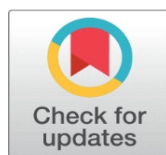
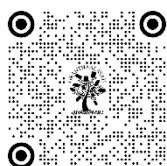


# ASSESSING THE ROLE OF FINTECH IN FINANCIAL INCLUSION IN EMERGING MARKETS

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## ABSTRACT

FinTech has emerged as a powerful mediator for enhancing financial inclusion across emerging markets of the world and is also addressing persistent barriers to access traditional banking services, poor financial literacy, high transaction costs, and lack of trust in financial institutions. This study presents a paradigm for evaluating the effect of FinTech in improving financial inclusion in emerging markets, taking into account the fundamental variables that influence FinTech adoption. The paradigm also takes into account the mediating role of financial literacy in the digital age, as well as the moderating influence of perceived regulatory support on the link among finance technology adoption and financial inclusion. Literature identified in the proposed framework by simultaneously assessing the relationships between key factors like trust, service quality, perceived security, FinTech adoption, digital financial literacy, perceived regulatory support, and financial inclusion, while evaluating both direct and indirect effects to test the research hypotheses. According to the hypothesis, digital financial literacy is intended to play an intermediary role in the link between adoption of finance technology and financial inclusion, tempered by perceived regulatory support. The findings should have significant importance in providing insights into the factors that foster FinTech adoption and their role in driving financial inclusion, together with a number of practical recommendations on how to enhance digital financial literacy and regulatory environments to support FinTech innovations in emerging markets.

**Keywords:** FinTech, Financial inclusion, Emerging markets, Digital financial literacy, Regulatory support, SEM.



## 1. INTRODUCTION

Despite many global economic gains, financial exclusion remains one of the dominant challenges to ensuring fair and equitable development. It remains too common that most individuals lack access to the formal financial system [1]. This calls for innovative solutions for addressing the gap. In this respect, FinTech has emerged as one of the powerful instruments for addressing the problem, offering more accessible financial services and making them more convenient, especially for marginalized communities. FinTech uses the power of technology in changing how people handle their finances and their transaction capabilities as they can make transactions from virtually any place at any time [2]. These advantages are very visible in areas where banking infrastructure is limited, and, as a result, people are able to carry out their financial undertakings using smartphones and other digital platforms [3] [4]. The affordability and accessibility of FinTech services have been very instrumental in impacts on enhancing financial inclusion [5]. FinTech solutions are

often less expensive than the solutions provided by the old schools of banks, making financial services more accessible for a wider population. It is particularly transforming in developing countries, where digital financial literacy becomes imperatively fundamental in ensuring effective access to such services. FinTech is the leading heart of the global anti-poverty efforts and pushes forward economic development further [6].

For example, in India, policies and programs of the government, complemented with the expeditious pace of technology, have ignited a tremendous growth in digital financial services. Others are their direct life-line as seen with UPI and Bharat QR code [7]. They fundamentally impact the positive avenues for improved access to better financial inclusion for individuals and businesses alike [8]. Conversely, fast-moving FinTech adoption also comes with challenges in relation to privacy, security, and the regulatory environment at large. Notably, many users experience identity theft and possible misuse of personal information, hence the need for digital financial literacy. For one to be in a position to reap the full benefits of the FinTech product, they must understand what it entails and manage the risks involved. What constitutes digital literacy must therefore be differentiated from that of financial literacy [9]. Financial literacy refers to an understanding of economic principles and ability to make informed financial choices. Digital literacy, on the other hand, refers to the technical skills one needs for them to be able to interact on digital platforms. Next comes the combination of the two: digital financial literacy. This is so important in today's digital age that even someone with very extensive knowledge about finance may not be able to work efficiently if there are technical issues in FinTech without adequate digital skill [10]. Additionally, the adoption of FinTech solutions in public sector insurance could lead to improved risk assessment and customer outreach, supporting broader financial inclusion goals in emerging markets [11] [12].

While a number of research has been done in studying the factors driving FinTech adoption or its direct effects on financial inclusion, it is noteworthy that not much of this line of research is able to expose how digital financial literacy may influence the relationship [13]. More importantly, regulatory support is crucial in instilling confidence in the services of FinTech among users, hence encouraging broader participation. Perceived regulatory support reflects users' perceptions that the regulatory environment is transparent. This research contributes to the behavioural finance field in three major ways. First, it unfolds that FinTech adoption alone is not sufficient to make the financial lives of people better. Instead, the relationship between FinTech use and financial inclusion is mediated by several factors, including digital financial literacy [14]. This is also considered important, as digital financial literacy has the effect of having a participant interact effectively with FinTech services especially in the current digitized world. The third aspect is what the study found out regarding the role of regulatory support in enhancing the confidence and trust that users display towards FinTech-showing that a robust regulatory framework fosters the wider adoption of digital financial services. Findings may allow necessary policies toward the effectual meaning of serving a large target with FinTech services while ensuring that the services are delivered in a safe environment which supports sustainable financial inclusion.

## 2. LITERATURE REVIEW

The regime has mainly driven the use of financial technology in Nigeria as an improvement for inclusion and poverty reduction [15]. The government and other financial institutions in the different regions are embracing the digital alternative platforms to provide services such as mobile payment and Automated Teller Machines (ATMs) to the unbanked. However, various factors like low literacy, infrastructure, data security issues, and the digital divide continue to hinder these initiatives. The proposed framework attempts to fill in the blanks in several areas by focusing on the dimensions of digital financial literacy and perceived regulatory support, the least noticed aspect in many past studies that mentioned financial inclusion in developing markets.

This report [16] has featured a digital financial inclusion index on 52 emerging markets, pinpointing digital financial services as the critical driver for financial inclusion in Africa and Asia. Though impressive, this research study has put regional gaps of access into light, signalling demand for policies to end the digital divide post-COVID-19. Whereas this research focuses on the adoption of technology, it does not examine the effect of users' digital financial literacy as well as their perceived support of regulation on the entry process in a more detailed manner. The proposed framework fills the above gap by focusing on these as essential mediating variables and moderators during the FinTech adoption process. FinTech credit has gained considerable ground in developing countries with improving financial inclusion, which it indicates is complementing traditional banking services to small and medium enterprises. The paper [17] mainly focuses on the role of FinTech as an alternative credit source and does not consider broader implications in terms of financial

inclusion. This would suggest an extension of that, including the role of FinTech in general financial inclusion along with the inclusion of digital financial literacy and regulatory support as core factors that could increase the impact of FinTech credit among the underserved populations.

This study [18] narrows focus to the ASEAN region, indicating that Vietnam, Laos, and Cambodia are the three major markets of significant potential for growth in FinTech because of high exclusion from finance. This is going to provide an outline for governments to develop policies toward financing investment in FinTech. At the same time, it places the focus on market potential and not thinking about digital literacy or even understanding of the regulatory environment in developing inclusion. The proposed framework aims to fulfil the gap in determining whether the support for digital financial literacy and the perceived regulatory can enhance the FinTech role in increasing financial inclusion in high-potential regions.

This research [19] delves into the complex interplay among FinTech penetration, financial inclusion, and financial development across more than 60 economies. It finds that penetration of FinTech is important for the financial development of economies where financial inclusion is low, and also their poor financial performance. Still, how digital financial literacy on the part of the users and regulatory perceptions may affect these outcomes, and if so, in what ways, remain unexplored by this study. The proposed framework overcomes such shortfall as it encompasses both of these elements as critical factors that may enhance the effectiveness of FinTech in driving financial inclusion as well as financial development in emerging markets.

**Critical Observations:** Although some past researches have laid out illuminating insights into how FinTech enables financial inclusion, there is a big limitation related to the relevance of digital financial literacy and regulatory support. The current framework is designed to overcome these limitations by giving significant weight to these mediating and moderating factors. Digital financial literacy is essentially important to ensure that users can effectively interact with FinTech platforms, and regulatory support availed is likely to boost the adoption of these services and enhance trust and confidence in these services. This framework serves to understand the elaborative dynamics between FinTech adoption and financial inclusion, thus offering important practical implications for policymakers and other industry stakeholders in emerging markets.

### 3. PROPOSED SEM ANALYSIS METHODOLOGY

The entire process of design and survey procedure to determine the role FinTech can play for improving financial inclusion. Initially, a structured questionnaire was designed on Google Forms that has sections for demographic information as well as FinTech usage, along with variables such as Trust, Service Quality, Perceived Security, Digital Financial Literacy, Perceived Regulatory Support, and Financial Inclusion. To ensure that the questionnaire was coherent, it was pilot-tested on a sample of 30 users allowing for necessary adjustments based upon their feedback. The completed survey was distributed across three months using various channels such as social media platforms, email, and FinTech community groups to maximize reach and participation. All the participants gave their informed consent assuring them confidentiality thus making all questions compulsory not to receive any incomplete responses. Finally, this period has seen the collection of a total of 500 valid responses made based on convenience and snowball sampling techniques. Finally, it was possible to dig deeper into how FinTech can contribute to financial inclusion in emerging markets with a robust method to examine the established relationship through the use of SEM techniques for data analysis as shown in the [fig. 1](#).

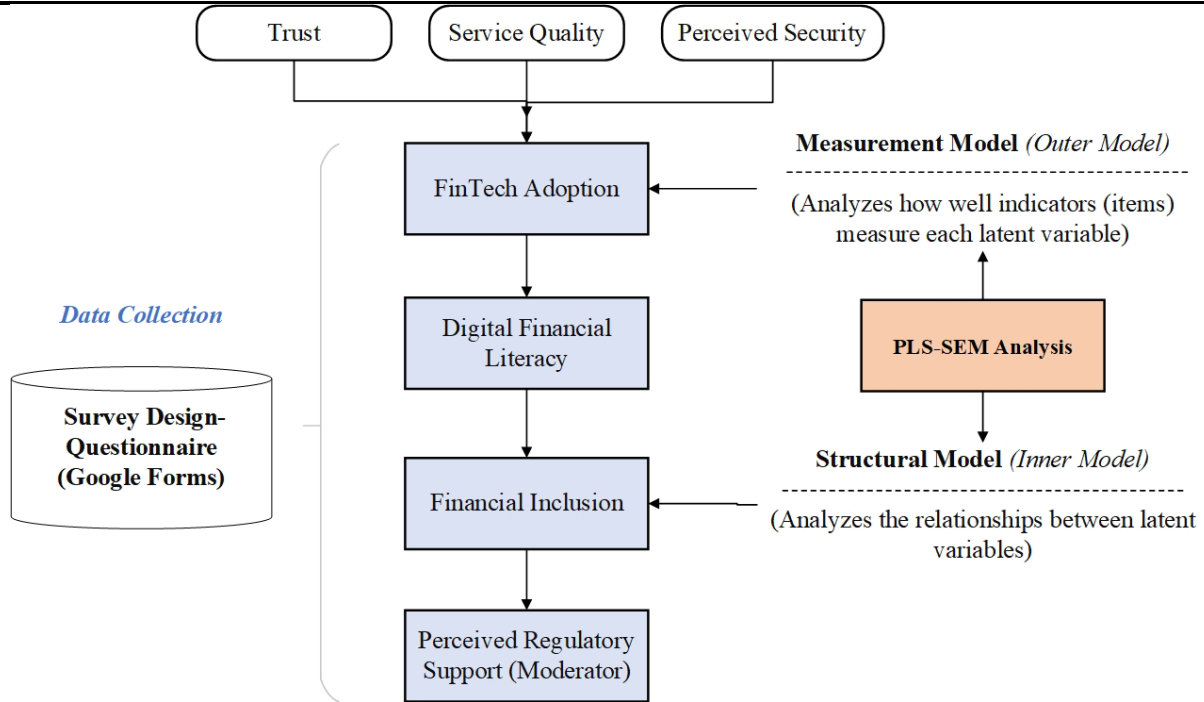


Fig. 1. Proposed Framework Assessing the FinTech in Financial Inclusion

#### 4. VARIABLES AND THEIR RELEVANCE

The independent variables in this proposed framework include trust, service quality, perceived security, digital financial literacy, and perceived regulatory support. They are speculated to boost FinTech uptake and usage, which will have an influence on financial inclusion in emerging economies. It indicates that the factor that depends is the level of financial inclusion, which refers to the bottom of the pyramid's capacity to obtain and use official banking services. The variable measured through users' engagement in different forms of FinTech platforms like mobile payments, investment services, credit options, and insurance products. In these lines, the study intends to see how the better factors, such as trust and quality service, drive larger mechanisms for financial inclusion into FinTech innovations as shown in the [fig. 3](#).

**INDEPENDENT VARIABLES:** Trust, Service Quality, Perceived Security, Digital Financial Literacy, and Perceived Regulatory Support.

**DEPENDENT VARIABLE:** Financial Inclusion and its relevance as this are the outcome measure of the study.

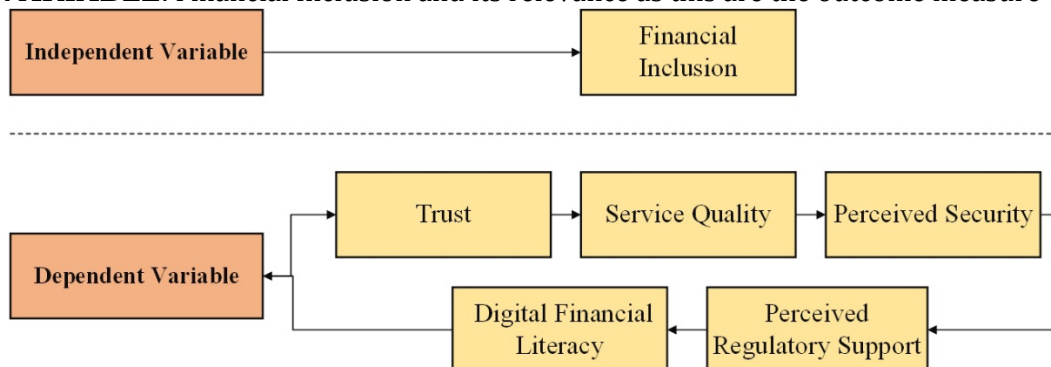


Fig. 2. Independent and Dependent Variables

- **Trust** is one of the critical influencers of the uptake of FinTech services in that it directly deals with the willingness of the users to involve themselves with digital financial platforms. Enough trust lowers perceived risks and creates a feeling of safety among people so that they can open themselves for their use.

- **Service Quality:** While the quality of service that FinTech platforms offer plays a strong role in user satisfaction and retention, high service quality within the FinTech context is the efficiency, responsiveness, and user-friendliness that directly leads to higher user experience and further engagement with FinTech.
- **Perceived security:** It is one of the factors by which users are motivated to form an acceptance rate towards the services of FinTech. The more a user perceives security in the protection of their financial and personal data, the most willing they would be to trust and utilize the services, hence increasing their adoption.
- **Digital Financial Literacy:** Digital financial literacy empowers users to conduct different sorts of FinTech platforms in an effective manner, hence facilitating sound monetary decisions for the user. Higher levels of literacy do not merely make people confident but increase the relationships between users and available digital financial services.
- **Perceived Regulatory Support:** The form and maturity which develops in FinTech is entirely based on the regulatory framework established for its operations. The resultant trust in the solutions should increase with user perception as having strong and favourable regulatory support, and their adoption should increase farther.
- **Financial Inclusion:** Achieving this requires an understanding of these variables because they all relate to the effectiveness with which FinTech services could be extended and served to underserved populations. The framework addresses these factors with the purpose of identifying pathways through which these innovations in FinTech can enhance financial inclusion.

## 4.4 HYPOTHESES DEVELOPMENT OF THE PROPOSED FRAMEWORK

### HYPOTHESIS 1:

*(H1)-FinTech adoption has a direct and positive impact on financial inclusion.*

FinTech innovations bring low-cost, accessible financial services that overstep traditional banking boundaries like geographical constraints and high transaction fee [21]. FinTech now enables an increased population, not necessarily constrained to traditional banking services but those in more remote areas or previously excluded from such services, to access financial products through the use of mobile platforms, digital wallets, and peer-to-peer payment systems [22]. This means that, by doing so, it is assumed that increased adoption of FinTech technologies leads to more extensive financial inclusion by rendering the underbanked capable of participating in financial systems in emerging markets [23].

### HYPOTHESIS 2:

*(H2)- Digital financial literacy acts as a positive mediator of FinTech adoption with respect to the financial inclusion relationship.*

While FinTech solutions do provide access to financial services, their effective use is predicated upon users' understanding and capability to navigate through these platforms [24]. Users need to be digitally financially literate, i.e., have knowledge of, and possess the required skills to utilize mobile payments, online banking, and digital wallets, in order to reap maximum benefits from FinTech offering [25]. This hypothesis assumes that adoption of FinTech services may not be effective in forcing financial inclusion unless the adopters understand the financial aspects of these services [26]. In this respect, digital financial literacy works as a mediating factor that serves to augment the relationship between FinTech adoption and financial inclusion through equipping adopters with how to best utilize FinTech services.

### HYPOTHESIS 3:

*(H3)-Trust in FinTech services positively affects the adoption of FinTech services.*

One of the key factors that determine the adoption of technology in financial services is based on trust [27]. The majority of the population in emerging markets remains skeptical about using digital platforms largely because it concerns data privacy and security as well as basic fraud fear. According to this hypothesis, if users believe that FinTech services are secure, reliable, and trustworthy, then a probability of adopting such services rises. Trust also reduces the perceived risk of adopting new technologies, and therefore it is possible to increase a greater acceptance of the solutions of FinTech in consumers and especially those who, for their part, have little experience of using digital finance.

### HYPOTHESIS 4:

*(H4)-Service quality has a positive impact on the adoption of FinTech.*

Quality service provided by FinTech such as an easy operating procedure, reliability, and customer support are necessary before the adoption takes place [28]. When FinTech platforms turn out easy to use and are responsive to users, they tend



to continue using the service and recommend it. This hypothesis indicates that superior service quality does better enhance user experience, which in turn relates to improved adoption levels [29]. In emerging markets, by the nature of the differing degrees of technological literacy, high-quality interfaces and customer care are essential for breaking through initial reluctance towards digital financial services.

### HYPOTHESIS 5:

**(H5)- Perceived security has a positive effect on FinTech adoption.**

Security is a major issue for FinTech service users, especially in developing countries where cases of frauds and cybercrime may represent a barrier to the adoption of technology [30]. This hypothesis suggests that when users feel FinTech services are secure-due to strong data protection mechanisms, means of authentication, and encryption-the higher the adoption rates are likely to be [31]. The advanced security features reduce fears of losing private and financial data, thus enhancing confidence levels and willingness to use FinTech platforms.

### HYPOTHESIS 6:

**(H6)- Perceived regulatory support and financial inclusion have a positive moderating effect on FinTech adoption.**

A conducive regulatory environment ensures that FinTech innovations are launched in accordance with the rule of law, protection for consumers, and promotion of innovation [32]. The hypothesis here signifies that when the users know that governments and regulators support FinTech through friendly policies, protection, and regulation, then their trust in such platforms increases [33]. This regulatory support moderates the link among the adoption of FinTech and financial inclusion by ensuring more users that the system is secure, regulated, and generally backed by government institution [34]. This is highly critical in emerging markets where regulatory incongruity may be the case. This hypothesis was virtually presented in the fig. 4.

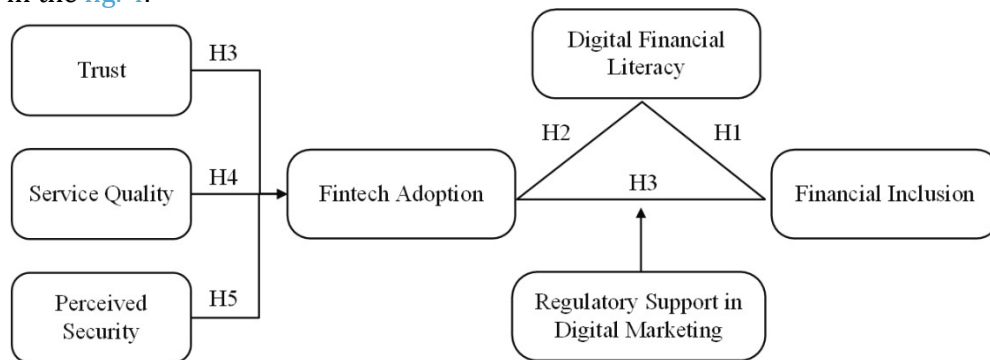


Fig. 3. Development of Conceptual Model for Perceived Regulatory Support through Digital Marketing

## 5. CONCLUSION AND IMPLICATIONS

In conclusion, the findings of this study suggest that FinTech has a significant role in the promotion of financial inclusion in emerging markets. Removing trust, service quality, and perceived security as barriers will increase adoption rates by FinTech platforms. This means a more significant part of the population can access basic financial services. Besides that, digital financial literacy is an important component; hence, developing appropriate educational programs aiming at the development of digitized financial capabilities is important. This further emphasizes the relationship between FinTech adoption and financial inclusion, and regulatory support aids the relationship, implying policymakers should create a supportive regulatory framework that would allow for the introduction of innovation while ensuring that users are protected. The results of the study indicate that for sustainable financial inclusion using FinTech, this involvement would complement the need for a wholistic approach combining technological advancement, education of the users, and supportive policies.

## CONFLICT OF INTERESTS

None.

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