

FinTech and MSMEs Drive Global Economic Transformation: ASEAN Perspectives

Abstract:

Amid the accelerating digital transformation of global financial services, financial technology (FinTech) has emerged as a critical enabler of inclusive finance, particularly for micro, small, and medium-sized enterprises (MSMEs) in the ASEAN region. This study presents a comprehensive and systematic literature review (SLR) of 83 peer-reviewed articles published between 2017 and 2025, examining the role of FinTech in enhancing MSME performance. Guided by the PRISMA protocol and structured through the Theory-Context-Characteristics-Methodology (TCCM) framework, the review synthesizes theoretical models, geographic and industrial contexts, adoption drivers and barriers, and methodological approaches. The findings reveal an exponential growth in research following the COVID-19 pandemic, with dominant themes including financial inclusion, Sharia-compliant innovation, digital literacy challenges, and access to alternative financing. Indonesia accounted for the majority of studies, underscoring geographic imbalances and limiting cross-country generalizability. The review identifies significant gaps in theoretical integration, methodological diversity, and ecosystem-level analysis. It concludes by proposing a future research agenda that emphasizes multi-level theoretical synthesis, inclusive FinTech design, longitudinal and experimental methods, and a broader regional representation. This study contributes a foundational roadmap for advancing scholarship and policymaking at the intersection of FinTech and MSME development in ASEAN economies.

Keywords: FinTech, MSMEs, ASEAN, Financial Inclusion, Digital Transformation

Track: Financial Management, Entrepreneurship

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1. Introduction

FinTech, or financial technology, has revolutionized global financial markets by introducing innovative solutions and business models that challenge traditional financial service providers. It is often seen as a disruptive force, leveraging new technologies to offer competitive services (Clarke, 2019). Simultaneously, small and medium enterprises (MSMEs) play a crucial role in economic and social development, particularly in developing and emerging markets (Savlovski & Robu, 2011). MSMEs are vital for nation-building, contributing to job creation, reducing income inequality, and alleviating poverty, aligning with several Sustainable Development Goals (SDGs) (OECD, 2017). Their impact would be even greater if informal MSMEs are included in assessments. Together, FinTech and MSMEs represent transformative forces in both financial innovation and sustainable economic growth.

Small and Medium-sized Enterprises (MSMEs) are pivotal to the economies of ASEAN countries, constituting over 99% of firms and serving as key drivers of employment, inclusive growth, and technological innovation (OECD & ASEAN, 2024). In 2022, Thailand had approximately 3.2 million micro, small, and medium-sized enterprises (MMSMEs), while Indonesia reported over 65.46 million MMSMEs, employing more than 119.5 million people (Statista, 2022). MSMEs also play a significant role in advancing green economies and have demonstrated resilience, particularly during the COVID-19 pandemic, by embracing digital transformation, e-commerce, and digital payments. Improved access to finance, fueled by the growth of fintech solutions, has further strengthened their ability to compete internationally (ASEAN, 2022).

Despite their substantial economic contributions, MSMEs have historically been underserved by traditional banks due to limitations in assessing their financial health. Post-global financial crisis regulations aimed at bolstering bank resilience further restricted funding flows to MSMEs (Acharya et al., 2018). FinTech firms have emerged to fill this gap, offering alternative financing solutions and potentially incentivizing banks to enhance their SME services through competition and technological innovation, enabling better risk assessment and lending practices (Havrylchyk et al., 2017; Mills, 2018). Against this backdrop, this study explores the FinTech phenomenon in the context of MSMEs in ASEAN countries, employing the TCCM framework to analyze literature from Scopus and Web of Science (WoS). It provides a comprehensive overview of current research on FinTech, with a specific focus on MSMEs in the ASEAN region.

The study addresses the following research questions (RQs):

RQ1: What are the impacts of Fintech on MSMEs within the ASEAN context?

RQ2: What are the key themes or areas of focus in the existing literature on FinTech and MSMEs?

RQ3: What are the unexplored research areas that could provide future research directions?

This review offers significant theoretical and practical implications, contributing to literature in three major ways. First, it provides a pioneering overview of FinTech business models and a comprehensive synthesis of state-of-the-art research on FinTech's role in MSMEs growth, enhancing our understanding of this relationship. Second, it introduces an integrative framework that maps the connections between FinTech and MSMEs revolution, emphasizing accessibility, availability and adoption. Third, it identifies future research directions, offering valuable insights for scholars and practitioners in the field of financial decision-making.

2. Background and theoretical foundation

2.1 FinTech and MSMEs in ASEAN

The growth of digital technology has significantly enhanced production processes and work efficiency, becoming a cornerstone of modern information and communication. Its adoption is strongly linked to global financial growth and is essential for future global trade connections (Agarwal and Chua, 2020; Sugiarto, 2020). The COVID-19 pandemic highlighted the need for robust digital strategies to support MSMEs in achieving sustainable economic recovery (Gudovskaya and Linin, 2021; Agyekum et al., 2021). FinTech plays a central role in the fourth industrial revolution, integrating advanced technologies into business processes and transforming operations.

Pizzi et al. (2021) introduced the ReSOLVE model, which examines how FinTech drives MSMEs toward sustainable business models and circular economy practices, underscoring its transformative potential in Industry 4.0. Huong et al. (2021) developed the ASEAN FinTech Adoption Index (AFAI) to assess FinTech adoption across ASEAN sub-sectors. The findings revealed that Brunei, Cambodia, Myanmar, and Laos are in the early stages of FinTech adoption, with relatively low rates. In contrast, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam exhibited growing FinTech adoption. Singapore, the financial hub of Southeast Asia, led with a high adoption rate, accounting for nearly 50% of FinTech deals in 2021, totaling \$1.6 billion, including six mega-rounds worth \$972 million. Indonesia, leveraging its large population, raised \$904 million, while Vietnam secured \$375 million (Reuters, 2021).

FinTech has the potential to significantly enhance SME performance by expanding financing opportunities and reducing costs. It addresses information asymmetry between banks and MSMEs, a major barrier to traditional lending, by leveraging advanced technologies like big data and cloud computing. These tools improve financial institutions' ability to collect and process information, making it easier to assess SME creditworthiness (Sedunov, 2017). For instance, platforms like Ant Financial use non-traditional data to aid loan approvals, increasing banks' willingness to lend and broadening financing access for MSMEs (Chen et al., 2019; Wang et al., 2021). Additionally, FinTech mitigates the high default risks associated with SME lending, which often lead to higher interest rates. By dynamically monitoring SME operations and implementing early warning systems, FinTech reduces the likelihood of defaults and lowers risk premiums (Zheng et al., 2022). Furthermore, it fosters competition among banks by introducing innovative financial products and services, driving down borrowing costs for MSMEs (Gozman et al., 2018). Collectively, these advancements enable MSMEs to secure financing more efficiently and affordably, ultimately boosting their performance.

2.2 Technology Acceptance Theories

The diffusion of technology is influenced by a series of choices and prospects, with theoretical frameworks like the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) laying the groundwork for understanding user behavior. These theories evolve into the Technology Acceptance Model (TAM), which emphasizes rational decision-making by end-users based on perceived ease of use, perceived usefulness, and attitudes toward technology (Davis et al., 1989). TAM, one of the most widely cited models in technology acceptance, highlights how ease-of-use components can drive FinTech adoption in MSMEs (Ganciu and Niculescu, 2019; Senanu and Anning-Dorson, 2022).

TPB further refines this understanding by focusing on individual control over behavioral constraints, suggesting that MSMEs adopting FinTech can expand their customer base and boost future sales (Ajzen, 1991). Similarly, the Technological-Organizational-Environmental (TOE) framework by DePietro et al. (1990) provides a robust basis for assessing technology diffusion in enterprises, particularly in evaluating digital readiness and innovation adoption in MSMEs (Sari and Santoso, 2020; Aboelmaged, 2014). Rogers' (1962) Diffusion of Innovation Theory complements these models by explaining how innovation adoption occurs gradually within a society, driven by the perceived relative advantages and cost-benefit analysis. In the current competitive economic landscape, MSMEs are driven to adopt technological advancements and innovations to maintain strategic resilience and stay aligned with evolving industrial developments (Muganyi et al., 2022; Poorangi et al., 2013). Collectively, these theories provide a comprehensive foundation for understanding and promoting FinTech adoption in MSMEs.

3. Methodology

To systematically synthesize the existing body of literature on FinTech adoption among MSMEs in the ASEAN region, this study employed a Systematic Literature Review (SLR) guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol (Moher et al., 2010). The SLR process involved systematically extracting documents from selected databases by defining precise search terms and establishing clear inclusion and exclusion criteria. This approach significantly reduces bias in literature selection (Tranfield et al., 2003). The process was further complemented by the Theory-Context-Characteristics-Methodology (TCCM) framework (Paul & Rosado-Serrano, 2019) to examine the structure of FinTech research in MSMEs, identifying key research clusters, among other insights.

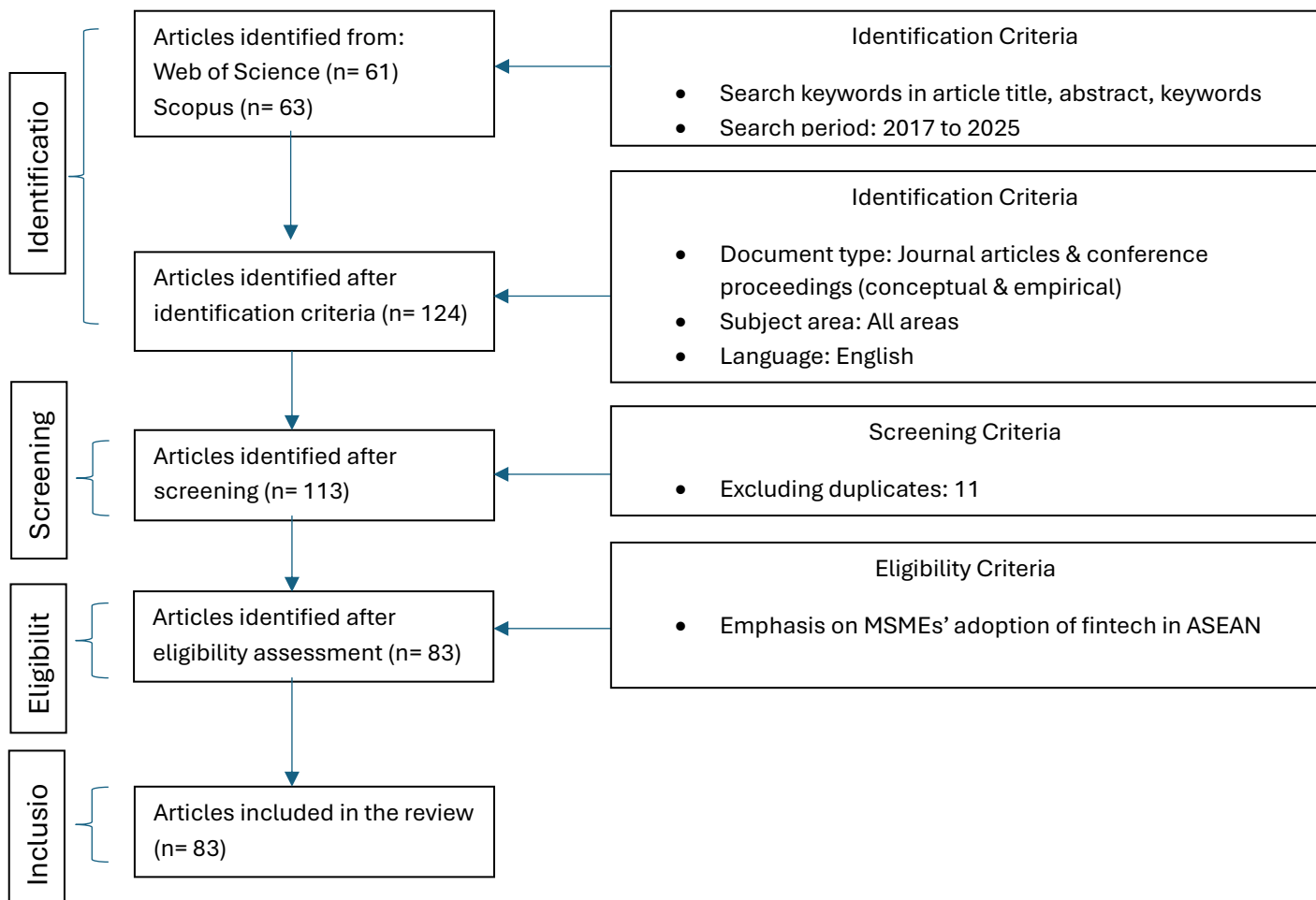
In the identification phase, journal articles of conceptual and empirical nature were compiled from two reputable and widely recognized academic databases: Web of Science (WoS) and Scopus. These databases were selected due to their extensive coverage of peer-reviewed journals in business, technology, and social sciences (Paul et al., 2021). The search strategy utilized Boolean operators to combine keywords capturing the intersection of FinTech, MSMEs, and the ASEAN context. The search string was as follows: "FinTech" AND "MSMEs" AND ("ASEAN" OR "Indonesia" OR "Malaysia" OR "Thailand" OR "Vietnam" OR "Philippines" OR "Singapore" OR "Cambodia" OR "Laos" OR "Myanmar" OR "Brunei" OR "Timor-Leste"). The entire review process was documented using the PRISMA flow diagram (Figure 1), ensuring transparency in article inclusion and exclusion.

The keyword search was conducted within the title, abstract, and keyword fields of journal articles to ensure thematic relevance. This SLR included all studies related to FinTech and MSMEs within the ASEAN region, without imposing a specific starting year, although most of the identified publications fell within the 2017–2025 period capturing developments in the post-digital transformation era and the effects of the COVID-19 pandemic. To maintain consistency and accessibility, only articles published in English were considered. This initial identification process yielded a total of 124 relevant articles.

The screening and eligibility process involved a structured protocol to refine the initial pool of articles. After removing 11 duplicate records, 113 unique articles remained. Title and abstract screening eliminated studies that did not focus on FinTech adoption among MSMEs

in ASEAN countries, emphasizing only those with conceptual clarity and regional relevance. Full-text eligibility assessment was guided by three criteria: contextual relevance to ASEAN MSMEs, methodological clarity (quantitative, qualitative, or mixed methods), and theoretical contribution. This process resulted in a final sample of 83 articles for analysis. Figure 1 summarizes the PRISMA flow diagram of the research phases.

Figure 1: Flow diagram of SLR using the PRISMA protocol



Source: Authors own work

4. Results

4.1 Descriptive Analysis

This section provides a detailed bibliometric analysis of the 83 peer-reviewed publications identified through systematic literature review. By mapping the publication outlets and temporal trends, this review captures the evolution and growing scholarly engagement with FinTech adoption among SMEs in ASEAN.

4.1.1 Publication Outlets

The selected articles span 48 distinct journals and conference proceedings, reflecting a multidisciplinary intersection of research in financial technology, SME development, and Islamic finance. Notable journal concentrations suggest a thematic clustering in three core domains: (1) Islamic finance and Sharia-compliant financial practices; (2) technological innovation and digital transformation; and (3) SME-centric policy and management.

Leading scholarly outlets include *Journal of Islamic Accounting and Business Research* (5 articles) emphasizing governance and ethical compliance in Islamic FinTech adoption. *Quality - Access to Success* (4 articles), with a focus on quality assurance in digital transformation among SMEs. *Journal of Islamic Marketing* (3 articles), where studies addressed consumer trust and value co-creation in digital Islamic finance. *Banks and Bank Systems* and *Qualitative Research in Financial Markets* (2 articles each), contributed work on banking innovation and investor perceptions.

15% of the articles were published in a mix of interdisciplinary journals, such as *Economic Analysis and Policy*, *Journal of Distribution Science*, and *Cogent Business and Management*. These papers typically explored themes such as digital payment adoption, SME financing challenges, and FinTech regulatory frameworks. Importantly, 32% of the studies were disseminated through conference proceedings, highlighting the emergent and dynamic nature of this research area. These conference publications often represent cutting-edge insights and pilot studies in underexplored ASEAN contexts, signalling both academic and practitioner interest in the topic.

4.1.2 Publication trends

Temporal analysis of the publications reveals a clear inflection point around the year 2020, aligning with the onset of the COVID-19 pandemic and the concomitant acceleration of digital transformation efforts across ASEAN economies. Three distinct phases can be discerned:

- **2017–2019 (8 articles; 9.6%):** The nascent phase, during which publications were scarce and largely conceptual or normative in nature. Dominant themes included regulatory perspectives on P2P lending and early discussions on financial inclusion.
- **2020–2021 (12 articles; 14.5%):** The transitional phase marked by initial empirical engagements, often employing qualitative or mixed methods. The pandemic's impact on SME resilience and the expedited need for contactless financial services featured prominently.
- **2022–2025 (63 articles; 75.9%):** A period of exponential scholarly activity. Approximately 70% of studies during this phase employed quantitative methods, particularly cross-sectional surveys aimed at uncovering adoption drivers such as digital financial literacy, perceived ease of use, and religious compliance factors. The

surge in academic output coincides with increased governmental and institutional support for digital finance ecosystems in the region.

Publication peaked in 2023 (18 articles; 21.7%) and reached its highest level in 2024 (22 articles; 26.5%), illustrating an intensified focus among scholars and policymakers on FinTech as a vehicle for post-pandemic economic recovery and inclusive finance.

4.2 TCCM framework-based review of studies

To systematically evaluate the intellectual structure of FinTech adoption research in ASEAN SMEs, this study adopts the TCCM framework (Theory, Context, Characteristics, Method), which facilitates a granular classification and identification of knowledge gaps.

4.2.1 Theories

Technology Adoption Theories emerged as the most frequently employed theoretical lens, comprising 38.6% of the studies with explicit theoretical grounding. Among these, the Technology Acceptance Model (TAM) was the most prevalent, featuring in eight studies primarily focused on evaluating the determinants of mobile wallet and QR payment adoption among micro and small enterprises. The Unified Theory of Acceptance and Use of Technology (UTAUT) was applied in four studies, particularly in examining user behaviour toward Islamic crowdfunding platforms. Behavioural Theories accounted for 22.9% of the theorized studies. The Theory of Planned Behaviour (TPB) was employed in five studies to explore SME owners' behavioural intentions in adopting FinTech tools, while Signalling Theory, used in three studies, was prominent in the context of Islamic FinTech, where Sharia compliance was leveraged to enhance investor trust. Ecosystem-based theories constituted 15.7% of the sample, with frameworks such as Technology–Organization–Environment (TOE) and Competition-Fragility Theory applied to examine environmental factors and systemic risks in digital lending ecosystems, respectively. However, only 6% of the studies demonstrated theoretical integration through hybrid models (e.g., TAM combined with institutional theory), highlighting a significant gap in the literature. This limited application of multi-level frameworks underscores the need for more holistic theorizing to capture the complex, interdependent dynamics inherent in FinTech adoption among SMEs in the ASEAN context.

4.2.2 Contexts

Geographic distribution revealed a strong concentration in Indonesia (68 studies; 81.9%), underscoring its status as the ASEAN region's most active FinTech hub. This overrepresentation, while reflective of market realities, raises questions about generalizability to other ASEAN contexts. Malaysia (10 studies; 12.0%) focused primarily on Islamic FinTech models, often situated in urban SME contexts. Vietnam, Thailand, and Singapore collectively accounted for only 5 studies (6.1%), highlighting a significant underrepresentation of these rapidly digitizing economies.

Industry context was heavily weighted toward SMEs and microenterprises (91.6%), with sub-sectoral analyses as follows: *Islamic Finance*-related SMEs were discussed in 29 studies (34.9%), reflecting the growing relevance of Sharia-compliant digital financial services. *Agricultural and Creative Industries* (8 studies; 9.6%) emerged as niche areas, often cited as needing targeted FinTech solutions due to their informal nature and limited collateral base.

The transaction types within the reviewed literature reveals a distinct divergence in FinTech applications among ASEAN SMEs, aligning with two primary functional domains: financing

and payments. Financing-focused studies comprised a significant portion of the corpus, with 32 articles (38.6%) examining peer-to-peer (P2P) lending platforms and 12 studies (14.5%) addressing Islamic crowdfunding mechanisms. These forms of alternative finance are especially critical in addressing credit access gaps faced by underserved SMEs, particularly those excluded from conventional banking systems. On the other hand, 18 studies (21.7%) explored the adoption of digital payment solutions, such as mobile e-wallets and QR code-based systems, which are instrumental in enhancing transactional efficiency and supporting business digitalization. This dual emphasis reflects how FinTech simultaneously serves as a catalyst for working capital access and a tool for operational streamlining, positioning it as a multidimensional enabler of SME growth and resilience in digitally transitioning economies.

4.2.3 Characteristics

FinTech adoption among ASEAN SMEs was shaped by a dynamic interplay of structural, behavioural, and technological factors, resulting in both enabling drivers and persistent barriers. A significant driver identified across 22.9% of the studies was crisis-induced necessity, particularly during the COVID-19 pandemic, where FinTech adoption was often characterized as a “forced adoption” response to movement restrictions and disrupted banking access. Financial inclusion and literacy also featured prominently as motivators, with 34.9% and 20.5% of studies respectively highlighting FinTech’s role in democratizing financial services for previously underserved or unbanked populations. On the other hand, adoption was frequently hindered by digital illiteracy and insufficient technological readiness, especially among rural and microenterprises, as noted in 30.1% of the studies.

Religious and ethical concerns, particularly regarding ambiguity around Sharia compliance, posed additional adoption barriers in Muslim-majority contexts, affecting 9.6% of the studies. In terms of outcomes, the literature consistently reported positive impacts on SME performance, cited in 39.8% of studies that measured through indicators such as revenue growth, expanded market access, and increased customer acquisition. Furthermore, 28.9% of studies reported enhanced credit access through FinTech channels, often evidenced by reduced loan rejection rates and faster approval processes. Notably, Islamic FinTech studies emphasized ethical governance and social outcomes, including innovations like waqf-based crowdfunding, whereas conventional FinTech research was more focused on enhancing operational efficiency and scalability, revealing a meaningful divergence in priorities and value propositions across different FinTech models.

4.2.4 Models

The methodological landscape of this research was predominantly quantitative, with 65.1% of the studies (54 articles) employing survey-based designs, typically involving a median sample size of around 300 respondents, and some also incorporated firm-level secondary data obtained from banks or FinTech providers. Qualitative approaches accounted for 25.3% of the studies (21 articles), including case studies, ethnographic methods, and in-depth interviews that provided rich contextual understanding, albeit with limited generalizability. Mixed-methods designs were relatively underutilized, appearing in only 9.6% of the studies (8 articles), where surveys were often integrated with comparative regional analyses to generate more nuanced insights. Despite this growing methodological diversity, the field remains constrained by the absence of large-scale datasets ($n > 10,000$) and a complete lack of longitudinal studies, limiting the ability to draw causal inferences or track the evolution of FinTech adoption behaviors over time.

5. Discussions

This section interprets the key findings and connects them to broader theoretical, contextual, and practical considerations. The discussion emphasizes how FinTech adoption research in ASEAN MSMEs is evolving, where the field currently stands, and what critical insights emerge from the synthesis. It reflects on the implications of publication trends, theoretical applications, contextual distributions, and methodological orientations, offering a multidimensional understanding of the domain's maturity and its unresolved gaps.

5.1 Theoretical Implications

The results underscore a notable theoretical fragmentation within the literature, with 24 discrete frameworks applied across 83 studies but limited evidence of theoretical integration. The dominance of individual-level models such as the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) suggests an overemphasis on micro-level determinants of technology adoption, often to the neglect of meso- and macro-level factors such as institutional readiness, regulatory alignment, and socio-cultural embeddedness. While these frameworks have yielded valuable insights into factors like perceived ease of use, perceived usefulness, and social influence, they risk oversimplifying the complex, multilayered dynamics of FinTech ecosystems.

This siloed approach limits explanatory power in contexts like ASEAN, where FinTech diffusion is not solely a function of individual perceptions but also heavily contingent upon market maturity, religious norms (e.g., Sharia compliance), and government policy. Notably, only 6% of the reviewed studies employed multi-level or hybrid theoretical frameworks. There is thus a strong case for advancing integrated models that combine behavioural, institutional, and technological constructs such as a TAM-TOE-Institutional Triad to better account for the multi-dimensional nature of FinTech adoption.

The relative underutilization of ecosystem-level frameworks such as the Technology-Organization-Environment (TOE) model and Competition-Fragility Theory suggests that broader institutional, organizational, and technological contexts remain insufficiently explored, points to an under-theorization of platform dynamics, network effects, and systemic risk, particularly pertinent for peer-to-peer lending and crowdfunding ecosystems. Future theorizing must move beyond individual utility maximization and toward a systems-based understanding of FinTech innovation and adoption.

5.2 Contextual Contributions

The geographic concentration of studies in Indonesia (81.9%) significantly skews the empirical base of the field. While this reflects Indonesia's status as the region's largest FinTech and MSME market particularly in Islamic finance, it limits the generalizability of findings to other ASEAN countries with markedly different regulatory structures, financial infrastructures, and digital readiness levels. For instance, countries such as Vietnam, Cambodia, and the Philippines, which are experiencing rapid digitalization but remain underrepresented in the literature, warrant deeper exploration. The lack of comparative regional studies prevents meaningful insights into how national contexts shape FinTech adoption trajectories, policy efficacy, and innovation diffusion.

Additionally, while studies on Islamic finance comprise more than one-third of the sample, many limit their focus to compliance mechanics rather than exploring how religious values shape user trust, investor signalling, or ethical product design. There is significant potential for more nuanced studies that engage with Islamic finance as a cultural institution rather than merely a regulatory constraint. Industry-wise, most studies focus on general MSME contexts or Islamic finance-related businesses, with limited attention paid to high-impact sectors such as agriculture, creative industries, and women-led enterprises. These underexplored segments may exhibit unique barriers or adoption logics, shaped by infrastructure limitations, gender norms, or sector-specific financing needs.

The bifurcation of FinTech transaction types such as financing (e.g., P2P lending, Islamic crowdfunding) and payments (e.g., e-wallets, QR-based systems) reveals two primary use cases: addressing capital access gaps and enhancing operational efficiency. While this duality is well-captured in the existing literature, few studies interrogate how these functions may converge within integrated platforms or evolve under different regulatory and cultural pressures. A deeper contextual analysis of how SMEs choose between financing and payment applications could provide more actionable insights for platform design and public policy.

5.3 Practical and Managerial Implications

The results also point to several practical and managerial insights. First, digital illiteracy remains the most consistent barrier to FinTech adoption, cited in 30.1% of studies. This finding reinforces the need for tailored capacity-building programs, especially for micro and rural SMEs, to build not only digital skills but also confidence and trust in digital financial ecosystems. Training initiatives should go beyond basic onboarding and address long-term digital capability, incorporating hands-on workshops, peer learning, and support structures in local languages and culturally relevant formats.

Second, the role of FinTech in promoting financial inclusion, highlighted in 34.9% of studies must be reinforced through co-designed solutions that cater to specific user segments. Platforms should simplify user interfaces, offer vernacular support, and integrate trust-enhancing features, such as community-based verification or religious compliance disclosures. The importance of Sharia compliance in Islamic FinTech reported as a barrier in nearly 10% of studies, further underscores the need for ethical design and governance mechanisms that align with users' socio-religious values.

Third, the positive impact of FinTech adoption on SME performance and credit access is clear. More than 39.8% of the studies reported enhanced business performance outcomes such as revenue growth, market expansion, and operational efficiency, while 28.9% documented improved access to financing through faster approvals or reduced rejection rates. However, these benefits are unevenly distributed and contingent on infrastructural and institutional support. As such, policymakers and FinTech providers must collaborate to ensure that these technologies are accessible, affordable, and equitable, especially for marginalized segments of the SME population.

Finally, the review reveals a lack of empirical robustness in the current evidence base. The methodological dominance of cross-sectional surveys (65.1%) with few mixed-methods (9.6%) and no longitudinal studies, limits the ability to track adoption trajectories or infer causality.

Managers and policymakers need evidence not just of correlation, but of what works, for whom, and under what conditions. To this end, future research should adopt longitudinal and experimental designs that measure impact over time, test interventions (e.g., digital literacy campaigns), and evaluate platform design features in diverse user environments.

6.0 Conclusion

This study presents a comprehensive bibliometric and thematic review of FinTech adoption research among MSMEs in the ASEAN region, synthesizing insights from 83 peer-reviewed articles published between 2017 and 2025. The findings reveal several critical trends: (i) an exponential growth of research post-2020 driven by the COVID-19 pandemic and digital acceleration; (ii) a theoretical landscape dominated by individual-level technology adoption models with minimal integration of institutional or ecosystemic perspectives; (iii) a strong geographic bias towards Indonesia, limiting cross-national comparative insights; and (iv) a heavy reliance on quantitative methods, with a scarcity of longitudinal or large-scale empirical studies.

This review advances the academic discourse in several ways. First, by categorizing extant studies through the TCCM framework, it provides a structured synthesis of theories, contexts, characteristics, and methodologies in the field. Second, it identifies critical gaps in theoretical integration, geographic representation, and methodological diversity. Third, it delivers timely insights for practitioners and policymakers seeking to leverage FinTech for SME development and inclusive finance in the region. In conclusion, this review provides a foundational roadmap for advancing scholarly and practical understanding of FinTech adoption in ASEAN SMEs. As the region continues its digital transformation, the imperative for theoretically rigorous, contextually grounded, and empirically robust research has never been greater.

6.1 Future Research Agenda and Recommendations

Future research on FinTech adoption among ASEAN SMEs should prioritize the development of integrative theoretical frameworks that bridge behavioural, technological, and institutional perspectives. Current studies often rely on singular models such as TAM or TPB, which, while useful, may fall short in capturing the multifaceted dynamics of FinTech ecosystems involving multiple stakeholders, regulatory contexts, and sociocultural variables. A more holistic approach that synthesizes these dimensions would enable scholars to better account for the complex and evolving nature of FinTech adoption in practice.

There is also a clear geographic imbalance in the existing literature, with a heavy concentration of studies in Indonesia and Malaysia. Future research should address this gap by expanding empirical investigations to underrepresented ASEAN countries such as Thailand, Vietnam, Cambodia, and the Philippines. Cross-country comparative studies would be particularly valuable in uncovering how different regulatory environments, levels of digital infrastructure, and cultural norms influence adoption patterns and the effectiveness of policy interventions.

Methodologically, the field would benefit from greater use of longitudinal and experimental research designs. Longitudinal studies are essential for understanding how FinTech adoption behaviours evolve over time, particularly in response to policy changes, technological innovations, or market disruptions. Additionally, experimental methods such as randomized controlled trials could be employed to test the causal impacts of digital literacy training, changes in platform interface design, or incentives on adoption outcomes, thereby enhancing the field's analytical rigor.

Inclusivity and ethics should also be at the forefront of future research agendas. There is a critical need to investigate how FinTech solutions can be more effectively designed for marginalized groups, including women-led enterprises, rural SMEs, and religiously observant users. Studies should explore how ethical considerations particularly those grounded in Islamic finance principles such as fairness, transparency, and risk-sharing can be embedded into FinTech governance and design to foster trust and social impact.

Finally, future inquiries should delve deeper into the systemic characteristics of FinTech platform ecosystems. Topics such as algorithmic bias in credit scoring, governance structures of P2P lending platforms, and consumer protection mechanisms in decentralized finance (DeFi) warrant closer scrutiny. Understanding these systemic risks and institutional arrangements will be vital for designing robust, transparent, and inclusive FinTech infrastructures that support sustainable SME development across ASEAN.

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