

The Evolution of Fintech and Financial Inclusion: The Role of Institutions in Shaping Digital Financial Systems

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Abstract

Financial technology evolution has changed the way people use and interrelate with financial services. With the starting of electronic payment systems, introduction of digital ecosystem like mobile payments, computerized banking, online loans, AI, blockchain and data-driven financial services have grown. Fintech is the important tool for financial inclusion because of digital platforms which reduces transaction costs, solve geographical problems and accessible to people who have been untouched by formal financial institutions. But, technology cannot only guarantee financial inclusion, due to poor internet access, costly devices, lack of digital skills, financial knowledge or raising security and privacy. Issues. This paper examines the evolution of fintech and studies the formal conditions that impact its contribution to financial inclusion. As per the literature review, The paper concludes that fintech creates opportunities for financial inclusion, but strong and responsive institutions are necessary to ensure that these opportunities are widely and fairly shared.

Keywords: Fintech, Financial Inclusion, Digital Finance, Digital Payments, Financial Technology, Regulation, Digital Literacy, Financial Exclusion.

Introduction

Over the last few years, the way people use money has changed significantly due to modernisation and developments. Banking, can be used now from a click of mobile phone or a laptop. Fintech development, encompasses digital banking, mobile payments, online lending, artificial intelligence and other tech-enabled financial services. Fintech has brought a number of benefits to the table, in terms of making finance more accessible, convenient, and faster to use. As such, it has been heralded as a tool to increase financial inclusion, especially for those who do not have easy access to banks. However, not everyone who lacks access to traditional banking services has the opportunity to turn to fintech. Limited internet penetration, the digital divide, financial literacy and cyber security concerns can be just as limiting for financial inclusion as a lack of access to banks. Therefore, while technology can help open the door, the door itself must be made accessible to all. This paper will analyse the institutional factors that contribute to the latter, and how fintech fits into this framework.

Objectives of the Study

- To explore how fintech has evolved and to assess how technological advances have reshaped the structure, delivery and accessibility of financial services.

- To identify the institutional conditions—such as digital infrastructure, interoperability, regulation, affordability, digital financial literacy, consumer protection and data governance—that shape whether fintech advances financial inclusion or gives rise to new forms of financial exclusion.

Literature Review

Schueffel (2016) focused on the challenge of defining fintech and discussed its general nature, being the use of technology to enable financial activities. This perspective is particularly useful because fintech is not confined to one particular product or activity. Fintech includes digital payments, online banking, lending, investment applications, data analytics and other technology-based financial activities. Asif et al. (2023) examined the influence of fintech and digital financial services on financial inclusion in India and found that digital services had expanded the opportunities for the underserved populations. However, the Indian experience also shows the significance of digital infrastructure and accessibility in determining who benefits. Sant'Anna and Figueiredo (2024) reviewed the benefits and risks of fintech innovation and emphasized the relationship between financial inclusion, financial stability, regulation and consumer protection. Ha, Le and Nguyen (2025), having done a review of 96 studies, also emphasized the importance of regulation, security, consumer protection, and the need to measure the actual effects of fintech on financial inclusion. Trotta et al. (2026) conducted an umbrella review of reviews and highlighted accessibility, technological and ethical concerns, economic constraints, regulatory barriers and social factors as important obstacles to digital financial inclusion.

Fintech and Financial Inclusion

Financial inclusion generally refers to the ability of individuals and businesses to access and use appropriate financial services at an affordable cost. It is therefore broader than simply having a bank account. Meaningful financial inclusion also involves the ability to make payments, save money, obtain suitable credit, manage financial risks and use financial services safely.

Fintech can contribute to these goals in several ways. Mobile payments can make small transactions easier and reduce the need to travel to a bank. Digital banking can allow customers to manage accounts remotely. Online lending platforms can potentially reach borrowers who have difficulty accessing conventional credit. Small businesses can also use digital payment systems to receive and record payments more easily.

However, access is only the first step. A person may have a digital bank account but rarely use it because of high data costs, limited financial knowledge or concerns about security. Similarly, having access to digital credit does not necessarily mean that the credit is affordable or appropriate.

This distinction between access and effective use is central to the recent literature. A 2024 study focusing on India found that digital financial literacy helped explain the relationship between fintech use and financial inclusion, while perceived regulatory support also influenced this relationship. This suggests that people's ability to understand and trust digital financial services matters alongside technological availability.

Fintech can therefore be both inclusive and exclusionary. It can remove geographical barriers while creating digital barriers. It can make credit easier to obtain while also creating risks of over-borrowing. It can make financial decisions faster while making those decisions harder for consumers to understand.

Evolution of Fintech and the Changing Financial System

Banking, which used to be a highly branched and paper-intensive industry, can now be done with a few taps on a smartphone or a computer. This development has been enabled by the fintech industry, which is involved in banking, mobile payments, online lending, artificial intelligence or other tech-driven financial services. Fintech has been a huge disruption to the financial industry, making many financial services more accessible, convenient and faster, especially for those who lack access to traditional banking. It is often hailed as a cornerstone of financial inclusion. However, even if financial services can be provided digitally to people in remote locations, it does not mean that they will necessarily use these services, as there are various barriers to adoption, such as poor connectivity, high smartphone prices, poor digital literacy, financial illiteracy, fraud and privacy concerns. The value of fintech, then, is largely dependent on the context in which it is used. This paper will highlight the ways in

which fintech has and is still disrupting the financial industry and what institutional factors facilitate financial inclusion.

- **Computerization of Banking**

Fintech's early growth occurred within conventional financial institutions, which relied on computers to handle information, maintain records, and boost efficiency. Automated teller machines (ATMs) progressively reshaped how customers related to bank branches, letting them withdraw cash and carry out simple transactions without interacting with bank staff. Electronic payment systems subsequently cut down on the use of cash and paper money. At that point, technology mostly served to support the banking system already in place.

- **Internet Banking**

With the rise of internet banking, customers can conduct transactions remotely, with no need of visiting the branch. The demand for physical locations of banks everywhere have decreased. Technology changes the way customers deal with their banks.

- **Smartphone based Finance**

Financial services are now easily accessible with mobile applications and anywhere where there is a good network connectivity. Mobile phone wallets, UPI payments, online loans, and different investment platforms grew more with this. One customer may have a bank account at one bank, make payments through another, and obtain other financial services through the another bank.

- **Data and Artificial Intelligence**

Data is the most recent phase of growing fintech. Digital payments provide information that can serve different purposes like fraud detection, credit assessment, customer service and product development. Even AI can also assist financial institutions in analysing information and taking crucial automating decisions. Technology should be transparent, accountable and fair.

Institutional Conditions for Inclusive Fintech

- **Digital Infrastructure**

Dependable digital infrastructure is among the fundamental requirements for inclusive fintech. The coverage and availability of mobile networks, internet, digital identification and payment infrastructure shape whether people are able to take part in digital finance. Where connectivity is limited or costly, fintech will likely benefit only those who are already well connected. Investing in digital infrastructure is thus also an investment in financial inclusion.

- **Interoperability**

Interoperability enables different financial institutions and payment systems to operate together. In the absence of interoperability, consumers may end up locked into separate networks, and businesses may have to support multiple systems. India's Unified Payments Interface (UPI) offers a key example of interoperable payment infrastructure that supports a broader digital payment ecosystem. The broader lesson is that how financial infrastructure is designed matters. Innovation is more valuable when different services can communicate instead of functioning as isolated systems.

- **Regulation**

Fintech frequently advances more quickly than conventional regulatory frameworks, which poses a challenge for policymakers. Overly strict rules can stifle beneficial innovation, whereas lax regulation may leave consumers and institutions exposed to considerable risks. Good regulation ought to cover consumer protection, cybersecurity, data usage, competition and financial stability. The aim should not be to block technological change, but rather to make sure that innovation occurs within a clear and accountable framework. Recent studies, among them Sant'Anna and Figueiredo (2024), stress how important regulatory and supervisory capacity is for balancing fintech's benefits against its possible risks.

- **Affordability**

Unable to pay for digital financial services make the people non inclusive. It becomes difficult for low-income households to bear expenses of smartphone, mobile data and financial services. Affordability and availability of these go parallel to each other.

- **Digital Financial Literacy**

Financial inclusion policies should not only focusses on development of infrastructure, but should try to train or provide information to users with the knowledge required f good choices.

- **Consumer Protection**

Efficient complaint mechanisms, transparent information and clear responsibilities for financial service providers are therefore important. When consumers feels unsafe in usage of digital financial services, they may use more cash system or other types of informal financial methods.

- **Data Governance**

Good data governance system ought to cover consensus, safety, storage, sharing and accountability. Consumers deserve a knowledge of how their data is used and how the decisions affecting them are reached.

Fintech Becomes Exclusionary

Technologies can remove certain barriers and can create new barriers also. Digital exclusion is seen when access to internet is difficulty, or there is lack of skills to use smartphones or digital services. Economic exclusion is seen due to high cost of financial services or data. Regulatory exclusion can be seen when misleading products reaches vulnerable customers.

The recent literature backs this broader perspective. Trotta et al. (2026) point to technological, ethical, economic, regulatory and social barriers to digital financial inclusion. This strengthens the idea that digital access should not be seen as the same thing as financial inclusion. Genuine inclusion means that people can access, comprehend, afford and safely use financial services.

Policy Implications

The growth of fintech carries a number of consequences for policymakers. Digital infrastructure, expanded reliable and affordable connectivity will help all over sectors or areas for access to financial services. Interoperability should be promoted in order to reduce fragmented areas and increase competition. Regulation should be balanced in relation to innovation. Consumer protection, cybersecurity, should be dealt properly without delay in terms of technological progress.

People should able to understand financial products in markets, understand different online frauds and protect their personal information. Policymakers should try that underserved groups, rural area people, uneducated women's or small business can be able to use financial services carefully and affordably.

Conclusion

Fintech has reshaped financial services from a system based largely in physical branches and traditional institutions into one that is more digital, interconnected and driven by data. The rise of mobile payments, digital banking, online platforms and artificial intelligence has opened up real opportunities to broaden financial inclusion by lowering geographical and transaction barriers. Yet the mere availability of technology does not guarantee financial inclusion. The benefits of fintech hinge on the broader institutional environment in which it functions. Reliable digital infrastructure, interoperability, affordability, effective regulation, digital financial literacy, consumer protection, and responsible data governance all help determine whether digital finance widens opportunity or produces new forms of exclusion. The experience of developing economies, India included, shows that technological innovation can deliver substantial results when it is backed by suitable institutional arrangements. Fintech should thus be viewed as an opportunity, not a guarantee, of financial inclusion. The long-term success of digital finance will hinge not only on how fast technology advances but also on whether institutions can make financial services accessible, affordable, transparent, secure, and fair. In the end, a genuinely inclusive digital financial system should be measured by whether people can take part in financial life with confidence, protection, and equal opportunity

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