

## FinTech Adoption, Digital Inclusion and the Transition to a Cashless Economy in Bangladesh: A Thematic Analysis

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### Abstract

**Research purpose:** This research aimed to examine how the adoption of FinTech will support digital financial inclusion and contribute to Bangladesh's shift toward a cashless economy amid accelerated digital transformation. Furthermore, the research sought to develop a thematic conceptual model to accelerate the adoption of FinTech and digital inclusion in support of Bangladesh's transition to a cashless economy.

**Design/methodology/approach:** A qualitative research method was chosen for the study to attain the research objective. The required data were collected from both primary and secondary sources. 20 respondents were interviewed using purposive sampling. The secondary data source included published research articles and industry reports on FinTech.

**Findings:** The study developed a thematic conceptual model to accelerate the adoption of FinTech and digital inclusion in support of Bangladesh's transition to a cashless economy. The study highlighted five key themes in the transition process, including a digital mindset & financial awareness, robust digital infrastructure, selection of appropriate FinTech solution & tools, cross-sectoral integration & stakeholders' engagement, and effective governance.

**Originality/value:** The research's originality lies in constructing a qualitative thematic conceptual model that elucidates the interaction between fintech adoption and digital financial inclusion in the Bangladesh context, facilitating the shift to a cashless economy.

**Practical implication:** The research has valuable policy implications, recommending that the government and regulatory agencies must focus on digital literacy initiatives, invest in safe and inclusive digital infrastructure, advance interoperable FinTech systems, and improve regulatory and cybersecurity frameworks to make digital access and use more trustworthy and available to all.

**Limitation:** The study used only a qualitative research approach, focusing on a single country context.

**Keywords:** FinTech, Digital inclusion, Cashless economy

**JEL Classification:** G23, O33, O16, E42

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## 1. Introduction

Financial Technology (FinTech) has risen to become the fastest-growing financial service in the world, providing a new avenue for enhancing financial access and efficiency in transactions (Odei-Appiah et al., 2022). Digital applications such as mobile financial services, electronic payment systems, and digital wallets have greatly diminished reliance on traditional cash-based deals (Aloulou et al., 2024). With nations becoming more and more digital in their financial infrastructure, the notion of a cashless economy has been a subject of significant discussion as an effective strategic objective to enhance transparency, lower transaction fees, and enhance financial responsibility (Kaur, 2019). The fintech in Bangladesh has experienced a significant growth during the last decade through the expansion of mobile penetration, the swift development of mobile financial services, and national efforts towards digitalization (Khatun & Tamanna, 2020). Digital financial services have increased access to financial operations among the previously unserved populations, especially in rural and semi-urban regions (Mahmud et al., 2022). In spite of these developments, Bangladesh continues to use a lot of cash in its day-to-day economic operations. Some of these issues, such as low digital literacy, disparity in infrastructure, unequal technology readiness, and regulatory barriers, still slow the process of moving to a fully functioning cashless economic system (Datta, 2024). Even though past research has discussed both FinTech adoption and digital financial inclusion individually, there has been a lack of interest in realizing how these two components of the transition to a cashless economy interact with each other, especially in the Bangladesh socio-economic and institutional environment (Raza et al. 2024). Additionally, the current literature tends to follow quantitative designs that test predetermined relations, whereas less of it has tried to investigate and formulate context-specific conceptual frameworks by using qualitative research (Jena, 2025). Consequently, there are still no detailed frameworks that combine the technological, institutional, and contextual aspects to clarify how Bangladesh can successfully transition to a cashless economy. Based on the above discussion, the following research question arises:

*RQ1. How can FinTech adoption and digital financial inclusion facilitate Bangladesh's transition toward a sustainable cashless economy?*

To get the answer to the research question and fill the above-discussed research gaps, this study aims to apply a qualitative research method for identifying the avenues through which the adoption of FinTech and digital financial inclusion can enable the shift to a cashless economy in Bangladesh. The study seeks to build a situation-specific conceptual model of the digital financial transformation process, capturing the most important themes, enabling mechanisms, and contextual factors through qualitative exploration and thematic analysis. The originality of this research lies in formulating a context-based, qualitative conceptual framework to describe the interaction between fintech adoption and digital financial inclusion in Bangladesh to aid the shift towards a cashless economy. Instead of testing models, the study aims to construct a thematic framework with strong contextual grounding to provide practical information to policy-makers, financial institutions, and technology developers to

help them design effective strategies to accelerate Bangladesh's move towards a sustainable cashless economy.

## **2. Review of Related Literature**

### *2.1 FinTech Adoption*

FinTech has become an essential element of changing the contemporary financial systems to make them more accessible, efficient, and customer-centered (Shi et al., 2026). FinTech adoption is the acceptance and use of technology-based financial services, such as mobile banking, digital wallets, online lending platforms, and electronic payment systems (Amnas et al., 2025). Recent research shows that FinTech adoption depends on the technological readiness, usefulness, trust, regulation and digital literacy (Ryu, 2021). Different theories have been applied to explain FinTech adoption. Of these, the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) are widely used to examine user acceptance of digital financial services. Perceived ease of use and usefulness, social influence, and facilitating conditions play a significant role in shaping individuals' willingness to adopt financial services, according to the models (Amnas et al., 2025). Recent empirical studies put emphasis on the importance of fintech adoption, and related operational efficiencies as well as customer satisfaction (Gomber et al. 2018). According to Kou & Lou (2025), FinTech adoption enables financial institutions to automate services, cut down on transaction costs, and offer financial services in real time. Also, integrating Artificial Intelligence systems, blockchain technology, and cloud computing services has improved financial platforms' performance and scalability.

### *2.2 FinTech and Digital Inclusion Landscape in Bangladesh*

Over the past decade, Bangladesh has seen a major development of FinTech and digital financial inclusion due to the rapid technological advancement, supportive government policies, and increasing mobile penetration (Datta, 2024). The growth of MFS has been central in enhancing financial inclusion as it helps individuals, especially those in rural and underserved regions, access to formal financial services (Rahman et al. 2025). Efforts by the government, like Digital Bangladesh Vision and national payment infrastructure development, have enhanced the pace of digital financial services. Availability of interoperable payment systems, agent-banking networks, and mobile-based financial services has increased access to savings, remittances, and payment services to various socio-economic groups (Bangladesh Bank, 2023). Despite these successes, there are still challenges of making digital financial inclusion equitable. Poor digital literacy, cybersecurity threats, and inequalities between urban and rural infrastructure still influence the usage of FinTech services (Islam et al. 2025). Moreover, there are also regulatory issues and trust-based implications among users that also affect the rate of FinTech diffusion. FinTech and digital inclusion in Bangladesh is a promising environment of supportive, inclusive economic growth and scaling up the transition to a sustainable cashless economy in the future.

Compared with other developing countries, Bangladesh has made a significant progress in promoting digital financial services through the rapid expansion of Mobile Financial Services (MFS), digital banking and financial platforms. Similar to countries like India, Indonesia and

Kenya, FinTech adoption has improved financial expansion by expanding access to formal financial services and encouraging digital payment usage (World Bank, 2022; Mahmud et al., 2023). However, unlike these countries, Bangladesh continues to face challenges related to digital literacy, cybersecurity, interoperability, and customer trust, which may hinder its transition toward a fully cashless economy (Datta, 2024; Huda et al., 2024). These institutional and technological differences suggest that evidence from other developing economies can not be directly generalized to Bangladesh. Therefore, examining how FinTech adoption promotes a cashless economy through digital financial inclusion within the Bangladeshi financial sector remains both timely and necessary (Huda et al., 2024; Mahmud et al., 2023).

### *2.3 Challenges and Opportunities of Cashless Economies in Bangladesh*

A cashless economy is the elimination of physical money and the implementation of digital money, which also possesses the beneficial feature of speed, efficiency, and transparency (Rahman et al. 2021). The change in Bangladesh is driven by mobile money, interoperability, and digital identity systems, enhancing onboarding and access, particularly to underserved populations (Monir et al. 2025). To continue the momentum, it is necessary to deal with the lack of literacy and cyber threats, data privacy, and infrastructure resilience, and balance trust, technology, and control. Regulators, institutions, providers, and consumers are subject to FinTech, digital inclusion, and cashless transformation (Singhraul & Garwal, 2018). The priorities are considered to be stronger agent networks, interoperability, digital identity, literacy, and cybersecurity (Oginni, 2013). Agile governance promotes innovation by iteration and teamwork. The regulators need to have flexible regulations and sandboxes; the teachers need to have enriched digital curricula; the FinTech providers need to have modular and secure systems.

## **3. Methodology**

### *3.1 Research Design and Approach*

The study used a qualitative exploratory research design to understand the role of FinTech adoption and digital financial inclusion in Bangladesh's move towards the cashless economy. This is because the study seeks to develop a deeper understanding of attitudes, experiences, and other factors that shape digital financial transformation rather than testing hypotheses (Tisdell & Merriam, 2025). The study has an exploratory research design as well, which allowed the researcher to discover the main themes, and inter-relationships between the factors affecting FinTech adoption, digital financial inclusion, and the shift to a cashless economy. Exploratory qualitative designs are well suited to examine socio-economic and/or technological phenomena in a complex setting (Yin, 2018). The study is grounded on the interpretivist philosophy as it aims to explore stakeholders' perceptions and experiences regarding FinTech adoption and digital financial inclusion. Since the study employs qualitative interviews and thematic analysis to develop a conceptual model rather than testing hypothesis the interpretivist philosophy is considered the most appropriate (Saunders et al., 2023).

### 3.2 *Sampling and Data Collection Procedure*

To achieve the research objectives, purposive sampling was employed in this research, which means the sample is selected based on their expertise and experience with FinTech adoption, digital financial services, and policy in Bangladesh. Qualitative studies often use purposive sampling to identify information-rich cases, interviewees who are likely to provide relevant information on the research phenomenon (Patton, 2022). Target respondents are purposefully selected from a range of stakeholders, such as financial institution professionals, FinTech service providers, regulators, technical experts, and users of digital financial services (Tisdell & Merriam, 2016). The viewpoints of multiple stakeholders improve the quality and depth of qualitative research. The sample size was determined by the data saturation point, meaning that data collection was continued until no new themes or insights were identified (Guest et al., 2006). They concluded that data saturation is an important criterion for sample size determination in qualitative research. They asserted that, while thematic saturation may be attained by the 12th interview in qualitative research, it may be necessary to conduct more interviews to fully develop the themes. Qualitative research usually consists of 15-30 participants, based on the respondents' diversity and the research environment (Saunders et al., 2019). Author Malhotra claimed that the sample sizes for qualitative research are generally small as the main goal is to gain in-depth understanding (Malhotra, 2020). Typically, for in-depth interviews, 5-25 participants are involved in qualitative research, depending on the research question and data needed. Based on these sources, this study opted for 20 sample interviews (Creswell & Baez, 2020). The study used both the primary and secondary data. Primary data were collected from structured interviews with stakeholders involved in FinTech adoption and digital financial services in Bangladesh following an appropriate interview protocol. The respondents were selected from Dhaka, Bangladesh, based on their FinTech and digital financial inclusion expertise and the researchers' convenience. Interviewees were FinTech users, bankers, IT experts, academic experts, policy makers, etc. A set of interview questions were prepared based on the study objectives and areas of interest such as FinTech adoption, digital inclusion, and cashless payments. The interviews were either conducted face-to-face or online, based on the respondents' convenience. The duration of the interviews was around 30-50 minutes and the responses were audio recorded with the permission of the interviewees. The researchers interviewed respondents from diverse professional backgrounds. A large proportion of respondents selected from the supply chain and logistics background intentionally because these sectors exclusively utilize digital payment system, FinTech solutions, and technology-enabled business processes. Their practical experience was considered highly relevant to exploring the drivers of FinTech adoption and digital financial inclusion, while respondents from banking, AI, policy, research and other sectors ensured data triangulation and diverse perspectives. Throughout the data collection process, informed consent was obtained from all the respondents, and confidentiality and anonymity of their responses were ensured. The secondary data source comprised 35 journal articles and 30 industry reports on FinTech and digital inclusion that were accessible. The interviewees' demographics are provided in Table 1.

**Table 1:** Demographics of Interviewees

| Interviewee Number | Affiliation/ Occupation             | Experience (Years) | Interview Duration (Minutes) | Key Expertise Area          | Location    | Focus             | Perspective |
|--------------------|-------------------------------------|--------------------|------------------------------|-----------------------------|-------------|-------------------|-------------|
| 1                  | Supply Chain Manager, Manufacturing | 15                 | 45                           | Risk Mgt., AI Adoption      | Dhaka       | Digital Inclusion | Positive    |
| 2                  | Logistics Coordinator               | 10                 | 40                           | Logistics Operations        | Chittagong  | Cashless Economy  | Positive    |
| 3                  | AI Solutions Developer              | 8                  | 50                           | AI Technology               | Dhaka       | FinTech Adoption  | Positive    |
| 4                  | Financial Analyst, Bank             | 12                 | 35                           | FinTech in Bank             | Dhaka       | Digital Inclusion | Positive    |
| 5                  | Operations Director                 | 20                 | 50                           | Operations & Resilience     | Narayanganj | Cashless Economy  | Positive    |
| 6                  | Risk Consultant                     | 18                 | 38                           | Risk Mitigation             | Dhaka       | FinTech Adoption  | Negative    |
| 7                  | IT Specialist, Logistics Firm       | 7                  | 42                           | IT Systems in SCM           | Khulna      | Digital Inclusion | Positive    |
| 8                  | Academic Researcher                 | 14                 | 45                           | Supply Chain Analytics      | Dhaka       | FinTech Adoption  | Positive    |
| 9                  | Policy Advisor                      | 16                 | 40                           | Supply Chain Policy         | Dhaka       | Cashless Economy  | Positive    |
| 10                 | Warehouse Manager                   | 13                 | 37                           | Inventory & Disruption      | Dhaka       | Digital Inclusion | Positive    |
| 11                 | AI Research Scientist               | 9                  | 48                           | Machine Learning Models     | Dhaka       | FinTech Adoption  | Positive    |
| 12                 | Procurement Officer                 | 11                 | 35                           | Procurement & Supplier Risk | Gazipur     | Cashless Economy  | Negative    |
| 13                 | Supply Chain Consultant             | 22                 | 45                           | Consultancy, Strategy       | Dhaka       | Digital Inclusion | Positive    |
| 14                 | Transport Manager                   | 15                 | 36                           | Transport Logistics         | Chittagong  | FinTech Adoption  | Positive    |
| 15                 | Data Analyst                        | 8                  | 41                           | Data Analytics & AI         | Dhaka       | FinTech Adoption  | Positive    |
| 16                 | Company Executive                   | 19                 | 50                           | Corporate Strategy          | Dhaka       | Cashless Economy  | Positive    |
| 17                 | AI Systems Integrator               | 12                 | 44                           | Systems Integration         | Dhaka       | Digital Inclusion | Negative    |
| 18                 | Supply Chain Planner                | 14                 | 40                           | Planning & Forecasting      | Narayanganj | FinTech Adoption  | Positive    |
| 19                 | Disaster Management Expert          | 17                 | 38                           | Disaster Resilience         | Dhaka       | Cashless Economy  | Positive    |
| 20                 | Quality Assurance Manager           | 13                 | 43                           | Quality & Risk Management   | Gazipur     | Digital Inclusion | Positive    |

**Source:** Authors' development

### 3.2.1 Data Analyzing Process

Thematic analysis was used to analyse the data in this study. The thematic analysis is a recognised approach which allows systematic identification, organisation and reporting of patterns in qualitative data (Braun & Clarke, 2006). The data analysis in this study involves a number of steps. Firstly, interview data are transcribed to get an exact picture of the gathered data. Secondly, initial coding is performed to group segments of the data that relate to FinTech adoption, digital financial inclusion and transition to a cashless economy. Thirdly, the codes are organised into categories that generate larger themes that assist in drawing inferences about patterns in the data collected. And after identifying themes, the relationship between themes is used to create a conceptual model of the move towards a cashless economy. This research adopts NVivo software that assist in organizing the coded data, mapping of the theme relationships, and conceptual model building. This approach of data analysis is backed by some of the earlier researchers, such as Braun & Clarke (2006), Creswell & Poth (2018), and Lincoln & Guba (2005). The interview data were analyzed through thematic analysis by generating initial codes, grouping related codes into categories, and refining them through repeated reviews. This iterative process led to the identification of the five overarching themes that formed the basis for the conceptual model.

## 4. Analysis and Discussion

The analysis and discussion sections are divided into two distinct segments. Firstly, the researchers analyze word frequency based on the collected data to gain insights into the code and theme. Secondly, the study proceeds to create a proposed model.

### 4.1 Word Frequency Analysis and Generation of Themes

Transcribed interviews and textual data were compiled into a single file in Microsoft Word and analyzed in terms of word frequency. Thematic coding was informed by the most common words, with emphasis on those up to 16 letters. The selection of the 20 high-frequency words assisted in revealing the key ideas regarding the adoption of FinTech and the digital inclusion to propel Bangladesh towards becoming a cashless economy. Table 2 summarizes the results of this analysis, and the overall word cloud analysis as a whole is presented in Figure 1. These themes gave a systematic basis for the interpretation of the qualitative data and finding common patterns between the interviews.



**Figure 1:** Overview of Word Cloud Analysis [Source: NVivo (V, 11) output]

**Table 2:** Word Frequency Summary

| SN | Frequency | Word              | Dictionary Meaning                                                           | Similar Words              | Contextual Meaning in This Study                                                                                                                                                | Opposite Word |
|----|-----------|-------------------|------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 1  | 152       | <b>digital</b>    | Involving or relating to the use of computer technology and electronic tools | electronic, virtual        | Refers to the technological foundation of FinTech platforms, digital payments, MFS, and data-driven financial services shaping Bangladesh's transition to a cashless ecosystem. | analog        |
| 2  | 147       | <b>financial</b>  | Relating to money, banking, investments, and economic transactions           | monetary, fiscal           | Represents formal financial activities digitized through FinTech, such as payments, credit scoring, remittances, and transfers.                                                 | non-financial |
| 3  | 139       | <b>inclusion</b>  | The state of being included or integrated within a system                    | access, participation      | Indicates ensuring all populations, especially unbanked groups, gain access to digital financial services and can use them effectively.                                         | exclusion     |
| 4  | 131       | <b>technology</b> | Application of scientific knowledge for practical purposes                   | tech, innovation           | Encompasses AI, machine learning, blockchain, mobile applications, and digital ID systems enabling FinTech platforms.                                                           | primitiveness |
| 5  | 118       | <b>cashless</b>   | Using little or no physical cash, relying on electronic transactions         | electronic payments        | Describes the national movement toward digital payments, reduced cash dependency, and streamlined economic activities.                                                          | cash-based    |
| 6  | 112       | <b>economy</b>    | The system of production, distribution, and consumption within a country     | market, economic system    | Refers to Bangladesh's broader macroeconomic environment, impacted by FinTech-driven digital financial transformation.                                                          | disorder      |
| 7  | 94        | <b>adoption</b>   | The act of accepting and starting to use something new                       | acceptance, implementation | Represents the willingness of users, merchants, and institutions to embrace FinTech tools and digital financial services.                                                       | rejection     |
| 8  | 88        | <b>innovation</b> | The introduction of new methods, ideas, or products                          | advancement, invention     | Reflects emerging FinTech models (AI-led scoring, e-KYC, MFS interoperability), modernizing Bangladesh's financial landscape.                                                   | stagnation    |
| 9  | 72        | <b>data</b>       | Facts and statistics collected for reference or analysis                     | information, metrics       | Refers to user, transaction, and behavioral data driving AI-powered analytics, fraud detection, and predictive services.                                                        | ignorance     |

| SN | Frequency | Word                    | Dictionary Meaning                                                                  | Similar Words             | Contextual Meaning in This Study                                                                                                     | Opposite Word   |
|----|-----------|-------------------------|-------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 10 | 69        | <b>infrastructure</b>   | The basic systems and services needed for an economy to function                    | framework, foundation     | Denotes digital networks, payment rails, cybersecurity, and interoperability systems essential for FinTech expansion.                | collapse        |
| 11 | 63        | <b>regulation</b>       | A rule or directive made and maintained by an authority                             | policy, governance        | Represents Bangladesh Bank policies, KYC rules, data protection laws, and interoperability standards, enabling safe digital finance. | deregulation    |
| 12 | 58        | <b>accessibility</b>    | The quality of being easy to approach or use                                        | availability, usability   | Implies how easily individuals can reach and utilize digital financial platforms like MFS, wallets, and agent networks.              | inaccessibility |
| 13 | 56        | <b>stakeholders</b>     | Individuals or groups affected by or involved in a system                           | actors, participants      | Banks, MFS providers, regulators, merchants, consumers, and FinTech startups shaping the digital finance ecosystem.                  | outsiders       |
| 14 | 53        | <b>interoperability</b> | The ability of systems to work together seamlessly                                  | integration, linkage      | Refers to the interconnection of banks, MFS, PSPs, and government platforms that enable smooth digital payments.                     | fragmentation   |
| 15 | 49        | <b>governance</b>       | The system of rules, practices, and processes controlling an organization or sector | oversight, administration | Denotes regulatory frameworks, consumer protection, and data governance needed for safe and sustained FinTech growth.                | mismanagement   |
| 16 | 46        | <b>resilience</b>       | The capacity to recover quickly from difficulties                                   | robustness, adaptability  | Describes the financial system's ability to withstand shocks such as fraud, cyber-attacks, or system outages through digital tools.  | fragility       |
| 17 | 43        | <b>predictive</b>       | Relating to predicting future events based on data                                  | anticipatory, forecasting | Indicates AI-driven credit scoring, fraud detection, and trend analysis that improve financial risk management.                      | Reactive        |
| 18 | 36        | <b>cybersecurity</b>    | Protection of systems and data from digital attacks                                 | data security, protection | Refers to safeguarding digital payment platforms and consumer data as the adoption of FinTech increases.                             | vulnerability   |
| 19 | 33        | <b>transactions</b>     | Instances of buying or selling; financial exchanges                                 | payments, transfers       | Represents digital payments, merchant transactions, and mobile money transfers, increasingly replacing cash use.                     | inactivity      |
| 20 | 31        | <b>invention</b>        | Creative or novel solutions applied to systems or processes                         | creation                  | Highlights the continuous technological evolution driven by FinTech startups.                                                        | unoriginality   |

#### 4.2 Proposed Model Development

On the basis of the ‘word frequency’ and ‘word cloud’, the output outcomes of the research found five key themes namely Cultivating a Digital Mindset and Financial Awareness, Building Robust Digital Infrastructure and Data Governance, Selecting Appropriate FinTech Solutions and Tools, Ensuring Cross-Sectoral Integration and Stakeholder Engagement, and Scaling, Continuous Improvement, and Governance which may affect the fintech adoption and digital inclusion driving Bangladesh’s transition toward a cashless economy. Figure-2 illustrates the proposed model of FinTech adoption and digital inclusion towards a cashless economy.

##### **Cultivating a Digital Mindset and Financial Awareness**

The theme ‘Cultivating a Digital Mindset and Financial Awareness’ was identified from the interview data and all the related documents. This result implies that people who have more knowledge about the digital financial service, mobile banking, and online payment system are more likely to use FinTech with confidence. Respondents highlighted the importance of digital literacy and promotion programs in fostering trust and overcoming apprehensions about digital transactions. A number of respondents stated a lack of awareness about digital platforms, security and transaction process causes fear and unwillingness to use digital platforms. Finally, FinTech use was based on cultivating a digital mindset and financial awareness as the basic premise of boosting digital financial inclusion and the adoption of cashless payment systems at large in Bangladesh. For instance, some of the related statements from the interviewees are as follows:

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##### **Supporting Statements**

- *“Using digital platforms requires a certain level of digital literacy, especially among the elderly and rural population.” (Interviewee-3)*
  - *“Limited digital literacy and low financial inclusion foster dependence on cash transactions. Trust issues with online platforms also contribute.” (Interviewee-9)*
  - *“People often prefer cash to maintain privacy or avoid disclosure.” (Interviewee-6)*
- 

Therefore, the researchers believe financial institutions should cautiously consider the theme ‘Cultivating a digital mindset and financial awareness’, especially in an emerging economy like Bangladesh.

##### **Building Robust Digital Infrastructure and Data Governance**

The theme points out the need for a robust digital infrastructure based on mobile networks, cloud computing, interoperability, and secured data system to support FinTech adoption and advance the transition towards a cashless economy. The findings indicate that there is a need for reliable internet connectivity, a secure digital platform, and widespread access to mobile networks to ensure that digital financial inclusion is smooth and uninterrupted. To facilitate credible and smooth financial transactions, companies and regulators should put in place data privacy, standardization, and cybersecurity measures. Besides, the importance of data governance was stressed by the respondents to mitigate against fragmentation of systems, transparency of transactions, and scalability of digital payment, which can be offered to all population segments. Hence, from the interview and the observation of the relevant

document data, 'Building Robust Digital Infrastructure and Data Governance emerged. Some of the related statements of the interviewees are:

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#### Supporting Statements

- *"Slow adoption of digital payments is rooted in limitations in digital infrastructure." (Interviewee-3)*
  - *"The government needs to invest in expanding reliable internet and network coverage." (Interviewee-17)*
  - *"Investment in cybersecurity is very important to protect critical data and reduce risks." (Interviewee-1)*
  - *"Aligning data privacy regulations with international standards will enhance credibility." (Interviewee-12)*
- 

Hence, the authors claim 'Building Robust Digital Infrastructure and Data Governance' as one of the key themes for adopting FinTech and digital inclusion in the context of Bangladesh.

#### Selecting Appropriate FinTech Solutions and Tools

This theme focuses on the importance of choosing relevant FinTech solutions and tools that suit the users' needs, technological capacity, and financial needs. Based on the findings, the proper FinTech solutions and tools selection should be geared towards matching the users' needs, technological, and financial capacity with a high usability, accessibility, and effectiveness of cheap digital financial platforms. They emphasized selecting proper FinTech solutions and tools such as mobile banking applications, digital wallets, and online payment systems to enhance users' transaction efficiency and convenience. Equally, the implementation strategy should be a compromise between technological advancement, affordability, and ease of integration to avoid being overstretched with the technology at the early stages. The relevant theme identified based on the analysis of the FinTech adoption documents and the interviews is Selecting Appropriate FinTech Solutions and Tools. Therefore, the authors argue that selecting an appropriate FinTech solution and tools is crucial in advancing fintech and digital inclusion from a country's perspective.

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#### Supporting Statements

- *"Banks, card networks, MFSs, and PSPs operate under entirely different systems... cost structures differ widely." (Interviewee-3)*
  - *"Affordable, scalable solutions position Bangladesh as an ideal partner for developing markets." (Interviewee-18)*
  - *"Some banks and MFS providers... introduced AI-based nano-lending." (Interviewee-17)*
  - *"Digital lending and invoice factoring are growing... startups like Bkash, ShopUp, drutoloan, Tredx..." (Interviewee-5)*
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#### Ensuring Cross-Sectoral Integration and Stakeholder Engagement

This theme identifies the need for multi-sectoral coordination and stakeholder co-operation to facilitate FinTech adoption and move towards a cashless economy. The study identified that collaboration with banks, FinTech companies, government, telecommunication providers and regulators is important to implement a smooth and efficient digital financial system. Continual engagement with stakeholders through feedback cycles, real-time data analytics and transparency measures helps to build confidence, enhance services, and respond to changing

market demands and risks. Collaboration among financial, technological, and regulatory actors is most critical. Therefore, from the interview and the analyzed data, 'Ensuring Cross-Sectoral Integration and Stakeholder Engagement' has been identified as another key theme in this regard, and the authors claimed that ensuring cross-sectoral integration and stakeholder engagement is one of the most crucial factors for adopting fintech and digital inclusion for the transition to a cashless economy.

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#### **Supporting Statements**

- *"Coordination is needed across private and public bodies, including financial service providers, regulators, and ministries." (Interviewee-7)*
  - *"The push toward a cashless society is a collaborative effort involving the central bank, commercial banks, and MFS providers." (Interviewee-17)*
  - *"Bangladesh should pursue partnerships with global tech companies such as Microsoft, Google, and Amazon." (Interviewee-8)*
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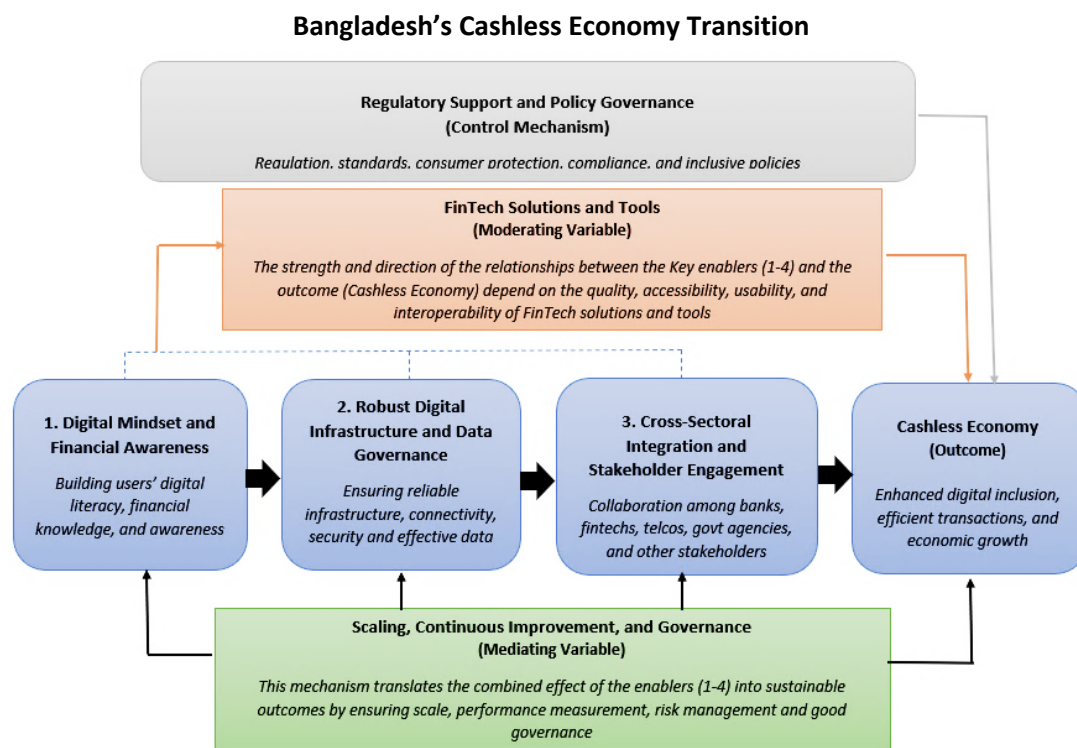
#### **Scaling, Continuous Improvement, and Governance**

This theme reflects the importance of scaling digital financial services and ensuring continuous improvements and governance mechanisms to sustain FinTech adoption and sustain the long-term shift toward cashless economies. The findings attest that FinTech success requires continuous upgrades, performance monitoring, and regular assessment to address changing technology and user requirements. They pointed out that scaling the FinTech services to wider geographical locations is critical to furthering financial growth inclusively, especially in rural and unserved areas. The scaling should be policy-driven and strategic in order to ensure sustainability with minimal inequality. The technology also needs to be compliant with the regulations, and this should be ensured through capacity-building initiatives that will enable digital literacy and ethical behavior. Continuous and sustainable innovation and flexible governance will foster inclusive growth and competitiveness. As such, the researchers agree with this issue.

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#### **Supporting Statements**

- *"Bangladesh requires a regulatory environment that copes with the pace of digital innovations while ensuring consumer protection." (Interviewee-1)*
  - *"Enhancing cybersecurity is important... poor security can result in data breaches and loss of trust." (Interviewee-8)*
  - *"This transition demands policymaking, including regulatory initiatives to enable interoperability." (Interviewee-16)*
  - *"Bangladesh should establish innovation hubs and regulatory sandboxes to test emerging technologies safely." (Interviewee-12)*
  - *"Capacity enhancement programs shall be developed for innovators and fintech providers to ensure proper application." (Interviewee-7)*
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**Figure 2:** Thematic Conceptual Model for FinTech Adoption Driving (*Source: Authors' Development*)

The proposed thematic conceptual model outlined the relationship between various enablers to facilitate the shift to a cashless economy in Bangladesh through mediation and moderation effects. Three independent variables form the starting point: Digital Mindset and Financial Awareness, Strong Digital Infrastructure & Data Security, and Cross-Sectoral Integration & Stakeholder Engagement. These are the core enablers of digital financial inclusion and readiness. A more digital mindset and financial awareness are the starting points of the concept, which in turn aims to enhance the users' readiness to use digital financial services. This readiness is then supported by a secure and reliable technical support and infrastructure. In the final step, the financial institutions, regulators, telecom providers, and users can collaborate more with the help of stakeholder engagement and sectoral integration. In this framework, the scaling, continuous improvement, and governance act as a mediating variable, whereby the overall impact of the enabling factors on the end outcome is explained - a cashless economy. The mediation process helps in scaling, improving and governing digital financial interventions, and in ensuring that the initial adoption process results in a sustainable cashless economy with enhanced financial inclusion. Scaling, continuous improvement, and governance are conceptualized as mediating variables because they explain how the combined effects of the key enablers are translated into sustainable cashless economy outcomes. In other words, digital awareness, infrastructure, and stakeholder collaboration produce greater impact only when they are effectively scaled, continuously improved, and supported by sound governance.

Likewise, FinTech tools and technologies act as the moderating variable which significantly affects the relationship between the enabling factors and outcome. The presence of accessible, secure, and interoperable FinTech apps, tools, and platforms moderates the impact of infrastructure, awareness, and collaboration of stakeholders on the success of digital financial outcomes. FinTech solutions and tools are treated as a moderating variable because they influence the strength and effectiveness of the relationships between the key enablers and the cashless economy. The quality, usability and security and interoperability of FinTech solutions determine whether the impact of digital awareness, infrastructure, and stakeholder collaboration becomes stronger and weaker. Further, the regulatory and policy governance have been identified as the control variables in the proposed model, which are important for the system to work. The model culminates in the cashless economy, which is the outcome of digital inclusion, transactions, and economic participation.

## 5. Conclusion, Policy Implications, and Future Directions

The study proposed a thematic conceptual model, which demonstrates the development of FinTech and digital inclusion, and how both lead to a cashless economy in Bangladesh. The findings highlighted that building a digital mindset and financial literacy are driving forces that prepares individuals and organizations for the digital transformation. Enabling a robust digital infrastructure will increase the resilience and security of the financial systems. The key moderating factors that could be applied to turn the digital preparedness into action are the selection of appropriate FinTech tools and solutions, and inter-sectoral integration is the key to keeping stakeholders involved. Finally, scaling, iteration, and governance will ensure the sustainability of the financial systems, which will eventually lead to a cashless economy. Our research offers several policy implications. The findings recommend that the Government of Bangladesh and the Bangladesh Bank expand digital financial literacy, improve secure digital infrastructure, strengthen interoperability among MFS providers, banks and FinTech firms, and enhance cybersecurity and consumer protection regulations. These initiatives would support broader digital financial inclusion and accelerate Bangladesh's transition toward a trusted and inclusive cashless economy. This study further offered some research opportunities. This model can be tested by future research in quantitative ways using the tools of SEM or PLS-SEM, the mediating role of digital trust and policy support, and by undertaking comparative and longitudinal studies to better understand the evolution of FinTech adoption and cashless economy advancement in various contexts.

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