

FINTECH AND DIGITAL FINANCIAL LITERACY IN ASIA: A PRISMA-BASED SYSTEMATIC REVIEW OF QUANTITATIVE EMPIRICAL STUDIES

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ABSTRACT

This study synthesizes empirical evidence on the relationship between Financial Technology (Fintech) and digital financial literacy through a PRISMA-based Systematic Literature Review (SLR) of quantitative, Scopus-indexed studies conducted in Asian contexts from 2021 to 2025. The review followed four stages consisting of identification, screening, eligibility, and inclusion, yielding 10 studies for thematic synthesis. Findings converge on two determinant clusters: internal factors, such as trust, self-efficacy, and foundational financial knowledge, and external enablers, including internet access, institutional quality, and regulatory safeguards, that jointly shape the fintech literacy nexus. Overall, Fintech can enhance literacy and financial inclusion. However, the review also reveals inconsistent findings across studies. While several studies associate fintech adoption with improved financial capability and inclusion, others indicate that low levels of digital financial literacy may increase users' vulnerability to fraud, over-indebtedness, and poor financial decision-making. These findings suggest that the benefits of fintech depend heavily on users' cognitive and procedural capabilities. Methodologically, the field is dominated by survey-based designs and Structural Equation Modeling (SEM), while qualitative, mixed-methods, and longitudinal approaches remain limited. The review further identifies theoretical fragmentation, as most studies rely on technology adoption frameworks such as TAM, whereas behavioral and capability-based perspectives remain underexplored. Persistent gaps include limited causal identification, lack of standardized fintech literacy measures, and underexplored mediating and moderating mechanisms. Future research should prioritize longitudinal, mixed-methods, and comparative cross-country approaches to better capture causal mechanisms and contextual differences in fintech literacy development across Asian economies.

Keywords: Financial Technology, Digital Financial Literacy, PRISMA, Systematic Literature Review, Asia, Quantitative Research

INTRODUCTION

The rapid advancement of financial technology (Fintech) has significantly transformed the global financial landscape by broadening access to financial services, especially for populations traditionally excluded from the formal financial system (Chen et al., 2019). This phenomenon is not limited to developed countries such as the United States and several European nations (Kumar et al., 2024), but is also markedly evident in Asian economies. Countries like China, India, and Indonesia have witnessed an exponential rise in Fintech adoption, driven by digital innovation, smartphone penetration, and a tech-savvy young demographic (Sun et al., 2022). However, the rapid diffusion of Fintech services also raises concerns regarding users' capacity to understand and manage increasingly complex digital financial products (Aryan et al., 2024). Without adequate financial literacy (Khan et al., 2023), individuals may be unable to fully benefit from Fintech innovations and may instead face heightened financial risks and suboptimal financial outcomes (Showkat et al., 2025).

Within the broader agenda of financial inclusion, Fintech plays a crucial role by facilitating access to services such as mobile payments, peer-to-peer lending, and digital banking platforms (Belgacem et al., 2024; Sun et al., 2022). By reducing transaction costs and overcoming

geographic barriers, these digital innovations enable underserved communities to participate in formal financial systems (Rabbani et al., 2022). In several Asian countries, including China and India, platforms such as Alipay, WeChat Pay, and Paytm have significantly reshaped consumer payment behavior and expanded digital financial access (Majid et al., 2022; Zhang & Zhang, 2025). Nevertheless, expanded access does not necessarily imply improved financial capability. Empirical evidence indicates that limited financial literacy can lead to the misuse of digital financial products, increased susceptibility to fraud, and poor financial decision-making, suggesting that Fintech-driven inclusion may unintentionally intensify financial vulnerability if not accompanied by adequate user understanding (Choung et al., 2025).

The challenge of low financial literacy is especially significant in Asia, where literacy levels vary widely across regions (Hu & Liu, 2025). In Indonesia, despite the increasing popularity of Fintech applications, the financial literacy index remains relatively modest (Chen et al., 2024). According to the National Survey on Financial Literacy and Inclusion (Survei Nasional Literasi dan Inklusi Keuangan [SNLIK]), Indonesia's financial literacy index in 2024 was reported at 65.43 percent (OJK, 2024). This discrepancy between the rapid expansion of digital financial services and uneven levels of financial literacy highlights a structural challenge, raising important questions about whether existing empirical research sufficiently explains how financial literacy shapes Fintech usage and outcomes in emerging Asian economies.

Despite the growing number of empirical studies examining Fintech adoption and financial literacy, the existing literature remains fragmented in several respects. Prior studies frequently focus on single-country contexts, emphasize adoption behavior without systematically addressing user capability development, or rely on diverse methodological approaches that limit cross-study comparability (Abdul-Rahim et al., 2022; Hu & Liu, 2025). Moreover, existing review studies often adopt broad global perspectives or combine conceptual, qualitative, and empirical discussions, which constrains their ability to synthesize recent quantitative evidence within comparable regional and methodological boundaries (Chen et al., 2024). As a result, there remains a lack of a focused and systematic synthesis of quantitative empirical findings that specifically examines the interaction between Fintech and financial literacy within Asian emerging economies (Choung et al., 2025).

To address this gap, this study adopts a Systematic Literature Review (SLR) following the PRISMA framework proposed by Page et al. (2021). Unlike previous reviews that employ broad thematic scopes or integrate multiple methodological traditions, this review focuses exclusively on recent quantitative empirical studies published in Scopus-indexed journals and conducted within Asian contexts. By applying clearly defined inclusion and exclusion criteria, this SLR emphasizes methodological consistency and analytical depth, allowing for a more rigorous synthesis of theoretical perspectives, research designs, and contextual characteristics (Irimia-Diéguez et al., 2023).

This research is grounded in the increasing demand for evidence-based insights into Fintech behavior, particularly among consumers in emerging economies. This study aims to identify dominant themes, theoretical approaches, and methodological patterns used by scholars to explain Fintech adoption in relation to financial literacy. In doing so, it seeks to generate a conceptual map of existing findings, uncover underexplored dimensions of the topic, and offer structured recommendations for future research. Specifically, this study makes three key contributions. First, it provides a PRISMA-based synthesis of recent quantitative empirical studies on Fintech and financial literacy within Asian emerging economies, a focus that remains underexplored in prior reviews. Second, it integrates theoretical perspectives, methodological choices, and contextual characteristics into a unified analytical framework, moving beyond descriptive classification. Third, it offers evidence-based insights to inform future empirical research and policy initiatives aimed at strengthening digital financial capability in rapidly digitalizing economies.

The review also provides a basis for understanding how financial literacy interacts with technological adoption across diverse socio-economic contexts. In countries characterized by high digital engagement but uneven literacy levels, bridging the gap between Fintech innovation and user capability becomes a strategic priority. This study contributes to academic discourse as well as to regulatory and policy discussions by offering a consolidated and systematic overview of current empirical evidence and by outlining directions for more inclusive and informed Fintech development.

LITERATURE REVIEW

Systematic Literature Review (SLR)

In the context of Fintech and financial literacy research, the SLR method is particularly relevant due to the fragmented nature of empirical findings across countries, theoretical perspectives, and methodological approaches. Rather than merely summarizing prior studies, SLR enables the systematic comparison of how Fintech adoption mechanisms and financial literacy dimensions are operationalized, measured, and linked to financial outcomes across diverse empirical settings. This analytical function positions SLR as a methodological bridge that consolidates dispersed evidence into coherent thematic insights (Page et al., 2021).

Beyond procedural rigor, the use of PRISMA in this study serves an analytical purpose by ensuring that only quantitatively comparable and methodologically robust studies are included. This focus allows the review to move beyond descriptive aggregation and toward thematic synthesis, particularly in identifying recurring theoretical explanations, dominant empirical patterns, and contextual variations in the relationship between Fintech and financial literacy across Asian emerging economies (Christiani & Widuri, 2024; Christiani & Widuri, 2025; Steelyana, 2022).

The theory underlying the use of SLR in this study is the Knowledge Synthesis Theory, which emphasizes the importance of integrating findings from various studies to generate a more holistic and in-depth understanding of a phenomenon (Page et al., 2021). By employing SLR, this study aims to identify the factors influencing Fintech adoption and categorize them into relevant themes, thus providing both theoretical and practical contributions to the field of Fintech and financial literacy.

Financial Technology (Fintech)

Rather than being viewed solely as a set of digital tools, Fintech functions as a mechanism that reshapes how individuals interact with financial systems (Chen et al., 2024). Empirical studies increasingly emphasize that Fintech adoption is not only determined by technological availability but also by users' cognitive and behavioral capabilities, including their ability to evaluate digital financial risks, costs, and benefits (Thatsarani & Jianguo, 2022). This perspective highlights the need to examine Fintech adoption within a broader behavioral and capability-based framework (Irimia-Diéguez et al., 2023).

Within this review, Disruptive Innovation Theory provides a conceptual basis for understanding Fintech as a structural force that lowers entry barriers to financial services (Christensen et al., 2018). However, empirical evidence suggests that the disruptive potential of Fintech is conditional rather than universal. Its effectiveness depends on users' financial knowledge and decision-making capacity, indicating that technological disruption alone is insufficient to guarantee positive financial outcomes. This insight underscores the necessity of integrating Fintech mechanisms with financial literacy considerations in the thematic analysis of prior studies (Rabbani et al., 2022).

Financial Literacy

In empirical Fintech research, financial literacy is no longer treated merely as an individual attribute but increasingly as a moderating or mediating factor (Hu & Liu, 2025) that shapes how users perceive, adopt, and utilize digital financial services (Xie & Chen, 2025). This shift reflects growing recognition that limited financial literacy may constrain the benefits of Fintech adoption, even in environments with high digital access (Choung et al., 2025).

When examined alongside Disruptive Innovation Theory, Financial Literacy Theory highlights a critical interaction: while Fintech reduces structural barriers to financial access, financial literacy determines users' ability to convert access into meaningful financial capability (Lusardi & Mitchell, 2014). This theoretical intersection provides a guiding framework for the present SLR, enabling the classification of empirical studies according to how financial literacy influences Fintech adoption, usage quality, and financial outcomes across different contexts.

The theoretical foundation of financial literacy in this study is the Financial Literacy Theory proposed by Lusardi & Mitchell (2014). This theory emphasizes the importance of financial understanding as a foundation for optimal financial decision-making (Lusardi & Mitchell, 2014). Low levels of financial literacy can be a major barrier to Fintech adoption, as individuals who lack basic financial knowledge may be reluctant or unable to effectively use digital financial services (Chen et al., 2024).

Taken together, the literature suggests that Fintech and financial literacy are interdependent rather than independent constructs. Fintech acts as an enabling infrastructure that expands access to financial services, while financial literacy functions as a capability mechanism that shapes users' effective engagement with these services. Guided by this conceptual linkage, the present SLR adopts a thematic analytical framework that examines how prior quantitative studies position financial literacy as an antecedent, mediator, or moderator in the relationship between Fintech adoption and financial outcomes. This integrative perspective elevates the review beyond a catalog of studies by providing a theory-informed synthesis of empirical evidence.

RESEARCH METHODOLOGY

Research Approach

This study employs a Systematic Literature Review (SLR) approach by following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol. SLR is chosen for its ability to provide a systematic, comprehensive, and structured review of relevant literature, thereby minimizing bias and enhancing the validity of the research findings (Page et al., 2021). The PRISMA Flow Diagram is used to track the process of identifying, screening, and selecting studies, ensuring transparency and accountability at each stage (Page et al., 2021). Beyond procedural transparency, the PRISMA-guided SLR is employed as an analytical tool to enable structured comparison across empirical studies with similar methodological designs, thereby facilitating thematic synthesis rather than narrative description.

Research Object

The object of this research is literature that discusses the relationship between financial technology (fintech) and financial literacy, with a focus on their influence and implications in various economic and financial contexts. The studies used are sourced from Scopus-indexed journals and selected based on predetermined inclusion and exclusion criteria.

Research Boundaries

The following boundaries were applied in this research:

a) Topical Boundaries:

- Fintech: No specific limitations; includes all aspects of Fintech.
- Financial Literacy: Focus on digital financial literacy.
- Relationship: Only studies discussing the influence between Fintech and digital financial literacy were included.

b) Publication Year Boundaries:

- Studies published between 2021–2025.

c) Methodological Boundaries:

- Only studies using quantitative methods were included.

This restriction was applied to ensure comparability of findings across studies and to support systematic thematic synthesis based on measurable constructs, effect relationships, and statistical outcomes. Qualitative and mixed-methods studies, while valuable for exploratory insights, often employ heterogeneous analytical lenses that limit cross-study comparison within an SLR framework.

d) Geographical Boundaries:

- Studies conducted in the Asian region.

e) Special Exclusions:

- Studies discussing COVID-19.
- Studies related to the agricultural sector.
- Studies focusing on Islamic (Sharia) Fintech (as this research adopts a general perspective).

These exclusions were implemented to avoid contextual distortions arising from crisis-specific financial behavior (COVID-19), sector-specific regulatory frameworks (agriculture), and normative-religious financial principles (Islamic Fintech), which operate under distinct institutional logics and could obscure generalizable patterns of Fintech–literacy interaction.

Study Selection Process

The study selection process followed the PRISMA protocol and consisted of four main stages: Identification, Screening, Eligibility Assessment, and Inclusion. The final inclusion of 10 studies reflects a rigorous filtration process rather than data scarcity. In PRISMA-based SLRs with strict methodological and contextual boundaries, depth of analytical coherence is prioritized over numerical volume (Page et al., 2021). Below is a detailed explanation of each stage:

PRISMA Flow Diagram

The following outlines the PRISMA Flow Diagram stages, adapted to the research boundaries:

1) Identification:

- Keywords:
 - ("Fintech" OR "Financial Technology" OR "Digital Finance")
 - ("Financial Literacy" OR "Financial Knowledge" OR "Digital Financial Literacy")
 - ("Financial Technology AND Financial Literacy")
 - ("Fintech AND Financial Literacy")
- Database: Scopus (Q1, Q2, Q3, Q4).
- Total studies identified: n = 370.

2) Initial Screening:

- Duplicates removed: n = 19.
- Studies outside the publication year range (2021–2025): n = 53.
- Studies outside tier Q1–Q4: n = 39.
- Studies without an abstract: n = 6.
- Total studies screened: n = 253.

3) Screening Based on Boundaries:

- Studies not meeting topic, method, geographical, or specific exclusion boundaries: n = 219.
- Total eligible studies: n = 34.

4) Study Retrieval:

- Studies not accessible (non-open access): n = 24.
- Total studies assessed for eligibility: n = 10.

5) Inclusion:

- Studies meeting all criteria: n = 10.

Inclusion and Exclusion Table

Table 1. Literature Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Topic	Fintech and digital financial literacy	Studies not discussing the relationship between Fintech and digital financial literacy
Language	English	Non-English
Publication Year	2021–2025	Studies outside the 2021–2025 range
Research Method	Quantitative	Qualitative, mixed methods, or non-empirical studies
Geographical Scope	Asian region	Studies conducted outside the Asian region
Specific Exclusions	–	Studies on COVID-19, agriculture, or Islamic Fintech

Source: Author (2026)

Data Analysis Method

Data from the 10 studies that met the criteria and were analyzed using a thematic analysis approach. The analysis process included:

- 1) Coding: Identifying factors influencing the adoption of Fintech and digital financial literacy.
- 2) Thematic Grouping: Categorizing codes into broader themes such as internal factors (e.g., financial literacy, trust in technology) and external factors (e.g., government regulation, internet access).
- 3) Synthesis of Findings: Summarizing the findings and identifying existing research gaps.

Coding was conducted iteratively to ensure consistency across studies, with thematic refinement guided by theoretical alignment with Disruptive Innovation Theory and Financial Literacy Theory.

Data Validity and Reliability

To ensure the validity and reliability of the research, several steps were taken:

- 1) Internal Validity: Verified through the strict use of the PRISMA protocol (as shown in Figure 1) and clearly defined inclusion/exclusion criteria.
- 2) External Validity: Enhanced by selecting studies from the reputable and trusted Scopus database.
- 3) Reliability: Maintained through detailed documentation of the selection and analysis process, and the use of reference management software to minimize human error.

To mitigate subjective bias in thematic interpretation, coding decisions were repeatedly reviewed against original study objectives and empirical findings, ensuring analytical consistency and replicability.

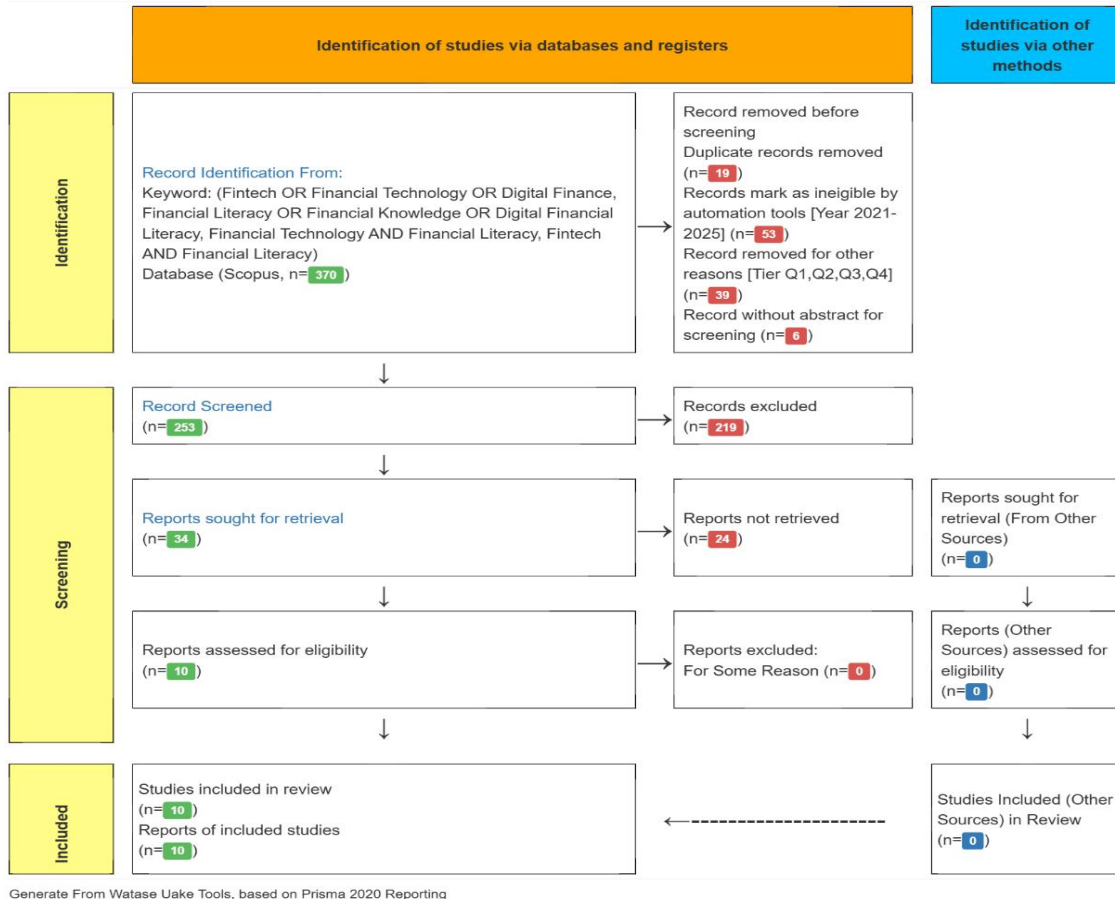


Figure 1. PRISMA Flow Diagram
Source: Author (2026)

RESULT AND DISCUSSION

Publication Year

The distribution of publication years offers an important insight into the research momentum surrounding the topic. The articles reviewed in this study were published between 2022 and 2025, with 2022 being the earliest publication year. This indicates that academic interest in the intersection between Fintech and digital financial literacy has only gained traction in recent years, likely propelled by the surge in digital financial activity and the broader push toward financial inclusion across Asia.

Out of the ten articles, the majority were published in 2024 and 2025, with four studies each year (n = 4; 40%), indicating a significant increase in research output in the most recent period. Meanwhile, only one study was published in 2022, and another in 2023 (n = 1; 10% each). This trend can be clearly observed in Figure 2, which visualizes the year-wise distribution of the selected studies. This growing trend not only reflects the relevance of the topic but also suggests that it is still evolving and open to further academic exploration.

The upward trajectory in publication volume may be attributed to multiple factors, including the increasing accessibility of Fintech platforms, government-led digital transformation initiatives, and heightened awareness of the importance of financial literacy in navigating digital financial environments. As this systematic review was concluded in mid-2025, it is

anticipated that additional studies may still be published in the latter part of the year, reinforcing the dynamic and expanding nature of the field.

Beyond indicating research momentum, this temporal concentration also suggests that the empirical understanding of Fintech and financial literacy remains at an early developmental stage. The dominance of recent publications implies that theoretical frameworks, measurement instruments, and analytical models are still being actively shaped. Consequently, existing findings should be interpreted as emergent rather than conclusive, reinforcing the need for systematic synthesis rather than isolated empirical generalization.

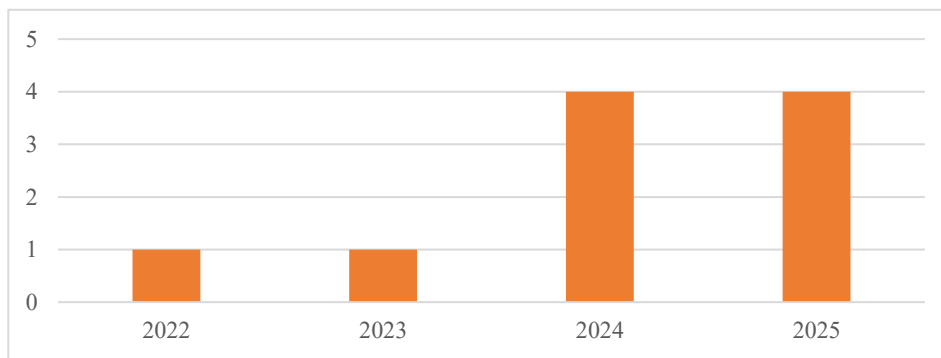


Figure 2. Distribution of Studies by Publication Year
Source: Author (2026)

Theory

A total of 10 empirical studies were identified that examine the relationship between fintech and financial literacy. This selection process revealed a diversity of theoretical frameworks employed by researchers, reflecting the complexity of fintech literacy issues, which encompass technical, behavioral, social, and policy dimensions, which are shown in Figure 3.

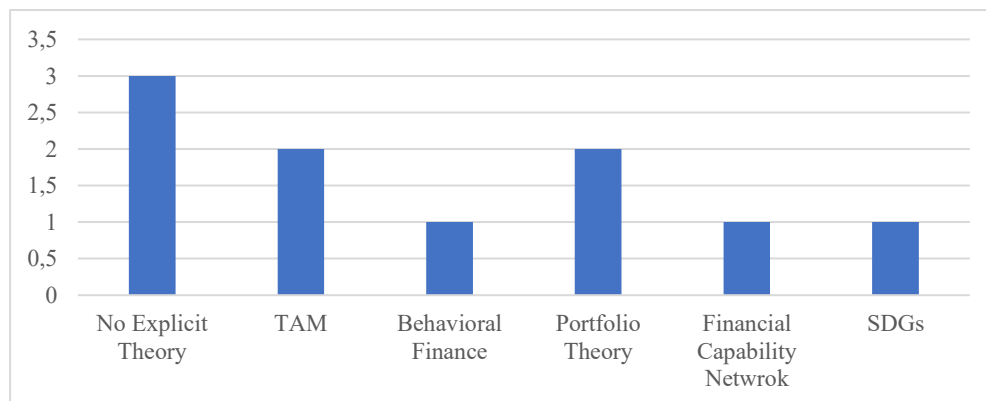


Figure 3. Distribution of Research Theory on Fintech and Financial Literacy Theory
Source: Author (2026)

Out of the ten articles, the majority were published in 2024 and 2025, with four studies each year ($n = 4$; 40%), indicating a significant increase in research output in the most recent period. Meanwhile, only one study was published in 2022, and another in 2023 ($n = 1$; 10% each). This trend can be clearly observed in Figure 2, which visualizes the year-wise distribution of the selected studies. This growing trend not only reflects the relevance of the topic but also suggests that it is still evolving and open to further academic exploration.

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initiatives, and heightened awareness of the importance of financial literacy in navigating digital financial environments. As this systematic review was concluded in mid-2025, it is anticipated that additional studies may still be published in the latter part of the year, reinforcing the dynamic and expanding nature of the field.

The Technology Acceptance Model (TAM) emerged as the most dominant theoretical framework, applied by Thathsarani & Jianguo (2022) as well as Showkat et al. (2025). Thathsarani & Jianguo (2022) used TAM to analyze fintech adoption among SMEs in Sri Lanka, while Showkat et al. (2025) integrated TAM with the Theory of Planned Behavior to explore women's empowerment through fintech in India and Yemen. Although effective in explaining factors such as perceived ease of use and usefulness, TAM is limited in its capacity to capture digital risk dimensions.

Behavioral Finance Theory was utilized by Aryan et al. (2024) in a study focusing on millennial consumers in Jordan. Aryan et al. applied this theory to investigate how cognitive biases influence digital financial behavior. While highly relevant, the potential of this theory remains underexplored in the context of fintech literacy.

Household Portfolio Theory was applied by two separate studies. Hu & Liu (2025) employed it to examine rural households in China, while Chen et al. (2024) used it to assess urban households in the same country. Both studies explored the relationship between fintech literacy and risk investment preferences, although the applicability of this theory in developing countries is debatable.

The Financial Capability Framework was adopted by Belgacem et al. (2024) in a study conducted in Saudi Arabia. Belgacem et al. (2024) used this framework to evaluate the impact of fintech on narrowing financial literacy gaps. Their findings revealed that fintech had only a limited effect in addressing such disparities.

The Sustainable Development Goals (SDGs) served as the conceptual framework in a study by Kumar et al. (2024) focusing on SMEs in BRICS countries. Kumar et al. (2024) linked fintech literacy to inclusive economic growth goals.

Interestingly, three studies did not explicitly refer to any established theory. Khan et al. (2023) and Choung et al. (2025) focused primarily on demographic analyses, while Xie & Chen (2025) developed an independent conceptual framework. This indicates that the field of fintech literacy research is still evolving and lacks a consolidated theoretical foundation.

Several critical insights emerged from this analysis. The dominance of TAM in the works of Thathsarani & Jianguo (2022) and Showkat et al. (2025) reflects an overemphasis on technology adoption aspects. Meanwhile, Aryan et al. (2024) offered a rare example of applying Behavioral Finance Theory to uncover psychological dimensions of fintech literacy.

This study also identifies key research gaps. The theories used by Hu & Liu (2025) and Chen et al. (2024) fall short in capturing the full complexity of fintech literacy in the digital age, particularly regarding cybersecurity awareness and challenges specific to developing countries.

Based on these findings, several recommendations for future research are proposed. First, modifications to TAM—as used by Thathsarani & Jianguo (2022)—should incorporate digital security concepts. Second, expanded use of Behavioral Finance Theory—as demonstrated by Aryan et al. (2024)—could deepen our understanding of cognitive biases. Third, new theoretical frameworks tailored to developing countries are needed to address the limitations observed in studies by Belgacem et al. (2024) and Kumar et al. (2024).

A data visualization shows that among the 10 studies, 2 adopted TAM (Showkat et al., 2025; Thathsarani & Jianguo, 2022), 1 applied Behavioral Finance Theory (Aryan et al., 2024), 2 used Portfolio Theory (Chen et al., 2024; Hu & Liu, 2025), and 3 employed no explicit theoretical framework (Choung et al., 2025; Khan et al., 2023; Xie & Chen, 2025). This pattern reinforces the need for a more comprehensive and consistent theoretical foundation.

The dominance of the Technology Acceptance Model (TAM) across multiple contexts reflects not only its analytical convenience but also a broader tendency in Fintech research to prioritize adoption intentions over post-adoption outcomes. This theoretical preference may partially explain why financial literacy is frequently treated as a control or antecedent variable rather than as a dynamic capability shaping long-term financial behavior.

Conversely, the limited application of Behavioral Finance Theory highlights a missed opportunity to integrate cognitive bias, risk perception, and bounded rationality into Fintech literacy research. This theoretical imbalance constrains the field's ability to explain why increased access to digital finance does not always translate into improved financial well-being.

Taken together, the findings indicate that theoretical choices systematically shape empirical outcomes: adoption-focused theories tend to emphasize usability and intention, while capability-based theories reveal deeper inequalities in financial outcomes. This theoretical fragmentation underscores the necessity of integrative frameworks that link technological access with behavioral and literacy-based mechanisms.

Across the reviewed studies, technology adoption frameworks dominate fintech and digital financial literacy research. Most studies focus on explaining fintech acceptance through variables such as perceived usefulness, ease of use, and behavioral intention. Consequently, digital financial literacy is commonly positioned as a factor supporting fintech adoption rather than as a broader capability related to financial resilience and long-term financial decision-making.

Several inconsistencies also appear across theoretical perspectives. Studies based on technology adoption models generally emphasize the positive role of fintech accessibility and usability in promoting financial inclusion (Thatsarani & Jianguo, 2022). Meanwhile, behavioral and capability-based studies highlight persistent disparities in digital competence and financial outcomes. Limited digital financial literacy is frequently associated with financial vulnerability and difficulties in evaluating digital financial services. These findings indicate that fintech adoption alone does not necessarily improve financial well-being.

Overall, the literature remains theoretically fragmented. Existing studies continue to emphasize technological adoption, while institutional trust, behavioral factors, and sustainable financial capability receive less attention. This condition highlights the need for more integrative theoretical frameworks linking technological acceptance with long-term digital financial resilience.

Country

Based on the analysis of ten selected scholarly articles, a pattern of geographical distribution emerges that highlights a significant concentration in the Asian region, with additional representation from the Middle East. Out of the ten studies, eight originated from Asian countries, indicating that the region serves as a central hub for the development and exploration of fintech literacy. China stands out as the most dominant contributor with three publications—by Hu & Liu (2025), Chen et al. (2024), and Xie & Chen (2025). These studies address a range of issues, from financial risk-taking behavior in rural communities to the role of fintech in promoting household entrepreneurship, reflecting the rapid growth of China's fintech ecosystem and the high academic interest it generates.

Other Asian countries also made notable contributions. In Malaysia, Khan et al. (2023) examined fintech literacy among millennials, while in South Korea, Choung et al. (2025) explored the relationship between digital financial literacy and individuals' life satisfaction. The study from Sri Lanka by Thatsarani & Jianguo (2022) focused on the role of fintech in supporting the sustainability of MSMEs.

Meanwhile, the Middle East was represented by two studies. Belgacem et al. (2024) investigated financial literacy gaps in Saudi Arabia, while Aryan et al. (2024) explored the financial behavior of the millennial generation in Jordan. A standout study in terms of geographical scope was conducted by Showkat et al. (2025), which compared the empowerment of women through fintech in two countries—India and Yemen. Another study by Kumar et al. (2024) adopted a regional approach by analyzing the role of fintech literacy in BRICS countries.

These findings reveal that the body of literature on fintech literacy is still heavily concentrated in developing countries within Asia. The dominance of the Asian region (8 out of 10 studies) and the focus on developing nations (9 out of 10 studies) suggest that fintech literacy is seen as a crucial issue in the context of financial inclusion and digital growth in these areas. However, only one study (Showkat et al., 2025) employed a cross-country comparative approach, and one (Kumar et al., 2024) adopted a regional perspective, highlighting the scarcity of direct cross-national research.

These insights underline the importance of expanding the geographical scope of future research to include regions such as Africa, Latin America, and Southeast Asian countries like Indonesia and Vietnam, which have high fintech adoption rates but remain underrepresented in scholarly discourse. Moreover, there is a pressing need to develop fintech literacy frameworks that are sensitive to local contexts, given the diverse social, economic, and regulatory environments across countries.

As visualized in Figure 4, China accounts for the highest number of publications (three studies), while the remaining seven studies are distributed across Malaysia, Sri Lanka, South Korea, India-Yemen, Saudi Arabia, Jordan, and the BRICS region, each represented by one study.

The geographical concentration in Asian developing economies is not merely empirical but structural. Rapid Fintech diffusion combined with uneven financial literacy levels makes these contexts analytically attractive for adoption-focused research. However, this concentration also limits cross-contextual generalization, as institutional maturity, regulatory frameworks, and digital infrastructure vary substantially across regions.

The scarcity of cross-country comparative studies suggests that existing research largely captures context-specific relationships rather than universal mechanisms. As a result, current findings may reflect local institutional conditions rather than transferable theoretical insights, thereby constraining cumulative knowledge development.

The geographical concentration in Asian developing economies is not coincidental. Rapid fintech diffusion combined with uneven financial literacy levels makes these contexts particularly relevant for adoption-oriented research. However, this concentration also limits the generalizability of existing findings because institutional quality, digital infrastructure, and regulatory maturity differ substantially across countries and regions. The limited number of comparative cross-country studies shown below in Figure 4 further suggests that much of the current literature remains context-specific rather than globally generalizable.

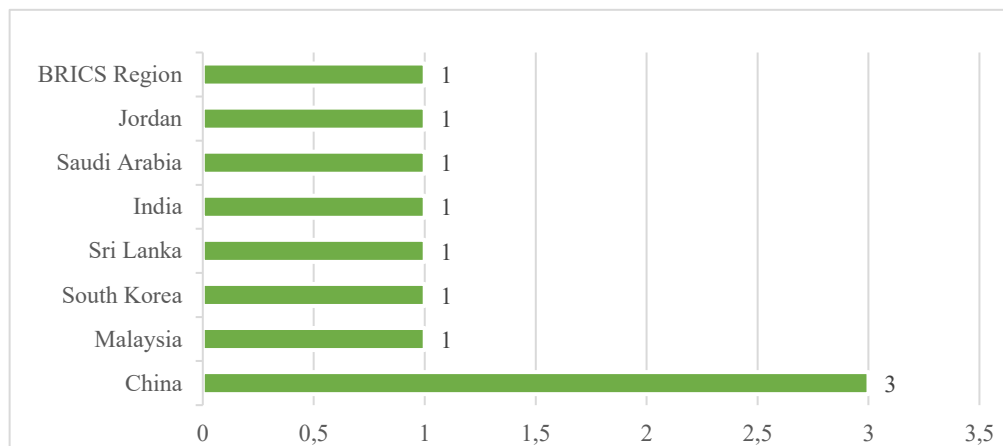


Figure 4. Country Distribution in Fintech and Financial Literacy Studies
Source: Author (2026)

Respondent

In analyzing the target respondents across the ten selected studies on fintech and financial literacy, the findings reveal a strong emphasis on specific demographic and occupational groups. The respondents can be classified into five main categories: generation-based groups (e.g., millennials and adults), household units, business owners (particularly MSMEs), gender-based samples, and the general population. Two studies, namely Khan et al. (2023) in Malaysia and Aryan et al. (2024) in Jordan, focused on millennials, while Choung et al. (2025) examined adult fintech users in South Korea. Three studies investigated household units in different settings: rural households (Hu & Liu, 2025), urban households (Chen et al., 2024), and households in general (Xie & Chen, 2025), all conducted in China. In terms of business orientation, two studies targeted MSMEs—specifically, MSME owners and managers in Sri Lanka (Thathsarani & Jianguo, 2022) and MSMEs in BRICS countries (Kumar et al., 2024). One study by Showkat et al. (2025) examined female respondents in India and Yemen, and one study by Belgacem et al. (2024) used a more general population sample in Saudi Arabia.

The results indicate that 70% of the studies focused on specific population groups, such as millennials, households, MSMEs, and women, suggesting a deliberate approach in addressing key segments of fintech users. Only one study by Belgacem et al. (2024) adopted a general population sample. Notably, China stands out with three household-focused studies, underlining the country's unique socioeconomic dynamics in fintech adoption. The targeted focus on millennials (Aryan et al., 2024; Khan et al., 2023) aligns with their high fintech usage rate, while studies on MSMEs (Kumar et al., 2024; Thathsarani & Jianguo, 2022) are crucial given the sector's economic significance. Additionally, the gender-focused study (Showkat et al., 2025) helps address existing gaps in financial literacy research concerning women.

Despite these contributions, several limitations emerge. First, certain demographic groups remain underrepresented. No studies specifically targeted the elderly—who often face digital vulnerability—or students, marginalized groups, or residents in remote areas. Second, the overrepresentation of millennials may risk overlooking the behavioral nuances of other age cohorts. Furthermore, only one study focused on gender, and none explicitly examined low-income populations. Third, geographic concentration poses a challenge: most household studies were urban or rural settings in China, with limited representation from semi-urban or culturally diverse regions. Moreover, comparative analyses between countries or regions

remain scarce, even though contextual differences are likely to influence fintech adoption and financial literacy.

Given these gaps, future research should expand its demographic scope to include older adults, students, marginalized communities, and workers in the informal sector. Comparative studies across generational lines or between rural and urban areas are also needed. Research on public sector workers or digital creative industries may provide further insight. Innovative methodological approaches, such as longitudinal studies and multi-stakeholder analysis involving users, regulators, and providers, are highly recommended.

As visualized in Figure 5, households were the most studied group (30%), followed by MSMEs and millennials (each 20%), women (10%), general population (10%), and adult users (10%). This uneven distribution highlights the need for broader inclusion and more balanced research strategies in future studies.

The strong focus on millennials, households, and MSMEs reflects an implicit assumption that these groups are the primary drivers of Fintech diffusion. While empirically justified, this emphasis risks marginalizing vulnerable populations such as the elderly, low-income groups, and digitally excluded communities, whose financial literacy challenges may differ fundamentally.

This demographic selectivity shapes research conclusions by foregrounding digitally active users, potentially overstating the inclusiveness and effectiveness of Fintech solutions. Future research must therefore recalibrate respondent selection to capture exclusionary dynamics alongside adoption success stories.

The dominance of millennials, households, and MSMEs as research respondents reflects the assumption that these groups are the primary drivers of fintech adoption and digital financial activity. While this focus is relevant in rapidly digitalizing economies, it may unintentionally overlook financially vulnerable populations such as elderly individuals, low income communities, and digitally excluded groups, whose experiences with fintech may differ substantially (Xie & Chen, 2025). This demographic concentration may therefore produce an overly optimistic understanding of fintech inclusiveness and digital financial capability.

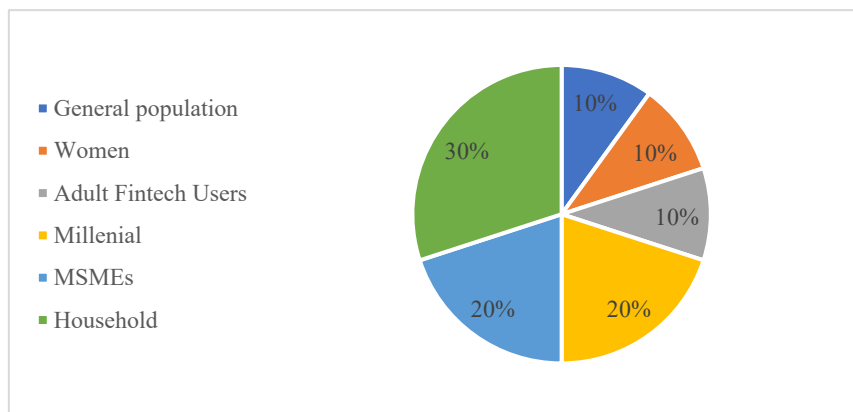


Figure 5. Distribution of Research Respondents in Fintech and Financial Literacy Studies
Source: Author (2026)

Research Methods Used in the Articles

Based on the analysis of ten selected journal articles, the methodologies employed in fintech and financial literacy research can be broadly categorized into three main approaches: quantitative surveys, secondary data analysis, and machine learning techniques. Six of the ten

studies adopted quantitative survey methods, making it the most dominant approach (Aryan et al., 2024; Belgacem et al., 2024; Choung et al., 2025; Khan et al., 2023; Showkat et al., 2025; Thathsarani & Jianguo, 2022). Several of these utilized basic regression analysis (e.g., Choung et al., 2025), while others employed advanced statistical techniques such as Structural Equation Modeling (SEM) to examine complex inter-variable relationships (e.g., Aryan et al., 2024; Showkat et al., 2025; Thathsarani & Jianguo, 2022).

Three studies conducted secondary data analysis using large-scale datasets such as the China Household Finance Survey (CHFS), applying econometric techniques such as Probit, Tobit, and Two-Stage Least Squares (2SLS) to address endogeneity and enhance external validity (Chen et al., 2024; Hu & Liu, 2025; Xie & Chen, 2025). A single study employed a machine learning approach, in which Kumar et al. (2024) utilized Principal Component Analysis (PCA) and Random Forest Tree algorithms to assess fintech literacy. Although innovative, this approach remains underutilized in current research.

The dominance of quantitative survey designs reflects a strong preference for methods that enable generalization and large-scale hypothesis testing. However, heavy reliance on surveys introduces several limitations, such as response bias, lack of contextual understanding, and difficulty in accurately capturing the multidimensional nature of fintech literacy (Aryan et al., 2024; Showkat et al., 2025; Thathsarani & Jianguo, 2022).

Conversely, secondary data analysis offers advantages in terms of scope and population representativeness, but tends to lack flexibility in measuring nuanced constructs such as fintech perceptions and knowledge (Chen et al., 2024; Hu & Liu, 2025). The methodological innovation presented by Kumar et al. (2024) demonstrates the potential of machine learning techniques to explore complex variables, although this line of inquiry remains nascent.

A critical analysis of these methodological trends reveals several notable gaps. None of the reviewed studies employed qualitative approaches such as in-depth interviews or case studies, indicating a limited exploration of behavioral or experiential aspects of fintech usage. Furthermore, mixed-methods research was absent, despite its value in enhancing data richness through triangulation. Longitudinal designs, which could provide insights into temporal dynamics of fintech literacy, were also missing.

Another prominent challenge is the lack of standardized measurement instruments for fintech literacy across studies, as well as limited treatment of endogeneity in correlational models. While some studies included moderator or mediator variables, few explored the mechanisms underlying the relationships in sufficient depth (Aryan et al., 2024; Showkat et al., 2025).

Considering these findings, future research is encouraged to adopt more diverse methodological strategies. Qualitative research should be expanded to uncover behavioral and sociocultural dimensions that are often overlooked in surveys. Mixed-methods designs are recommended for achieving a more comprehensive understanding, while longitudinal studies are necessary to track changes in fintech literacy over time. Innovative measurement strategies are also needed, including field experiments, the use of digital trace data from fintech platforms, and the development of valid and comparable fintech literacy scales. Analytical rigor can be further enhanced through the adoption of natural experiments, causal inference methods, and cross-validation between qualitative and quantitative approaches (Hu & Liu, 2025; Kumar et al., 2024).

Overall, the methodological landscape of fintech and financial literacy research remains predominantly quantitative, with a strong inclination toward SEM-based survey designs. Nevertheless, emerging trends such as big data and machine learning approaches demonstrate promising potential. Advancing this field requires greater methodological diversity, measurement innovation, and a commitment to robust analytical practices.

The methodological homogeneity observed—particularly the dominance of survey-based SEM studies—can be attributed to their compatibility with adoption-oriented theories such as TAM. However, this alignment also reinforces a narrow epistemological lens, favoring correlational inference over causal explanation and experiential understanding.

The absence of qualitative and mixed-methods research limits insight into how financial literacy is constructed, negotiated, and applied in real-world Fintech usage. Consequently, current findings explain “whether” relationships exist rather than “how” and “why” they unfold across contexts.

This methodological convergence suggests a self-reinforcing cycle in which theory selection drives method choice, which in turn constrains theoretical innovation. Breaking this cycle requires deliberate methodological diversification to enable richer and more explanatory knowledge production.

The methodological dominance of survey-based SEM studies indicates a strong preference for correlational explanation within fintech literacy research. While these approaches are effective for testing adoption-related hypotheses, they provide limited insight into causal processes, behavioral change, and contextual dynamics. The absence of qualitative, mixed methods, and longitudinal approaches further restricts understanding of how fintech literacy develops over time and across institutional settings. This methodological convergence, shown below in Figure 6, may also contribute to theoretical homogeneity, particularly the continued dominance of technology adoption perspectives in the literature.

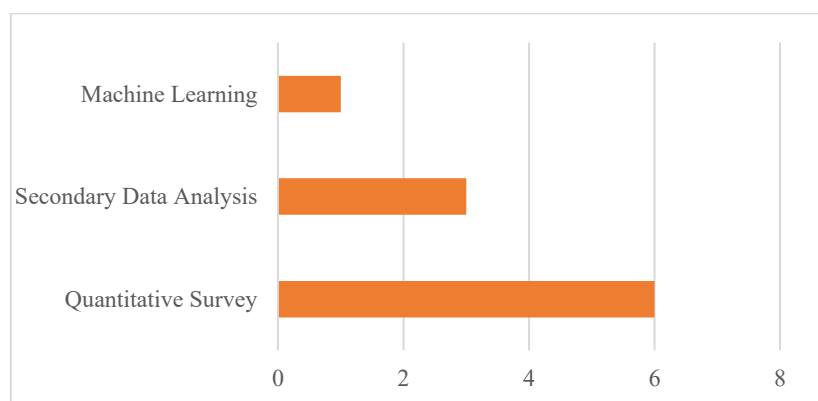


Figure 6. Distribution of Research Method on Fintech and Financial Literacy
Source: Author (2026)

CONCLUSION

Based on the systematic review of ten selected journal articles, this study identifies several dominant patterns in the existing literature on fintech and financial literacy. The findings indicate not only a strong methodological concentration on quantitative survey designs—particularly SEM-based models—but also a broader fragmentation in theoretical perspectives and contextual focus. The predominance of technology-oriented frameworks such as the Technology Acceptance Model (TAM) reflects an emphasis on adoption behavior, while behavioral, institutional, and contextual dimensions of fintech literacy remain insufficiently integrated into existing theoretical models. In addition, the literature is heavily concentrated in developing Asian economies, suggesting that fintech literacy is primarily framed as a financial inclusion issue rather than as a multidimensional capability shaped by regulatory environments, digital risks, and socio-cultural factors. By mapping publication trends, theoretical foundations, country coverage, respondent profiles, and research methods in an integrated manner, this review contributes to the literature by clarifying how methodological choices, theoretical

dominance, and contextual concentration jointly shape current knowledge development in fintech literacy research.

The literature suggests that fintech functions as both an enabling mechanism and a potential source of financial vulnerability. While fintech adoption may improve access to financial services and support financial inclusion, these benefits are highly conditional upon users' digital financial literacy, institutional protection, and contextual readiness. The coexistence of positive inclusion outcomes and increasing digital financial risks demonstrates that fintech should not be viewed solely as a technological solution, but also as a socio-financial ecosystem requiring complementary literacy development and regulatory safeguards.

The implications of these findings extend beyond methodological considerations. The dominance of adoption-focused theories and survey-based approaches may constrain deeper understanding of how fintech literacy evolves, how digital risks are perceived, and how policy and regulation influence financial behavior across different social groups. From a policy perspective, this suggests that fintech literacy initiatives should move beyond access and usage metrics toward strengthening digital capability, risk awareness, and consumer protection mechanisms.

Nevertheless, this review has several limitations that warrant critical reflection. The small number of included studies, regional bias toward Asian developing countries, and exclusion of qualitative and mixed-methods research limit the generalizability of the conclusions. Furthermore, the descriptive nature of several reviewed studies restricts the ability to draw causal or comparative inferences. Future research should therefore pursue more analytically integrative approaches by combining diverse theoretical frameworks, expanding geographical coverage, and adopting mixed-methods and longitudinal designs. Comparative cross-country studies, theory-driven qualitative inquiries, and the development of standardized fintech literacy measurement instruments are particularly recommended to advance both theoretical rigor and practical relevance in this rapidly evolving field.

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