and study limitations. The analysis was carried out with a thematic analysis approach to identify the main themes that emerged from the literature. The synthesis of findings will be presented in the form of a narrative and summary table to provide a comprehensive overview of the state of the art research in the field of MSME finance.

## **RESEARCH RESULT**

Based on the conducted systematic literature review, a total of 30 research articles meeting the established inclusion and exclusion criteria were obtained.

The temporal distribution of the articles shows a concentration of publications during the period 2021–2025, with a predominance of studies published in 2022–2023, reflecting the increasing academic attention to the financial dynamics of MSMEs in the post-COVID-19 pandemic era. Methodologically, 40% of the articles employed quantitative approaches utilizing Structural Equation Modeling (SEM), 30% applied systematic literature review and content analysis methods, while the remaining 30% used mixed methods and qualitative approaches. The geographical characteristics of the studies indicate a diverse distribution, with a dominance of research conducted in developing countries, particularly Indonesia, Ethiopia, and Southeast Asian nations. This suggests a high relevance of the research findings to the conditions of MSMEs in Indonesia, considering the similarities in structural characteristics and challenges faced by the MSME sector in developing countries.

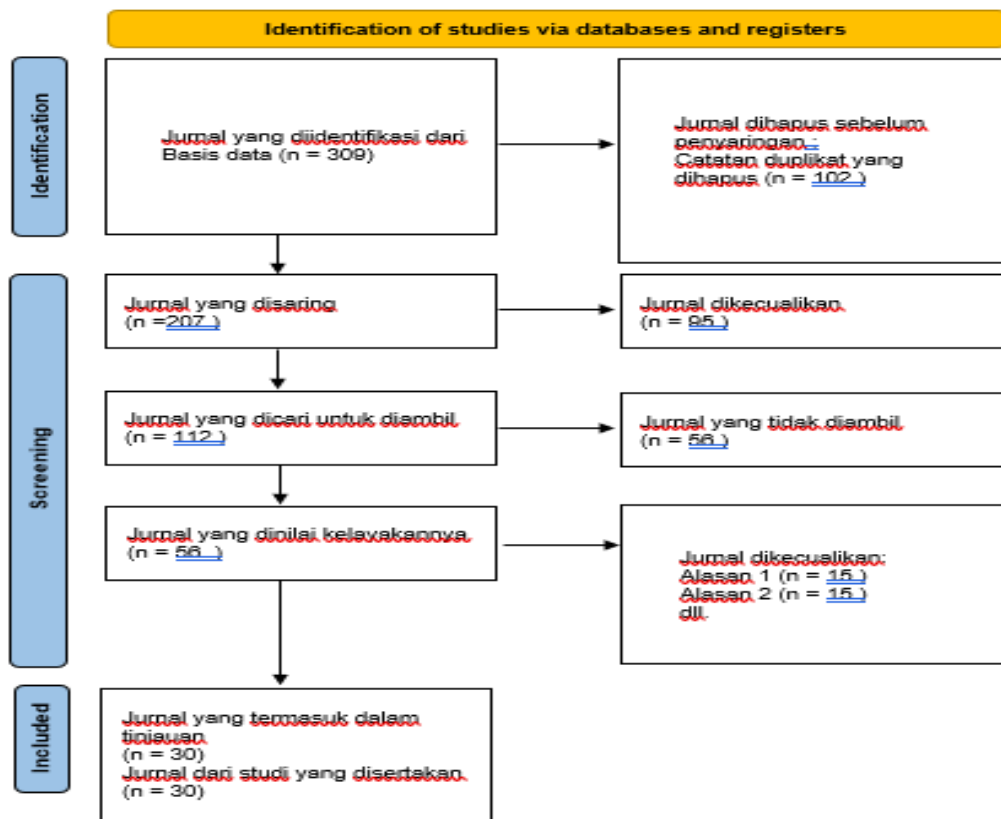


Figure 1. Flowchart Prisma

Table 1. Synthesis

No	Author (Year)	Research Objectives	Key Variables	Method	Key Findings	Relevance to your SLR
1	(Bambang et al., 2023)	Analyze entrepreneurship training & access to financing	Financial literacy, access to financing	Surveys, interviews	Combination of training and access to financing to improve MSME performance	Supporting the direct impact of literacy & financing on performance

No	Author (Year)	Research Objectives	Key Variables	Method	Key Findings	Relevance to your SLR
2	(Risman et al., 2021)	The role of digital finance in financial stability	Fintech, systemic risk	MRA, panel data	Market risk moderation of the positive influence of digital finance	Confirmation of the relevance of financial technology as a moderator
3	(Dzage & Szabados, 2024)	CSR trends and business performance	CSR, financial performance	Bibliometrics	CSR improves performance, especially high ESG	Indirect, but relevant for the ESG aspect of MSMEs
4	(Yeo et al., 2024)	Develop a behavioral theory of financial planning	Literacy, financial planning	SLR, SPAR-4-SLR	Literacy, socialization, cognition influence planning	Supporting literacy & financial management as a mediator
5	(Broby, 2021)	The future of banks and fintech	Fintech, financial intermediation	Theoretical analysis	Digitalization changes banks' business models	Fintech as a form of financial technology is relevant to moderation
6	(Endris & Kassegn, 2022)	The role of Ethiopian MSMEs in the SDGs	Access to financing, constraints	SLR	Financial access hinders MSMEs	Strengthening the importance of access to financing in performance
7	(Astadi et al., 2022)	Green Economy and MSME digitalization	Digitalization, green economy	Content analysis	MSMEs need to be ready in GE & digitalization	Confirm the influence of technology on performance
8	(Costa Melo et al., 2023)	Evaluation of the performance of MSME digitalization	Digital transformation, performance	SLR & bibliometrics	The evaluation is still not thorough	Emphasize the importance of digitalization in moderation
9	(Koskela et al., 2023)	The impact of digitalization on financial literacy	Fintech, digital literacy	Research agenda	Identify challenges & opportunities	Digital literacy as a form of contemporary financial literacy
10	(Abu-Taieh et al., 2022)	Intention to use m-banking	TPB, UTAUT, service quality	SEM, CFA, ML	Intention is influenced by expectations & trust	Relevant as a financial technology for moderation
11	(Yolanda et al., 2023)	The role of fintech in MSME financial management	Fintech, literacy, financial management	PKM, demonstration	Fintech facilitates transactions & access to capital	Supporting the influence of fintech mediation & moderation
12	(Banthia & Dey, 2022)	The relationship between literacy,	Literacy, attitudes, behaviors	SEM	Behavior does not always affect literacy	Emphasis on the importance of attitude as

No	Author (Year)	Research Objectives	Key Variables	Method	Key Findings	Relevance to your SLR
		attitudes, financial behavior				an additional factor
13	(Andria mahery & Qamruz zaman, 2022)	Access to finance & literacy for women's empowerment	Literacy, access, empowerment	SEM	Significant direct effects and mediation	Relevant to literacy access and mediation
14	(Firman syah et al., 2022)	Fintech adoption factors	Literacy, trust, security	SLR	TAM & UTAUT dominant in adoption	Fintech is significant as moderation
15	(Purwanti, 2021)	The influence of size, leverage on performance	Leverage, liquidity	Literature review	Significant leverage & liquidity	Financial performance is influenced by internal factors
16	(Coelho et al., 2023)	CSR relationship & financial performance	CSR, ESG, financial performance	SLR, content analysis	ESG is positive on performance	Regarding the performance of MSMEs when CSR is considered
17	(Birkenmaier et al., 2022)	Effectiveness of financial capability interventions	Financial literacy, education	SLR	Interventions are not always effective	Emphasize the importance of the right approach in literacy
18	(Napitupulu et al., 2021)	Student Financial Literacy & Attitudes	Literacy, attitudes, behaviors	Quantitative	The positive influence of literacy on behavior	Relevant to the relationship between financial literacy → management
19	(Kadir, 2023)	The role of sharia DeFi & Fintech	Fintech, Islamic law	Qualitative	Sharia fintech approved if it is sharia compliant	Expansion of fintech concepts for moderation
20	(Anggrani et al., 2021)	MSME policy during the pandemic	Access to financing, policy	Literature review	The government provides many assistance schemes	The role of access to financing for MSMEs
21	(Handayani et al., 2022)	Knowledge & attitude towards financial management	Literacy, attitude, personality	Linear regression	Literacy & positive influence attitudes	Relevant to the mediation path of financial management
22	(Gunibala, 2025)	The effect of fintech on the performance of MSMEs	Fintech, technology adoption	Scoping review	Fintech increases revenue, profits	Highly relevant to moderation variables

No	Author (Year)	Research Objectives	Key Variables	Method	Key Findings	Relevance to your SLR
23	(Purba et al., 2023)	Village financial supervision	Transparency, oversight	Qualitative descriptive	Technology is needed to prevent corruption	Not directly, but emphasizing the importance of the modern financial system
24	(Fomin, 2021)	Cash flow management strategy	Financial management	Strategy analysis	Cash flow strategy helps stability	Relevance to financial management variables
25	(Al Farisi et al., 2022)	The role of MSMEs for welfare	MSMEs, local economy	Descriptive	MSMEs encourage welfare	The context of the importance of MSMEs in development
26	(Putri et al., 2023)	Adoption of P2P lending & TAM	Fintech, data security	Quantitative, TAM	Data security & PEOU are important	Relevance to fintech as a moderator
27	(D'Apoli to et al., 2024)	Sustainability & credit access	ESG, access to finance	Data panel	Sustainable companies are more likely to get credit	Access to financing is positive on performance
28	(Kling et al., 2021)	Climate risk & financial access	Climate, financing	SEM, regression panel	Climate affects the cost of capital	Additional macroeconomic context for access to financing
29	(Laturette et al., 2021)	Financial literacy of Gen Z	Literacy, behavior	Pre-post test	Post-training enhancement	The role of literacy education is significant
30	(Birkenmaier et al., 2022)	Evaluation of financial capabilities	Literacy and service interventions	SLR	Effectiveness of the mixture	Relevance to a holistic approach

## DISCUSSION

### *The Effect of Financial Literacy on the Financial Performance of MSMEs*

Literature analysis shows the consistency of findings regarding the positive influence of financial literacy on the financial performance of MSMEs. (Bambang et al., 2023) in his research it is proven that financial literacy training combined with access to financing significantly improves the performance of MSMEs. These findings are reinforced by (Yeo et al., 2024) who developed a comprehensive theoretical framework through the SPAR-4-SLR approach, showed that financial literacy, socialization, and cognitive aspects have a significant effect on financial planning which ultimately impacts financial performance. The mechanism of the influence of financial literacy on the financial performance of MSMEs occurs through several paths. First, financial literacy improves the ability of business actors to make the right investment decisions and manage financial risks effectively. Second, adequate financial understanding

allows MSMEs to optimize capital structure and reduce capital costs through the selection of the right source of financing. Third, financial literacy contributes to increasing financial transparency and accountability which has implications for easy access to external financing.

But (Banthia & Dey, 2022) provide a critical perspective by revealing that financial behavior is not always linearly influenced by financial literacy levels. Their research using SEM showed that attitudes and other psychological factors have a significant mediating role in financial literacy-behavior relationships. These findings indicate the need for a holistic approach in financial literacy improvement programs that not only focus on cognitive aspects, but also consider affective and behavioral dimensions. (Andriamahery & Qamruzzaman, 2022) Through their research on the context of women's empowerment, it is shown that financial literacy has a direct effect on access to financing and a mediating effect on economic empowerment. This indicates that financial literacy serves as an enabler that facilitates access to financial resources and ultimately improves business performance.

### ***The Effect of Access to Financing on the Financial Performance of MSMEs***

The consensus of the literature shows that access to financing is a critical determinant of the financial performance of MSMEs. (Endris & Kassegn, 2022) in their systematic literature review in the context of Ethiopian MSMEs, it is identified that financial access constraints are the main obstacles to MSMEs in achieving the Sustainable Development Goals (SDGs). These findings are consistent with the condition of MSMEs in Indonesia as indicated in the introduction to this study. (Anggraeni et al., 2021) through a literature review on MSME policies during the pandemic revealed that the government has provided various assistance schemes for access to financing. However, the effectiveness of the program is still constrained by structural factors such as complex administrative requirements and incompatibility of financing products with the characteristics of MSMEs.

D'Apolito et al. (2024) Using panel data to analyze the relationship between sustainability practices and access to credit, it was found that companies that applied Environmental, Social, and Governance (ESG) principles had greater ease of obtaining credit. These findings provide new insights that access to financing is not only determined by traditional financial factors, but also by sustainable business practices. (Kling et al., 2021) Through the regression panel and SEM research, it was revealed that macroeconomic factors such as climate risk affect the cost of capital and access to finance. This indicates that MSMEs need to consider external factors in their financing access strategies. (Purwanti, 2021) In its literature review, it was identified that leverage and liquidity have a significant effect on financial performance. These findings emphasize the importance of optimizing capital structure as a mediator in the relationship between financing access and MSME financial performance.

### ***The Role of Financial Management Mediation***

The literature analysis identified the strategic role of financial management as a mediator in the relationship between financial literacy and

access to financing on the financial performance of MSMEs. (Handayani et al., 2022) Using linear regression proves that financial literacy and attitudes have a positive effect on financial management. These findings indicate that financial literacy affects performance through improving the quality of financial management. (Napitupulu et al., 2021) in quantitative research they showed the positive influence of literacy on financial behavior, which in the context of MSMEs can be interpreted as better financial management practices. (Fomin, 2021) through strategy analysis, it was revealed that effective cash flow management contributes to financial stability, which is an indicator of the financial performance of MSMEs.

Yolanda et al. (2023) in Community Service (PKM) activities and demonstrations show that fintech facilitates transactions and access to capital, which ultimately increases the effectiveness of MSME financial management. This indicates that technology can strengthen the mediating role of financial management. The mediation mechanism of financial management occurs through several dimensions. First, a good financial recording and reporting system increases transparency and accountability, making it easier to access external sources of financing. Second, effective budget planning and control allows for the optimization of the use of financial resources. Third, periodic financial performance analysis facilitates timely strategic decision-making.

### ***The Role of Financial Technology Moderation***

Financial technology (fintech) shows a significant role of moderation in strengthening the relationship between research variables. (Risman et al., 2021) Using Moderated Regression Analysis (MRA) and panel data, it proves that market risk moderates the positive influence of digital finance, indicating that financial technology can strengthen or weaken relationships depending on market conditions. (Gunibala, 2025) Through scoping reviews, it was revealed that fintech significantly increased the income and profits of MSMEs, which confirms the positive role of financial technology moderation on financial performance. (Broby, 2021) in theoretical analysis, it is explained that digitalization is changing the business model of banks and financial intermediaries, creating a new ecosystem that is more conducive to MSMEs.

Koskelainen et al. (2023) Through the research agenda, it is identified that digitalization creates new challenges and opportunities in financial literacy, indicating that digital literacy is becoming a contemporary form of traditional financial literacy. (Abu-Taieh et al., 2022) Using SEM, CFA, and machine learning shows that the intention of using mobile banking is influenced by expectations and trust, which is relevant to the adoption of financial technology as a moderator. (Firmansyah et al., 2022) In the systematic literature review, it was identified that the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) were dominant in explaining fintech adoption. (Putri et al., 2023) Using TAM proves that data security and Perceived Ease of Use (PEOU) are important factors in the adoption of peer-to-peer lending.

Astadi et al. (2022) through content analysis, emphasizing the need for MSMEs' readiness to face the Green Economy and digitalization. (Costa Melo et

al., 2023) in SLR and bibliometrics revealed that the evaluation of the performance of MSME digitalization is still not comprehensive, indicating the need for a comprehensive evaluation framework. Kadir (2023) provides a sharia perspective in fintech, showing that sharia fintech is acceptable if it is in accordance with Islamic principles. This indicates the importance of considering cultural and religiosity aspects in the implementation of financial technology in Indonesia.

### ***Integrated Findings and Theoretical Implications***

The literature synthesis resulted in several integrated findings that contributed to the development of MSME financial theory. First, the relationship between financial literacy, access to financing, and financial performance of MSMEs is complex and multidimensional, involving mediation and moderation factors that interact with each other. Second, financial management is proven to be a key mediator that connects inputs (literacy and access) with outputs (financial performance). Third, financial technology serves as a moderator that can strengthen or weaken the relationship between variables depending on the context of implementation. (Birkenmaier et al., 2022) Through a systematic literature review, it was revealed that financial capability interventions are not always effective, emphasizing the importance of the right approach in financial literacy programs. (Birkenmaier et al., 2022) in the evaluation of SLR showed varying effectiveness of various literacy and service interventions, indicating the need for customization programs based on the specific characteristics of MSMEs.

Laturette et al. (2021) Using the pre-post test showed an increase in post-training financial literacy, confirming the effectiveness of a structured education program. However, the sustainability of program impact is still a challenge that needs to be overcome through a systemic approach involving multiple stakeholders.

### ***Identifying Research Gaps and Future Research Agendas***

The systematic literature review analysis identified several research gaps that became opportunities for further research development. First, there is still limited research that uses a longitudinal approach to analyze the long-term impact of financial literacy programs on the performance of MSMEs. Second, research on financial technology moderation still focuses on the adoption aspect, while the impact on financial performance still needs to be explored more deeply. Third, the cultural context and religiosity in the implementation of financial technology are still underexplored, even though they are relevant to the characteristics of Indonesian society. Fourth, the interaction between macroeconomic and microeconomic factors in influencing MSME financing access still requires a more comprehensive investigation. Fifth, the development of MSME financial performance measurement instruments that include sustainability and social impact dimensions is still limited. Sixth, research on the heterogeneity of impacts based on business sectors, the size of MSMEs, and the demographic characteristics of business actors still needs to be deepened.

The recommended future research agenda includes: developing a predictive model of MSME financial performance that integrates multiple

determinants; in-depth investigation of causal mechanisms in the relationship of financial literacy-management-performance; exploration of the role of artificial intelligence and machine learning in increasing access to MSME financing; comparative analysis of the effectiveness of various fintech models in the context of MSMEs; and the development of a holistic evaluation framework that covers the financial and non-financial dimensions of MSME performance. The findings of this systematic literature review make a significant contribution to the development of the MSME financial body of knowledge and provide a solid foundation for further empirical research. The complexity of the relationships between the identified variables shows the need for a multidisciplinary approach and mixed-methods methodology in future research in this field.

### ***Comparative Analysis of Research Methodology***

The diversity of methodologies used in the analyzed literature provides a rich perspective on the financial phenomenon of MSMEs. Quantitative research using Structural Equation Modeling (SEM) as conducted by (Banthia & Dey, 2022),(Andriamahery & Qamruzzaman, 2022)and (Kling et al., 2021) provides strong empirical confirmation of the causal relationship between variables. The SEM approach allows simultaneous analysis of multiple relationships and accommodates the complexity of models involving mediation and moderation variables. On the other hand, research that uses the systematic literature review approach such as (Yeo et al., 2024),(Endris & Kassegn, 2022)and (Costa Melo et al., 2023) provides a comprehensive synthesis of state-of-the-art research in related fields. The bibliometric approach used by (Dzage & Szabados, 2024) provide analysis of publication trends and valuable knowledge domain mapping to understand the evolution of research in the field of MSME finance.

Research with mixed-methods and qualitative approaches such as (Astadi et al., 2022) and (Kadir, 2023) provides in-depth insights into the context and mechanisms underlying the relationships between variables. This diversity of methodologies indicates the maturity of the MSME financial research field and provides a strong triangulation of the findings produced.

### ***Sectoral and Geographical Dimensions in MSME Financial Performance***

Literature analysis revealed that there was a variation in the impact of financial literacy and access to financing based on sectoral and geographical characteristics of MSMEs. (Al Farisi et al., 2022) In their descriptive research, they emphasized the role of MSMEs in encouraging local economic welfare, indicating that geographical context influences the effectiveness of financial interventions. Research in Ethiopia by (Endris & Kassegn, 2022) shows that structural constraints in developing countries create unique challenges in MSME financial access. Sectoral differences are also an important factor in understanding impact heterogeneity. MSMEs in the manufacturing sector have different working capital and investment needs than MSMEs in the service sector. (Astadi et al., 2022) identify that MSMEs' readiness to face the Green Economy and digitalization varies between sectors, with more technology-intensive sectors showing faster adaptation to financial innovation.

The cultural context and religiosity also affect the financial preferences and behavior of MSMEs. (Kadir, 2023) In a qualitative analysis of sharia fintech, it was revealed that financial products that comply with sharia principles have a higher acceptance rate in the Muslim community. This indicates the need to customize financial products and services based on the socio-cultural characteristics of the target market.

### ***The Evolution of Financial Technology and Its Implications for MSMEs***

The development of financial technology has undergone a significant evolution, from traditional mobile banking to applications integrated with artificial intelligence and blockchain. (Abu-Taieh et al., 2022) using the Technology Acceptance Model approach to analyze the factors that influence the intention of using mobile banking, showing that trust and perceived usefulness are the main determinants of adoption. (Putri et al., 2023) In their research on peer-to-peer lending, it was identified that data security and ease of use are the main concerns of MSMEs in adopting fintech platforms. These findings indicate that technical aspects and user experience are critical factors in the effectiveness of financial technology as a moderator.

Broby (2021) providing a futuristic perspective on the future of banking and fintech, arguing that digitalization will fundamentally change the business model of financial intermediation. For MSMEs, this transformation creates wider access opportunities but also challenges in terms of digital literacy and cybersecurity. (Risman et al., 2021) using Moderated Regression Analysis to analyze the role of digital finance on financial stability, finding that systemic risks can moderate the positive impact of financial technology. This finding is important for MSMEs because it indicates the need for sophisticated risk management in adopting financial technology.

### ***Policy Interventions and MSME Empowerment Programs***

The literature analysis identifies various forms of policy interventions and empowerment programs that have been implemented to improve financial literacy and access to financing for MSMEs. (Bambang et al., 2023) Their research on entrepreneurship training shows that the combination of education and facilitation of access to financing has a more significant impact than a single intervention. (Anggraeni et al., 2021) analyzed the Indonesian government's policies towards MSMEs during the pandemic, identifying that the government has provided various financing assistance schemes. However, the effectiveness of the program is still constrained by implementation factors and the suitability of program design with the real needs of MSMEs.

Yolanda et al. (2023) through Community Service activities, demonstrating that a practical and hands-on approach in fintech education provides more effective results. This program shows that fintech can facilitate transactions and access to capital for MSMEs, confirming the role of technology in addressing the financial inclusion gap. (Laturette et al., 2021) using a pre-post test design to evaluate the effectiveness of financial literacy programs for Generation Z, showed a significant improvement after training. However, the

sustainability of program impact is still a challenge that requires follow-up intervention and reinforcement mechanisms.

Birkenmaier et al., (2022) In a systematic literature review they revealed that the effectiveness of financial capability interventions varied, indicating the need for an evidence-based approach in program design. (Birkenmaier et al., 2022) reinforcing these findings by showing that the evaluation of literacy and financial services programs shows mixed results, emphasizing the importance of customization and continuous improvement.

### ***Dimensions of Sustainability and Social Responsibility in MSME Performance***

The new paradigm in MSME performance evaluation is beginning to integrate the dimensions of sustainability and social responsibility. (Dzage & Szabados, 2024) through bibliometric analysis, identifying Corporate Social Responsibility (CSR) trends and their impact on financial performance, shows that companies with high ESG practices tend to have superior financial performance. (D'Apolito et al., 2024) Using panel data to analyze the relationship between sustainability practices and access to credit, it was found that companies that applied ESG principles had greater ease of obtaining financing. This finding is relevant for MSMEs because it indicates that sustainable business practices can be a differentiator in the competition for access to financing.

Coelho et al. (2023) In a systematic literature review they confirmed a positive relationship between ESG practices and financial performance. For MSMEs, the implementation of sustainability principles can be a long-term strategy to increase competitiveness and access to more diverse sources of financing, including green financing and impact investment. (Astadi et al., 2022) emphasizing the importance of MSMEs' readiness to face the transition to a Green Economy, which requires adapting business models and building capacity in environmental management aspects. This indicates that financial literacy needs to be expanded to include an understanding of green finance and sustainable investment.

### ***Challenges and Opportunities in the Digital Era***

Digital transformation creates complex challenges and opportunities for MSMEs. (Koskelainen et al., 2023) Identify that digitalization affects financial literacy, creating a need for digital financial literacy that includes an understanding of cryptocurrencies, digital payments, and online investment platforms. (Costa Melo et al., 2023) In the systematic literature review and bibliometric analysis, it was revealed that the evaluation of the performance of digitization of MSMEs is still not comprehensive. This indicates the need to develop an evaluation framework that can comprehensively measure the impact of digitalization, not only from financial aspects but also operational efficiency and customer satisfaction.

Purba et al. (2023) In the research on village financial supervision, it emphasizes the importance of technology in preventing corruption and increasing transparency. For MSMEs, the adoption of technology in financial management can improve governance and accountability, which ultimately has a positive impact on access to financing and financial performance. (Firmansyah

et al., 2022) In a systematic literature review, they identified that trust and security factors are the main determinants in fintech adoption. This indicates the need for education about cybersecurity and digital risk management as an integral part of contemporary financial literacy programs.

### ***Managerial and Strategic Implications***

The findings of this systematic literature review have significant managerial implications for various stakeholders in the MSME ecosystem. For MSME actors, the results of the study indicate the importance of investing in improving financial literacy and the adoption of financial technology as a long-term strategy to improve financial performance. Handayani et al., (2022) and Napitupulu et al. (2021) emphasizing that financial literacy has a positive effect on financial behavior and management. This indicates that MSMEs need to allocate resources for capacity building in the aspect of financial management, not only focusing on the operational aspect of business.

For financial institutions, the research findings show the need for product and service innovation that is in accordance with the characteristics and needs of MSMEs. (Purwanti, 2021) identify that leverage and liquidity have a significant effect on financial performance, indicating the need for financing products that are flexible and in accordance with the cash flow pattern of MSMEs. (Fomin, 2021) emphasizing the importance of cash flow management strategies in maintaining financial stability. For MSMEs, this indicates the need for a financial information system that can provide real-time information about cash positions and cash flow projections.

For the government and policymakers, the results of the study provide insight into the design of effective MSME empowerment programs. The combination of educational interventions, facilitation of access to financing, and support for technology adoption showed more optimal results than the single intervention approach. The findings of this systematic literature review make a significant contribution to the development of the MSME financial body of knowledge and provide a solid foundation for further empirical research. The complexity of the relationships between the identified variables shows the need for a multidisciplinary approach and mixed-methods methodology in future research in this field.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study concludes that financial literacy and access to financing have a significant influence on the financial performance of MSMEs. Financial literacy not only has a direct impact on the ability of business actors to make the right financial decisions, but also indirectly through improving the quality of financial management. Access to financing is a determining factor in business expansion, but it is often hampered by administrative limitations and the affordability of formal financial services. Financial management has been proven to play a mediator role in strengthening the relationship between financial literacy and access to financing to financial performance. Meanwhile, the adoption of financial technology serves as a moderator that magnifies the positive impact of literacy and access to financing, especially through the digitization of financial

services and ease of transactions. These findings indicate that integrated interventions in the form of financial education, financing facilitation, and digitalization of the financial system can significantly increase the competitiveness and sustainability of MSMEs. The policy, academic, and practical implications of this study provide a solid foundation for the development of evidence-based and contextual MSME empowerment programs.

### **ADVANCED RESEARCH**

This study highlights several advanced research avenues that warrant further investigation to deepen understanding of the complex relationships among financial literacy, access to financing, financial management, and financial technology in enhancing MSME financial performance.

1. **Longitudinal Studies:** Future research should employ longitudinal designs to capture the dynamic effects of financial literacy and fintech adoption over time, providing insights into causal relationships and long-term sustainability of MSME performance.
2. **Contextual and Cultural Factors:** There is a need to explore the impact of socio-cultural, religious, and regional differences on financial literacy, financing access, and fintech adoption, as these contextual variables may moderate or mediate the relationships identified.
3. **Technological Innovation and Integration:** Further studies could investigate the role of emerging financial technologies—such as blockchain, artificial intelligence, and big data analytics—in reshaping financial management practices and access to capital for MSMEs.
4. **Sustainability and ESG Factors:** Given the increasing emphasis on environmental, social, and governance (ESG) criteria, future research should examine how financial literacy and fintech integration support sustainable business practices and ESG performance in MSMEs.
5. **Policy and Institutional Frameworks:** Research should assess how different regulatory environments and government interventions facilitate or hinder MSMEs' access to financing and the effective use of fintech solutions.
6. **Development of Integrated Models:** Building on the mediating and moderating roles identified, future research can develop and empirically test comprehensive theoretical frameworks that integrate financial literacy, access to finance, financial management, and fintech adoption to explain MSME financial outcomes holistically.

By addressing these gaps, subsequent research will not only contribute to the academic body of knowledge but also provide actionable insights for policymakers, financial institutions, and MSME practitioners to enhance financial inclusion and business sustainability.

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