Resilience of Small Medium Business

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FINANCIAL ACCESS, FINTECH ADOPTION, AND THEIR IMPACT ON SME SURVIVAL: EVIDENCE FROM CONTEMPORARY FINANCE LITERATURE

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ABSTRACT

Objective: This study aims to synthesize contemporary financial literature to examine how access to finance and the adoption of financial technology (fintech) jointly affect the sustainability of micro, small, and medium enterprises (MSMEs), particularly in the context of economic uncertainty and global crisis.

Research Design & Methods: This study uses a systematic literature review approach based on the Scopus database with bibliometric analysis and thematic synthesis. A total of 77 relevant scientific articles were analyzed through publication trend mapping, keyword co-occurrence networks, and thematic grouping to identify patterns, mechanisms, and conceptual relationships between financial access, fintech adoption, and MSME resilience

Findings: The synthesis results show that access to external financing, particularly through bank credit, working capital, and risk-sharing financing mechanisms, remains a key determinant of MSME survival. However, post-2020 literature emphasizes that fintech adoption serves as a strategic complement that increases the speed of liquidity access, reduces transaction costs, and expands financial inclusion. The integration of traditional and digital financing has proven to be more effective in improving MSME resilience than reliance on a single source of financing

Implications & Recommendations: These findings indicate the need to strengthen a hybrid financing ecosystem that integrates banking and fintech to support SME sustainability. Policymakers are advised to promote adaptive and inclusive fintech regulations, while financial institutions need to develop collaborative financing models that are responsive to SME needs in both crisis and non-crisis conditions.

Contribution & Value Added: This article contributes by synthesizing fragmented evidence and proposing a mechanism-oriented conceptual framework that specifies how access to finance and fintech adoption interact to influence MSME sustainability. By clarifying these interaction pathways, the study advances the literature on inclusive finance and MSME resilience and provides a focused analytical basis for future research and policy.

Keywords: MSME survival, financial access, hybrid financing, financial resilience capacity.

JEL codes: G20, G23, L26.
Article type: research paper

INTRODUCTION

MSMEs play an important role in the economies of various countries, but barriers to access to financing remain a major challenge that directly affects their ability to survive and grow amid increasingly competitive market conditions (Irwin & Scott, 2010). The inability of MSMEs to meet strict requirements such as collateral, credit history, and formal financial reports makes financial institutions tend to assess this sector as high risk, making it difficult for them to obtain adequate capital support (Ramlee & Berma, 2013). Many MSMEs are trapped in capital constraints due to their high dependence on vulnerable and costly informal financing, which weakens the foundation for long-term business sustainability (Abdibekov et al., 2014). Access to bank credit is often hampered by asymmetric information between MSMEs and financial institutions, where limited data transparency makes credit institutions reluctant to expand lending without strong risk mitigation mechanisms (Wang, 2016). This factor is exacerbated by the low capacity of MSMEs to provide adequate physical collateral, thereby widening the financing gap despite increasing demand for working capital (Ngcobo, 2017). In addition to these structural barriers, the complexity of administrative requirements and high transaction costs exclude many MSMEs from the formal financial system, exposing them to greater risks when operating in volatile market conditions (Gómez et al., 2016). From a macroeconomic perspective, limited access to financing has an impact on the low capacity of MSMEs to increase productivity, make investments, and adapt to market changes, making them more vulnerable to economic crises (Carbó et al., 2016). This condition confirms that the issue of access to financing is not merely a technical issue, but a key factor that determines business resilience in facing short-term and long-term economic pressures (Lee & Brown, 2017). In turn, the lack of adequate liquidity limits the room for maneuver that MSMEs have to expand their capacity, manage risk, or invest in the innovation needed to maintain competitiveness (Erdogan, 2019). Thus, barriers to credit access remain a fundamental problem that affects the stability and sustainability of MSMEs in an increasingly dynamic modern business environment (Civelek et al., 2019).

Amidst the challenges of conventional financing access, the development of financial technology (fintech) has opened up new opportunities that enable MSMEs to obtain financial services that are more flexible, faster, and more inclusive than traditional banking mechanisms (Sannajust et al., 2014). Fintech offers a more accurate risk assessment model through the use of alternative data such as digital transactions, payment records, and machine learning algorithms, thereby reducing barriers caused by information asymmetry (Zhang et al., 2015). Thus, MSMEs that previously did not have a formal credit history can obtain access to financing through digital platforms without having to face difficult collateral requirements (Lu et al., 2022). Beyond financing, fintech also helps MSMEs improve operational efficiency through payment digitization, cash system integration, and financial administration automation, which can improve business liquidity management (Musyaffi et al., 2024). The application of fintech expands the scope of financial inclusion, especially in areas that are difficult to reach by banking services, allowing business actors to have access to various financing instruments such as peer-to-peer lending, digital micro-credit, and crowdfunding (Stefanelli et al., 2022). In addition, financial technology strengthens the ability of MSMEs to deal with operational risks because transaction processes become more transparent and documented, minimizing the potential for recording errors and fraud (Mutamimah et al., 2023). Furthermore, fintech plays a role in reducing MSMEs' dependence on high-cost informal financing channels, thereby creating a more efficient and sustainable financing structure (Rico et al., 2023). In the context of an increasingly digital global economy, the ability of MSMEs to adopt digital financial services is an important factor in increasing business success opportunities, both in terms of access to financing, strengthening governance, and expanding market share (Li & Tian, 2024). The literature shows that the integration of digital and traditional financial services can create a stronger financing ecosystem, where fintech serves as a complement to banking in providing more inclusive financial access (Beltrame et al., 2023). Therefore, the contribution of fintech in strengthening the resilience of MSMEs does not only depend on its ability to provide capital, but also on building greater efficiency and transparency in business operations (Civelek, 2023).

Although various studies have discussed barriers to financial access and the benefits of financial technology, comprehensive studies combining the aspects of financial access, fintech adoption, and SME survival are still limited in the literature (Owen et al., 2023). Many studies focus on bank financing constraints or credit risk, but have not integrated how fintech can serve as a solution or complement to strengthen the resilience of SMEs (Aristei & Angori, 2022). Meanwhile, other studies focusing on fintech adoption emphasize technology acceptance factors rather than assessing its impact on long-term business sustainability (Serkbayeva et al., 2024). At the same time, studies on MSME resilience tend to focus on internal factors such as innovation, managerial capabilities, and adaptive strategies, but have not yet examined in depth how adequate financing structures can increase the survival rate of MSMEs (Kaya, 2022). This gap in the literature shows that the understanding of the integrative relationship between traditional financing, digital financing, and business resilience is still not fully explained (Neves et al., 2024). In addition, several studies highlight that the role of traditional financial institutions is still very important, especially in providing the long-term financing needed by MSMEs, but the literature has not assessed how the bank-MSME relationship can synergize with digital financing innovations (Pantjes & Alkan, 2017). The literature debate regarding the effectiveness of fintech in reducing MSME financial risk also shows that a more holistic mapping of the roles of both in creating business resilience is needed, especially amid global economic uncertainty (Liu et al., 2022). Therefore, this study aims to fill this gap by comprehensively analyzing how financial access and fintech adoption contribute to the sustainability of MSMEs, as well as examining the mechanisms that enable these two financing instruments to work complementarily in strengthening business resilience (Gür et al., 2023). By synthesizing relevant literature, this study is expected to provide theoretical and practical contributions to the development of a more inclusive, adaptive, and sustainable financing ecosystem to support the long-term sustainability of MSMEs (Laso et al., 2025).

LITERATURE REVIEW

SME Survival and Business Continuity

The business continuity of SMEs is influenced by the interaction between internal company factors, external market conditions, and managerial capabilities in managing economic uncertainty (Ngcobo, 2017). Resiliensi UMKM sangat terkait dengan kemampuan mereka mempertahankan likuiditas serta menyesuaikan struktur pembiayaan ketika menghadapi tekanan pasar yang tiba-tiba (Caballero et al., 2016). The resilience of SMEs is closely related to their ability to maintain liquidity and adjust their financing structure when facing sudden market pressures (Kaya, 2022). The risk of insolvency also increases when debt burdens rise while operating cash flows weaken, something that has been evident in many MSMEs during global economic shocks (Pereira et al., 2023). Working capital and a company's ability to maintain efficiency in managing current assets are fundamental components of business resilience (Sardo & Teixeira, 2022). In addition to financial factors, managerial characteristics such as financial literacy, leadership style, and entrepreneurial orientation also influence the adaptability of MSMEs to crises (Ichim & Vid, 2025). On the external side, business environment dynamics such as competition intensity, technological changes, and government policies also affect business continuity (Wang, 2016). MSMEs in developing countries generally face higher risks due to market volatility and low institutional protection, so their resilience is largely determined by their access to external resources, including bank credit and alternative financing (Arezki et al., 2017). When the financial system is disrupted—as in the 2008 crisis and COVID-19—MSMEs often experience a contraction in financing that directly impacts their operational capabilities (Ghulam et al., 2025). Labor market conditions and technological innovation also play a role in suppressing or strengthening the competitiveness of MSMEs, as seen in the manufacturing and service sectors in various countries (Amoa & Dhliwayo, 2023). In addition, regional factors such as geographical remoteness have been shown to affect the level of financing and growth opportunities for MSMEs, especially in less developed regions (Lee & Brown, 2017).

Literature studies show that MSMEs that are able to utilize innovation and diversify their businesses have higher survival rates, because innovation enables companies to respond to changes in demand and minimize the risk of dependence on a single business model (Bakhouche, 2022). In this context, relationships with financial institutions, both banks and alternative lenders, are becoming increasingly important as they help companies maintain their operational continuity during periods of economic fluctuation (Beltrame et al., 2023). The characteristics of MSME relationships with banks, including relational closeness, relationship duration, and information quality, have been shown to influence the success of MSMEs in obtaining stable long-term financing (Pantjes & Alkan, 2017). Thus, the survival of MSMEs depends not only on internal management factors, but also on the company's ability to build a supportive external network, especially an accessible and inclusive financing system (Civelek, 2023). In many countries, the risk of SME failure increases when companies have high leverage without adequate risk mitigation systems, such as credit guarantees or debt restructuring facilities (Bräuning et al., 2024). During times of crisis, SMEs with inflexible funding structures face significant liquidity risks and are sometimes unable to maintain operations (Carreira & Silva, 2023). The impact of the crisis highlights the importance of a financing system that is responsive and adaptive to the needs of MSMEs, particularly through instruments such as revolving credit, credit guarantees, and short-term working capital financing (Cowling et al., 2018). In the context of economic globalization, institutional differences between countries also determine the survival rate of MSMEs because different banking structures and financial regulations can create opportunities or obstacles for their access to financing (Aristei & Angori, 2022). Thus, understanding the sustainability of MSMEs must consider various multidimensional factors, including financial, institutional, technological, and corporate adaptation capacity aspects.

Financial Access and Credit Constraints

Financial access is a fundamental factor in supporting the growth and sustainability of MSMEs, but various studies show that the majority of MSMEs in various countries still face difficulties in obtaining formal financing from traditional financial institutions (Irwin & Scott, 2010). Structural barriers such as lack of collateral, high documentation requirements, and limited credit history are major obstacles for MSMEs in accessing working capital (Ramlee & Berma, 2013). Information asymmetry between MSMEs and banks encourages financial institutions to apply stricter risk assessment procedures, thereby narrowing credit opportunities for small businesses (Zhang et al., 2015). In some developing countries, immature financial institutions cause MSMEs to rely on informal financing or their own capital, which ultimately limits their expansion and productivity capacity (Civelek et al., 2019). This situation is exacerbated by market volatility and macroeconomic uncertainty, which make banks more cautious in extending credit (Omer et al., 2015).

High borrowing costs are also an obstacle for many MSMEs, especially in countries with low banking competition and concentrated financial market structures (Wang et al., 2020). In this context, excessive leverage can increase the risk of default and reduce the long-term stability of companies (Pereira et al., 2023). Research shows that limited access to credit greatly affects the ability of MSMEs to manage working capital, especially in relation to the need to purchase supplies, pay suppliers, and support the production cycle (Lee & Brown, 2017). When credit is unavailable, many MSMEs are forced to rely on trade credit from suppliers, but this mechanism is not always stable and is often influenced by broader market conditions (Tang & Moro, 2020). In addition, banks often view MSMEs as a high-risk sector due to unstable income, small business scale, and a lack of assets to use as collateral (Erdogan, 2019).

Economic crises are the most critical moments when MSME access to credit is tested, as tightening liquidity in the banking sector has a direct impact on credit restrictions for small businesses (Ghulam et al., 2025). A similar situation occurred during the COVID-19 pandemic, where MSMEs that did not have strong relationships with banks found it more difficult to obtain emergency credit or working capital financing facilities (Liu et al., 2022). Research shows that long-term relationships between MSMEs and banks can reduce credit barriers, increase the flexibility of loan conditions, and help companies gain access to more stable credit (Pantjes & Alkan, 2017). On the other hand, credit access is also influenced by non-financial factors such as manager gender, entrepreneurial orientation, and company reputation. This shows that barriers to financial access are not only technical but also social and institutional. Credit guarantee schemes have become one of the main instruments for overcoming market failures in MSME financing, particularly in European and Asian countries (Cowling et al., 2018). These schemes help banks reduce financing risks by providing partial guarantees for SME loans, thereby increasing banks' willingness to extend credit (Gómez et al., 2016). However, the implementation of these schemes still faces challenges in terms of effectiveness, risk allocation, and funding sustainability (Corredera et al., 2021). In addition, regulatory changes such as banking deregulation and environmental policies can affect MSME financing patterns, both in the form of increased access and credit restrictions (Xia et al., 2021). Thus, barriers to financial access for MSMEs are a multidimensional phenomenon influenced by structural, institutional, and market factors, requiring a more comprehensive approach to understand their impact on business sustainability.

Fintech Adoption by SMEs

The adoption of financial technology (fintech) has become a key solution for MSMEs in overcoming the limitations of traditional financing, especially through digital platforms that provide faster, more flexible, and more inclusive financial services (Sannajust et al., 2014). Fintech lending, such as peer-to-peer lending, allows SMEs to obtain financing without going through the bureaucratic processes typically imposed by banks (Stefanelli et al., 2022). In addition, fintech utilizes more diverse digital data to assess creditworthiness, enabling SMEs that previously had no formal credit history to obtain alternative credit scores based on behavioral data (Wang et al., 2024). This mechanism helps reduce information asymmetry, one of the main barriers to MSME financing, thereby increasing financial inclusion in various countries (Lu et al., 2022). Fintech also includes digital payment services that help MSMEs improve operational efficiency, accelerate cash flow, and minimize cash transaction risks (Afrida et al., 2024). Digital payments provide verifiable transaction records that can enhance the credibility of MSMEs in the eyes of financial institutions and other financing providers (Li & Tian, 2024). In the context of supply chains, digital-based supply chain finance platforms enable small companies to obtain financing based on their transactional relationships with large buyers, rather than on conventional collateral (Zhang et al., 2023). Big data, machine learning, and Internet of Things (IoT) technologies further strengthen fintech's ability to assess risk in real time, improving the efficiency and accuracy of the credit assessment process (Chu et al., 2024).

Crowdfunding is another form of fintech that offers community-based financing alternatives for MSMEs, allowing them to raise capital from the public without relying on banks (Manso et al., 2025). Debt- and equity-based crowdfunding has helped many small businesses start or expand their businesses through access to global investors (Laso et al., 2025). Beyond financing, fintech also expands SME digital financial literacy by providing easy-to-use financial platforms, digital dashboards, and automated financial analytics that enhance business owners' ability to make data-driven decisions (Ichim & Vid, 2025). Digital banking and mobile banking technologies also increase SMEs' access to formal banking services at lower costs and with wider geographical coverage (Gama et al., 2024). Despite offering many benefits, the adoption of fintech by MSMEs is not without challenges, such as low digital literacy, cybersecurity risks, and regulatory uncertainty (Serkbayeva et al., 2024). Some MSMEs also remain distrustful of digital platforms due to concerns about fraud and legal uncertainty in electronic transactions (Ayad et al., 2024). However, research shows that fintech can improve the efficiency and productivity of MSMEs, particularly in cash management, financial record-keeping, and relationships with suppliers and customers (Palmieri & Ferilli, 2024). The adoption of fintech has even been shown to play a role in risk mitigation, helping MSMEs maintain operations during economic disruptions, including the COVID-19 pandemic (Liu et al., 2022). Thus, fintech serves not only as an alternative financing option but also as a digital infrastructure that strengthens the long-term resilience of SMEs.

Relationship Between Finance, Fintech, and SMEs

The relationship between traditional financing systems and fintech reflects complementary and competitive dynamics, in which both sectors influence the ability of MSMEs to obtain sustainable financing (Ruiz & Vasta, 2021). Banks still play a central role in providing long-term credit and complex financial services, but fintech has filled the SME financing gap that banks find difficult to reach (Owen et al., 2023). Fintech accelerates the financing process and expands access through more inclusive risk assessment algorithms, while banks offer stability and standardized financing structures (Waidelich & Steffen, 2024). The synergy between banking and fintech is evident in hybrid models such as digital supply chain financing, where technology is used to assess transaction risk, but funding still comes from banks (Zhang et al., 2023). Fintech can also strengthen SME relationships with banks through increased transaction transparency and ease of financial data verification, thereby indirectly improving SME access to credit. Long-term relationships between MSMEs and banks, such as relationship lending, remain an important factor in reducing financing barriers, especially during economic instability (Beltrame et al., 2023). On the other hand, banks that implement digital innovations have proven to be able to increase efficiency, reduce operational costs, and expand access to financing for small businesses (Feridun & Talay, 2024). However, competition between fintech and banks also occurs when fintech offers faster financing products that do not require collateral, thereby attracting many MSMEs that were previously reluctant to borrow from banks (Bakhouche, 2022).

The combined influence of traditional financial access and fintech technology on the sustainability of MSMEs is increasingly evident, especially in the context of an economic crisis, where the use of digital services can help MSMEs maintain cash flow, access emergency credit, and maintain operations (Liu et al., 2022). MSMEs that adopt digital technology and have diversified financing sources have been shown to have higher survival rates (Legenzova et al., 2025). In addition, the integration of traditional and digital financing helps reduce credit risk and increase the stability of the MSME financial system (Calabrese et al., 2021). In the long term, the synergy between the two types of financing can strengthen a more inclusive and adaptive financial ecosystem, thereby helping MSMEs improve their productivity and competitiveness. Overall, the literature shows that the combination of financial access and fintech adoption is a key determinant in strengthening the resilience of MSMEs, both under normal conditions and during economic disruptions (Kaya, 2022). When traditional financing faces limitations, fintech provides flexible and fast alternative mechanisms, while banks continue to play an important role in providing long-term financing stability (Goeck & Walther, 2022). Therefore, understanding the integrative relationship between traditional financing, fintech, and MSME performance is crucial in formulating business policies and financial strategies that are oriented towards business resilience.

METHODS

This study uses a Systematic Literature Review (SLR) approach to synthesize and analyze empirical and conceptual findings related to financial access, fintech adoption, and MSME survival. The methodological procedures are designed to be transparent, replicable, and comprehensive of all relevant literature. The review protocol followed four main stages: identification, screening, eligibility assessment, and final inclusion, which were structured based on the PRISMA framework. To visualize the literature selection process from the initial stage to final inclusion, a PRISMA diagram was inserted in the section after the screening stage description.

The identification stage began with a structured search of the Scopus database, which was chosen for its broad coverage of reputable journals and consistency with the data set used in this study. The search strategy utilized four groups of thematic keywords, namely: (1) MSMEs, (2) financial access and traditional financing mechanisms, (3) fintech and digital financial services, and (4) business continuity-related outcomes such as resilience, continuity, and insolvency risk. Boolean operators were used to combine search terms, and a series of queries were constructed to capture the intersection of the four themes. The search covered all years of publication up to the date of data collection and was limited to English-language articles. Additionally, a number of additional articles were included from a list of abstracts previously collected through a Scopus search, resulting in an initial dataset of 153 unique abstracts that formed the primary source of the analysis.

During the screening stage, titles and abstracts (or structured abstracts when abstracts were not available) were independently evaluated based on predefined inclusion and exclusion criteria. Articles were included if they: (1) focused on MSMEs or microenterprises; (2) discussed financial access, traditional financing, digital finance, or fintech mechanisms; (3) analyzed outcomes related to MSME survival, resilience, bankruptcy risk, or business continuity; and (4) were empirical studies, conceptual analyses, or review articles published in scientific journals. Articles are excluded if they discuss large companies without relevance to MSMEs, technical fintech articles without relation to MSME financing or survival, non-scientific opinions, or duplicate publications. Each article is coded as "include," "exclude," or "uncertain," and disagreements are resolved through review.

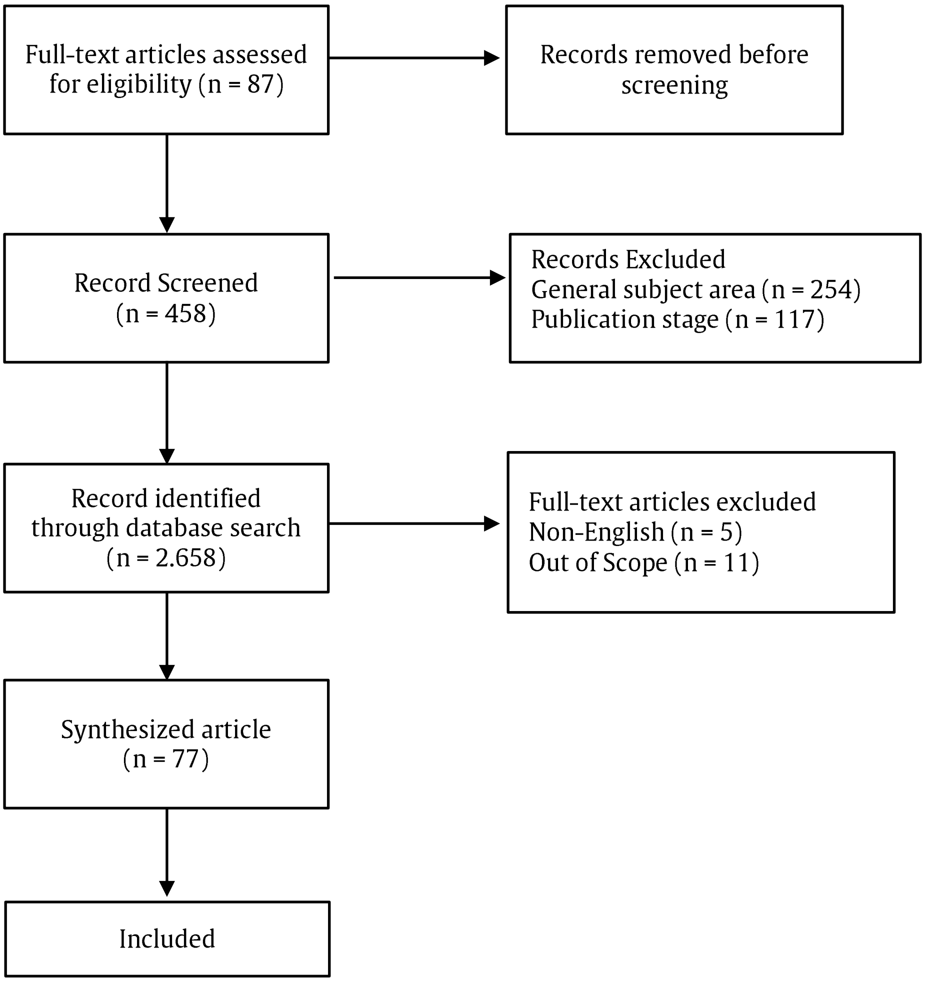


Figure 1 PRISMA Flow Diagram

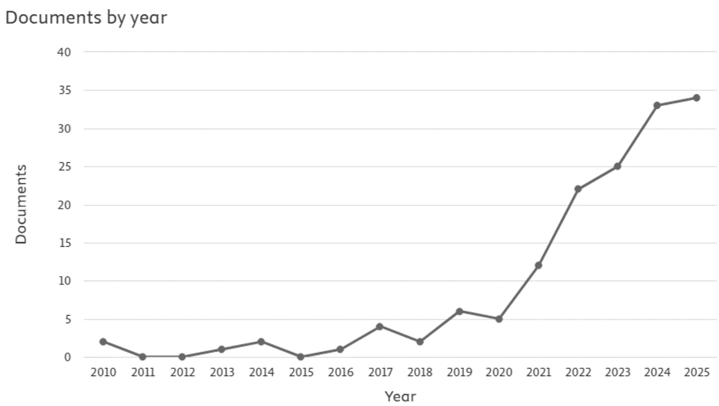
The number of articles screened and eliminated at this stage is shown in Figure 1 through a PRISMA diagram to reinforce the transparency of the selection process. At the eligibility assessment stage, all articles that passed the title-abstract screening were reviewed in full. For articles that were not available in full text, detailed summaries in the dataset were used to assess their suitability for inclusion criteria. Studies were excluded if they did not provide empirical or conceptual contributions regarding the relationship between financial access or fintech adoption and MSME survival; if they focused on macro-financial issues without any connection to MSMEs; or if key variables such as financing constraints, digital finance mechanisms, or business continuity indicators were not adequately discussed. The reasons for exclusion were recorded to ensure the replicability and accountability of the literature selection process.

The final inclusion stage brings together all eligible articles into the main corpus of the review. Each article then undergoes a data extraction process using a structured template that includes: author, year, country or region of study, research design, data sources, MSME characteristics, variables related to financial access and fintech adoption, outcome variables related to survival or resilience, analysis methods, main findings, and research limitations. This process enables descriptive mapping of the literature as well as thematic synthesis across studies. Furthermore, articles were also evaluated through quality assessment using a checklist of seven indicators that assessed topic relevance, methodological transparency, sample adequacy, control of confounding factors, analysis validity, and the existence of robustness tests. Quality scores were used to assess the strength of evidence without excluding studies with low scores, as long as they still met the minimum inclusion criteria.

RESULT

Analysis of documents by year extracted from the Scopus database shows a substantial and sustained increase in the number of scientific publications discussing financial access, MSME financing, and financial innovation during the period 2010–2025. In the early stages of literature development, particularly between 2010 and 2014, the number of publications was relatively limited and sporadic, with less than five indexed documents per year. This pattern reflects that academic studies during this period were still dominated by conventional approaches that focused on limited access to bank credit, bank-company relationships, and structural barriers in the formal financial system faced by MSMEs (Irwin & Scott, 2010; Ramlee & Berma, 2013). The literature in this phase generally places traditional banking and the availability of working capital as key factors in determining the sustainability of MSME businesses, while the dimension of financial technology innovation has not received significant attention (Caballero et al., 2016; Rossi et al., 2016). Entering the 2016–2019 period, the graph shows a moderate increase in the number of publications, which is in line with growing academic interest in financing source diversification, credit guarantee mechanisms, and alternative financing schemes such as trade credit and supply chain finance (Carbó et al., 2016; Chakuu et al., 2019). However, until 2020, publication growth remained gradual, indicating that the integration of financial access and digital technology in the context of MSME sustainability has not yet become a major focus in finance and entrepreneurship literature (Khalil et al., 2018; Lee & Brown, 2017). This condition confirms that the literature in its early stages tended to be fragmented and examined the financing dimension partially, without building a comprehensive understanding of the relationship between financial access, technology adoption, and the long-term resilience of MSMEs (Calabrese et al., 2021; Zarrouk et al., 2020).

Figure 2 Trends in Scholarly Publications on Financial Access, Fintech, and SME Survival

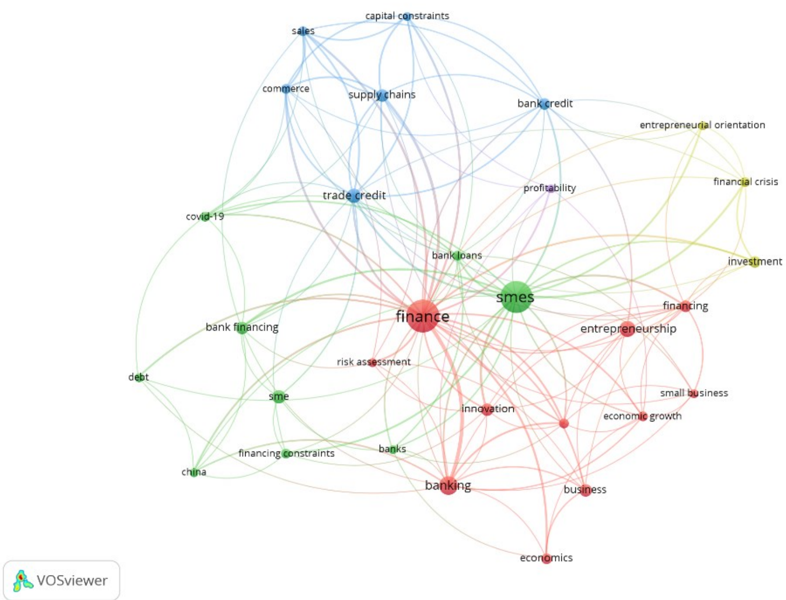


Source: created by author (2025)

A sharper surge in publications began to appear in 2020 and strengthened in the 2021–2025 period, as indicated by a significant increase in the number of documents from single digits to more than 30 publications per year. This change coincided with the COVID-19 pandemic, which drastically worsened MSME financing constraints and simultaneously accelerated the adoption of digital financial solutions in various countries (Corredera et al., 2021; Polishchuk et al., 2020). The literature during this period shows a clear shift in focus, with more research highlighting the role of fintech in expanding financial inclusion, accelerating access to liquidity, and reducing MSMEs' dependence on conventional bank financing (Lu et al., 2022; Stefanelli et al., 2022). The sharp increase in the number of publications after 2021 also reflects growing academic attention to the issue of MSME resilience and survival, particularly in the context of economic uncertainty and global crises, emphasizing how the combination of formal financial access and fintech adoption affects the ability of MSMEs to survive and adapt (Aristei & Angori, 2022; Kaya, 2022). In addition, recent literature has increasingly examined the integration of traditional and digital financing, including hybrid financing models, crowdfunding, and the use of alternative data-based credit scoring algorithms in assessing the creditworthiness of MSMEs (Gama et al., 2024; Gogas et al., 2025).

In line with the surge in publications after 2020, which reflects increased academic attention to SME financing and resilience, a keyword co-occurrence network analysis based on VOSviewer provides a more in-depth picture of the thematic structure and conceptual interrelationships in contemporary literature. The network visualization shows that the keywords finance and SMEs occupy a central position with the largest node size and high connectivity, indicating their role as the main axis in the research discourse. The strong interconnection between finance, banking, and bank loans indicates that bank financing remains an important foundation in the study of MSME sustainability, particularly in the context of capital access and financial risk management. At the same time, the emergence of keywords such as trade credit, capital constraints, and supply chains in interconnected clusters reflects the growing attention to alternative financing mechanisms and the role of working capital in supporting SME operations, especially during periods of crisis and supply chain disruptions. These findings reinforce the argument that the surge in publications after the pandemic is not only quantitative in nature, but also marks a deepening of analysis of the various sources and financing schemes that affect the resilience of small and medium-sized enterprises.

Figure 3 Keyword Co-occurrence Network of Studies on Financial Access, Fintech Adoption, and SME Survival



Source: Scopus database, processed using VOSviewer (2025)

The cluster structure in the co-occurrence network of keywords shows a clear shift in the literature towards an increasingly integrative approach between traditional financing, financial innovation, and entrepreneurial dynamics. Clusters linking the concepts of entrepreneurship, innovation, financing, and economic growth indicate that contemporary research no longer views financial access solely as a short-term liquidity issue, but rather as a strategic factor that directly contributes to the performance, competitiveness, and sustainability of MSMEs. At the same time, the emergence and interconnection of keywords such as COVID-19 and financial crisis with bank financing, risk assessment, and trade credit confirms that the global crisis has served as a major catalyst in directing the research agenda towards issues of business resilience, risk management, and MSME financial adaptation. The network visualization also shows the central position of core keywords such as MSMEs, finance, and banking, which reflects the fundamental role of formal financing in the literature, while also showing the development of clusters related to fintech, digital financial solutions, and alternative financing mechanisms driven by crisis conditions. The increasingly high level of interconnection between clusters indicates that recent studies no longer treat financial access, fintech adoption, and business continuity as separate phenomena, but rather as interdependent dimensions in building MSME resilience. Based on this thematic structure, the following section presents a synthesis of the literature organized into four main focuses, namely the role of financial access in the survival of MSMEs, the impact of fintech adoption on business performance, the integration of traditional and digital financing, and the key mechanisms through which these financial arrangements strengthen the resilience and sustainability of MSMEs.

Financial Access and MSME Business Survival

The literature consistently affirms that access to external financing is a key determinant of MSME business survival, particularly through bank loans and working capital stability. Cross-country empirical evidence shows that MSMEs with sustainable banking relationships tend to be better able to maintain operational continuity, manage cash flow fluctuations, and sustain production activities during periods of economic slowdown (Caballero et al., 2016; Irwin & Scott, 2010; Rico et al., 2023). Bank credit not only serves as a source of medium- and long-term liquidity, but also acts as a signal of credibility that enhances the reputation of MSMEs in the eyes of other financial stakeholders. This reputation expands opportunities for access to additional sources of financing and strengthens the position of MSMEs in the formal financial ecosystem, which in turn increases the probability of long-term survival (Beltrame et al., 2023; Bouslama & Boubacar, 2023). The literature also shows that MSMEs that are entirely dependent on internal funding or informal sources face a higher risk of failure, especially when faced with demand shocks or tightening credit conditions. Thus, access to bank financing is positioned in the literature not only as a financing instrument, but as a structural foundation that supports the resilience and sustainability of MSME businesses.

In addition to access to bank credit, the availability of working capital is identified as a key factor mediating the relationship between financing and MSME business continuity. Empirical studies show that working capital constraints significantly increase the likelihood of operational disruptions, production delays, and failure to meet short-term obligations, particularly in sectors with volatile cash cycles and high levels of accounts receivable (Caballero et al., 2016; Filomeni et al., 2023). This condition becomes even more critical during periods of economic crisis, such as the COVID-19 pandemic, when MSMEs with limited working capital reserves experience a sharper decline in performance and greater risk of bankruptcy compared to companies with adequate liquidity buffers (Gür et al., 2023; Kaya, 2022; Neves et al., 2024). Additionally, the literature highlights the role of risk-sharing financing mechanisms in enhancing SME resilience. Credit guarantee schemes, cooperative banking, and profit-sharing financial instruments have proven to reduce fixed debt burdens and distribute financial risks between MSMEs and funders (Agostino et al., 2022; Gómez et al., 2016; Haruna et al., 2024). This risk-sharing approach lowers financing barriers for credit-constrained MSMEs and increases their financial flexibility, thereby contributing to higher business continuity in an economic environment characterized by increasing uncertainty (Gallagher et al., 2024; Shirazi et al., 2023).

Fintech Adoption and MSME Performance

Contemporary literature shows that the adoption of financial technology (fintech) has become an important factor in improving MSME performance, particularly through accelerated access to capital and increased transaction efficiency. Fintech lending platforms significantly shorten the process of applying for and disbursing financing compared to traditional banking mechanisms, enabling MSMEs to respond to liquidity needs in a more timely manner (Sannajust et al., 2014; Serkbayeva et al., 2024; Stefanelli et al., 2022). This speed of access to capital has been shown to have a positive impact on the operational sustainability and short-term performance of

MSMEs, particularly in the context of dynamic markets and uncertain business environments (Legenzova et al., 2025). Furthermore, the literature confirms that the digitization of financial services through fintech reduces information asymmetry and administrative costs, which have been major obstacles for MSMEs in accessing formal financing (Laso et al., 2025; Li & Tian, 2024). By lowering transaction costs and minimizing dependence on physical documentation, fintech provides MSMEs with the space to allocate resources to productive activities, thereby increasing operational efficiency and business competitiveness (Afrida et al., 2024; Owen et al., 2023).

Beyond speed and cost, the use of alternative data-based credit scoring algorithms has emerged as a key mechanism for expanding MSME financing access through fintech. Studies show that machine learning and big data approaches can assess MSME creditworthiness more accurately than traditional methods that rely on formal financial statements and asset collateral (Gogas et al., 2025; Zhang et al., 2015). This approach particularly benefits MSMEs that are unbanked and underbanked, which were previously marginalized from the formal financial system (Simba et al., 2024). However, the literature also highlights that the successful adoption of fintech is highly dependent on security factors and user trust levels. Concerns regarding data protection, fraud risks, and regulatory uncertainty remain major barriers to fintech adoption by MSMEs in various country contexts (Ayad et al., 2024; Feridun & Talay, 2024). Therefore, research emphasizes the importance of a clear regulatory framework and strong digital governance to ensure that the benefits of fintech on MSME performance can be realized sustainably (Palmieri & Ferilli, 2024).

Integration of Traditional Finance and Fintech

Recent literature increasingly confirms that the relationship between traditional finance and fintech is complementary, rather than substitutive, in supporting MSME financing and business continuity. Traditional banking continues to play a central role in providing medium- and long-term financing, funding stability, and relationship-based monitoring functions (relationship banking), while fintech excels in flexibility, speed, and technology-based innovation (Lee & Brown, 2017; Serkbayeva et al., 2024). This complementary model allows MSMEs to take advantage of the strengths of each financial system, where bank credit provides a stable financial foundation, while fintech closes the gap in short-term liquidity and urgent financing needs (Gama et al., 2024). Empirical studies show that MSMEs that combine bank financing with fintech services demonstrate higher financial resilience compared to MSMEs that rely on only one source of financing (Bräuning et al., 2024; Waidelich & Steffen, 2024). This integration also contributes to reducing information asymmetry, as digital transaction data from fintech platforms can complement traditional credit information used by banks in the financing decision-making process (Chit & Rizov, 2024).

In addition to complementary models, the literature also highlights the development of hybrid financing schemes that combine bank credit, fintech lending, and crowdfunding as a strategy for diversifying MSME funding sources. This approach provides greater flexibility in funding structures and reduces the risk of dependence on a single financial institution (Laso et al., 2025; Sefried & Uhl, 2025). Diversification of financing has been shown to increase the resilience of MSMEs during periods of economic crisis, as it allows companies to adjust their funding structure to changing market conditions. Furthermore, the integration of traditional and digital finance also contributes to strengthening financial inclusion, particularly for MSMEs in remote areas and groups that were previously excluded from the formal banking system (Afrida et al., 2024; Leite et al., 2024). In this context, fintech acts as an entry point for MSMEs into the formal financial system, while banks provide more sustainable financing support as the scale and complexity of the business increases (Huseynova, 2024). These findings confirm that the integration of traditional finance and fintech is a key element in building an inclusive and sustainable financing ecosystem for MSMEs.

Mechanisms that Drive MSME Business Sustainability

The literature identifies access to liquidity as a fundamental mechanism linking external financing and fintech adoption to MSME business continuity. Adequate access to liquidity enables MSMEs to maintain business operations during periods of declining demand, supply chain disruptions, and macroeconomic uncertainty (Kaya, 2022; Neves et al., 2024). Bank financing plays an important role in providing relatively stable liquidity, while fintech offers flexibility and speed in meeting short-term working capital needs (Stefanelli et al., 2022; Wang et al., 2024). The combination of these two sources strengthens MSMEs' ability to manage cash flow and avoid liquidity pressures, which are often a trigger for business failure (Aristei & Angori, 2022; Ghulam et al., 2025). Furthermore, the literature shows that MSMEs with better access to liquidity have greater capacity to make strategic adjustments, such as operational restructuring or business model changes, without having to cease business activities (Legenzova et al., 2025). Thus, liquidity functions not only as a short-term buffer but also as a prerequisite for the long-term resilience and adaptability of MSMEs.

Beyond improving liquidity, the integration of traditional financing and fintech also contributes to reducing operational risks and increasing the efficiency and market reach of MSMEs. Diversifying financing sources helps MSMEs reduce credit risk and cash flow risk by avoiding over-reliance on a single financial institution (Bräuning et al., 2024; Gallagher et al., 2024). On the other hand, the digitization of financial services—including digital payments, automated cash management, and online financing platforms—improves operational efficiency by reducing transaction costs and speeding up financial processes (Afrida et al., 2024; Li & Tian, 2024). This efficiency allows MSMEs to allocate resources more productively and expand their market reach through integration with a broader digital ecosystem (Ichim & Vid, 2025). The literature also emphasizes that increased efficiency and better risk management strengthen the competitiveness of MSMEs and increase the probability of survival in an increasingly competitive and digitized business environment (Arcuri & Pisani, 2024). Overall, mechanisms for accessing liquidity, reducing operational risk, and increasing efficiency and market reach form the main pathways through which access to finance and fintech adoption jointly contribute to the sustainability and resilience of MSMEs.

DISCUSSION

The results of the literature synthesis confirm that the sustainability of MSMEs is increasingly determined by the configuration of an adaptive financing system, rather than by the existence of a single source of funding. Early literature predominantly positioned bank financing as the main determinant of MSME sustainability through the provision of liquidity, stability of credit relationships, and reduction of long-term funding uncertainty (Caballero et al., 2016; Irwin & Scott, 2010; Lee & Brown, 2017). Within this framework, access to formal credit is understood as a structural prerequisite for business continuity, while limited access is seen as a major obstacle that increases the risk of SME failure. However, findings from post-global crisis and COVID-19 pandemic literature indicate that this approach is no longer adequate to explain the dynamics of MSME sustainability in an increasingly volatile and digitized economic environment (Aristei & Angori, 2022; Kaya, 2022). This change in context has prompted a shift in academic focus from mere credit availability to the capacity of financing systems to respond to shocks, manage risk, and support sustainable business adaptation (Gallagher et al., 2024; Neves et al., 2024).

The literature review shows that the limitations of MSME financing are multidimensional and cannot be fully addressed through traditional banking mechanisms. Information asymmetry, collateral requirements, and procedural rigidity in banking continue to be structural barriers that weaken MSME access to formal credit, especially for small businesses, young businesses, and actors in the informal sector (Caballero et al., 2016; Rico et al., 2023). In this context, the role of fintech is significant because it offers more flexible, data-driven, and low-cost financing mechanisms. The literature shows that fintech lending and digital financial platforms can accelerate the financing process, expand service coverage, and reduce transaction costs that have burdened MSMEs (Sannajust et al., 2014; Stefanelli et al., 2022). These findings reinforce the argument that the sustainability of MSMEs depends not only on the amount of financing received, but also on the speed and ease of access to liquidity that is in line with the business operational cycle.

The use of alternative data-based credit scoring algorithms is one of fintech's main contributions to overcoming MSME financial exclusion. The literature shows that machine learning-based approaches enable more accurate risk assessment by utilizing digital transaction data, payment behavior, and business activities, thereby reducing dependence on formal financial reports that are often unavailable to MSMEs (Gogas et al., 2025; Zhang et al., 2015). This mechanism expands financing opportunities for unbanked and underbanked MSMEs, while supporting financial inclusion without excessively increasing credit risk (Simba et al., 2024). However, the literature also emphasizes that the effectiveness of fintech is highly dependent on user trust, data security, and regulatory certainty. Unclear legal frameworks and weak consumer protection have the potential to hinder fintech adoption and increase operational risks for MSMEs (Ayad et al., 2024; Palmieri & Ferilli, 2024). Therefore, fintech contributes optimally to the sustainability of MSMEs when integrated into a financial ecosystem with strong and credible governance. Contemporary literature also points to the understanding that the relationship between traditional banking and fintech is complementary, not substitutive. Banks continue to play an important role in providing long-term financing, building the credit reputation of MSMEs, and maintaining the stability of the financial system as a whole (Beltrame et al., 2023; Bouslama & Boubacar, 2023). Conversely, fintech offers short-term funding flexibility and rapid response to urgent cash needs, thereby complementing banks' limitations in responding to market dynamics (Serkbayeva et al., 2024). This discussion supports the finding that hybrid financing models—which combine bank credit, fintech lending, and alternative financing—are the most consistent configuration for improving MSME resilience, especially during periods of crisis and economic uncertainty (Bräuning et al., 2024).

Risk-sharing financing mechanisms have emerged as an important element in strengthening the sustainability of MSMEs. Credit guarantee schemes, cooperative banking, and Islamic financing have proven to be effective in reducing fixed debt pressure and distributing risk between MSMEs and fund providers, thereby increasing financial flexibility and reducing the probability of business failure (Gómez et al., 2016; Haruna et al., 2024; Shirazi et al., 2023). The literature shows that risk-sharing mechanisms become increasingly relevant in times of crisis, when income uncertainty and market volatility increase significantly. Thus, the integration of conventional financing, fintech, and risk-sharing instruments reflects the evolution of the MSME financing system towards a more resilient and inclusive structure. This discussion also clarifies the key mechanisms linking financial access and fintech adoption to SME survival. Flexible access to liquidity enables SMEs to maintain operational continuity, adjust business strategies, and absorb external shocks without having to cease business activities (Kaya, 2022; Legenzova et al., 2025). Operational risk reduction is achieved through diversification of financing sources and increased financial transparency, which helps MSMEs manage cash flow and financial obligations more effectively (Gallagher et al., 2024). The digitization of financial services also increases transaction efficiency and expands market reach through digital payment systems and online platforms, thereby strengthening the long-term productivity and competitiveness of MSMEs (Afrida et al., 2024; Li & Tian, 2024).

The findings of this discussion confirm that the sustainability of MSMEs can no longer be explained through a single financing approach. Business sustainability increasingly depends on the ability of MSMEs to take advantage of an integrated, adaptive, and responsive financing ecosystem to changes in the economic environment. By combining bank financing, fintech innovations, and risk-sharing mechanisms, MSMEs gain greater capacity to survive, adapt, and thrive amid ongoing economic uncertainty.

CONCLUSION

This study combines contemporary finance and entrepreneurship literature to analyze how financial access and fintech adoption jointly affect the survival of micro, small, and medium enterprises (MSMEs) amid increasing economic uncertainty. Findings indicate that external financing—particularly bank loans, working capital availability, and risk-sharing agreements—remains a key determinant of MSME survival. However, evidence also suggests that reliance on traditional bank financing alone is increasingly inadequate in an environment characterized by volatility, crisis exposure, and structural credit constraints. Limitations related to information asymmetry, collateral requirements, and procedural inflexibility constrain MSMEs' ability to respond effectively to sudden liquidity shocks. In this context, fintech-based financial solutions emerge as a critical complementary mechanism, improving the timeliness of liquidity access, reducing transaction costs, and improving credit assessment for underserved MSMEs. Rather than replacing bank financing, the adoption of fintech strengthens the financial adaptability of MSMEs and reduces short-term operational disruptions, thereby supporting business continuity.

This synthesis also shows that MSME resilience is most effectively supported through the integration of traditional financial institutions and digital financial platforms in a hybrid financing ecosystem. Bank-fintech complementarity allows MSMEs to combine long-term financial stability with short-term flexibility, resulting in more robust liquidity management and lower operational risk. Key mechanisms linking financial access and fintech adoption to SME survival include increased liquidity access, diversification of funding sources, enhanced risk management capacity, and efficiencies associated with digital financial services. This study contributes to the literature by reframing SME survival as a result of financial system integration rather than separate financing instruments. By consolidating fragmented empirical evidence, this article provides a coherent conceptual foundation for understanding how integrated financial architecture enhances the resilience and long-term survival of MSMEs. These insights offer important implications for policymakers and financial institutions seeking to design inclusive and adaptive financing frameworks capable of supporting MSMEs across a range of economic conditions.

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