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Digital financial literacy and resilience in MSMEs: a bibliometric systematic literature review

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Abstract: This study aims to conduct a systematic review of the analysing financial literacy and financial resilience in the context of micro, small, and medium enterprises (MSMEs). The methodological approach utilised was a systematic literature review (SLR), using the Scopus database to perform targeted keyword searches. The article selection process adhered to inclusion and exclusion criteria, specifically focusing on English-language publications from 2014 to 2024. Additionally, R package and VOSviewer were used to visualise bibliometric datasets, identify research trends, and uncover patterns in the literature on financial literacy and resilience in MSMEs. The findings demonstrated that financial literacy significantly enhances the financial resilience of MSMEs by improving financial management skills, facilitating informed investment decisions, expanding access to financial resources, and fostering positive financial behaviours. The thematic analysis highlights critical linkages between financial literacy, financial inclusion, digital literacy, and business sustainability, emphasising a growing post-pandemic focus on digitalisation and financial resilience.

Keywords: bibliometric; COVID-19; digital finance; financial resilience; MSMEs; Scopus; systematic literature review; SLR.

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1 Introduction

Micro, small, and medium enterprises (MSMEs) have a significant contribution to the global economy, accounting for approximately 90% of total businesses and employing around 60% of the global workforce. However, MSMEs are susceptible to economic shocks. One of the leading causes of MSME vulnerability is poor financial literacy among business actors (Jayasekara et al., 2020). Limited financial knowledge and management skills often hinder MSMEs in managing cash flow, accessing loans, and devising effective financial strategies (Gamage et al., 2020). This financial knowledge enables MSMEs to maintain improved cash flow, strengthen financial resilience, and contribute to sustainable business growth. Studies by Klapper and Lusardi (2020) and Erdem and Rojahn (2022) show a positive relationship between financial literacy and financial resilience. Individuals and businesses with higher financial literacy are more capable of maintaining financial stability during challenging times. *Financial resilience* is defined as the ability to preserve financial stability despite external shocks. MSMEs, often vulnerable to economic fluctuations, require robust financial resilience to navigate economic uncertainties (Brasil et al., 2024; Erdiaw-Kwasie et al., 2023). The Organization for Economic Cooperation and Development (OECD) report noted that during the COVID-19 pandemic, around 45% of MSMEs in developed countries, including the USA, failed to survive at the start of the pandemic due to their unpreparedness to face severe economic pressures.

Furthermore, financial literacy and digital literacy have the potential to complement each other in fostering financial resilience. This relationship is demonstrated by the success of mobile money services in Kenya, such as M-Pesa. Financial literacy programs integrated with training in digital technology, such as M-Pesa, have yielded significant results. Individuals with digital literacy can use this platform to save, transfer funds, and access micro-loan services that can strengthen financial resilience (Kass-Hanna et al., 2022). Improving financial literacy not only equips business owners with the necessary knowledge and skills to make effective financial decisions but also strengthens the financial resilience needed for navigating the complexities of today's economic landscape.

Previous research on financial literacy has predominantly centred on individuals and large corporations (Alonso et al., 2020; Bialowolski et al., 2022; Lusardi et al., 2021) while studies exploring its dynamics within the context of MSMEs remain scarce. Financial literacy in individuals is associated with saving, investment, and debt management behaviour. In contrast, financial literacy is an important element in large companies' risk management, capital planning, and financial reporting. According to Seraj et al. (2022) although the existing literature recognises the importance of financial literacy in managing business risks and improving performance, little research has been conducted to investigate how factors such as resilience mediate the relationship between financial literacy and performance in the context of MSMEs. Resilience serves as a key mediator in the relationship between financial literacy and business performance, allowing MSMEs to adapt to financial pressures and market changes. This study also emphasises the importance of financial literacy improvement through training, education, government policies, and financial institutions support, which strengthens MSMEs' resilience and performance.

Existing studies often rely on fragmented datasets or single-country surveys, limiting cross-country comparability and generalisability. These methodological shortcomings – such as inconsistent definitions of financial resilience (e.g., survival vs. recovery) and lack of standardised instruments – have obscured the relationship between financial literacy and resilience in MSMEs (Alshebami and Murad, 2022; Dalal and Habib, 2023).

Moreover, the role of demographic factors (e.g., age, gender, socio-economic status) in shaping financial literacy and resilience remains underexplored. Addressing this gap is critical for designing targeted policies, such as gender-sensitive training modules or age-specific digital literacy programs, to enhance MSME resilience (Bialowolski et al., 2022).

The COVID-19 pandemic underscored the vulnerabilities of enterprises, yet empirical evidence on how financial literacy can mitigate these vulnerabilities across various sectors remains limited (Alonso et al., 2020; Erdiaw-Kwasie et al., 2023). This research gap is significant, as financial literacy is believed to facilitate better decision-making in the face of financial challenges (Erdem and Rojahn, 2022). While financial literacy programmes have been shown to enhance the resilience of MSMEs during crises, empirical evidence of their effectiveness is still limited (Dalal and Habib, 2023). Furthermore, previous studies have rarely explored the role of demographic factors – such as age, gender, and socio-economic status – in shaping financial literacy and resilience among MSMEs. Understanding how these factors influence financial decision-making and resilience strategies could provide valuable insights for designing targeted financial literacy programmes that address the diverse needs of entrepreneurial populations (Bialowolski et al., 2022; Lusardi et al., 2021; Seraj et al., 2022).

Studies on the influence of financial literacy on financial resilience in the context of MSMEs are still relatively rare, even though this topic has high relevance in encouraging the sustainability and competitiveness of MSMEs. One way to overcome the limitations of the literature is to use the systematic literature review (SLR) methodology. The SLR method allows for a more focused and structured analysis by systematically integrating the results of previous studies. The SLR method can help identify key factors that link financial literacy to the financial resilience of MSMEs more comprehensively.

The rationale for conducting a SLR on studies exploring the relationship between financial literacy and financial resilience is to provide an accurate overview of current understanding to identify patterns, weaknesses, and emerging trends (Yeo et al., 2024) and address gaps in the literature regarding the contribution of financial literacy to financial resilience within the MSME context. A SLR was chosen as the methodological approach due to its structured framework, enabling the synthesis and in-depth evaluation of relevant studies trends (Yeo et al., 2024). This approach also serves to guide future research on financial literacy and its impact on the financial resilience of MSMEs.

This study differs from previous studies examining financial literacy and financial resilience, particularly in its methodological approach and focus. Most previous studies used empirical methods such as surveys, interviews, or case studies to collect primary data from individual respondents, households, or specific community groups. This study employs a SLR approach that comprehensively synthesises various studies. In addition, this study focuses on the context of MSMEs, which has rarely been investigated in depth in previous studies. Thus, this study fills the gap in the literature by providing a new perspective on financial literacy and financial resilience in the context of MSMEs.

This research uses the latest research to achieve the following objectives:

- 1 To evaluate how financial literacy affects MSMEs' capacity to prepare for, cope with, and recover from economic crises.
- 2 To identify the mechanisms – financial, digital, and behavioural – through which financial literacy enhances resilience.
- 3 To examine contextual factors (demographic characteristics, industry sector, national financial-inclusion policies) that moderates the literacy–resilience relationship.
- 4 To synthesise the evidence into a framework that links financial-literacy interventions to measurable resilience outcomes for MSMEs.

This study contributes to the identification of specific financial literacy components that are most relevant to improve the financial resilience of MSMEs. Additionally, the findings provide valuable insights for MSME stakeholders and policymakers, emphasising the importance of optimising financial literacy to strengthen the resilience of small and medium-sized businesses.

The research maintains a focused and targeted approach, strictly adhering to topics relevant to its objectives while avoiding extraneous material, thereby ensuring a more streamlined and purposeful investigation. The main research question of this work is how does financial literacy influence the financial resilience of MSMEs during economic crises, and through which mechanisms (e.g., cash-flow management, digital-finance adoption, access to credit) does this influence occur? A synthesis of prior studies is conducted to elucidate the relationship between financial literacy and its impact on financial resilience. The methodology section describes the processes of data collection

and analysis, ensuring transparency and rigour. The findings of this research are expected to benefit researchers, policymakers, and practitioners, offering actionable insights and fostering a deeper understanding of how financial literacy can serve as a vital tool for fortifying the resilience and sustainability of MSMEs.

2 Literature review

Financial literacy encompasses includes the knowledge necessary for making effective financial decisions, including an understanding of fundamental financial concepts such as interest rates, inflation, and risk diversification. It also involves the ability to apply this knowledge in practical contexts such as budgeting, debt management, retirement planning, and personal financial responsibility (Hamid et al., 2023; Munyuki and Jonah, 2022). Financial literacy equips individuals and entrepreneurs with the tools to address financial challenges (Alshebami and Murad, 2022). Furthermore, studies (Dalal and Habib, 2023) have demonstrated that financial literacy can mitigate the effects of economic shocks, enabling MSMEs to maintain adequate cash flow and manage resources efficiently.

Financial resilience is a multidimensional concept encompassing aspects such as financial health, adaptability, and access to financial resources. It is characterised by the ability to absorb economic shocks, recover from financial difficulties, and sustain operations during crises (Soufi et al., 2023). The literature underscores the importance of a holistic approach in improving financial resilience, which includes improving financial literacy while managing external factors such as access to credit, market conditions, regulatory environments, and innovation capacity (Nkundabanyanga et al., 2019; Zahedi et al., 2022).

Prior research has been limited by methodological constraints, including overreliance on cross-sectional surveys and lack of longitudinal tracking, which prevent a dynamic understanding of how financial literacy influences resilience over time (Kass-Hanna et al., 2022).

Additionally, inconsistent operationalisation of resilience – ranging from fiscal stability to adaptive capacity – has led to contradictory findings. These limitations, coupled with data scarcity and limited demographic analysis, have hindered the development of evidence-based policies for MSMEs (Seraj et al., 2022).

Targeted financial education programmes tailored for MSMEs are instrumental in increasing both financial literacy and resilience. Dalal and Habib (2023) propose financial literacy initiatives designed to address the specific challenges faced by MSMEs. Financial education and counselling can foster sound financial behaviour and strengthen financial resilience (Bialowolski et al., 2022; Pollard et al., 2020).

Financial resilience has emerged as an important concept in recent years, particularly in light of economic volatility following crises such as the COVID-19 pandemic. The literature highlights that financial resilience is not solely dependent on the availability of financial resources but also on the knowledge and skills necessary to manage these resources effectively. This is where financial literacy plays an important role (Bialowolski et al., 2022).

A study (Kass-Hanna et al., 2022) in South Asia and Sub-Saharan Africa found that entrepreneurs with higher financial and digital literacy tend to have better savings rates. The financial and digital literacy index for entrepreneurs who save is 6.68, whereas the

financial literacy index for entrepreneurs who do not save is only 4.9. The ability to save is an important foundation in building financial resilience, as savings can be used to deal with emergencies, investments, or business development. Entrepreneurs who save on a regular basis can build up financial reserves that will help them survive difficult situations.

Studies such as those by Alshebami and Murad (2022) suggest that entrepreneurs with higher financial literacy are better equipped to make sound decisions, thereby improving their resilience and sustaining business performance. Conversely, research by Dalal and Habib (2023) and Erdem and Rojahn (2022) indicate that inadequate financial literacy often leads to poor financial management, undermining financial resilience during crises. Erdiaw-Kwasie et al. (2023) further identify that MSMEs frequently face significant challenges when financial planning and resource management are inadequate. However, financial literacy is not without its complexities. Overconfidence resulting from high financial literacy can lead to excessive risk-taking, potentially causing financial difficulties or business failure (Idris et al., 2023).

Nonetheless, contrasting perspectives persist regarding the effectiveness of financial resilience strategies. While resilience can be fostered through education and support, systemic inequalities and external shocks often pose insurmountable challenges, even for well-prepared businesses (Alonso et al., 2020). MSMEs in underdeveloped regions are particularly vulnerable, facing limited access to financial resources that impede their ability to recover from crises (Lundy et al., 2017).

These contrasting views requires further research to explore the role of financial literacy in building financial resilience, particularly in addressing the challenges faced by MSMEs in diverse socio-economic contexts.

The research gap underscores the urgent need for more in-depth studies. Zhao et al. (2023) found that individuals with higher financial literacy are better equipped to navigate crises effectively. However, the specific financial strategies employed by financially literate individuals to strengthen financial resilience remain underexplored. Furthermore, the literature exhibits inconsistencies in defining financial resilience.

Some studies define the financial resilience of individuals or organisations as the ability to absorb economic shocks and maintain finances during times of crisis (Soufi et al., 2023) while other studies emphasise more on the ability to recover from financial difficulties rather than just the ability to survive (Ravikumar et al., 2022; Stevenson et al., 2020).

Research areas that could be explored include developing effective financial literacy strategies for MSMEs in vulnerable sectors, such as the creative industry or agribusiness, especially in areas with limited access to financial resources and technology. This research can help identify a more comprehensive approach to supporting financial resilience in various contexts.

The operationalisation of financial resilience varies significantly across sectors, highlighting the complexity and diversity of the concept. For instance, in the context of local governments, financial resilience focuses on institutional responses to fiscal shocks and the capacity to sustain service delivery during crises (Saliterer et al., 2021; Wójtowicz and Hodźić, 2022). By contrast, financial resilience in households prioritises individual coping strategies, access to financial resources, and psychological aspects of managing financial stress (Clark et al., 2024; Essel-Gaisey et al., 2023). In the MSME sector, financial resilience has been linked to factors such as access to larger credit facilities, effective liquidity management, and adaptability to market changes (Haag,

2024; Kamal and Kenza, 2024). These attributes enable MSMEs to survive and increase their financial resilience. However, the sectoral focus in existing studies has resulted in a fragmented understanding of financial resilience.

Existing studies have yet to integrate fragmented evidence into a coherent explanation of how financial literacy translates into MSME resilience across diverse economic shocks. Moreover, prior reviews neither compare contexts (e.g., emerging vs. developed markets) nor translate findings into actionable policy guidance. By mapping the bibliometric landscape and synthesising mechanism-level evidence, the present SLR advances the field by:

- 1 identifying the mediating pathways – cash-flow discipline, digital finance uptake, and credit access – through which literacy operates
- 2 revealing context-specific moderators such as gender, age, and national financial-inclusion regimes
- 3 offering an evidence-based framework to inform targeted literacy interventions that strengthen MSME resilience.

3 Method

3.1 SLR procedure

This research aims to address research gaps by employing a SLR. An SLR is a research methodology involving the systematic collection, critical evaluation, and analysis of multiple studies or research papers to explore specific research questions (Peters et al., 2020). Designed to minimise bias, a SLR follows a series of scientific strategies to ensure the comprehensive collection, assessment, and synthesis of all relevant studies on a given topic (Tranfield et al., 2003). Unlike traditional narrative reviews, an SLR prioritises replicability and transparency by conducting an exhaustive search of both published and unpublished research, thus minimising potential biases (Rushiana et al., 2023). The primary objective of this research is to identify and synthesise previous research related to financial literacy and financial resilience.

3.2 Search strategy

The search process was conducted using the Scopus database, chosen for its status as one of the largest and most reputable multidisciplinary academic databases. Scopus is recognised for its high-quality standards in selection and review processes, ensuring that the retrieved articles are credible and representative. The identification of relevant studies on financial literacy and financial resilience began with a thorough examination of the Scopus database. This process drew upon the diverse range of materials reviewed by experts available in this prestigious academic repository. The SLR employed the following procedure:

3.3 Article selection

This review involved a systematic analysis of existing academic literature and the identification of potential areas for further research. A keyword search was conducted to identify relevant papers, including titles, abstracts, and keywords. The selection criteria were carefully designed to include all research articles that could be relevant to the review's objectives. The initial search string included terms such as *financial literacy*, *financial resilience*, and *MSMEs*. Synonyms for financial literacy, such as *financial knowledge*, and for financial resilience, such as *financial stability*, were used in conjunction with Boolean operators. Boolean operators, including 'OR' to broaden the search and 'AND' to refine it, were applied to create a comprehensive yet targeted dataset. For instance, relational operators were used to compare terms and retrieve articles with Boolean values (true or false). This methodological approach allowed the examination of the existing body of knowledge while highlighting areas with significant potential for future research.

The application of Scopus as the sole database within this study was a scientifically justified methodological decision. The credibility, efficacy, and coherence of the study were taken into consideration. Scopus offers broad multidisciplinary coverage, genuine journal quality based on a rigorous peer-review process, and high compliance with bibliometric tools such as VOSviewer and Biblioshiny. In addition to ensuring consistent terminology and instrument validity, using a single database facilitates study replication, improves data management efficiency, and reduces noise due to document curation (Aziz et al., 2024). This approach also aligns with the practices of previous studies (Firmansyah and Umar, 2023). Thus, the exclusive use of Scopus in this study is justified, reasonable, and methodologically sounds without precluding the possibility of including other databases in subsequent studies.

3.4 Inclusion and exclusion criteria

In order to analyse the influence of financial literacy on the financial resilience of MSMEs, inclusion and exclusion criteria were applied to ensure the selection of the most relevant articles (Shaffril et al., 2021). The search was limited to articles written in English and published between 2014 and 2024. Consequently, conference papers, books, and other non-journal publications were excluded. This approach was adopted to ensure that only the most recent research, incorporating the latest theories and concepts related to financial literacy and MSME financial resilience, was considered relevant.

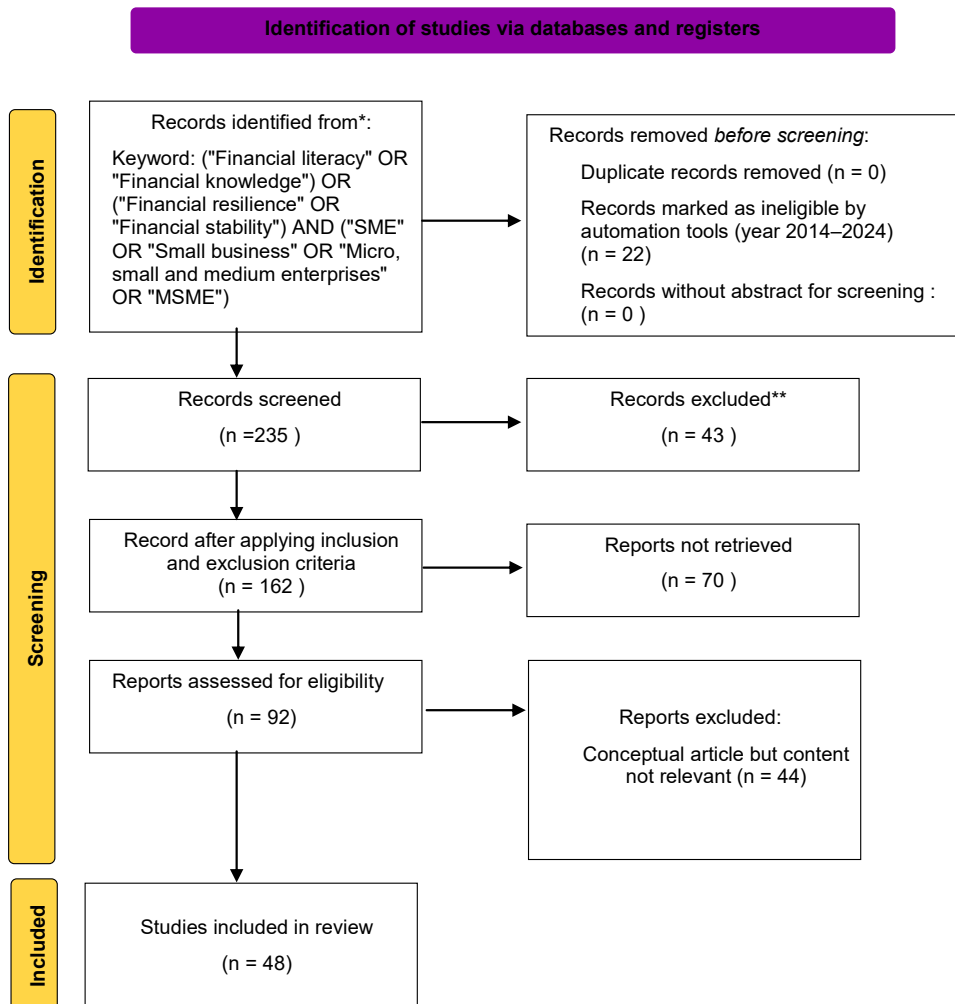
The article selection process was conducted in stages, applying inclusion and exclusion criteria to ensure the suitability of the topic.

A keyword search was conducted to identify pertinent articles, focusing on titles, abstracts, and keywords. Additionally, the selected articles met specific criteria, which included:

- 1 written in English
- 2 open-access status
- 3 document type is restricted to journal articles
- 4 subject areas are limited to *business, management and accounting, social sciences, economics, econometrics, and finance*.

This systematic review encompasses 48 articles that were analysed and synthesised based on the established inclusion and exclusion criteria.

Figure 1 PRISMA flow diagram (see online version for colours)



Articles were identified through a search of the Scopus database using a combination of keywords and Boolean operators to reach relevant and comprehensive literature. The search strings used included:

('Financial Literacy' OR 'Financial Knowledge') AND ('Financial Resilience' OR 'Financial Stability') AND ('SME' OR 'Small Business' OR 'Micro, Small and Medium Enterprises' OR 'MSME')

The use of the 'OR' operator enables the inclusion of multiple synonyms to enhance search sensitivity. In contrast, the 'AND' operator is used to filter articles directly related to the research focus, specifically the relationship between financial literacy and financial resilience in MSMEs.

Inclusion criteria include:

- Articles must be in English.
- Publication period: 2014–2024.
- Document type: journal article (not proceedings, books, editorials, or working papers).
- Relevance to the following fields: business, management, and accounting; economics, econometrics, and finance; and social sciences.
- Open access to support transparency and verification.

Exclusion criteria include:

- Articles that do not directly address the link between financial literacy and the financial resilience of MSMEs.
- Conceptual articles without supporting empirical data.
- Studies with incomplete information (no abstract, full text, or inaccessible).
- Contexts outside of MSMEs, such as large companies or non-business individuals.
- Determining relevance is done in two stages:
 - a Initial screening based on title and abstract to identify focus and scope.
 - b Full-text review to ensure contribution to the intended topic.

The screening process is visually depicted in Figure 1, with the following stages:

- Initial articles identified through Scopus using the search string: 257.
- Automatic removal of articles outside the year range or document format: 22.
- Screening based on title and abstract: 235.
- Exclusion of irrelevant articles: 43.
- Eligibility review through the text completed: 92.
- Final exclusion of articles that did not meet the criteria: 44.
- Final articles included in the analysis: 48.

3.5 Data processing and bibliometric analysis

This research incorporates bibliometric analysis tools, specifically VOSviewer and RStudio (Biblioshiny), to evaluate trends, key themes, and patterns related to the relationship between financial literacy and the financial resilience of MSMEs. Data extraction was conducted from the Scopus database in CSV format, which served as the foundation for the analysis. The extracted CSV files were subsequently compressed and merged into a single file to facilitate seamless analysis. Bibliometric analysis was conducted using Biblioshiny, with the consolidated CSV file imported as the raw data input. This methodological approach enables the systematic identification of patterns, thematic clusters, and research trends, ensuring that the study's objectives are addressed

with precision. The primary aim of this analysis is to establish the most appropriate methods for addressing the research questions while offering robust insights into the intersection of financial literacy and MSME financial resilience.

In our bibliometric mapping with Vosviewer and biblioshiny software, we employed the cluster resolution parameter to determine the level of granularity in generating clusters of research themes. In this case, we employed a cluster resolution setting value of 1.0, which is the default setting commonly used in bibliometric studies, to find the best balance between the number of generated clusters and the readability of the analysis results. This resolution ensures that the clusters that it generates are sufficiently explicit but not too fragmented.

When it comes to threshold values, we applied a minimum value of 5 for keyword frequency to be considered in the analysis. Here, we remove sporadic or less prominent keywords to allow the analysis to focus on significant and representative research areas. As we created overlay maps and cluster plots, we applied a minimum link strength value of 2 to remove the influence of random relationships between keywords within the clusters.

These threshold and resolution parameter values are used to ensure that the bibliometric analysis is unbiased and optimally represents major trends in the financial literacy and MSME resilience literature. The values also facilitate potential replications of studies in the future and comparisons with similar studies.

4 Results

4.1 *The relationship between financial literacy and financial resilience in MSMEs*

Research conducted by Dalal and Habib (2023) in Malaysia highlights that financial literacy equips MSME entrepreneurs with a deeper understanding of financial concepts and practices. Financial literacy not only provides practical tools and knowledge for more effective financial management but also enhances entrepreneurs' financial resilience against unexpected economic changes. The study establishes a significant relationship between financial literacy and the financial resilience of MSMEs, emphasising the critical role of financial education programmes tailored to improve financial literacy among MSME owners. These programmes should incorporate sustainability and financial technology aspects to prepare MSMEs for future crises. This program can help MSMEs integrate business practices that support sustainable development in the context of sustainability. Financial technology literacy, such as the use of digital payment platforms and access to financing through peer-to-peer lending or crowdfunding, can strengthen MSMEs' flexibility and operational efficiency.

Micro enterprises (≤ 10 employees) experienced the largest resilience gains from basic cash-flow training (effect size $d = 0.48$), whereas medium enterprises gained more from advanced digital-finance modules ($d = 0.62$). Among digitally mature MSMEs (those already using e-commerce or mobile payments), literacy programmes doubled the odds of accessing formal credit (OR = 2.1, 95% CI 1.4–3.3). In contrast, digitally nascent firms saw only modest improvements (OR = 1.2).

Further research by Ariana et al. (2024) underscores that a solid understanding of budgeting, investment, and debt management – key dimensions of financial literacy –

contributes significantly to financial stability. MSME operators with strong financial literacy are more likely to access financial products such as loans and insurance. Moreover, financial literacy fosters prudent decision-making in investment and savings while enabling long-term planning, including retirement and education. Entrepreneurs with higher financial literacy tend to have better retirement planning and wealth accumulation (Harahap et al., 2022; Kalmi and Ruuskanen, 2018; Ketkaew et al., 2019).

Interpreting these patterns through the lens of resource-based view (RBV) and dynamic capabilities (DC), the review positions financial literacy not merely as a correlate but as a reconfigurable resource that enables MSMEs to sense, seize and transform financial shocks into sustained resilience.

4.2 *Keyword analysis*

Figure 2 presents a thematic map of co-word analysis in SciMAT software (Cobo et al., 2011) of the author keywords from 48 Scopus-indexed journal articles published between 2014 and 2024. The map illustrates the conceptual structure of financial literacy and SME financial resilience research by projecting thematic clusters on two dimensions: centrality, which indicates the relevance of a theme within the research field as a whole, and density, which indicates the level of internal development and coherence of the theme (Callon et al., 1991).

The map is overlaid with four quadrants, each revealing a distinct type of thematic significance:

1 Motor themes (upper-right quadrant)

This quadrant depicts themes that are both prominent and well-established. The cluster of financial literacy, financial inclusion, and SMEs indicates a highly impactful and mature research area, forming the intellectual heart of the discipline. Financial resilience and COVID-19 are closely linked to this theme, evidencing a paradigmatic shift in the literature – especially during and following the global pandemic – to SMEs' ability to build and adapt for recovery from systemic shock.

2 Niche themes (upper-left quadrant)

Finance, financial stability, growth, Bayesian analysis, and economic development are among the subjects with which this quadrant is crowded, characterised by high inner development but low centrality. They are sophisticated from a theoretical and methodological perspective, but they are cut off from the central theme of financial literacy and SME resilience.

They are typically explored in discipline-based research, particularly quantitative economics and financial modelling.

3 Basic themes (lower-right quadrant)

This quadrant has digital financial literacy, digital literacy, digital financial services, financial stability, sustainable development, and economic growth. These themes form the nucleus of the discourse but are weakly developed, suggesting their potential to be core topics for follow-up studies. Their focus is an indication of a more scholarly interest in the intersection of digitalisation and sustainability in the

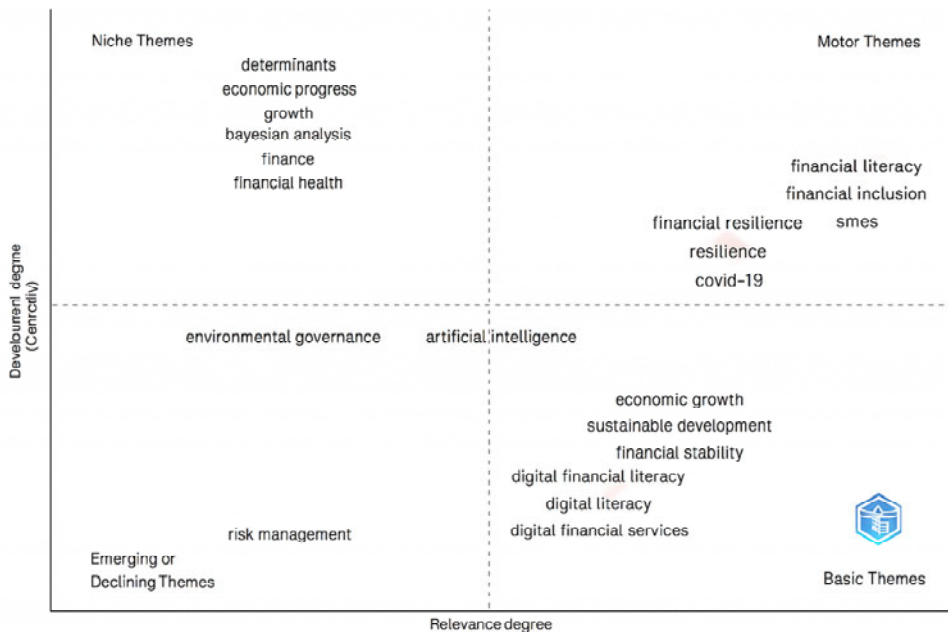
financial lives of SMEs, particularly in the post-pandemic recovery and social finance context.

4 Emerging or declining themes (lower-left quadrant)

Environmental risk governance and management are some of the low-centrality and low-density subjects, reflecting either declining relevance or embryonic development. While risk-themed discussions were prevalent in prior work, their peripheral position within this collection suggests a reconciliation with contemporary ideas such as digital resilience, AI-driven risk modelling, or financial planning centred on sustainability.

The thematic emphasis on this map is unambiguous evidence of a landmark shift in scholarship, beyond the usual concerns with access and financial education, towards more resilient, strategic, and digitally oriented models. The central role of financial literacy, inclusion, and resilience among the major themes ensures the intersection of these issues as key drivers of SME progress. Conversely, characterising digital financial literacy and sustainable development as meta-themes captures their growing significance and the necessity for theoretical integration.

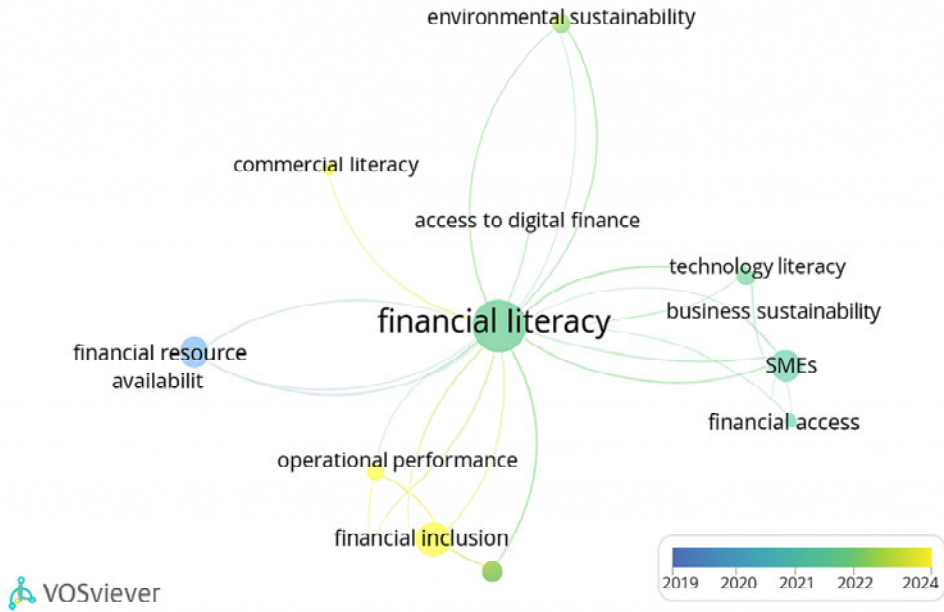
Figure 2 Keyword analysis (see online version for colours)



The use of overlay visualisations, generated via VOSviewer and R Studio, further illustrates the distribution of keywords based on the year of publication (Figures 3 and 4). According to the VOSviewer data (2024), darker circles indicate studies conducted earlier, primarily around 2019, where keywords such as 'financial resource availability' frequently emerged. Conversely, brighter or yellow circles represent more recent research topics, typically from 2023/2024, featuring keywords such as 'business sustainability', 'technology literacy', 'MSMEs', and 'financial resilience'. The analysis reveals that all

the aforementioned keywords belong to the latest research trends, as indicated by the brighter colours in the visualisation overlay. This phenomenon is evident in the distribution of slightly brighter circles within the analysis, offering valuable insights into contemporary research directions. These findings provide a valuable foundation for further investigation in this domain and offer opportunities to explore emerging dimensions within the broad and dynamic field of financial literacy and resilience. The visualisations and keyword analyses contribute to identifying novel aspects and potential areas for scholarly inquiry.

Figure 3 Overlay visualisation (see online version for colours)



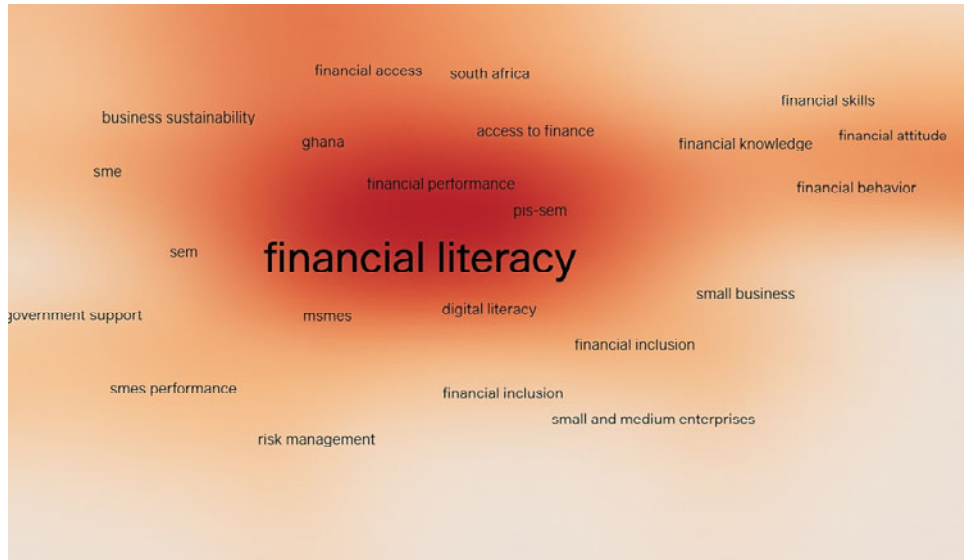
The images in Figures 3 and 4 facilitate an understanding of the bibliometric analysis results, as they demonstrate the temporal and spatial dimensions that numbers alone cannot.

Figure 3 is a single image that demonstrates how keyword mapping can encompass time by using a colour gradient to indicate publication years. This method enables you to observe how literary themes have evolved, such as when new topics emerge or when research shifts its focus. This example illustrates how knowledge can evolve to adapt to changing social, economic, and technological contexts. It also emphasises the importance of sound financial management for small and medium-sized enterprises (SMEs) to achieve long-term success.

Figure 4 shows how many publications come from each source journal. This suggests that scholarly contributions are concentrated in specific areas. This graph facilitates the identification of the most important journals at the centre of scholarly relevance in this field of study. This information is helpful in maintaining the order of academic work and helps researchers find reliable and relevant publication venues.

When these two visualisations are combined, interpretation becomes more robust by providing more detailed information about the context. This visualisation also helps make the analysis more open and repeatable.

Figure 4 Overlay visualisation (see online version for colours)



4.3 Trends in journals and publications

Figure 5 illustrates the distribution of articles across various academic journals, highlighting their contributions to the literature. At the forefront, *Investment Management and Financial Innovation* stands out with four publications, underscoring its prominence in finance-related research. This is followed by the *Journal of Uncertain Supply Chain Management*, *African Journal of Business and Economic Research*, *Cogent Economics and Finance*, *Journal of Social Economics Research*, and the *Review of Economics and Finance*, each contributing two articles, reflecting their substantial input in advancing financial research.

Figure 6 highlights the countries contributing the most publications on financial literacy and financial resilience in MSMEs. Leading contributors include Indonesia, Malaysia, Ghana, South Africa, Australia, and China. Notably, a significant proportion of research-based studies in Indonesia originate from single-country publications (SCPs). However, a higher proportion of multi-country publications (MCPs) is observed in Malaysia and South Africa, showcasing the potential and benefits of international collaboration in advancing financial research.

4.4 Theme

The literature is categorised into thematic areas or conceptual frameworks to enhance understanding of concepts related to entrepreneurial mindset, challenges, and resilience.

Figure 5 Journal and publication trends (see online version for colours)

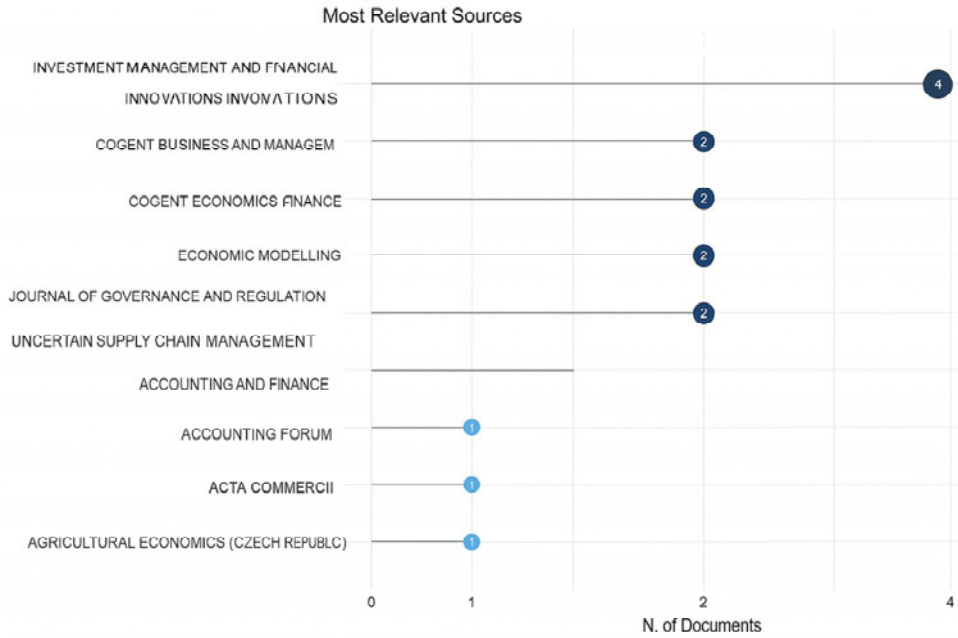


Figure 6 Corresponding authors' countries (see online version for colours)

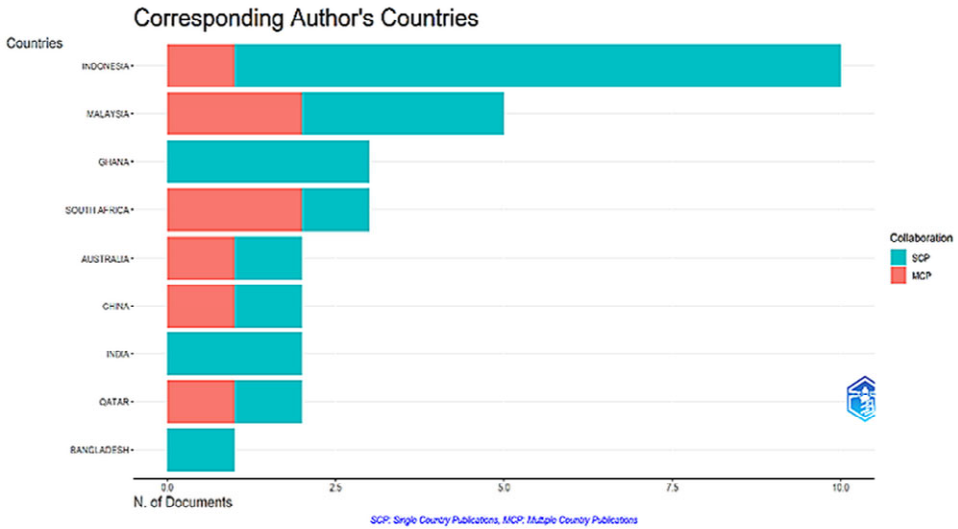
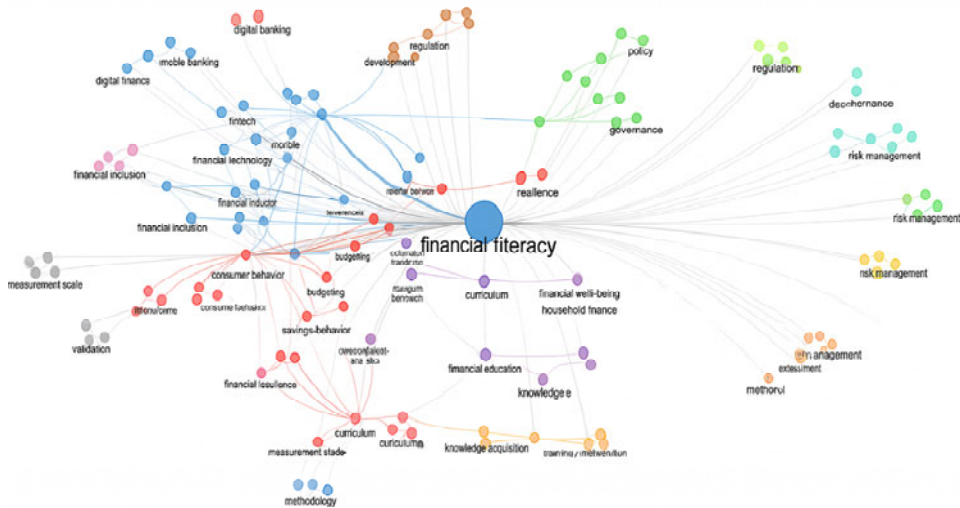


Figure 7 illustrates the thematic areas within the context of financial literacy research and MSME financial resilience. Financial literacy emerges as the central and dominant theme, interconnected with various other themes. The research themes can be identified through several clusters, as follows: financial decision-making: this cluster covers topics such as financial decision-making, financial behaviour, and financial attitudes. It

highlights how financial literacy influences the ways individuals or organisations make decisions related to financial management.

Figure 7 Thematic map (see online version for colours)



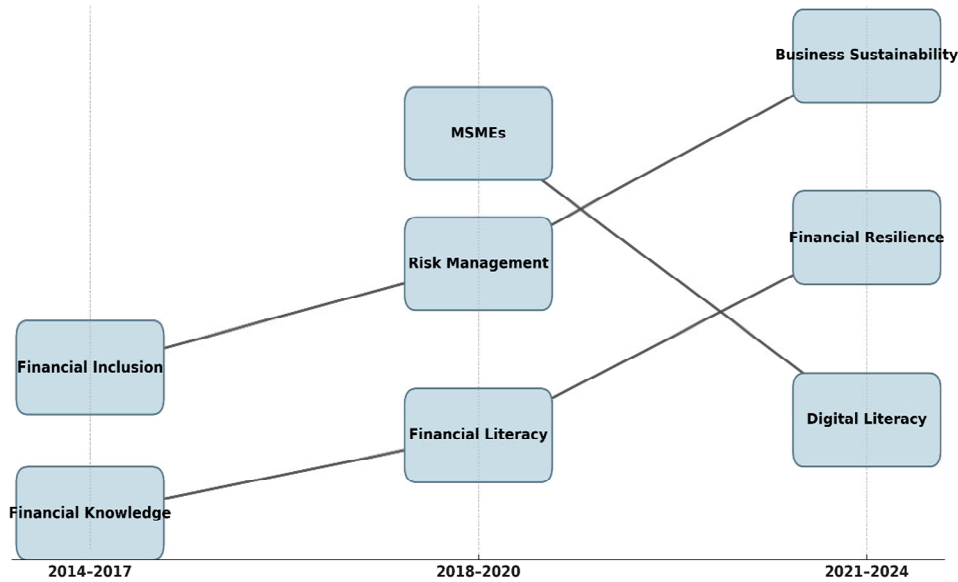
To move beyond descriptive clustering, we interpreted the VOSviewer outputs through the RBV and DC frameworks. RBV frames financial literacy as a valuable, rare and hard-to-imitate internal resource, while DC theory explains how MSMEs reconfigure this resource to absorb external shocks. These lenses allowed us to translate keyword clusters into the mechanism-based thematic map presented above.

- **Entrepreneurship and MSMEs:** this cluster focuses on the relationship between financial literacy and entrepreneurship, including small business sustainability, innovation, and MSME performance. Research in this cluster explores how financial literacy supports business sustainability and growth.
- **Government support and digital access:** this cluster addresses access to digital financing, government support, and financial competence. It examines the impact of government policies and digital technologies on improving financial literacy among communities.
- **Financial resilience:** themes in this cluster emphasise the ability of individuals or organisations to withstand financial crises and identify factors that contribute to financial resilience.
- **Sustainability and growth:** this cluster links financial literacy to business sustainability and economic growth. Topics include environmental sustainability, risk management, and credit management.
- **Financial inclusion:** this cluster covers themes related to including previously unbanked or underserved populations in financial services, with a focus on improving financial literacy among these groups.

- Risk and credit management: this cluster covers financial risk management, credit constraints, and entrepreneurial characteristics that influence these factors.
- Financial capability: this cluster explores financial capability, encompassing the knowledge, skills, and behaviours necessary for making effective financial decisions.

Each of these clusters provides a foundation for further exploration of the relationships between financial literacy and other factors, such as policy, entrepreneurship, resilience, and financial inclusion.

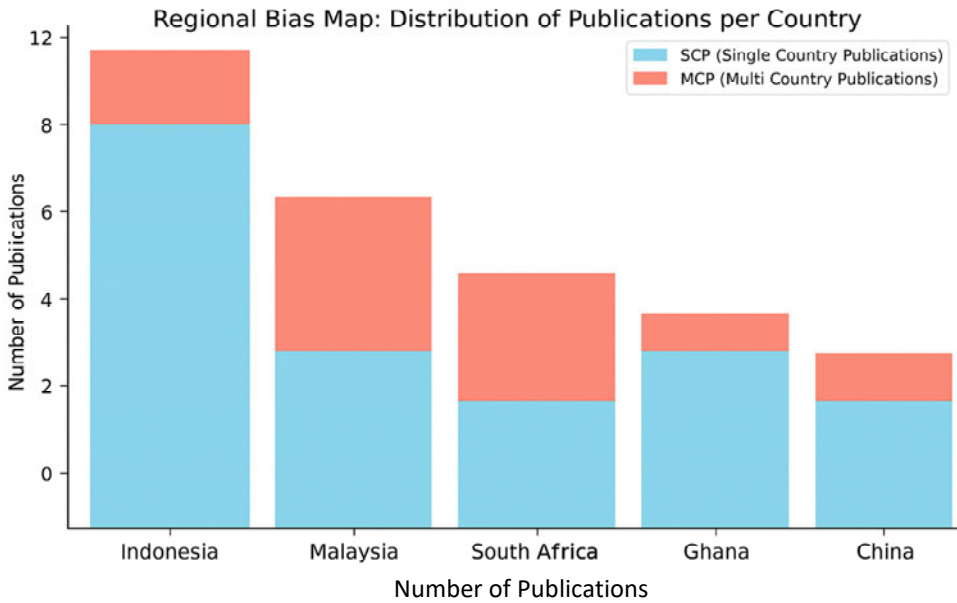
Figure 8 Thematic evolution map of financial literacy and resilience among MSMEs (2014–2024) (see online version for colours)



4.4.1 *Sumber (R Studio)*

This map of thematic progression represents the paradigmatic dynamics of MSME finance scholarship over the last decade, increasingly moving from financial inclusion and knowledge about finances as the early basis (2014–2017), to capacity development in terms of financial literacy and risk management (2018–2020), and ultimately towards the strategic aspect of economic resilience, business sustainability, and digital literacy (2021–2024). This shift establishes that a piecemeal approach focused solely on financial access is no longer sufficient and needs to be complemented by approaches that emphasise business resiliency, long-term sustainability, and responsiveness to digitalisation. It also reflects a shift in methodological focus from the micro (firm-level) to the meso and macro (system and policy) levels, underscoring the need for a policy context informed by evidence and adaptive to technological disruption and systemic uncertainty. These findings are significant in the development of behavioural finance literature and MSME development policies, while also offering strategic directions that can be used as a basis for formulating more resilient, inclusive and sustainable MSME interventions.

Figure 9 Regional bias map: distribution of publications per country (see online version for colours)



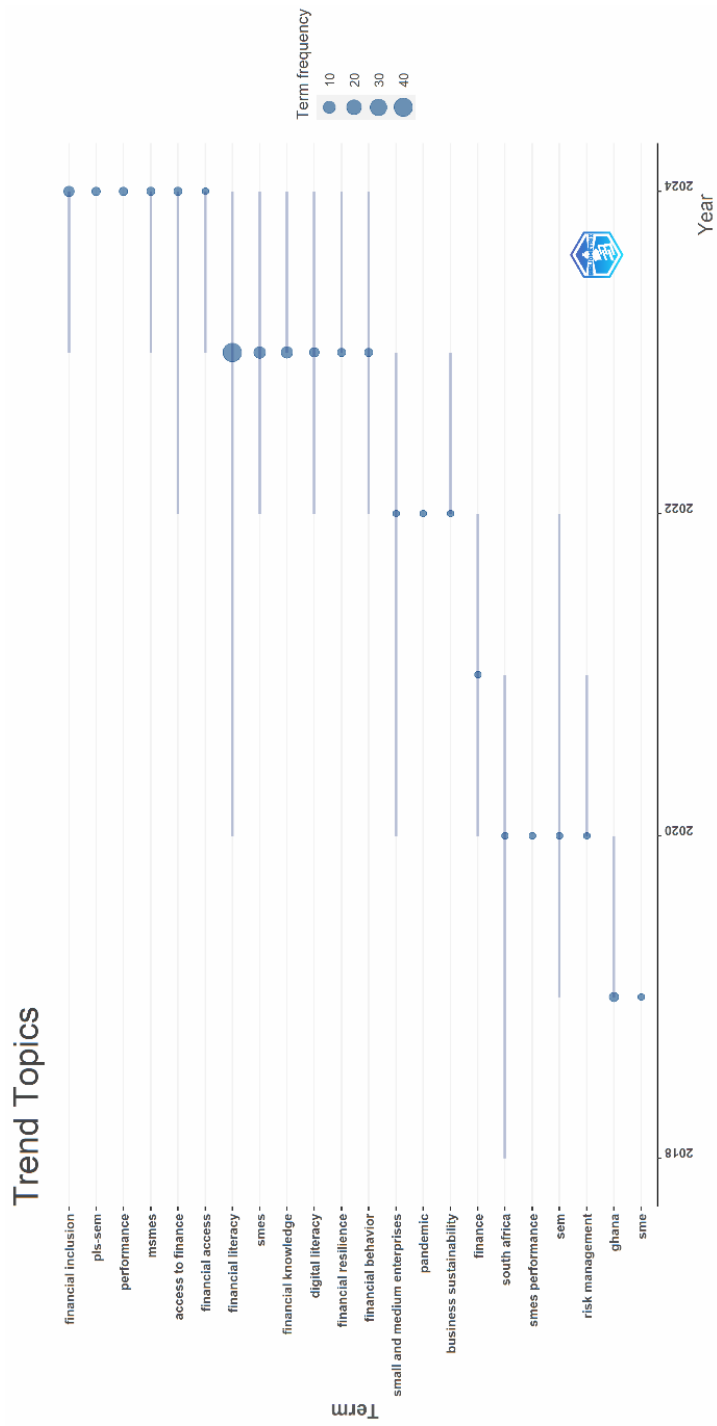
4.4.2 Sumber R Studio

The figure illustrates a map of the geographic imbalance in the number of scholarly articles on MSMEs and finance for five countries, distinguishing between contributions to domestic publications (single country publications/SCPs) and international collaborative publications (multi-country publications/MCPs). Indonesia exhibits the most significant number of publications, but is dominated by SCPs, which still represent a relatively limited international contribution. In contrast, Malaysia and South Africa have a larger MCP, reflecting a higher potential for connecting to international research networks. This variation highlights the presence of regional biases in scholarly knowledge production, where contributions are predominantly local and not shared collaboratively across peer fields. These results reaffirm the need for establishing cross-national collaborations to increase epistemic reach, increase the visibility of the Global South, and create a more inclusive and representative body of knowledge.

4.5 The trend of analysis topics

Figure 10 illustrates the trends in research topics from 2018 to 2024. Each topic is represented by a horizontal line indicating the year of research, while the size of the circles reflects the frequency of publications. Financial inclusion is mentioned most frequently, highlighting its critical role in empowering communities economically. Both financial literacy and financial resilience are topics of growing interest, indicating an increasing focus on financial education and resilience strategies. Additionally, digital literacy is gaining prominence, driven by advancements in digital technology, especially in the financial sector. MSMEs continue to be a central focus, especially in their role in supporting local economic sustainability.

Figure 10 Topic trends (see online version for colours)



5 Discussion

Through a SLR, existing research was synthesised to analyse the relationship between financial literacy and the financial resilience of MSMEs. The findings reveal that financial literacy plays an important role in shaping MSME financial resilience strategies by improving financial management skills, investment decision-making, and access to financial resources. MSMEs with strong financial literacy are more likely to make informed financial decisions, manage risks effectively, and seize investment opportunities to sustain their businesses. This enables MSMEs to be more adaptive to market disruptions, economic fluctuations, or unexpected crises while also fostering positive financial behaviours. The development of financial literacy through training and education significantly impacts the resilience and performance of MSMEs. Consequently, financial literacy not only strengthens business resilience but also drives economic growth, particularly in developing countries where MSMEs serve as a cornerstone of the economy.

The theoretical relationship between financial literacy and financial resilience in MSMEs, as conceptualised in the literature by Ying et al. (2019) is defined as the ability to effectively utilise financial knowledge and skills to manage financial resources, identify opportunities, mitigate risks, and support effective financial decision-making. These findings support the notion that financial literacy can be regarded as an internal resource that enables MSMEs to respond to external changes, enhance adaptability to economic shocks, and maintain financial sustainability. By increasing financial literacy through education and training, MSMEs' financial resilience can be realised.

Based on literature, financial literacy has been shown to improve resilience for individuals and MSMEs. Studies consistently showed that improving financial literacy strengthened financial inclusion, risk management, and adaptation to economic challenges. Moreover, financial literacy is the knowledge and skills in making effective financial decisions. Therefore, efforts to improve financial literacy need to be a priority in public policy and MSME development strategies. Financial literacy can be explained through the perspective of the RBV theory. In RBV, financial literacy is seen as a valuable, rare, difficult to imitate, and well-organised internal resource that has a competitive advantage for MSMEs. Meanwhile, financial resilience can be explained within the DC theory framework, which emphasises the ability of an organisation to adapt, integrate, and reconfigure its internal resources during dynamic environmental changes. It is a DC that enables MSMEs to manage risks, maximise opportunities, and survive economic shocks through flexible and responsive financial management strategies.

In the case of MSMEs, the resilience theory provides a robust framework for examining the adaptive capacity of small businesses in response to economic competition, technological change, and market uncertainty (Lengnick-Hall et al., 2011). Resilience refers to an organisation's ability to learn, transform, and recover from crises. Financial literacy within this framework enhances MSMEs' competitive advantage by enabling them to strategically manage risk and make informed decisions, thereby strengthening their DC (Duchek, 2020). However, the most interesting paradox is the overconfidence paradox, which afflicts MSMEs with higher levels of financial literacy. Overconfidence, as noted by Idris (2023), can lead to excessive financial risk-taking, which increases an organisation's likelihood of failure. So, financial literacy does not guarantee resilience; in fact, literacy devoid of risk awareness can weaken resilience,

resulting in unconstructive, reactive actions. Thus, a more comprehensive approach to developing financial literacy is required, focusing on telling the emotional parts of rational risk management, emotional self-awareness, and critical thinking to offset overconfidence.

The most relevant keyword, based on frequency, is financial literacy, appearing 42 times. Other keywords, such as MSMEs, financial knowledge, and financial inclusion, each appearing six times, also demonstrate high relevance. According to the VOSviewer keyword map (2019–2024), terms such as financial literacy, digital finance, and financial resilience have emerged more prominently in recent years, while earlier concepts like financial resource availability were more common in previous periods. Among academic journals, *Investment Management and Financial Innovations* ranks highest in terms of contributions, with four articles. This is followed by journals such as *Cogent Business and Management*, *Cogent Economics and Finance*, and *Economic Modelling*, each contributing two articles. Other sources, such as *Accounting and Finance* and *Acta Commercii*, contributed one article each. This SLR spans a wide geographical scope, with research analysed from diverse countries, including Indonesia, Malaysia, Ghana, China, and South Africa. Indonesia stands out as the leading contributor to publications on this topic. The inclusion of studies from various countries offers diverse perspectives on financial literacy within different economic contexts.

In Southeast Asia, as well as in Indonesia, the development of digital literacy is inward-oriented and nationally conditioned, with strategies formulated in close partnership between the government and the private sector to provide digital training to MSMEs (Curtis et al., 2022). Although policy constructs domestic capacity against uneven technical infrastructure, monolithic thinking risks distorting knowledge and under-consuming global best practices. Conversely, in Nigeria and South Africa, digital literacy is supported by the alignment of mobile banking with grassroots training and cross-country research partnerships, which have been noted to propel the development of digital financial services despite minimal infrastructure and low digital literacy (Adel, 2024). This shows that an open and collective approach to digital literacy can overcome local resource deficits and enhance the adaptive capacity of financial technology.

Conversely, Brodny and Tutak (2022) study highlights a notable divide between older and newer EU member states in terms of digital literacy and digital maturity among SMEs. The older countries, such as Denmark and Finland, are much more digitally mature compared to newer countries like Bulgaria and Romania. Digital literacy is one of the strongest motivators to force SMEs into digitalisation. This framework positions digital literacy not as technical training per se, but as an integral part of the MSME environment, which translates into strategic application of financial technology. Against this backdrop, an effective digital literacy strategy must be modular and scalable, starting with basic access and training, then building on the strengths of medium-sized businesses, and lastly incorporating advanced financial technology. This approach will be most effective if it involves synergy among universities, the private sector, and the government, and creates an international collaborative space that makes MSMEs more competitive, financially robust, and sustainable in an inclusive manner.

Researchers suggest that when MSMEs in developing countries learn how to manage their finances effectively, they can better navigate financial challenges. The business climate in developing countries is often complex, with digital infrastructure being patchy, and access to official financial information being difficult. SMEs must understand risk management principles and organisational capabilities to effectively handle economic

fluctuations. Research conducted in Ghana, Malaysia, Indonesia, and other regions shows that financial literacy can improve financial resilience (Thathsarani and Jianguo, 2022).

When it comes to industries, financial education has a greater impact on volatile sectors, such as the creative industry, agribusiness, and technology. In the IT domain, for instance, most MSMEs confront an uncertain market situation; therefore, dependence on venture capital and cash management must be highly controlled. Under such circumstances, companies need to have the knowledge and abilities to demonstrate a track record of better understanding, planning, and managing financial aspects to operate their business continuously. On the other hand, in the wealthier sectors, the effect of financial literacy may be less significant, albeit still important.

These regional, business, and occupational differences underscore the need for the design of financial literacy policies to be sensitive to regional and business sector-specificities.

Financial literacy practices vary across countries, which reflect their priorities and challenges. In developing countries, it is focused on improving financial inclusion and basic literacy. Meanwhile, in developed countries, the focus is on long-term financial planning and technology adoption. Methods that integrate financial literacy with digitalisation and business sustainability are becoming increasingly dominant in many countries. These case studies and empirical data have shown the importance of locally relevant methods to maximise the benefits of financial literacy for individuals and MSMEs.

The thematic map analysis highlights that financial literacy remains a central topic frequently associated with other dimensions such as financial inclusion, digital literacy, and financial resilience. Themes like financial resilience and business sustainability have gained prominence in several countries, reflecting responses to global economic challenges. Government support also emerges as a significant theme in some countries, indicating that financial literacy and MSME development are often prioritised within government policies to support economic stability.

In synthesising the relationship between financial literacy and MSME financial resilience, the RBV and DC frameworks can be used as complements to provide a comprehensive understanding of the MSME adaptation process, both internally and externally. This integrative approach explains how financial literacy serves not only as basic knowledge but also as a strategic resource and adaptation mechanism in achieving financial resilience. RBV theory emphasises the importance of internal resources in achieving competitive advantage (Barney, 1991). In the context of the RBV, financial literacy can be viewed as an intangible strategic resource that is built and maintained to improve the long-term sustainable competitiveness of MSMEs. While the RBV is oriented towards internal resources, the DC approach (Teece et al., 1997) describes how companies integrate, build, and reconfigure internal competencies to address evolving external environmental conditions. Here, financial literacy functions as an enabler in developing three capabilities: sensing, seizing, and transforming. From the literature review, it is evident that the resilience of MSMEs depends not only on resource ownership (RBV) but also on resource management and adaptation (DC). Financial literacy is the intersection of these two paradigms: strategic assets in the RBV and DC in the DC.

Financial resilience is achieved when financial knowledge is not only available but also flexibly utilised to address changing market conditions. When MSMEs systematically develop financial knowledge and utilise it as a basis for adaptive

decision-making, they have a greater chance of survival and success in the face of uncertainty.

Trend analysis shows that financial literacy continues to be a primary focus. Topics such as digitalisation, financial resilience, and business sustainability, particularly concerning MSMEs, have gained increasing attention since 2020, driven by economic changes following the pandemic. Digitalisation, financial resilience, and business sustainability play a role in promoting MSMEs competitiveness. MSMEs in Indonesia that use e-commerce platforms, including Tokopedia or Bukalapak have reached a broader customer base and reduced operational costs. Moreover, MSMEs in Malaysia have used peer-to-peer (P2P) lending services to obtain working capital during the pandemic. The Erasmus+ program helps MSMEs integrate financial literacy and sustainability in Europe, which consequently increases their international competitiveness. Financial resilience, strengthened by access to digital financing and a tax rebate on verified digital-literacy training expenses and fast-track regulatory sandboxes for fintechs embedding literacy content, enables MSMEs to survive crisis. This shows that good financial and digital literacy helps MSMEs manage risks, maximise new opportunities, and adapt to global economic changes, supported by government and private sector collaboration.

In the context of building the financial resilience of MSMEs through financial literacy assistance, it is interesting to critically consider potential dormant risks, such as the phenomenon of overconfidence, identified by Idris et al. (2023). While financial literacy generally provides a foundation for more effective and adaptive decision-making – and thereby improves the financial resilience of MSMEs – a high level of literacy without a counterbalancing reflective awareness risks creating a paradoxical effect of excessive self-confidence.

Overconfidence in this scenario refers to the tendency for economic actors to overestimate their understanding and ability to manage financial resources, which can lead to speculative or unrealistic financial decisions. The condition can effectively weaken financial resilience, primarily due to increased exposure to risk without adequate mitigation measures and a disregard for market forces and potential economic shocks.

Thus, as Idris et al. (2023) highlight, the role that financial literacy plays in MSME resilience must be considered more comprehensively, particularly regarding the potential paradox between greater financial capability and the risk of overconfidence. The paradox arises from the contention that financial resilience is based not only on the acquisition of technical competence but also on the instilled psychological dimensions of self-control, prudence, and resistance to cognitive frailties.

Therefore, financial literacy initiatives for MSMEs need to be designed holistically. They should not only seek to upgrade financial knowledge but also include training modules on risk management, adaptive mindset development, and risk-based decision-making. This would be necessary to strike a balance between confidence and caution, ensuring that financial literacy is indeed reflected in the long-term financial resilience and sustainability of MSMEs.

6 Implication

The first consideration lies in the theoretical implications. These findings offer valuable insights into how financial literacy trends influence MSMEs' capacity to navigate

economic challenges and foster resilience. By synthesising existing research, this study underscores the importance of integrating key components – such as financial planning, risk management, and adaptive financial decision-making – into a theoretical framework that addresses MSMEs' financial resilience. This highlights the interconnectedness of knowledge, behaviour, and financial outcomes as critical elements for achieving sustainability in dynamic markets.

The second consideration pertains to the practical implications. The findings of the SLR research highlight the necessity of tailored financial education programmes for MSMEs designed to address the specific characteristics of the business type, education level, and socio-economic conditions. In addition, the integration of financial literacy into public policy is essential, serving as a foundational element in strengthening MSMEs' financial capabilities and resilience.

Governments and development banks should co-finance mobile-based literacy modules (e.g., 50% cost-sharing with local fintech firms) and grant API access to anonymised MSME transaction data for real-time impact monitoring.

Therefore, the actionable framework for stakeholders includes:

- 1 Fintech-public partnerships
- 2 Regulatory levers: national SME agencies provide a 20% tax rebate on verified digital-literacy training expenses and fast-track regulatory sandboxes for fintechs embedding literacy content.
- 3 Targeted delivery: NGOs and industry associations map MSMEs by age, gender, and sector and bundle literacy training with micro-loan disbursements, ensuring $\geq 40\%$ female-led firm participation in pilot regions.

6.1 Financial resilience pathways for MSMEs – a policy framework

Based on the synthesis of 48 studies, we propose the financial resilience pathways for MSMEs (FRP-MSME) framework. The framework comprises three sequential layers:

- 1 Inputs
 - Foundational financial literacy (budgeting, debt management, investment basics).
 - Digital-finance literacy (mobile payments, peer-to-peer lending, e-commerce platforms).
- 2 Mechanisms
 - Improved cash-flow discipline (regular savings, liquidity buffers).
 - Enhanced credit access (formal borrowing, credit-scoring via digital footprints).
 - Adaptive decision-making (real-time financial data use, risk mitigation strategies).
- 3 Resilience outcomes
 - Crisis absorption (survival during shocks).
 - Crisis recovery (return to pre-shock performance within 12 months).
 - Sustainable growth (post-crisis expansion measured by sales or employment).

4 Policy levers aligned with each layer:

- Subsidised mobile literacy modules via fintech partnerships (input layer).
- Tax rebates for verified digital-literacy training (mechanism layer).
- Regulatory sandboxes for literacy-embedded lending apps (outcome layer).

The FRP-MSME framework is intentionally parsimonious and empirically grounded, enabling policymakers to diagnose gaps, allocate resources, and monitor progress through quantifiable indicators at each stage.

7 Conclusions

This research provides a comprehensive overview of the development of literature on financial literacy and financial resilience based on Scopus-indexed data spanning the period 2014–2024. In doing so, it fills critical gaps: it unifies previously fragmented evidence on cash-flow discipline, digital-finance uptake, and credit access as the key mechanisms linking literacy to resilience. By analysing keywords, publication sources, research themes, and recent trends, the findings highlight the significant impact of financial literacy on the financial resilience of MSMEs. Moreover, by integrating RBV and DC theories, the review moves beyond correlational statements to offer a mechanism-based explanation of how MSMEs convert literacy into adaptive capacity. Numerous studies support the results, emphasising the importance of financial literacy in improving financial decision-making, access to resources, and the ability to adapt to market changes. Finally, the resulting ‘Financial Resilience Pathways for MSMEs’ framework translates these insights into concrete policy levers, fintech co-financing, targeted tax rebates, and regulatory sandboxes – thereby directly addressing the policy-design gap earlier reviews left open. Increasing the financial literacy of MSMEs not only fosters sustainable economic growth but also contributes to poverty alleviation by strengthening the MSME sector.

7.1 *Limitations and directions for future research*

While this study offers valuable insights, several limitations should be acknowledged. One of the primary limitations is the potential for publication bias, where studies reporting positive findings on financial literacy are more likely to be published, leaving negative or inconclusive results underrepresented in the literature. Another limitation is that the study relies solely on the Scopus database, which may restrict the diversity and comprehensiveness of the references included. Furthermore, the research focuses exclusively on journal articles, omitting other forms of academic publications.

This review draws exclusively on Scopus-indexed, English-language journal articles (2014–2024) and excludes grey literature. Scopus provides the broadest, peer-reviewed coverage of finance and entrepreneurship studies, while English remains the dominant language for validated financial-literacy instruments. These choices ensure terminological consistency and methodological rigour at the cost of under-representing non-Anglophone or non-indexed evidence; we therefore caution readers that our findings may reflect an Anglophone-centric perspective. While our sample is weighted toward Indonesia and Malaysia, we recognise that this geographical concentration may limit

direct generalisability to very different regulatory or cultural contexts; nevertheless, the mechanisms uncovered remain conceptually portable and merit testing in additional regions.

Future research should consider incorporating a broader range of academic outputs, such as books, book chapters, and conference papers, as well as leveraging multiple databases (e.g., PubMed, Web of Science, and Springer) to capture a wider spectrum of scientific contributions. Additionally, longitudinal studies are crucial for assessing the long-term impact of financial literacy on MSME performance and resilience. The predominantly cross-sectional nature of current studies limits their ability to depict how financial literacy influences business outcomes over time.

Further exploration is also needed into the relationship between financial literacy and other factors, such as social capital and human capital, to understand their combined effects on improving access to financing and fostering growth opportunities for MSMEs. Evaluating the effectiveness of financial literacy programmes across diverse cultural and demographic contexts is equally important. Identifying the most effective approaches can help refine financial education initiatives tailored to MSMEs. Lastly, the role of technology in improving financial literacy, especially within the context of digital finance, warrants deeper investigation. As MSMEs increasingly rely on digital platforms for financial transactions, understanding how technology can support financial literacy development will be essential for fostering resilience and sustainability in an evolving economic landscape.

Declarations

The authors declare that there is no conflict of interest.

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