



Research Article

Financial Inclusion and MSME finance gap in India: A traditional review

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Abstract

Even with continuous financial reforms and rapid changes in digital technologies, the financing gap is still a persistent issue for MSMEs in emerging economies. This traditional review combines conceptual, theoretical and empirical approaches to financial inclusion, with attention to the Indian MSME segment. Combining Information Asymmetry theory, Institutional theory, financing behaviour, and firm-level capability views, this review interrogates the mechanism of managing credit access. This work includes major debates and properly evaluates the efficacy of these digital infrastructures, such as India Stack and Account Aggregator Framework. A vital insight from this work is that while these digital infrastructures have transformed MSMEs' access to finance through cash flow-based underwriting, macro inclusion measures and metrics still mask the firm-level characteristics. Granular-level analysis is vital for capturing the diverse characteristics of firms, resolving the doubtful issues of the inclusion-stability nexus and strengthening the need for a firm-level analysis for financial inclusion studies.

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1. INTRODUCTION

Financial Inclusion is the availability, access and usage of formal financial products and services which are affordable and relatable, such as savings, payment and settlement systems, loans and insurance to individuals as well as businesses who were previously excluded from the traditional banking system (Arora, 2025; Mishra et al., 2024; Pandey et al., 2025). Early concepts on financial inclusion were predominantly focused on access to households, but recent works have shifted towards firm-level inclusion, which looks at the access to finance as imperative for their innovation, productivity, and economic sustainability (Ayyagari et al., 2016; Meressa, 2022). At the firm level, inclusion can be defined as the ability of the firm to access and properly use external sources of finance for its investment activities (Beck et al., 2008; Thathsarani et al., 2023). Small and Medium Enterprises (SMEs) are the drivers of economic development and pillars of national wealth (ADB, 2022; Bu et al., 2024). In the Indian context, the MSME sector is vital, contributing 28.12 crore in employment as of June 2025, approximately 30% contribution in GDP in the financial year 2022-23 (Hossain & Pathak, 2023; PIB, 2025; UN, 2025; Verma & Shome, 2025). Despite such good numbers, the majority of the Indian MSMEs are classified as micro units that often operate in the informal domain, facing various barriers to achieve scaling up their business (Verma & Shome, 2025). It is mentioned in the groundbreaking works that markets with asymmetry in information often suffer from credit rationing, where lenders are not able to assess borrowers' creditworthiness properly (Stiglitz & Weiss, 1981). This information deficit for MSMEs ends in a notable financing gap that is estimated at \$230 billion dollar, because formal institutions prefer collateral models for lending (IFC, 2019). This shortfall tends the firm to follow the pecking order theory, relying on its internal or informal sources of funds before seeking external finance, restricting its growth (Ahmad & Atmiesha, 2018; Meressa, 2022; Myers & Majluf, 1984). Addressing these constraints, India Stack has been developed, which is a digital public infrastructure (DPI), leveraging biometric-linked accounts (Aadhaar) and UPI, fostering inclusion (Arner et al., 2020a; D'Silva et al., 2019). Rise of the Account Aggregator framework targeting the information gap issue by enabling underwriting based on the cash flow of the MSMEs, allowing them to use digital financial patterns instead of the traditional roadmap (Ranjan et al., 2025). Need for a review that focuses on Indian MSMEs rises out of the fragmented literature across traditional barriers and rapid digital innovations (Sharma et al., 2024). Bridging these literature, this paper forms an idea about the major debates and measuring variables essential for achieving firm-level inclusion in Indian MSMEs (Thathsarani et al., 2023).

2. OBJECTIVES

The core aim of this paper is to provide a rather detailed and critical assessment of the literature that is concerned with the financial Inclusion of Indian MSMEs. For the same reason, the objectives mentioned below are guiding the study.

- A. To consolidate vital theoretical and conceptual literature of financial inclusion at the firm level.
- B. To examine the interaction between conventional financing issues and digital drivers.
- C. To critically review empirical findings on determinants influencing the financial access of Indian MSMEs.
- D. To examine broader evidence on socioeconomic impacts related to financial inclusion in emerging economies.
- E. To identify key gaps in the literature and propose a future research agenda.

3. METHODOLOGY

A. Review Design

This work uses a substantive narrative review design, a technique that is widely used for the summation and explanation of a rather complex and disintegrated body of literature (Cropanzano, 2009). A substantive literature review provides an organisational type framework for the present literature, which allows the researchers to link various works for the purpose of interconnecting them and conducting a theoretical evaluation. (Baumeister & Leary, 1997; Cropanzano, 2009). This design acts as a bridge between various fragmented articles, helping in presenting justifications and conclusions at a theoretical level that individual empirical studies may not address (Baumeister & Leary, 1997). Integrating these findings among various works, such a review can address questions in a much more robust manner (Snyder, 2019).

To ensure that this work remained focused only on the financial inclusion at a firm level, strict criteria for the selection of studies were applied. Studies that were providing conceptual or empirical proofs were selected, related to the financing constraints, focusing on MSMEs/SMEs. Works that explored drivers of financial performance and fintech adoptions within emerging economies were considered. Also, papers having well-established theoretical findings or works that include measurement of various dimensions of financial inclusion measurement such as access, usage or depth elements, were also considered. Excluded sources were those works that only focused on household-level access without mentioning implications for firm-level expansion and enterprise scaling activities. For maintaining scholarly rigour and empirical rigour, anecdotal sources and personal views were largely omitted.

B. Selection Criteria

This paper employs a traditional approach, using judgmental sampling to articulate a body of literature that relates to the Indian MSMEs' financial inclusion. Where systematic reviews try for a rather exhaustive summation of literature, this review narrows down to fit the purpose of the studies selected, helping to achieve a critical and evaluative appraisal of various theories and empirical debates (Dekker et al., 2022; Snyder, 2019). The selection process lies on the specified corpus of studies, chosen for the eligibility of providing descriptions and relevance to the specific synergy of traditional financing issues and digital

innovations (Dekker et al., 2022). The conceptual limits for the review were guided by a set of thematic descriptors instead of the rigid search criteria. Core themes include "financial inclusion", "MSME financing", "institutional constraints", "information gap", and "digital finance" (Snyder, 2019). Being consistent with the selection criteria of this paper, studies were favoured and included that provided proper theoretical contributions and empirical evidence for the finance gaps and the ability of digital infrastructures to provide desired results (Baumeister & Leary, 1997).

To ensure that the review has a rather comprehensive analysis that helps in bridging the gap between theory and practice, this review combines categories of authoritative sources. First, it includes empirical and conceptual papers that provide a theoretical foundation for the rationing of credit and adoption of technology. Second, it inculcates reports and publications from regulatory bodies and international institutions such as the World Bank and the IMF. These institutional works are viewed as vital works for understanding the macro-level view, helping in obtaining empirical findings on various financial indicators, rather than classifying them as grey literature (Dekker et al., 2022). This blended approach helps in providing a robust approach and perspective related to firm-level financial inclusion (Grant & Booth, 2009).

C. Multi-theoretical Framework

The primary theory anchored for conceptualizing MSME's financial constraints is the Information Asymmetry theory (Akerlof, 1970; Stiglitz & Weiss, 1981). In the credit market, a gap exists when borrowers have information about the project or reason for which credit is asked, such as actual risk and profit that is not easily calculated or found by the lender (Meressa, 2022; Myers & Majluf, 1984; Ranjan et al., 2025). This information gap is critical for young firms that are not yet mature and lack sufficient creditable history or verified financial records (Beck et al., 2006; Berger & Udell, 1998). Moreover, lender also faces issues such as adverse selection and moral hazard (Bu et al., 2024). To mitigate these risks, formal lenders pave their way to rationing of credit intentionally in order to keep the credit supply below the required demand instead of raising interest rates (Cowling et al., 2026; Dong & Men, 2014; EIB, 2014). Driven by informational constraints, MSMEs generally follows pecking order theory. This theory puts forward the argument that a firm will prefer internal financing or its own retained earnings over external debts and equity over external sources, avoiding the higher costs rising due to information asymmetry and dilution of ownership (Ahmad & Atniesha, 2018; Dong & Men, 2014; Meressa, 2022). To bridge these choices with the firm's capacity and readiness in the resource-based view theory. As per this theory, a firm's competitive advantage and performance depend on its ability to manage tangible and intangible resources strategically (Barney, 1991; Khin & Ho, 2019; Zahra, 2021). In financial inclusion, a firm's competency, such as financial literacy, attitude towards digital adoption, and competency of the managers are seen as a unique human competencies which

determine how properly and effectively a firm can leverage external mechanisms such as digital financial inclusion to achieve optimum performance (Ahinful et al., 2021; Pavlova & Gvetadze, 2023; Tandilino et al., 2025).

As the firm enters into the formal financial system, it is subject to logic with Institutional theory, which says that the behaviour of the organisation is moulded by the need to conform to attain legitimacy under regulatory settings (DiMaggio & Powell, 1983; Holmes Jr. et al., 2013). For mandated and regulatory compliance in India, pushing for the India Stack and Account Aggregator framework creates specific pressures. Acquired from the formal and regulatory standards, such as Pradhan Mantri Jan Dhan Yojana (PMJDY) or digital finance regulations that force MSMEs to inculcate formal ways to access government benefits. For peer-driven imitation-based pressures where MSMEs mimic the behaviour of those units that achieved success, which were adopting digital methods for growth, such as starting to use digital payments. Confirming with institutional fields, these pressurises these firms become similar to achieve legitimacy required for a formal lender and the usage of a digital platform. The final stage of the firm's cycle, which is the transition into digital ecosystems, is explained through the lens of micro-level adoption and systemic diffusion. The Technology Acceptance Model focuses on the behaviour of MSME owners, stating that perceived usefulness and perceived ease of use are the main factors for the adoption of digital finance for a particular firm (Venkatesh et al., 2003; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000). Opposite to that Diffusion of Innovation theory talks about how the digital services spread through MSMEs as a whole through systemic characteristics like relative benefits, such as faster services, and more compatibility with the present firm's practices (Pandey et al., 2025; Rogers, 1983). While the Technology Acceptance Model focuses on the entrepreneur's behavioural intentions, the Diffusion of Innovation theory shows the route by which such digital innovations decrease the risks of market failure (Arner et al., 2020b; Oreoluwa et al., 2025).

D. Major Debates

Impact of Financial Inclusion on Economic Development

Debates on the economic impact of financial inclusion is talked since Schumpeter's view, which discusses that financial intermediation is the core driver for innovation and growth of the enterprise (Sanga & Aziakpono, 2023a; Shah & Ali, 2022). This was later proved by the important works that identified a strong link between financial development and the nation's economic development (Hasham, 2022; Levine, 2005). Initial studies also provides with empirical evidence that a very large Small and Medium Enterprise (SME) sector is one of the characteristics of a developed nation, even though there is a slight causal connection to poverty reduction being unclear (Beck et al., 2005). Evidence from India showed that when focused on the role of state-led regulations and policies on lending, discovered that lending loans through formal channels actually increased sales and profit growth of such firms

(Banerjee & Duflo, 2014) even though large firms found it better to shift from market-based borrowing through subsidised loans (Zia, 2008). Contrary to these growth achievements by finance, various works highlighted the issues of bankruptcy in economies gave over importance to micro credit. Various works have argued that financial inclusion initiatives mostly prioritise the profitability of the formal financial institutions rather than the welfare and development of the underserved population (Mader, 2018), and these digital platforms may mirror the existing exclusionary practices rather than eliminating them (Bateman et al., 2019). Recent works have been shifted towards the changing potential of Digital Financial Inclusion. Various evidence shows that mobile money services are enhancing consumption and helping households elevate out of poverty (Suri & Jack, 2016). In India, the debates are revolving around to examine if digital channels actually fill the gap, and works such as (Johri et al., 2024) also suggests that DFI also supports innovation and increased performance for micro units while other works such as (Verma & Shome, 2025) shows that impact of such DFI is limited to the effectiveness is limited due to the continuous gaps in digital literacy and increased rates of inactive accounts. Literature has transitioned from a consensus on the advantages of credit to a more subtle capability-based view where the outcomes are mostly conditional on the interplay of the technology used and the stakeholder's financial literacy.

Interplay between stability and Inclusion

Rising tension between inclusion and stability can be traced back to the Information Asymmetry theory (Stiglitz & Weiss, 1981) which talks about lenders rationing their credit for the avoidance of adverse selection and moral hazard risks that arise from lending to firms having opaque credit status, such as small firms (Bu et al., 2024; Cowling et al., 2026; Meyer & Rowan, 1977; Sanga & Aziakpono, 2023b). This shows an existing trade-off between having stability in the financial system while excluding risky elements (Bains et al., 2022; Cihák et al., 2020; World Bank, 2019). Various empirical evidence also tried to bridge this gap had debates that inclusion and stability are complementary to each other (Hannig & Jansen, 2010). This blended view confronts that inclusion creates diversification in the depositors, which helps in reducing banks' dependence on volatile funding (Demirgüç-Kunt & Huizinga, 2010), and the exposures are the small individuals that are too small to create a systemic spillover effect (Cihák et al., 2020; Tomilova & Valenzuela, 2018). India's regulatory elements had views during this period that viewed that while financial inclusion is an enabler of growth, a fast increase in the number of credit demands can influence stability, as seen from the Andhra Pradesh Microfinance crisis (Khan, 2011).

This trade-off view got engagement after 2008, with studies finding that a rapid increase in credit often results in banking crises (Schularick & Taylor, 2012). Various evidence also proves that a higher level of financial inclusion is negatively correlated with stability if the elements of regulation and supervision are not robust enough for the level of financial

inclusion (Sahay et al., 2015). Correlation from cross countries also indicated that inclusion of firms does not pose much risk as they use the given credit effectively, but the expansion of individuals in financial inclusion can increase exposure to systemic risks (Cihak et al., 2016). Present literature also explores how fintech and big tech are altering such balances. Recent works also find that digital channels can enable real-time personalised risk assessment, enabling adjusted credit pricing that moderates the trade-offs (Arner et al., 2020b). Still, the rise of such big techs has also raised various concerns related to the dense operational structures and systemic failure risks (Adrian et al., 2021). Account aggregator framework in India is continuously tested as a response to the trade-off by shifting from collateral-backed lending to cash flow-based lending models (Ranjan et al., 2025).

Digital Divide

Digital exclusion debates are talked about in the Diffusion of Innovations theory, where it mentions that innovations will gradually spread from early adopters to the wider socioeconomic environment (Rogers, 2003). However, early works introduced the knowledge gap hypothesis and concepts such as gap widening consequences, mentioning that when a system changes, resource-rich stakeholders, being resource-rich, inculcate the innovations earlier and get the benefit over the average firms, creating inequalities instead of reducing them (Rogers, 2003). Studies from early 2010 majorly support the democratizing perspective, mentioning that digital money platforms reduce costs and also include the previously excluded population, bypassing the weak traditional infrastructure (Suri & Jack, 2016). India and other emerging markets also suggested that digital financial services can reduce this divide by maximising the advantage of such digital payment infrastructures to reach the underserved population (Afjal, 2023). Various literature also identifies another level of digital divide. Works have shown that access to such digital technologies does not results into efficient usage. For example, in India, even though having such a huge number of smartphone owners, a gender gap exists where female firm owners are facing cultural and capability barriers for using digital finance tech properly (Adegbite & Machethe, 2020; Grant & Booth, 2009). While digital platforms help in reducing the distance constraints, they may create asymmetric digital disengagement for small firms that lack financial literacy or verified data that is required from formal institutions (Sanga & Aziakpono, 2023b).

Recent works have shifted their attention to the algorithmic bias risks and ethical issues. It is widely discussed that AI-based credit scoring models are efficient; they may generate responses based on the historical data that may have been used for training those AIs, which may exclude a valid potential borrower (IIF, 2021a, 2021b). Adding to this, questions are being raised about the quality of inclusion, also arguing that without proper consumer protection, this digital financial inclusion can become exploitative by lending to the vulnerable

population with high-cost products that they can't afford to repay (Soursourian & Plaitakis, 2019).

Evolving Markets Architectures

Debates of this origin can be traced back to the Financial Intermediation theory, which viewed banks as the supervisors of the economy, that is responsible for assessing borrowers and managing liquidity risks. Fintech's emergence gave challenges to this paradigm, creating debates on whether these tech-based finance can displace traditional banking by directly linking savers and borrowers through P2P intermediation models (Adrian et al., 2021; Baumeister & Leary, 1997). Early works showed the relationship as competitive, where fintech firms may disrupt the traditional banking by covering profitable areas like payments and firm lending, leaving formal and traditional banks with low-margin products (Zetterli, 2021). In India, evidence supports this disruption, mentioning that non-bank entities providing payment services were capturing larger market share in huge volumes, causing the banks to retreat from some retail segments (BIS, 2018). Evidence also proved to be contradictory, supporting the collaborative hypothesis. Fintech often lacks deposits, and also the regulatory structure of banks, while banks suffer from a deficit of such technological support that fintech startups have, resulting in a structure led by partnership rather than displacement (Feyen et al., 2021). Indian evidence focuses on the Account Aggregator framework, which formalises this partnership, allowing fintech firms to act as agents feeding information to traditional financial institutions, maintaining a bank role as a vital element, while also allowing alternative methods for underwriting (Ranjan et al., 2025). This debate has recently shifted towards BigTech and its risks of market concentration. Unlike small fintech units, BigTech firms have data systems that can create difficult entry barriers, resulting in the market shifting from a competitive-based system to an oligopoly-type structure by such data giants. (Adrian et al., 2021). This has resulted in the triggering of new theories, whether mandates such as open banking and standardisation of API are enough for fair play or just merely helping to the dominance of such large aggregators (Feyen et al., 2021; Soursourian & Plaitakis, 2019).

Consumer Protection, Financial Capability and Risks in Inclusive Financial Systems

Dating back to the Capability approach (Sen, 1999), that debates that access to resources is not sufficient without using them with the required capability. For Financial Inclusion, this prompts that providing the underserved population with new digital channels without necessary safety nets can instead lead to exploitation rather than inclusion. (Kimmitt & Muñoz, 2017). Many works focus on the concept of democratisation of finance, discussing that fintech actually reduces the information gap and allows previously excluded populations into the formal finance and helps in building their credit history (Gomber et al., 2018). Account Aggregator framework from India shows specifically how fintech can allow many stakeholders to enter into the formal financial system at a very minimal cost (D'Silva

et al., 2019). Countering such benefits of financial inclusion, debates from the opposite side have also emerged where workers talk about how easy access to credit, while having low financial literacy, has led to over-indebtedness in emerging economies (Yue et al., 2022). Issues such as circulation and usage of unauthorised digital finance tools have raised issues about the recovery of loans and data privacy of customers in India, which has led to highlighting the regulatory innovations, too (Ali & Marisetty, 2023). In addition to that, the entry of BigTech in finance has introduced systemic risks, as a failure of a single large firm can disrupt the entire system (FSB, 2019). Recent debates have shifted from basic access of financial inclusion to Financial Resilience. Present studies argue that financial inclusion should focus on capacity building of various stakeholders for stability under economic downturns, rather than just increasing the frequency of transactions (Salignac et al., 2019). Digital financial literacy is now critically discussed among scholars as an initial criterion, mentioning that without such literacy, the digital divide can transition into another risk gap (Kass-Hanna et al., 2022; Morgan & Pontines, 2018).

E. Measurement of Variables

This part bridges the gaps between the conceptualisation of definitions and empirical evidence by mentioning how financial inclusion, performance of firms, and digital adoption are measured by works in the literature. Categorisation of variables into access, quality and usage provides a very structural metric for further empirical works, making sure that the research agenda is methodologically robust. It also identifies the transition from static indicators to changing, transaction-based measures that are more relevant in the present era.

Earlier, Financial Inclusion was measured through the proxies from the supply side, such as the number of bank branches and ATM penetration (Beck et al., 2005; Sarma, 2012). Recent works focus on multiple factors that also capture the demand side. The Global Findex Database has now become a vital and critical element for cross-country comparisons, which provides data on proxies such as account ownership, saving behaviour, and data on borrowing from formal institutions (Demirgüç-Kunt et al., 2018). Considering the firm-level analysis, the World Bank Global Enterprise Survey (WBES) provides ample useful metrics to be used as proxies for financial inclusion and credit constraints (Kuntchev et al., 2013).

For granular assessment of various dimensions of financial inclusion, the literature has created divisions for the variables. Access is measured by the physical or digital proximity, such as the number of mobile money agents or Point of Sale (POS) terminals available per 1000 km² (GPFI, 2016). For the element of usage of financial inclusion, it captures the depth of inclusion, which is measured through the number of transactions, the rate of dormant accounts, and usage of digital payments (which will be the % of GDP) (Cámara & Tuesta, 2017). For assessment of quality of financial inclusion, indicators such as cost of using such services, complaints from consumers and scores of financial literacy (Klapper et al., 2015).

The emergence of fintech has led to the transformation of digital services. Mobile Money accounts, usage of internet banking services, and adoption of digital payments are some of the key variables (Sahay et al., 2020). In the Indian specific context, some specific variables, such as India Stack is increasing their relevance, such as transactions of UPI, Aadhaar-based account penetration, and usage of the Account Aggregator framework for data sharing (D'Silva et al., 2019; Ranjan et al., 2025). For the critical assessment of the impact of financial inclusion, various studies are now linking these metrics of financial inclusion with the firm-level outcomes. Some dependent metrics, such as sales and employment growth, and return on assets (Ahinful et al., 2021; Ayyagari et al., 2016). Financial constraints are measured through the investment-cash flow sensitivity model (Fazzari & Hubbard, 1988) or through the direct survey about the criticality of finance being a constraint for business (Beck et al., 2006).

Limitations and Future Scope

The primary limitation of this review arises from its usage of a traditional archetype rather than a systematically searched protocol. In addition to this, this study is subject to selection bias as the literature was selected based on purpose and judgement rather than generated systematically with robust criteria, meaning those relevant works outside the specific requirement of this criteria are not included in the primary selection. It is to be noted that this limit is aligned with the review's objective, which was the strategy to design a judgement-based sample ensuring relevance to the specific theoretical connections of novel theories, such as Information Asymmetry theory with Digital Public Infrastructures. Absence of a systematic protocol limits the replication of this review compared to the strict review protocol, such as PRISMA or SPAR-4-SLR. While systematic reviews allows to replicate the studies for generalisation and minimisation of bias, they sometimes lack theoretical integration. Thus, this lack of rigid protocol mentions a purposeful strategy to have a rich theoretical base for this review. This perspective allowed for the blending of various complex, theoretical and practical perspectives, mixing Institutional theory with Technology Acceptance Models in a way that these rigid protocols would not have been able to address. A significant amount of work related to the digital drivers is mostly predicated on India Stack, specifically on the Account Aggregator framework and UPI. These digital infrastructures depend upon government-backed identification mechanisms that are particularly for the Indian context. Other than this, the findings from cash flow-based financing and reducing information asymmetry may not be able to be directly generalised to other emerging economies.

Addressing the limitation of selection bias, future research can adopt bibliometric analysis to map the structure of the sample study. It is encouraged to use a rather more comprehensive database, such as Scopus and Web of Science, etc., for performing citation and co-citation analysis. Such rigorous approaches will validate the clusters found in this paper and additionally provide a macro view of how fintech, financial

Inclusion and MSME are evolving. While this paper has considered conceptual debates and patterns, there is a critical need to measure these relationships. Future studies should use meta-analysis to collect empirical data from multiple studies. By using advanced statistics and econometrics, more rigorous hypotheses and objectives can be achieved, whether the benefits of inclusion are robust across all regulatory environments.

4. CONCLUSION

The synthesis of this literature shows that the financing gap is still a critical constraint for MSMEs in emerging markets, and the mechanisms that drive this exclusion are going through a rigorous transformation. Even though digital infrastructure, such as India Stack and the Account Aggregator framework, has transformed the environment to greater heights by allowing cash flow-based financing, it has not yet totally resolved the credit issues. Instead, the problem has now shifted from a simple issue of access to utilisation and capability, where the coexistence of banks and fintech companies is reducing constraints rather than displacing each other. Adding to that, while the adoption of inclusion infrastructure is robust, the uneven adoption of digital services by firms and the consistent digital divide continuously divide the outcomes for firms. Importantly, this review undertakes the crucial element of granular, firm-level analysis within India, as macro or systemic indicators are not sufficient to view the diverse characteristics of the MSME sector. Different firm sizes, readiness to adopt digital practices, financial literacy, and engagement with formal institutions gradually shape the effect of financial inclusion mechanisms, which means the supply side dynamics may achieve success for some elements while fail to reach the informal micro units that actually constitute the majority of the sector. Additionally, scholars should focus on inquiring about finer empirical measurements and context-based evaluation criteria rather than broad assessments that can remove the tangles of usage and quality, making sure that the next generation of financial inclusion reflects true diverse realities.

REFERENCES

1. Asian Development Bank. Financing small and medium-sized enterprises in Asia and the Pacific: Credit guarantee schemes. Manila: ADB; 2022. Available from: <https://www.adb.org/publications/financing-smes-credit-guarantee-schemes>
2. Adegbite OO, Machethe CL. Bridging the financial inclusion gender gap in smallholder agriculture in Nigeria: An untapped potential for sustainable development. World Dev. 2020;127:104755. doi:10.1016/j.worlddev.2019.104755
3. Adrian T, Boyarchenko N, Giannone D. Multimodality in macrofinancial dynamics. Int Econ Rev. 2021;62(2):861–886. doi:10.1111/iere.12501
4. Afjal M. Bridging the financial divide: A bibliometric analysis on the role of digital financial services within FinTech in enhancing financial inclusion and economic

- development. *Humanit Soc Sci Commun.* 2023;10(1):645. doi:10.1057/s41599-023-02086-y
5. Ahinful GS, Boakye JD, Bempah NDO. Determinants of SMEs' financial performance: Evidence from an emerging economy. *J Small Bus Entrep.* 2021;35(3):362–386. doi:10.1080/08276331.2021.1885247
 6. Ahmad NSM, Atniesha MRAA. The pecking order theory and start-up financing of SMEs: Evidence from Libya. *Financ Mark Inst Risks.* 2018;2(4):5–12. doi:10.21272/fmir.2(4).5-12.2018
 7. Akerlof GA. The market for “lemons”: Quality uncertainty and the market mechanism. *Q J Econ.* 1970;84(3):488–500.
 8. Ali A, Marisetty VB. Are FinTech lending apps harmful? Evidence from user experience in the Indian market. *Br Account Rev.* 2023;101269. doi:10.1016/j.bar.2023.101269
 9. Arner DW, Buckley RP, Zetzsche DA, Veidt R. Sustainability, FinTech and financial inclusion. *Eur Bus Organ Law Rev.* 2020;21(1):7–35. doi:10.1007/s40804-020-00183-y
 10. Arora R. Fintech and the evolution in financial inclusion. In: Kararach G, Moreira EP, Murinde V, editors. *The Palgrave handbook of development finance.* Cham: Springer; 2025. p. 355–369. doi:10.1007/978-3-031-77422-5_18
 11. Ayyagari M, Juarros P, Martinez Peria MS, Singh S. Access to finance and job growth: Firm-level evidence across developing countries. *World Bank Policy Res Work Pap.* 2016.
 12. Bains P, Sugimoto N, Wilson C. BigTech in financial services: Regulatory approaches and architecture. *Fintech Notes.* 2022;2022(002). doi:10.5089/9781557756756.063
 13. Banerjee AV, Duflo E. Do firms want to borrow more? Testing credit constraints using a directed lending program. *Rev Econ Stud.* 2014;81(2):572–607. doi:10.1093/restud/rdt046
 14. Barney J. Firm resources and sustained competitive advantage. *J Manage.* 1991;17(1):99–120.
 15. Bateman M, Duvendack M, Loubere N. Is fintech the new panacea for poverty alleviation? *Rev Afr Polit Econ.* 2019;46(161):480–495.
 16. Beck T, Demirguc-Kunt A, Laeven L, Levine R. Finance, firm size, and growth. *J Money Credit Bank.* 2008;40(7):1379–1405.
 17. Beck T, Demirguc-Kunt A, Levine R. SMEs, growth, and poverty: Cross-country evidence. *J Econ Growth.* 2005;10:199–229.
 18. Berger AN, Udell GF. The economics of small business finance. *J Bank Financ.* 1998;22:613–673.
 19. Bank for International Settlements. *BIS annual economic report 2018.* Basel: BIS; 2018.
 20. Bu Y, Du X, Wang Y, Liu S, Tang M, Li H. Digital inclusive finance: A lever for SME financing? *Int Rev Financ Anal.* 2024;93:103115.
 21. Cámara N, Tuesta D. Measuring financial inclusion: A multidimensional index. *BIS;* 2017.
 22. Cihák M, Mare DS, Melecký M. Financial inclusion and stability. *World Bank Res Obs.* 2021;36(2):197–233.
 23. Cowling M, Liu W, Yang H, Wilson N. Loan size concentration and SME access to finance. *J Small Bus Manag.* 2026;64(1):193–224.
 24. DiMaggio PJ, Powell WW. The iron cage revisited. *Am Sociol Rev.* 1983;48(2):147–160.
 25. Dong Y, Men C. SME financing in emerging markets. *Emerg Mark Financ Trade.* 2014;50(1):120–149.
 26. D'Silva D, Filkova Z, Packer F, Tiwari S. The design of digital financial infrastructure. *BIS Pap.* 2019.
 27. Fazzari S, Hubbard RG. Finance constraints and corporate investment. *Brookings Pap Econ Act.* 1988;1988(1).
 28. Feyen E, Frost J, Gambacorta L, Natarajan H, Saal M. Fintech and the digital transformation of financial services. *World Bank;* 2021.
 29. Gomber P, Kauffman RJ, Parker C, Weber BW. On the FinTech revolution. *J Manage Inf Syst.* 2018;35(1):220–265.
 30. Kass-Hanna J, Lyons AC, Liu F. Building financial resilience. *Emerg Mark Rev.* 2022;51:100846.
 31. Khan HR. Financial inclusion and financial stability. *BIS Review.* 2011.
 32. Khin S, Ho TC. Digital capability and organizational performance. *Int J Innov Sci.* 2019;11(2):177–195.
 33. Klapper L, Lusardi A, Oudheusden P van. Financial literacy around the world. *GFLEC;* 2015.
 34. Levine R. Finance and growth. In: *Handbook of economic growth.* Vol 1. Elsevier; 2005. p. 865–934.
 35. Mader P. Contesting financial inclusion. *Dev Change.* 2018;49(2):461–483.
 36. Morgan PJ, Pontines V. Financial stability and financial inclusion. *Singapore Econ Rev.* 2018;63(1):111–124.
 37. Myers SC, Majluf NS. Corporate financing and investment decisions. *J Financ Econ.* 1984;13(2):187–221.
 38. Rogers EM. *Diffusion of innovations.* 5th ed. New York: Free Press; 2003.
 39. Sahay R, Allmen UE von, Lahreche A, et al. The promise of fintech. *IMF;* 2020.
 40. Sarma M. *Index of financial inclusion.* Berlin: HTW Berlin; 2012.
 41. Schularick M, Taylor AM. Credit booms gone bust. *Am Econ Rev.* 2012;102(2):1029–1061.
 42. Sen A. *Development as freedom.* Oxford: Oxford University Press; 1999.
 43. Sharma SK, Ilavarasan PV, Karanasios S. Small businesses and FinTech. *Electron Commer Res.* 2024;24(1):535–575.
 44. Snyder H. Literature review as a research methodology. *J Bus Res.* 2019;104:333–339.
 45. Stiglitz JE, Weiss A. Credit rationing in markets with imperfect information. *Am Econ Rev.* 1981;71(3):393–410.

46. Suri T, Jack W. The long-run poverty and gender impacts of mobile money. *Science*. 2016;354(6317):1288–1292.
47. Venkatesh V, Bala H. Technology Acceptance Model 3. *Decis Sci*. 2008;39(2):273–315.
48. Venkatesh V, Davis FD. A theoretical extension of TAM. *Manage Sci*. 2000;46(2):186–204.
49. Venkatesh V, Morris MG, Davis GB, Davis FD. User acceptance of information technology. *MIS Q*. 2003;27(3):425–478.
50. Yue P, Korkmaz AG, Yin Z, Zhou H. The rise of digital finance. *Financ Res Lett*. 2022;47:102604.

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