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(Review Article)

The impact of mobile financial services in Bangladesh: Usage, benefits, and challenges

Md Mamunur Rashid *

General Manager, ICT Division, Bangladesh Krishi Bank, Bangladesh.

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Abstract

Mobile Financial Services (MFSs) have ignited a financial revolution in Bangladesh, dismantling traditional barriers and ushering in an era of unprecedented accessibility, efficiency, and economic empowerment for the unbanked and underprivileged. This in-depth analysis rigorously explores the meteoric rise and transformative influence of MFSs across Bangladesh's financial ecosystem, scrutinizing their catalytic role in reshaping household economies, supercharging SME growth and redefining the nation's digital financial infrastructure through a comprehensive evaluation of empirical data, cutting-edge industry reports, and authoritative policy documents. The research spotlights the stratospheric dominance of industry titans like bKash, Rocket and Nagad while launching a penetrating critique of stubborn roadblocks—spotty network reliability, crippling digital illiteracy, sophisticated cyber fraud networks and deep-seated trust issues—leveraging the SERVQUAL framework alongside groundbreaking case studies to dissect service excellence. Revelatory findings confirm that while MFSs have spectacularly expanded financial inclusion, particularly in remote hinterlands, formidable systemic hurdles persist, demanding bold policy overhauls, disruptive technological breakthroughs and ironclad security protocols to unlock their full potential. The study culminates in a visionary blueprint for regulators and financial innovators, prescribing aggressive strategies to fortify platform resilience, amplify rural penetration and cultivate unshakable consumer trust—ensuring these digital financial powerhouses become unstoppable engines for nationwide prosperity, bridging Bangladesh's wealth gap and propelling the nation toward an irrepressible, cashless future.

Keywords: Financial Revolution; SERVQUAL Framework; Technological Breakthroughs; Security Protocols; Cashless Future

1. Introduction

Over the past decade, Bangladesh has witnessed a rapid digital transformation in its financial sector, largely propelled by the rise of Mobile Financial Services (MFSs). These services—delivered via mobile phones—have reshaped how individuals and businesses manage transactions, savings and payments. Spearheaded by service providers like bKash, Rocket, and Nagad, the growth of MFSs has been especially impactful among the rural and unbanked populations, offering them a gateway to formal financial systems without the need for traditional bank branches (Kabir et al., 2020; Ehsan et al., 2019).

The appeal of MFSs lies in their accessibility, speed and low cost. As of 2023, Bangladesh boasts over 110 million registered MFS accounts, with around 40 million active users monthly (Bangladesh Bank, 2022). Services such as mobile top-ups, P2P transfers, utility bill payments and government benefit disbursements are now commonplace.

However, despite these advances, substantial challenges remain. Issues such as inadequate digital infrastructure in rural areas, weak financial literacy and lack of trust hinder widespread adoption. Moreover, security concerns related to fraud, over-the-counter misuse and data privacy are eroding consumer confidence (Ehsan et al., 2019).

* Corresponding author: Md Mamunur Rashid.

This paper investigates the current usage patterns of MFSs in Bangladesh and explores their socio-economic impacts. Using both qualitative insights and quantitative data from credible studies—including those conducted by the Bangladesh Bank and academic institutions—this research evaluates MFS performance using the SERVQUAL framework, assesses risks and proposes feasible strategies for improving access, quality, and trust in mobile financial systems.

2. Background and Literature Review

Financial inclusion has been a core developmental goal in Bangladesh, particularly for marginalized and rural populations. Traditional banking models failed to penetrate deeply into the rural landscape due to high operational costs, lack of physical infrastructure and low profit margins. The introduction of MFSs in 2011, with Dutch Bangla Bank and later bKash as pioneers, was a significant milestone aimed at bridging this divide (Kabir et al., 2020).

Bangladesh's experience aligns with global trends. According to GSMA (2021), over 245 MFS providers operate globally across 80+ countries. In South Asia, countries like India, Pakistan, and Nepal have successfully adopted mobile money to varying degrees, influenced by local regulatory frameworks, telecom penetration and financial culture (Sultana, 2014; Abdinoor & Mbamba, 2017).

The Bangladeshi context presents unique factors. While mobile penetration exceeds 90% (BTRC, 2022), banking penetration remains lower—especially in rural regions. Services offered include:

- Person-to-person (P2P) transfers
- Salary disbursements
- Utility bill payments
- Loan disbursements
- Government transfers (G2P)

Several studies offer insights into MFS adoption patterns. Ehsan et al. (2019) found that 33% of survey respondents preferred MFS for transactions, though 46% still relied on cash. Factors such as ease of use, agent proximity and recharge convenience significantly influenced usage, while trust and security remained key barriers. Kabir et al. (2020) emphasized the need for service diversification and innovation to maintain growth and sustainability.

Bangladesh Bank's impact report (2017) further documented how MFSs empowered users economically, reduced transaction times and increased access to emergency funds. However, it also noted misuses of over-the-counter (OTC) services and a concentration of users in urban areas—indicating an adoption gap in rural regions.

Moreover, SERVQUAL analysis by researchers has shown that while reliability and responsiveness score high, dimensions like tangibility (quality of physical service points), assurance and empathy often lag behind due to inadequate training of agents and inconsistent service delivery.

2.1. Research Objectives

This study aims to explore and evaluate the usage, benefits and limitations of Mobile Financial Services (MFSs) in Bangladesh, with a particular focus on:

- How MFSs are used by different population segments
- Their impact on households and SMEs
- Quality of service delivery using the SERVQUAL model
- Risks associated with MFS adoption
- Feasible policy recommendations to support long-term, inclusive financial growth

2.2. Specific Objectives

- To analyze the usage patterns and purposes of MFS adoption across demographics.
- To assess the socio-economic impact of MFS on rural households and SMEs.
- To evaluate service quality using the SERVQUAL model.
- To identify major risks such as illegal remittance, fraud and user privacy concerns.
- To recommend measures for enhancing adoption, trust and security in MFS platforms.

3. Methodology

3.1. Research Design

This is a descriptive and analytical study combining both qualitative and quantitative data. It draws on existing empirical studies (Bangladesh Bank, 2017; Ehsan et al., 2019; Kabir et al., 2020) and includes critical interpretation through the SERVQUAL framework.

3.2. Data Sources

- Primary Data: Survey data from Ehsan et al. (2019) involving 198 participants (129 valid MFS users).
- Secondary Data: Bangladesh Bank reports, GSMA statistics and journal articles on MFS usage.

3.3. Sampling Technique

Convenience sampling was used for primary surveys in urban and semi-urban regions of Dhaka. Though limited geographically, results offer key insights into user behaviors.

3.4. Analytical Framework

- Descriptive statistics (frequency analysis, percentages)
- SERVQUAL Model: Evaluating service dimensions — reliability, responsiveness, assurance, empathy and tangibility
- Comparative analysis with global trends and rural SME needs

4. Results and Discussion

4.1. Impact on Households

Mobile Financial Services have had a transformational impact on rural and low-income households in Bangladesh. The 2017 Bangladesh Bank study shows:

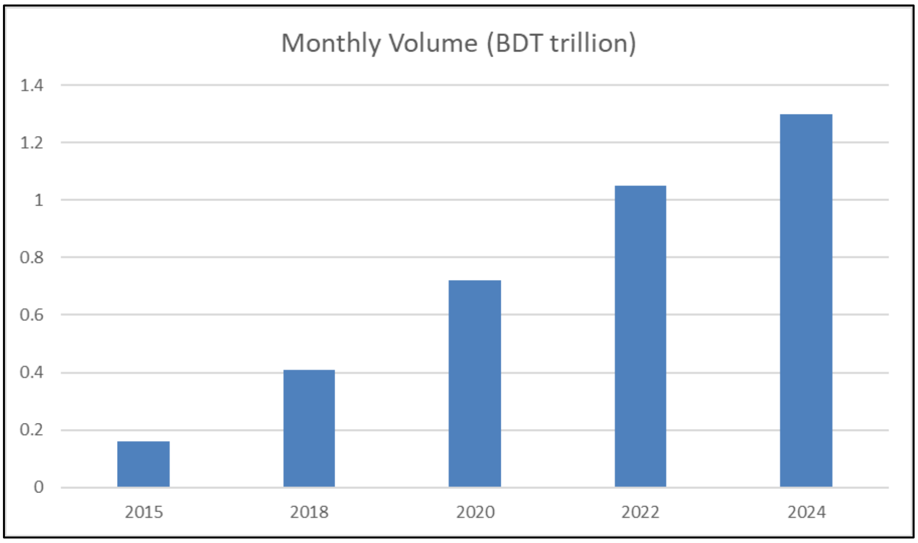
- 82% of users use MFS for P2P transfers.
- 74% reported saving on travel time and transport costs to access traditional banks.
- 68% received emergency funds or remittances through MFS platforms during crises.

A case study from Gaibandha district (Kabir et al., 2020) illustrated how women used bKash to receive family remittances from urban centers, enabling them to manage household expenses and school fees more efficiently.

Ehsan et al. (2019) also reported that households perceive MFS as convenient and accessible:

- 30.8% used MFS for mobile top-ups
- 25.8% for money transfers
- But 46% still preferred cash due to trust issues and limited agent support in remote areas.

The findings indicate that while MFS provides real-time benefits, long-term trust and education are essential for consistent adoption among low-income rural families.



Source: Bangladesh Bank, 2022; GSMA, 2023.

Figure 1 Growth of Mobile Financial Services Monthly Transaction Volume in Bangladesh (2015–2024)

4.2. Impact on Small and Medium Enterprises (SMEs)

SMEs, especially in rural and peri-urban areas, benefit from MFS in several ways:

- Reduced transaction times for payments and supplies
- Faster salary disbursement for daily wage workers
- Efficient payment tracking and cash flow management

According to Bangladesh Bank data, over 40% of SMEs use MFS regularly, particularly in retail, transportation and agro-trading sectors.

4.2.1. Case Example

A small clothing wholesaler in Rangpur shifted to MFS for supplier payments and daily income deposits, reducing dependency on physical banks and improving liquidity cycles. Additionally, services like Rocket enable automated salary transfers—critical for employee retention.

However, SMEs also reported concerns:

- Daily transaction caps (e.g., BDT 25,000) are limiting for higher-volume businesses.
- Transaction fees and platform downtime remain pain points.
- Thus, while MFS offers a scalable tool for SME inclusion, structural upgrades and business-specific services (like merchant wallets) are needed to fully empower rural enterprises.

4.3. Service Quality Assessment (SERVQUAL Model)

To evaluate the effectiveness of MFS providers in Bangladesh, the SERVQUAL model is applied using five key dimensions: reliability, responsiveness, assurance, empathy and tangibility.

4.3.1. Reliability

This dimension refers to the provider's ability to deliver promised services accurately and dependably. Most users reported that services like bKash and Rocket performed reliably in routine transfers, especially for airtime top-ups, bill payments and cash-in/cash-out services. However, occasional transaction delays, especially during system maintenance, impacted perceived reliability (Ehsan et al., 2019).

4.3.2. Responsiveness

This refers to the willingness of service providers and agents to help customers and provide prompt service. Studies show that while urban agents were more responsive, rural agents often lacked training and were unavailable outside peak hours (Kabir et al., 2020). Users complained of long agent queues and slow dispute resolution, especially in remote districts.

4.3.3. Assurance

This covers the knowledge and courtesy of staff and their ability to inspire trust. Assurance was rated low in rural areas due to:

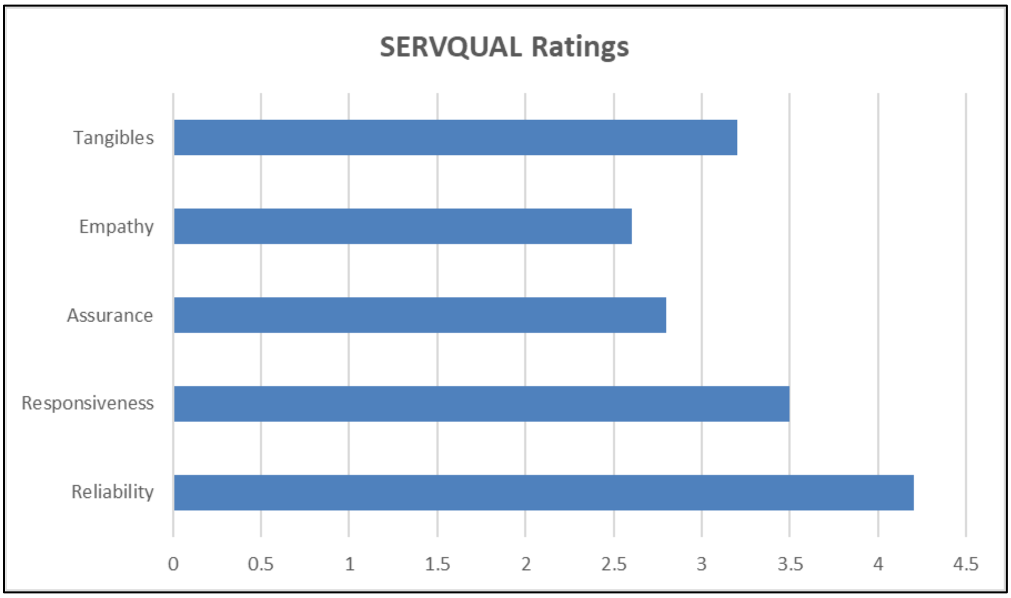
- Lack of awareness regarding transaction limits and fraud protection
- Limited customer care hotlines in local languages
- Low financial literacy among users

4.3.4. Empathy

This includes the personalized attention the service provider offers its users. While most providers maintained large agent networks, few offered customized experiences. There was a lack of tailored services for elderly users or those with disabilities.

4.3.5. Tangibility

Tangibles refer to the physical facilities, equipment and appearance of personnel. Although bKash and Rocket booths were widely visible, their branding, hygiene, and consistency varied. Remote areas lacked standardized kiosks, which eroded user confidence.



Source: Ehsan et al., 2019; Kabir et al., 2020

Figure 2 Average SERVQUAL Dimension Ratings for MFS Providers in Bangladesh

4.4. Challenges and Risks

Despite impressive growth, several persistent challenges threaten the sustainability and trustworthiness of MFS in Bangladesh:

4.4.1. Trust and Security Concerns

Many rural users remain skeptical due to reports of fraudulent agents, phishing scams, and account hacking. Bangladesh Bank's 2017 report and Ehsan et al. (2019) both highlighted:

- Incidents of SIM swaps leading to unauthorized access
- Agent fraud in over-the-counter (OTC) transactions
- Lack of transaction verification for illiterate users

4.4.2. Fraud and Illegal Transactions

While MFSs have simplified remittance flows, they've also enabled unregulated OTC activity. Agents often conduct transactions on behalf of users without proper KYC (Know Your Customer) procedures, risking:

- Money laundering
- Unreported remittance inflows
- Circumvention of banking regulations

4.4.3. Inadequate Infrastructure

MFSs rely heavily on mobile and internet networks. However, network disruptions in char areas and hilly regions (e.g., Bandarban, Khagrachari) inhibit seamless service. Moreover, many agents lack POS devices, paper receipts, or proper identification.

4.4.4. Digital & Financial Literacy Gap

A significant portion of rural users are semi-literate or non-literate, and often do not own smartphones. This leads to:

- Reliance on third parties (e.g., local store owners)
- Lack of awareness about limits, fees, or fraud prevention
- Hesitancy in using app-based services

4.4.5. Transaction Costs & Limitations

While MFS is cheaper than traditional banking, service fees for transactions, withdrawals and merchant payments still discourage frequent usage—especially among low-income users and SMEs.

4.4.6. Policy Recommendations

Based on the challenges and findings, the following measures are recommended:

Strengthen Agent Oversight

- Mandatory biometric registration for agents
- Standardized training programs
- Surprise audits and field inspections

Expand Financial Literacy

- National campaigns in rural languages
- Use of community-based organizations and schools
- Integrating financial literacy into mobile platforms (voice instructions, video tutorials)
- 3. Introduce Tiered KYC Frameworks
- Allow simplified KYC for low-value accounts to encourage onboarding
- Ensure robust KYC for merchant and remittance accounts to prevent fraud

Promote Interoperability and Innovation

- Enable interoperability between MFS providers and banks
- Promote digital wallets, microcredit, and insurance via MFS platforms

Encourage Public-Private Partnerships

- Government should partner with NGOs and telecom operators to enhance infrastructure
- Subsidies for building agent booths in underserved areas

Implement User Protection Protocols

- Real-time transaction alerts
- Easy-to-use complaint systems
- Daily transaction caps to prevent fraud

Support SME-targeted Solutions

- Merchant QR payments with lower fees
- Working capital disbursement via MFS channels
- Bookkeeping tools embedded into apps

5. Conclusion

The rise of Mobile Financial Services in Bangladesh marks a defining shift in the country's financial landscape, particularly for underserved populations. With over 100 million registered users and growing mobile penetration, MFS platforms like bKash, Rocket and Nagad have successfully democratized financial access by bridging the gap between formal banking and rural communities.

This paper has shown that MFSs significantly benefit both households and SMEs through lower transaction costs, greater accessibility and faster services. The SERVQUAL analysis confirmed that while users are satisfied with the reliability and reach of services, serious improvements are needed in assurance, agent training, and personalized support.

Persistent challenges such as digital illiteracy, fraud risks, network instability, and trust deficits continue to hamper full-scale adoption—especially in remote and low-income areas. However, with proper policy reform, agent monitoring, financial education campaigns and service innovation, these barriers can be overcome.

To fully harness the transformative power of MFSs, stakeholders—including banks, fintech firms, telecom operators and the government—must collaborate on a shared vision for inclusive finance. Doing so will not only expand the reach of digital banking but will also foster economic resilience, job creation and equitable growth across all sectors of society.

Bangladesh's journey with MFS is far from over—but with the right strategy, it is well on its way to becoming a global model for mobile-powered financial inclusion.

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