

# Divers Influencing the Adoption of Financial Technology (FinTech): Evidence from State-owned Commercial Banks in Bangladesh

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**Abstract:** *FinTech, or financial technology, is the use of digital tools and platforms to innovate, improve, and streamline financial services, increasing their accessibility, effectiveness, and security. The goal of the study is to understand the factors influencing the adoption of FinTech in Bangladesh's state-owned commercial banks. A 25-question survey was administered to 150 respondents, representing a wide range of FinTech service users, wherein multiple regression analysis was used. According to this study, the adoption of FinTech is influenced by internet connectivity, trust and security, performance expectancy, regulatory framework and social impact. The findings imply that the adoption of FinTech is strongly and favorably influenced by internet connectivity, trust and security, and social factors. Banks should increase public knowledge and understanding of financial services, implement comprehensive user financial literacy programs, and collaborate with regulatory bodies to establish a regulatory framework conducive to growth. By concentrating on Bangladesh's state-owned banks, which are essential to the nation's financial ecosystem, this study offers a novel viewpoint on FinTech adoption. It draws attention to the region's particular prospects and challenges, which are not covered enough in the current literature. Future studies should examine how FinTech adoption is influenced by technology providers, regulators, and private banks, as well as the effects of various national regulatory frameworks.*

**Keywords:** *FinTech Adoption, Connectivity, Security, Expectancy, Regulation, Social Influence, State-owned Commercial Banks.*

## 1. Introduction

Mobile Financial Services (MFS) have become a revolutionary financial In the twenty-first century, financial technology (FinTech) has significantly transformed the global financial services sector (Burke, 2021). The financial services sector

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in Bangladesh has experienced a significant transformation, propelled by the emergence of FinTech. These digital platforms have eliminated geographical constraints, delivering financial services to formerly marginalized people through enhanced speed, efficiency, and accessibility (Datta, 2024; Sarker & Rahman, 2025). FinTech has evolved from mere technological innovation to an essential instrument for promoting financial inclusion by providing services that surpass conventional banking frameworks. It integrates technology and finance to develop creative solutions that significantly transform how individuals and organizations manage and access their financial data (Lee, 2024). FinTech aims to enhance the efficacy of financial services, hence improving client experiences by tackling several variables, including socioeconomic constraints and technological infrastructure, that affect its acceptance (Hatta & Alwi, 2021; Mohammeda & Hassan, 2024).

Financial Technology has become a principle point in Bangladesh's dynamic financial sector, particularly in the context of state-owned commercial banks in Bangladesh (Das, 2021; Hossain et al., 2021; Wu, 2023). According to (Basdekis et al., 2022; Wang et al., 2022), the nation's financial environment is significantly shaped by these six state-owned commercial banks, which act as catalysts for economic stability and advancement. These institutions' adoption of FinTech marks a revolutionary step forward for financial services innovation, accessibility, and efficiency. However, some significant studies such as (Aldás- Manzano et al., 2009; Lee, 2009; Li, 2013; Wang et al., 2022) contend that the growing acceptance of new technology and services in the financial sector cannot be entirely attributed to consumer pleasure. They demonstrate how customer behaviour, cognition, and personality traits, particularly, affect FinTech products' acceptance.

By providing access to innovative financial solutions, FinTech helps people who were previously unbanked or under-banked and helps communities achieve financial integration (Kim et al., 2018). FinTech promises cost-effectiveness, transparency, financial inclusivity, financial resilience, and many other advantages (Deng et al., 2019; Zetzsche et al., 2019). It is argued that agent banking services under FinTech, which include unbanked individuals in financial inclusion, will eventually create the chance for appropriate resource and finance mobilization while upholding safety and security (Hossain et al., 2021). If FinTech can increase customer satisfaction with better service and offers like reduced rates and fees and faster, more flexible, and transparent processes, it could exploit consumers' discontent with existing competitors to increase its market share (Maier, 2016).

The research objective is to examine the determinants of FinTech adoption in state-owned commercial banks in Bangladesh, with particular emphasis on connectivity, security concerns, performance expectations, regulatory variables, and societal influences. The study seeks to evaluate the impact of these elements on financial inclusion, customer satisfaction, and the modernization of banking services.

This study distinguishes itself by examining the integration of FinTech in state-owned commercial banks in Bangladesh, a vital yet under-researched area of the financial system. It incorporates behavioral and psychological elements, including trust and client cognition, to enhance an understanding of the determinants of FinTech acceptability. The study underscores the significance of internet connectivity and infrastructure for successful implementation. Furthermore, it examines the regulatory and social influences shaping the emergence of FinTech, offering an extensive outlook on the sector's developments in Bangladesh.

## **2. Literature Review**

Financing, cross-process, investment, and payment are the key elements of the developing FinTech business (Putritama, 2019). According to (Guild, 2017), it has been shown that peer-to-peer lending platforms and digital cash transfer services are two ways to innovate in finance research that examines FinTech adoption by means of behavioral intention to utilize the technology (Gao et al., 2011; Rodrigues et al., 2016; Safeena et al., 2011; Teo & Pok, 2003). Studies evaluating FinTech acceptance through real-world use are unusual, despite the prevalence of FinTech services.

### **2.1 Internet Connectivity**

Researchers (Chen et al., 2023; Hjort & Tian, 2021; Qiang et al., 2009) examined whether increased internet connectivity benefits economic development by promoting innovation, boosting productivity, and expanding access to international markets. Researchers have also examined various aspects of internet quality, including coverage, speed, and reliability. To help close the digital divide, they have assessed the quality of internet access in rural areas (Deepika & Sundararajan, 2013; Hounghonon et al., 2022; Niranga et al., 2022).

Additionally, research focuses on internet connectivity technologies such as satellite internet, 5G, and fiber optics. A study published in 2020 (El-Rewini et al., 2020; Suryono et al., 2020) assessed advances in satellite internet, discussing its potential to provide high-speed connectivity to underserved and rural areas. Studies have identified barriers to connectivity, including cost, digital literacy, and limited infrastructure.

### **2.2 Trust and Security**

Trust and security mean users feel confident in the dependability, privacy, and safety of FinTech services (Aldboush & Ferdous, 2023; Jafri et al., 2024). When users trust that platforms are dependable, secure, and private, they are more likely to use FinTech services regularly (Aljaradat & Shukla, 2025; Ridwan et al., 2024). Security concerns make it hard for people to adopt technology (Ogbanufe & Kim, 2018) and participate in e-commerce (Taherdoost, 2017; Tseng et al., 2017).

**JUJBR****2.3 Performance Expectancy**

The Davis' Technology Acceptance Model (TAM), introduced by Davis (1989), suggests that perceived utility and ease of use influence users' attitudes and behavioural intentions toward technology use. According to Venkatesh & Zhang (2010), the Unified Theory of Acceptance and Use of Technology (UTAUT) paradigm incorporates several aspects, including performance expectancy. Research on e-commerce adoption found that perceived performance benefits strongly influenced customers' intentions to adopt online shopping. (Gefen & Straub, 2000). In healthcare, researchers discovered that performance expectancy was a strong predictor of doctors' adoption of technology. (Philippi et al., 2021; Venkatesh et al., 2003).

Performance expectancy greatly affected users' intentions to adopt mobile payment services (Lin et al., 2019). According to a study by Lu et al. (2017), for example, cultural factors influenced how consumers perceived performance benefits and their intent to use mobile payment services. Several studies examined moderating factors affecting the link between performance expectancy and technology adoption. Researcher (Shiau & Chau, 2016) showed that perceived self-efficacy mediated the relationship between behavioral intention to use mobile banking and performance expectancy.

**2.4 Regulatory Environment**

The regulatory environment comprises rules, guidelines, directives, and standards issued by governing bodies to ensure that FinTech enterprises operate fairly, safely, and ethically (Allen, 2024; Vijayagopal et al., 2024). Regulation significantly shapes the use of financial technology, influencing industry dynamics, trust, and daily operations. Efficient regulation is crucial to both innovation and the lasting success of financial services, particularly FinTech. These conditions also create opportunities to revise rules and start new businesses (Restoy, 2021; Treleaven, 2015; Tsai & Kuan-Jung, 2017).

**2.5 Social Influence**

Social influence is the impact of others on a person's decision to adopt a new system and on their view of the reference group's culture (Chuang et al., 2016; Davis, 1989; Kim et al., 2018; Venkatesh & Bala, 2008). It refers to how much a person believes that important individuals think they should adopt a new system. People close to someone can strongly influence changes in behavior (Chen, 2023; de Oliveira Santini et al., 2025; Miranda et al., 2024). We used social influence as a key variable to see if FinTech adoption by associated companies affects FinTech users' intentions.

Investigating FinTech adoption in Bangladesh's state-owned institutions is vital because it affects the financial sector, economy, and society. Identifying what drives adoption can help these banks overcome regulatory challenges, improve financial inclusion, and enhance services (Mahmud et al., 2022; Robin et al., 2025). Furthermore, adopting FinTech can strengthen competitiveness by promoting innovation and collaboration with entrepreneurs (Barua et al., 2025). This study is unique in that it focuses on state-owned commercial banks in

Bangladesh, a topic that has received little attention in the research on the adoption of Fintech. Although earlier research has generally assessed FinTech adoption, this study makes a distinctive contribution by examining the specific effects of internet connectivity, trust and security, performance expectancy, regulatory environment, and social influence on FinTech adoption in these essential institutions. By examining these variables, this study aims to provide insights to financial regulators, bank managers, and government officials on the most effective ways to boost FinTech service adoption and promote financial inclusion and economic growth in Bangladesh.

### 3. Research Hypothesis

The research hypotheses were formulated based on theoretical concepts and prior empirical evidence about the Adoption of Financial Technology (FinTech):

H1: The adoption of FinTech by six state-owned commercial banks in Bangladesh has been significantly affected by the internet connectivity.

H2: The adoption of FinTech by six state-owned commercial banks in Bangladesh has been significantly affected by trust and security.

H<sub>3</sub>: The adoption of FinTech by six state-owned commercial banks in Bangladesh has been significantly affected by the performance expectancy.

H4: The adoption of FinTech by six state-owned commercial banks in Bangladesh has been significantly affected by the regulatory framework.

H5: The adoption of FinTech by six state-owned commercial banks in Bangladesh has been significantly affected by social influence.

### 4. Research Methodology

#### 4.1 Sources of Data and Sample Size

Primary data were collected through a questionnaire survey of bank customers to ensure a complete understanding. The survey was targeted to investigate respondents' perceptions of FinTech and the determinants affecting its adoption. A standardized questionnaire was developed, including five-point Likert (Nemoto & Beglar, 2014; South et al., 2022) scales to assess attitudes toward critical variables such as connectivity, security, performance expectancy, regulatory factors, and social influence. The final sample comprised 150 respondents, representing clients from six state-owned commercial banks in Bangladesh.

#### 4.2 Econometric Model and Variable Description

Econometrics, which focuses on empirically estimating economic relationships, relies heavily on models and data (Meyer & Shera, 2017; Nasr et al., 2000). To examine the connections between variables, multiple linear regression models are frequently employed. These models include diagnostics, model formulation, and estimation methods (Greene et al., 2019). Here, the Econometric Model as follows:

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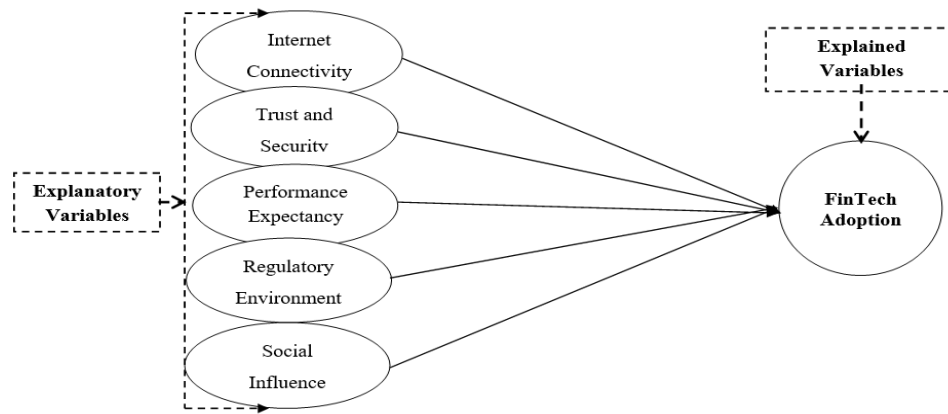
$$FinAD_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \varepsilon_{it} \dots \dots \dots (i)$$

FinAD stands for FinTech Adoption. X1 is the Internet Connectivity; X2 stands for Trust and Security; X3 is the Performance Expectancy; X4 stands for Regulatory Environment; X5 represents Social Influence. Here, i denotes banks, t denotes time (year), and  $\varepsilon$  is the error term.

**Table 1: Variables Measurement**

Serial No.	Variable Name	Variables Definition	Sources
<b>Dependent Variable</b>			
1	FinTech Adoption	The process through which people or organizations start using financial technologies like online lending platforms, digital payment systems, and block chain-based services to handle their financial affairs is known as FinTech adoption.	(Mahmud et al., 2022; Wu, 2023)
<b>Independent Variable</b>			
2	Internet Connectivity	The capacity of devices to connect to the internet, including the different technologies and infrastructures that make this connection possible, is referred to as internet connectivity.	(Gozzi et al., 2024)
3	Trust and Security	Security and trust refer to users' faith in the dependability, confidentiality, and safety of systems, particularly in digital platforms, which guarantee the protection of their data and transactions.	(Jafri et al., 2024; Zhang et al., 2023)
4	Performance Expectancy	The extent to which a person thinks that utilizing a specific technology would improve their performance at work is known as performance expectancy.	(Camilleri, 2024; Sari et al., 2024)
5	Regulatory Environment	A regulatory environment is made up of the laws, rules, and policies set forth by governing authorities that affect how industries operate and guarantee ethical and compliant behaviour.	(James Jr, 2000; Martínez et al., 2023)
6	Social Influence	Social influence is the process through which other people's presence or actions alter a person's attitudes, beliefs, or behaviours; this frequently results in conformity or behavioural changes.	(Moussaïd et al., 2013)

### 4.3 Conceptual Framework



**Figure 1: Conceptual Framework of the Study**

## 5. Data Analysis

### 5.1 Descriptive Statistics

The descriptive statistics display the mean, standard deviation, minimum, maximum, skewness, and kurtosis. The biggest value is indicated by Maximum, and the lowest number is displayed by Minimum. The mean is calculated by dividing the total number of observations by the average value of all the observations. The standard deviation, skewness, and kurtosis values are used to assess the consistency of the data and determine the degree of risk.

**Table 2: Descriptive Statistics**

	Obs.	Min.	Max.	Mean	Std. Dev.	Skewness	Kurtosis
FinTech Adoption	150	1.00	5.00	2.270	1.609	0.3061	2.880
Internet Connectivity	150	1.00	5.00	3.591	.8056	-0.4762	2.917
Trust and Security	150	1.00	5.00	3.591	.8139	-1.0494	2.722
Performance Expectancy	150	1.00	5.00	3.898	.7245	0.5783	1.073
Regulatory Environment	150	1.00	5.00	3.591	.8084	0.7513	2.660
Social Influence	150	1.00	5.00	3.693	.7484	-1.0145	1.944

*Notes: The table shows the mean, standard deviation, minimum, skewness, and kurtosis of the FinTech adoption, performance expectancy, internet connectivity, regulatory environment, trust and security, social influence with a total sample size of 150, questionnaire surveys were used to collect the primary data sources.*

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The mean value of Performance Expectancy was at 3.8978, showing a positive response, and it also had the lowest standard deviation of 0.72450. By comparison, the mean for FinTech adoption was 2.27, with a standard deviation of 1.609. Turning to other factors, the mean values were as follows: internet connectivity at 3.59, trust and security at 3.59, regulatory environment at 3.5911, and social influence at 3.6933. Additionally, skewness and kurtosis values were within the standard range. Therefore, the data are normally distributed.

**5.2 Reliability and Validity Test**

Valid and reliable data collection is required for producing high-quality research findings (Perret et al., 2001). The accurate findings will be revealed if the data is accurate. It is necessary to test the validity and reliability of the instruments used in this study in order to assess their suitability for use (Cook & Beckman, 2006). To confirm the reliability of the questionnaire, Cronbach's alpha was employed.  $\alpha < 0.50$  = Unacceptable,  $0.50 \leq \alpha < 0.60$  = Poor,  $0.60 \leq \alpha < 0.70$  = Acceptable,  $0.70 \leq \alpha < 0.90$  = Good (High Reliability), and  $\alpha \geq 0.90$  = Excellent (Very High Reliability) are the values indicated by Cronbach's alpha (Cronbach, 1951).

**Table 3: Reliability Statistics**

Cronbach's Alpha	N of items
.919	18

Cronbach's alpha for the 18 entries in this table is 0.919, which is higher than 0.90. This indicates that the data or indicators used for analysis in this study are of extremely high quality.

**5.3 Sample Adequacy and Sphericity Test**

The study has tested five hypotheses with different dimensions and variables. Determining whether a dataset is appropriate for the study is therefore necessary.

**Table 4: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.882
Bartlett's Test of Sphericity	Approx. Chi-Square	519.447
	Df.	18
	Sig	.000

The sample sufficiency index KMO by Kaiser-Meyer-Olkin is shown in the Table below. At 0.70 (70%), it is considered reliable. This index compares observed correlation coefficients with the partial correlation coefficients for all analysis variables, resulting in 0.882 (94.0%) (Yong & Pearce, 2013). The Bartlett test confirmed a substantial correlation between variables, with its sphericity test yielding 0.000.



### 5.4 Correlations Analysis

**Table 5: Correlations Analysis**

	FinTech Adoption	Internet Connectivity	Trust and Security	Performance Expectancy	Regulatory Environment	Social Influence
FinTech Adoption	1					
Internet Connectivity	.284**	1				
Trust and Security	.158**	.651**	1			
Performance Expectancy	-.210**	.512**	.605**	1		
Regulatory Environment	-.266**	.556**	.617**	.640**	1	
Social Influence	.225**	.480**	.580**	.705**	.670**	1

*Statistically Significant \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ ; t statistics are enclosed in parentheses.*

*Notes: The table shows the results of Pearson's pairwise correlation coefficients between the examined variables. Total sample size was 150, questionnaire surveys were used to collect the primary data sources.*

Internet Connectivity, Trust and Security, Performance Expectancy, Regulatory Environment, and Social Influence are the five factors associated with FinTech adoption shown in the table, along with their Pearson correlation coefficients. There are noteworthy correlations between FinTech Adoption and Internet Connectivity ( $r = 0.284$ ,  $p < 0.01$ ). There is also a significant association between FinTech Adoption and Trust and Security ( $r = 0.158$ ,  $p < 0.04$ ), as well as between FinTech Adoption and Social Influence ( $r = 0.225$ ,  $p < 0.01$ ). On the other hand, Performance Expectancy has a strong negative relationship with FinTech Adoption ( $r = -0.210$ ,  $p < 0.02$ ), meaning that as Performance Expectancy increases, FinTech Adoption decreases. Similarly, Regulatory Environment also has a strong negative relationship with FinTech Adoption ( $r = -0.266$ ,  $p < 0.01$ ), indicating that higher values in Regulatory Environment are associated with lower FinTech Adoption. All significant relationships have p-values below 0.05, emphasizing how crucial these variables are in determining FinTech adoption.

### 5.5 Regression Analysis:

**Table 5: Regression Analysis**

Variables/Particulars	Pooled OLS Model
Internet Connectivity	4.668** (.506)
Trust and Security	0.826** (.323)
Performance Expectancy	4.469 (.054)

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Variables/Particulars	Pooled OLS Model
Regulatory Environment	4.130 (.321)
Social Influence	4.653** (.157)
Constant	-.783** (-.194)
F-Stat	41.048*** (385.793)
R <sup>2</sup>	0.586
Adjusted R <sup>2</sup>	0.580
No. of Observations	150

*Statistically Significant \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ ;  $t$  statistics are enclosed in parentheses.*

*Notes: The table shows the results of the specific effects of internet connectivity, trust and security, performance expectancy, regulatory environment, and social influence on FinTech adoption in six state-owned commercial banks in Bangladesh where Pooled OLS Model (multiple regression) was applied to measure the impact.*

The dependent variable (FinTech Adoption) and the independent variables: internet connectivity, trust and security, Performance expectancy, regulatory environment, and social influence have a strong correlation, as indicated by the R<sup>2</sup> value of 0.586 between the explanatory variables and FinTech Adoption. According to the R<sup>2</sup> value of 0.586, the model is suitable, and the data fit the model well. The fact that all of the independent factors significantly contribute to explaining the variation in FinTech adoption within Bangladesh's state-owned commercial banks is confirmed by the adjusted R<sup>2</sup> value of 0.580, which is extremely close to the R<sup>2</sup> value. To assess the correlation between FinTech adoption and the independent variables, the F-test was used. The F-test results show a significant relationship, as the p-value (0.000) is less than 0.05 and the F-value of 41.048 (with degrees of freedom 5) exceeds the critical value of 2.21. Thus, the alternative hypothesis is accepted, and the null hypothesis is rejected. These outcomes demonstrate that multiple independent factors jointly affect FinTech adoption.

The regression analysis reveals that internet connectivity, trust and security, and social influence are significant predictors of FinTech adoption in state-owned commercial banks in Bangladesh, as all corresponding p-values are below 0.05. Their coefficients are 0.506, 0.323, and 0.157, respectively, with a constant of -0.194. The regression model captures the positive association between these predictors and FinTech adoption: improvements in internet connectivity, trust and security, and social influence correspond to higher adoption rates. These results highlight the critical role of these factors in driving FinTech adoption in the banking sector.

## 6. Findings and Discussion

Internet connectivity showed a positive and significant effect on the adoption of FinTech by six state-owned commercial banks in Bangladesh ( $\beta=.506$ ,  $t=4.668$ ,  $p=0.020$ ). This outcome aligns with Ediagbonya & Tioluwani (2023), which demonstrates that internet availability considerably affects FinTech adaption. Trust and security also produced a positive and significant result on FinTech adoption ( $\beta=.323$ ,  $t=0.826$ ,  $p=0.030$ ) among the six state-owned commercial banks in Bangladesh. This finding is corroborated by Jafri, (2024), indicating trust and security as positive drivers of adoption. Social influence has a substantial effect on FinTech adoption in six state-owned commercial banks in Bangladesh. Results show a positive and significant impact ( $\beta=.157$ ,  $t=4.653$ ,  $p=.048$ ), consistent with findings by Hoque (2024).

The findings enhance theoretical understanding by demonstrating that internet connectivity, trust and security, and social influence are pivotal factors in FinTech adoption within state-owned commercial banks in Bangladesh, thereby reinforcing models that prioritize technological infrastructure, risk management, and socio-cultural elements in digital adoption. From a managerial standpoint, banks ought to highlight improving internet accessibility, fortifying security measures, and utilizing social influence via consumer engagement techniques to elevate adoption rates. These conclusions suggest that customer-centric technical and social solutions are more effective than depending exclusively on performance advantages or regulatory measures.

This research provides multiple theoretical contributions to the FinTech adoption literature. It enhances previous technological adoption frameworks (e.g., TAM and UTAUT) by incorporating internet connectivity, trust and security, and social impact as interconnected factors of adoption (Amnas, 2025; Budisusetyo, et al., 2025). This research situates these linkages within state-owned commercial banks, providing novel insights into the influence of institutional factors on digital transformation. It presents the notion of institutional-technical fit and illustrates how infrastructure and regulatory legitimacy jointly affect adoption behavior (Shaikh & Hasan, M., 2025). Social influence is redefined as a process that reduces risk and promotes normative acceptance in conservative banking contexts. The results indicate that customer-focused and socially integrated tactics encourage technology adoption more effectively than solely performance-driven incentives. The report redefines FinTech adoption as a multifaceted construct, highlighting infrastructure and socio-cultural factors rather than viewing it strictly as a technology issue (Hoque, 2025). It enhances theory by demonstrating how public institutions in emerging economies assimilate digital technologies within the constraints of their structural limitations. This research enhances the external validity of adoption models in emerging market environments. It elucidates the relationship between technological readiness, trust management, and social dynamics in the context of FinTech adoption in public financial institutions.

**JUJBR****7. Conclusion**

Digital technology is changing financial services to meet new customer needs. Performance, laws, social impact, internet access, security, and trust influence its use. Bangladesh's state banks must adapt to compete. But government rules, technology problems, costs, and other barriers slow FinTech growth. Businesses, authorities, and the government should work together to overcome these challenges. Partnerships between state banks and FinTech firms are also key to success. Building on these points, the main takeaway is that, according to both UTAUT and TAM, performance expectancy, internet access, trust and security, and the regulatory environment most strongly drive FinTech adoption in Bangladesh's state-owned banks. These findings provide a framework for understanding FinTech adoption in developing countries.

Findings of our study have direct managerial implications. Regulators and financial institutions should use these insights to drive FinTech adoption. Banks should improve their digital infrastructure and partner with telecom providers to expand internet access. Institutions should raise customer awareness and financial literacy to build trust. Regulators must ensure balanced regulation to foster innovation and protect consumers. State banks should train staff and invest in cyber-security as priority actions.

A key finding is that collaboration among banks, regulators, and FinTech firms is essential for a stable and innovative FinTech environment, as balanced regulations developed with all stakeholders i.e. directors, managerial bodies, employees, govt. authorities and who have the interest in this field promote both innovation and consumer protection. Turning to future research, this study focuses on state-owned banks, limiting insights into the broader financial sector. Future research should include private banks, regulators, legislators, and FinTech providers for a fuller understanding. A broader focus will reveal how different players and regulations shape FinTech adoption. Including FinTech suppliers' perspectives will deepen understanding of opportunities and challenges.

In summary, taking a broader approach will reveal what best drives FinTech use and will provide a clear path for strengthening it across Bangladesh's financial sector. The lessons from these studies will help integrate FinTech into the national financial system and ensure cooperation among public, private, and regulatory roles for growth and inclusion.

**Reference**

- Ahassan, T. F., Blokhina, T., & Kouadio, J. A. (2021). Financial Innovation: The Impact of Mobile Money on Innovative Economic Growth. In *Proceeding of the International Science and Technology Conference "FarEastCon 2020" October 2020, Vladivostok, Russian Federation, Far Eastern Federal University* (pp. 27-38). Springer Singapore.
- Aldás Manzano, J., Lassala Navarré, C., Ruiz Mafé, C., & Sanz- Blas, S. (2009). The role of consumer innovativeness and perceived risk in online banking usage. *International Journal of Bank Marketing*, 27(1), 53-75.

- Aldboush, H. H., & Ferdous, M. (2023). Building trust in fintech: an analysis of ethical and privacy considerations in the intersection of big data, AI, and customer trust. *International Journal of Financial Studies*, 11(3), 90.
- Aljaradat, A., & Shukla, S. K. (2025). Trust and cybersecurity in digital payment adoption: socioeconomic insights from India. *Journal of Business and Socio-economic Development*.
- Allen, H. J. (2024). Regulating fintech: A harm focused approach. *Computer Law & Security Review*, 52, 105910.
- Amnas, M. B. (2025). Understanding the determinants of FinTech adoption: Integrating UTAUT2 with TTM. *Smart Journal of Business Management Studies*, 21(3), 112-130.
- Barua, D., Akber, S., Akter, R., & Khan, M. R. (2025). Financial inclusion through agent banking in Bangladesh: opportunities and challenges. *International Journal of Research in Business and Social Science*, 14(1), 65-73.
- Basdekis, C., Christopoulos, A., Katsampoxakis, I., & Vlachou, A. (2022). FinTech's rapid growth and its effect on the banking sector. *Journal of Banking and Financial Technology*, 6(2), 159-176.
- Budisusetyo, S., et al. (2025). Trust in fintech banking: The strategic role of data security and transparency. *Future Business Journal*, 11(1), 1-15.
- Burke, J. J. (2021). *Financial Services in the Twenty-First Century: The Present System and Future Developments in Fintech and Financial Innovation*. Springer.
- Camilleri, M. A. (2024). Factors affecting performance expectancy and intentions to use ChatGPT: Using SmartPLS to advance an information technology acceptance framework. *Technological Forecasting and Social Change*, 201, 123247.
- Chen, C.-H. (2023). Extending the Technology Acceptance Model: A new perspective on the adoption of blockchain technology. *Human Behavior and Emerging Technologies*, 2023(1), 4835896.
- Chen, Y. P., Oughton, E. J., Zagdanski, J., Jia, M. M., & Tyler, P. (2023). Crowdsourced data indicates broadband has a positive impact on local business creation. *Telematics and Informatics*, 84, 102035.
- Chuang, L.-M., Liu, C.-C., & Kao, H.-K. (2016). The adoption of fintech service: TAM perspective. *International Journal of Management and Administrative Sciences*, 3(7), 1-15.
- Cook, D. A., & Beckman, T. J. (2006). Current concepts in validity and reliability for psychometric instruments: theory and application. *The American journal of medicine*, 119(2), 166.
- Das, S. (2021). Financial inclusion disclosure: Empirical evidence from the banking industry of Bangladesh. *Global Journal of Business, Economics and Management: Current Issues*, 11(1), 27-41.
- Datta, R. K. (2024). Fintech-Based Financial Inclusion in Bangladesh: Overview, Challenges and Policy Directives. *International Journal of Finance & Banking Studies*, 13(1).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

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- de Oliveira Santini, F., Sampaio, C. H., Rasul, T., Ladeira, W. J., Kar, A. K., Perin, M. G., & Azhar, M. (2025). Understanding students' technology acceptance behaviour: A meta-analytic study. *Technology in Society*, 81, 102798.
- Deepika, M., & Sundararajan, T. (2013). LSP blocking rate performance analysis of link state update policies for GMPLS enabled Optical Networks. 2013 IEEE International Conference ON Emerging Trends in Computing, Communication and Nanotechnology (ICECCN),
- Deng, X., Huang, Z., & Cheng, X. (2019). FinTech and sustainable development: Evidence from China based on P2P data. *Sustainability*, 11(22), 6434.
- Ediagbonya, V., & Tioluwani, C. (2023). The role of fintech in driving financial inclusion in developing and emerging markets: issues, challenges and prospects. *Technological Sustainability*, 2(1), 100-119.
- El-Rewini, Z., Sadatsharan, K., Selvaraj, D. F., Plathottam, S. J., & Ranganathan, P. (2020). Cybersecurity challenges in vehicular communications. *Vehicular Communications*, 23, 100214.
- Gao, S., Krogstie, J., & Siau, K. (2011). Developing an instrument to measure the adoption of mobile services. *Mobile information systems*, 7(1), 45-67.
- Gefen, D., & Straub, D. W. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the association for Information Systems*, 1(1), 8.
- Gozzi, N., Comini, N., & Perra, N. (2024). Bridging the digital divide: mapping Internet connectivity evolution, inequalities, and resilience in six Brazilian cities. *EPJ Data Science*, 13(1), 69.
- Greene, A. L., Eaton, N. R., Li, K., Forbes, M. K., Krueger, R. F., Markon, K. E., Waldman, I. D., Cicero, D. C., Conway, C. C., & Docherty, A. R. (2019). Are fit indices used to test psychopathology structure biased? A simulation study. *Journal of abnormal psychology*, 128(7), 740.
- Guild, J. (2017). Fintech and the Future of Finance. *Asian Journal of Public Affairs*, 17-20.
- Hatta, M., & Alwi, S. F. S. (2021). Fintech Development in Financial Institutions Industry: An Empirical Study on Malaysia Islamic Banks. *Journal of Academic Research in Business and Social Sciences*, 11(3), 487-499.
- Hjort, J., & Tian, L. (2021). The economic impact of internet connectivity in developing countries. *Annual Review of Economics*, 17.
- Hoque, M. Z., Chowdhury, N. J., Hossain, A. A., & Tabassum, T. (2024). Social and facilitating influences in fintech user intention and the fintech gender gap. *Heliyon*, 10(1).
- Hossain, M. I., Al-Amin, M., & Toha, M. A. (2021). Are Commercial Agent Banking Services Worthwhile For Financial Inclusion? *Business Management and Strategy*, 12(2), 206-227.
- Houngbonon, G. V., Mensah, J. T., & Traore, N. (2022). The impact of internet access on innovation and entrepreneurship in Africa.
- Jafri, J. A., Amin, S. I. M., Rahman, A. A., & Nor, S. M. (2024). A systematic literature review of the role of trust and security on Fintech adoption in banking. *Heliyon*, 10(1).

- James Jr, H. S. (2000). Understanding Regulatory Environments and their Impact on Economic Change.
- Kim, M., Zoo, H., Lee, H., & Kang, J. (2018). Mobile financial services, financial inclusion, and development: A systematic review of academic literature. *The Electronic Journal of Information Systems in Developing Countries*, 84(5).
- Lee, L. (2024). Enhancing financial inclusion and regulatory challenges: A critical analysis of digital banks and alternative lenders through digital platforms, machine learning, and large language models integration. *arXiv preprint arXiv:2404.11898*.
- Lee, M.-C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic commerce research and applications*, 8(3), 130-141.
- Li, C.-F. (2013). The Revised Technology Acceptance Model and the Impact of Individual Differences in Assessing Internet Banking Use in Taiwan. *International Journal of Business & Information*, 8(1).
- Lin, X., Wu, R., Lim, Y.-T., Han, J., & Chen, S.-C. (2019). Understanding the sustainable usage intention of mobile payment technology in Korea: Cross-countries comparison of Chinese and Korean users. *Sustainability*, 11(19), 5532.
- Lu, J., Yu, C.-s., Liu, C., & Wei, J. (2017). Comparison of mobile shopping continuance intention between China and USA from an espoused cultural perspective. *Computers in Human Behavior*, 75, 130-146.
- Mahmud, K., Joarder, M. M. A., & Muheymin-Us-Sakib, K. (2022). Adoption factors of FinTech: evidence from an emerging economy country-wide representative sample. *International Journal of Financial Studies*, 11(1), 9.
- Maier, E. (2016). Supply and demand on crowdlending platforms: connecting small and medium-sized enterprise borrowers and consumer investors. *Journal of Retailing and consumer Services*, 33, 143-153.
- Martínez, C., López Gracia, J., & Mestre Barberá, M. R. (2023). The regulatory environment and financial constraints of private firms in the European Union.
- Meyer, D., & Shera, A. (2017). The impact of remittances on economic growth: An econometric model. *EconomiA*, 18(2), 147-155.
- Miranda, M., Pereda, M., Sánchez, A., & Estrada, E. (2024). Indirect social influence and diffusion of innovations: An experimental approach. *PNAS nexus*, 3(10).
- Mohammeda, M. G., & Hassan, R. (2024). Factors Influencing FinTech Continuous Use: Systematic Literature Review and Expert Validation. *Contemporary Management Research*, 20(2), 137-175.
- Moussaïd, M., Kämmer, J. E., Analytis, P. P., & Neth, H. (2013). Social influence and the collective dynamics of opinion formation. *PloS one*, 8(11).
- Nasr, G. E., Badr, E. A., & Dibeh, G. (2000). Econometric modeling of electricity consumption in post-war Lebanon. *Energy economics*, 22(6), 627-640.
- Niranga, M., Sedera, D., & Sorwar, G. (2022). Does It Matter (Now)? A Global Panel Data Analysis of 7 Regions from 2018-2020 on Digitalization and Its Impact on Economic Growth.
- Ogbanufe, O., & Kim, D. J. (2018). Comparing fingerprint-based biometrics authentication versus traditional authentication methods for e-payment. *Decision Support Systems*, 106, 1-14.

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- Perret, C., Poiraudau, S., Fermanian, J., Colau, M. M. L., Benhamou, M. A. M., & Revel, M. (2001). Validity, reliability, and responsiveness of the fingertip-to-floor test. *Archives of physical medicine and rehabilitation*, 82(11), 1566-1570.
- Philippi, P., Baumeister, H., Apolinário-Hagen, J., Ebert, D. D., Hennemann, S., Kott, L., Lin, J., Messner, E.-M., & Terhorst, Y. (2021). Acceptance towards digital health interventions—model validation and further development of the unified theory of acceptance and use of technology. *Internet interventions*, 26, 100459.
- Putritama, A. (2019). The mobile payment fintech continuance usage intention in Indonesia. *Jurnal Economia*, 15(2), 243-258.
- Qiang, C. Z.-W., Rossotto, C. M., & Kimura, K. (2009). Economic impacts of broadband. *Information and communications for development 2009: Extending reach and increasing impact*, 3, 35-50.
- Restoy, F. (2021). *Fintech regulation: how to achieve a level playing field*. Financial Stability Institute, Bank for International Settlements London.
- Ridwan, M., Puspitasari, R., Winarsih, T., Wangsih, I., & Sudarmanto, E. (2024). The effect of digital banking adoption, trust in fintech, perceived security and customer satisfaction on financial inclusion in Indonesian banking. *West Science journal of Business and Management*, 3(1), 1-15.
- Robin, I. A., Islam, M. M., & Alharthi, M. (2025). The Impact of FinTech on the Financial Performance of Commercial Banks in Bangladesh: A Random-Effect Model Analysis. *FinTech*, 4(3), 40.
- Rodrigues, G., Sarabdeen, J., & Balasubramanian, S. (2016). Factors that influence consumer adoption of e-government services in the UAE: A UTAUT model perspective. *Journal of Internet Commerce*, 15(1), 18-39.
- Safeena, R., Date, H., & Kammani, A. (2011). Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective. *Int. Arab. J. e Technol.*, 2(1), 56-64.
- Sari, N. P. W. P., Duong, M.-P. T., Li, D., Nguyen, M.-H., & Vuong, Q.-H. (2024). Rethinking the effects of performance expectancy and effort expectancy on new technology adoption: Evidence from Moroccan nursing students. *Teaching and Learning in Nursing*, 19(3), 557-565.
- Sarker, S., & Rahman, I. (2025). Digital Financial Inclusion in Bangladesh: Unlocking Opportunities for Marginalized Populations. *Asian Journal of Economics, Business and Accounting*, 25(3).
- Shaikh, M. A., & Hasan, M. (2025). FinTech adoption and its impact on bank profitability: A study of Bangladeshi commercial banks. *ICMAB Journal of Accounting & Business Research*, 12(2), 45-62.
- Shiau, W.-L., & Chau, P. Y. (2016). Understanding behavioral intention to use a cloud computing classroom: A multiple model comparison approach. *Information & Management*, 53(3), 355-365.
- Siddiquee, T. A. (2025). Digital Transformation and FinTech in Modern Banking: Impacts on Banking Efficiency, Customer Experience, and the Future of Digital Finance. *Business and Social Sciences*, 3(1), 1-9.
- Taherdoost, H. (2017). Understanding of e-service security dimensions and its effect on quality and intention to use. *Information & Computer Security*, 25(5), 535-559.
- Teo, T. S., & Pok, S. H. (2003). Adoption of the internet and WAP-enabled phones in Singapore. *Behaviour & Information Technology*, 22(4), 281-289.



- Treleaven, P. (2015). Financial regulation of FinTech. *Journal of Financial Perspectives*, 3(3).
- Tsai, C.-H., & Kuan-Jung, P. (2017). The FinTech revolution and financial regulation: The case of online supply-chain financing. *Asian Journal of Law and Society*, 4(1), 109-132.
- Tseng, J.-T., Han, H.-L., Su, Y.-H., & Fan, Y.-W. (2017). The influence of intention to use the mobile banking-the privacy mechanism perspective. *Journal of Management Research*, 9(1), 117-137.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences*, 39(2), 273-315.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Venkatesh, V., & Zhang, X. (2010). Unified theory of acceptance and use of technology: US vs. China. *Journal of global information technology management*, 13(1), 5-27.
- Vijayagopal, P., Jain, B., & Ayinippully Viswanathan, S. (2024). Regulations and fintech: a comparative study of the developed and developing countries. *Journal of Risk and Financial Management*, 17(8), 324.
- Wang, H., Zheng, L. J., Xu, X., & Hung, T. H. B. (2022). Impact of financial digitalization on organizational performance: A look at the dark side. *Journal of Global Information Management (JGIM)*, 30(1), 1-35.
- Wu, J. (2023). The Impact of the Development of Financial Technology on the Banking Industry. *Advances in Economics, Management and Political Sciences*, 52, 149-154.
- Zetzsche, D. A., Veidt, R., Buckley, R., & Arner, D. (2019). Sustainability, FinTech and Financial Inclusion. *European Business Organization Law Review*.
- Zhang, W., Siyal, S., Riaz, S., Ahmad, R., Hilmi, M. F., & Li, Z. (2023). Data security, customer trust and intention for adoption of Fintech services: an empirical analysis from commercial bank users in Pakistan. *Sage Open*, 13(3).

**JUJBR****Appendix****Demographics Profile Analysis**

According to the responses of different customers of six State-owned commercial banks in Bangladesh to the questions in the data collection tool, the following finding is obtained:

<b>Gender</b>	Particulars	Frequency	Percentage (%)
	Male	78	52
	Female	72	42
<b>Age</b>	18-25	99	66
	26-30	38	25.3
	31-35	5	3.3
	35 above	8	5.3
<b>Occupation</b>	Students	75	50
	Employed	38	25.3
	Self Employed	18	12
	Others	19	12.7
<b>Income Level</b>	Less than 25,000	100	66.7
	25,000-39,000	22	14.7
	40,000-59,000	22	14.7
	60,000 above	6	4
<b>Respondents Distribution</b>	Sonali Bank PLC	29	19.3
	Rupali Bank PLC	26	17.3
	Janata Bank PLC	25	16.7
	Agrani Bank PLC	22	14.7
	BASIC Bank PLC	24	16
	Bangladesh Development Bank PLC	24	16

Source: Drawn from Authors' questionnaire