

## Financial Inclusion in Fintech

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### Abstract

Financial Technology (FinTech) has become a major catalyst in advancing financial inclusion by delivering financial services that are accessible, cost-effective, and technology-driven. This research investigates the influence of FinTech on financial inclusion, concentrating on digital wallets, UPI, neobanks, mobile banking, microloans, and AI-enabled credit evaluation systems. The study aims to evaluate how FinTech reduces the gap faced by unbanked and underbanked individuals, examine awareness and usage patterns of services such as savings, credit, and insurance, identify innovations that promote inclusion, and explore challenges including data security and the digital divide.

Primary data were gathered from 106 respondents and examined using a one-sample t-test through SPSS software. The findings indicate statistically significant results ( $p < 0.001$ ) across all measured variables, demonstrating a strong positive impact of FinTech on financial inclusion. The null hypothesis claiming that FinTech has not fulfilled the objective of financial inclusion was rejected, confirming its significant contribution toward expanding access to financial services. Furthermore, results related to data protection also showed statistical significance ( $p < 0.001$ ), supporting the alternative hypothesis that multi-layer authentication mechanisms effectively safeguard user information on FinTech platforms.

Although the outcomes are positive, issues such as limited digital awareness, unequal access to the internet, and apprehensions regarding misuse of data continue to exist. The study concludes that FinTech has considerably strengthened financial inclusion; however, continuous improvements in digital infrastructure, awareness initiatives, and regulatory protection are necessary to build an inclusive and secure financial environment.

### Introduction

Financial inclusion involves providing affordable and appropriate financial services to individuals and businesses, especially those belonging to underserved and economically weaker segments. Access to banking facilities, savings, credit, insurance, and payment systems is essential for poverty reduction, entrepreneurial growth, and long-term economic development. However, conventional banking institutions have been unable to effectively reach large portions of the population due to high operational expenses, geographical limitations, documentation barriers, and low levels of financial literacy.

The rise of Financial Technology (FinTech) has transformed the financial services sector through digital platforms, mobile applications, and data-oriented innovations. Tools such as digital wallets, Unified Payments Interface (UPI), neobanks, mobile banking, microcredit facilities, and AI-driven credit scoring models allow users to access financial services conveniently and at lower costs. In India, FinTech has significantly supported national initiatives like Digital India and Jan Dhan Yojana, thereby accelerating the pace of financial inclusion.

Despite its rapid growth, FinTech adoption encounters several obstacles. Concerns regarding the digital divide, cybersecurity risks, protection of personal data, and lack of trust in digital systems remain major challenges, particularly among first-time users. Strengthening data security through multi-factor authentication systems and effective regulatory policies is crucial for enhancing user confidence. Therefore, this research examines the contribution of FinTech to financial inclusion, evaluates awareness and usage behaviour, and assesses whether existing security systems adequately protect user information.

## Review of Literature

Recent studies have explored the role of Financial Technology (FinTech) in promoting financial inclusion and have provided significant insights. Research by Sahay et al. (2023) highlights that FinTech enhances financial inclusion by lowering entry barriers and enabling alternative credit assessment methods, while also stressing the importance of strong data protection regulations and cybersecurity frameworks to maintain user trust. Similarly, a report by the World Bank (2022) indicates that digital financial services such as mobile payments and digital identity systems have accelerated financial inclusion in the post-pandemic period, although concerns regarding limited digital literacy and connectivity gaps continue to pose challenges. In addition, Bazarbash and Beaton (2020) found that mobile banking, digital lending, and data-driven credit evaluation significantly improve access to financial services for unbanked populations in emerging economies, while emphasizing the need for effective regulatory oversight. Supporting this, the Reserve Bank of India (2020) observed that digital payment systems like UPI and mobile wallets have expanded the reach of formal financial services in India by offering greater convenience, transparency, and faster transactions. Furthermore, Philippon (2019) concluded that FinTech-driven innovations improve efficiency and accessibility in financial services by reducing operational barriers, increasing competition, and extending services to previously excluded sections of society.

## Methodology

This study relies on primary data collected from 106 respondents using a structured questionnaire. A descriptive as well as analytical research design was implemented. Convenience sampling was adopted for selecting respondents. The collected data were analyzed using IBM SPSS software. A one-sample t-test was conducted to examine hypotheses concerning FinTech's role in financial inclusion and data protection. Statistical testing was performed at a 5 percent significance level ( $p < 0.05$ ). Interpretation of results was based on mean scores, t-values, significance levels, and effect size measurements.

## Data Analysis

Primary data obtained from 106 participants were processed using IBM SPSS. Both descriptive statistics and one-sample t-tests were applied to evaluate the influence of FinTech on financial inclusion and data security.

### Hypothesis 1: Role of FinTech in Financial Inclusion

- Variables associated with FinTech usage and inclusion (V4 and V5) showed relatively high mean values of 2.39 and 2.08 respectively.
- The calculated t-values (26.091 and 25.558) were statistically significant at  $p < 0.001$ .
- The significance level considered was 5 percent.

### **Result:**

The null hypothesis (H0), which stated that FinTech has not achieved the objective of financial inclusion, was rejected. The alternative hypothesis (H1) was accepted, indicating that FinTech has made a significant contribution to enhancing financial inclusion.

### **Hypothesis 2: Data Privacy and Security in FinTech Platforms**

- Variables relating to data security (Unsecured and Secured) recorded mean values of 1.81 and 2.67.
- The corresponding t-values (24.225 and 28.245) were statistically significant at  $p < 0.001$ .
- The significance level applied was 5 percent.

### **Result:**

The null hypothesis (H0), which proposed that FinTech platforms lack data privacy protection, was rejected. The alternative hypothesis (H1) was accepted, suggesting that authentication systems effectively ensure user data security.

### **Findings**

Statistical analysis confirms that FinTech plays a significant role in enhancing financial inclusion. The increased use of FinTech services has reduced dependence on physical bank branches for routine transactions, while users demonstrate strong awareness and frequent usage of UPI, digital wallets, and mobile banking. Among various services, payments, savings, and fund transfers are widely adopted, whereas credit and insurance services show comparatively lower usage. Factors such as convenience, speed, accessibility, and advanced security features act as key drivers influencing FinTech adoption and building user trust. Additionally, younger users exhibit higher adoption levels, although challenges such as limited digital literacy, inadequate internet access, and concerns related to cyber risks continue to persist.

### **Conclusion**

The study determines that FinTech has become a significant instrument in promoting financial inclusion by offering efficient, affordable, and easily accessible financial solutions. Empirical findings derived from SPSS analysis strongly validate the positive impact of FinTech in integrating unbanked and underbanked groups into the formal financial system. Additionally, the research confirms that security mechanisms such as multi-factor authentication contribute to protecting sensitive data and strengthening user trust.

Nevertheless, achieving the full potential of FinTech requires addressing existing barriers including digital illiteracy, infrastructure deficiencies, and privacy-related concerns. Policymakers, financial institutions, and FinTech providers need to collaborate in enhancing digital awareness initiatives and strengthening regulatory standards. Overall, FinTech presents substantial opportunities for developing an inclusive and secure financial ecosystem.

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