USERS' ASSESSMENTS OF BKASH AS A MOBILE FINANCIAL SERVICE (MFS) PROVIDER IN BANGLADESH

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Received on 30 July, 2023; Accepted on 19 October, 2023; Published on 17 February, 2024 (Online); 20 February, 2024 (Print)
DOI : https://doi.org/10.58964/JBA44N202

Abstract

This research aims to provide a demand-side mobile financial services (MFS) assessment of bKash, the 48% market-share holding leading MFS in Bangladesh, through the lens of users' perspectives in the post-COVID-19 realities. It also aims to derive recommendations, reflecting customers' experiences, to foster enhancements of the services. It shows how the same mobile financial service appears differently to users when gender and urban-rural differentials are in play. It evidences the impacts of contemporary manufacturing philosophy and required technical skills on the choices users are compelled to make. It also reveals patterns in user assessments and the impacts of its abuses on the broader image of MFS. This study uses the existing SERVQUAL framework but in a new way, incorporating ground realities in the new normal, by using user-defined compound weights of the factors to form the components of the SERVQUAL framework rather than simple gap calculations.

Keywords : *bKash, Bangladesh, Mobile Financial Service (MFS), Mobile Banking, Service Quality Dimensions*

JEL Classification : *M30, N20, O32, O33*

1. INTRODUCTION

Mobile banking, synonymously used for mobile financial services (MFS), implies the use of a smartphone or other mobile devices to perform online banking tasks such as checking account balance, transferring funds, receiving funds, bill payments, and locating ATM booths in a location independent manner (Tracy, 2020; Hawrylack, 2021). Advancements in the Internet and mobile phone technologies made financial/ banking transactions through mobile phones a reality, and MFS gradually became the predominant channel for financial inclusion in emerging markets (Al Amin et al., 2023; Amin, 2007; Barnes & Corbitt, 2003).

The rapid proliferation of mobile devices and increased availability of relatively cheaper smartphones have resulted in an ever-increasing number of mobile-based services around the world, particularly in Asia and Europe (Mallat et al., 2004). Widespread penetration, relatively stable mobile connectivity, positive user[2] experience, personal nature of the mobile devices, time and place independence, and affordable perceived security and convenience are the key factors that made MFS

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2 User and customer are used synonymously throughout this article.

popular (Mallat et al., 2004; Suoranta, 2003). MFS is one of the up-to-the-minute technologies for banking activities through smartphones and/or tabs with interactive apps. Mobile banking offers banks the opportunity to satisfy and retain their existing, technology-savvy customers by offering value-added and pioneering services and to simultaneously acquire new customers (Tiwari & Buse, 2007).

Bangladesh is a highly populated country with a significant presence of a digital divide; as a result, MFS has been treated as a great opportunity for telecommunication business for both international and local investors (Muzareba & Parvin, 2009). Given that today's development platform is intimately related to ICT interventions and there exists a profound relationship between development effectiveness and the existence of ICT tools among common people (Duncombe & Boateng, 2009; Muzareba & Rahman, 2014), MFS can play a pivotal role in enhancing the quality of life and augmenting the standard of living. The consistent downward trend in the technology product prices, as per Moore's Law, can be thought of as enabling many people to avail the blessings of ICT or MFS to be precise (Muzareba & Rahman, 2014).

In Bangladesh, MFS was initiated in 2011 with only a single provider though now there are 13 MFS providers (Bangladesh Bank, 2021). In September 2011, Bangladesh Bank gave some guidelines for banks on the issue of MFS, and in July 2018, replacing the previous guidelines, it issued Bangladesh Mobile Financial Services (MFS) Regulations 2018 which has been used as the regulating tool for all the MFS, except one MFS named Nagad (Bangladesh Bank, 2018). Nagad is regulated by the Bangladesh Postal Act Amendment 2010 Section 3(2) and this point of difference along with its government affiliation offers it a competitive advantage over the other MFS providers in the country.

With a 48% market share, bKash is the leading MFS in Bangladesh while Nagad is in the second position with a 28% market share (The Daily Star, 2021). These MFS providers include bKash of BRAC Bank Limited, Nagad of Bangladesh Post Office, Rocket of Dutch-Bangla Bank Limited, UCash of United Commercial Bank Limited, MYCash of Mercantile Bank Limited, Easy Cash of Prime Bank Limited, Ok Wallet of One Bank Limited, t-cash of Trust Bank Limited, MCash of Islami Bank Bangladesh Limited, and SureCash of Progoti Systems Limited (Maliha & Aziz, 2020). The total number of active MFS accounts was 45.762 million (26.73% of the total population) in May 2022 and cash in, cash out, merchant payment, utility bill payment, and government payments were 28.88%, 28.18%, 3.91%, 2.05%, and 0.27% of the total monthly transactions respectively (Bangladesh Bank, 2022). MFS usage probability increases by about 43% when households have domestic migrant members, though females are less likely to use it compared to males (Akhter & Khalily, 2020).

People in Bangladesh usually use MFS to transfer money, receive money, send money, pay bills, recharge their mobile, and make payments for purchases (Lee et al., 2021). However, MFS users face some challenges like dependency/assisted access, lack of basic digital literacy, lack of perceived usefulness, lack of perceived ease

of use, security concerns, and relatively higher transaction costs compared to those charged by banks (Afroze & Rista, 2022).

This research is a case on bKash therefore, structurally, it can be argued to lack generalizability. However, given that bKash covers about half of the market as the market leader in the MFS sector while the second to it (Nagad) covers about one-fourth of the market, some of the findings from this research that are related to structural realities rather than brand-specific activities can, to a degree, be generalized- such as, app design issues and infrastructural factors.

1.1 bKash as an MFS

MFS is convenient for customers as it can be accessed and used via all the mobile networks operating in Bangladesh. bKash is the pioneer and now the market leader of the mobile banking service industry in Bangladesh (Yesmin et al., 2019; Khan et al., 2020). It was launched in 2011 as a subsidiary of BRAC Bank Limited under the authority of Bangladesh Bank. This service started as a joint venture between BRAC Bank Limited of Bangladesh and Money in Motion LLC of the United States of America. The success of mPesa, a popular mobile banking service in Kenya, was an inspiration behind the fast-growing trend of bKash in Bangladesh (Yesmin et al., 2019). It enjoyed a quick expansion by the end of 2013 when about 22 percent of the population used the service (Chen & Rasmussen, 2014). The expansion might have been influenced by the fact that in April 2013, International Finance Corporation (IFC) became an equity partner of bKash (International Finance Corporation [IFC], 2016). This foreign interest in bKash continued and the Bill and Melinda Gates Foundation became another investor in April 2014, followed by investment coming from Ant Financial of Alibaba Group in 2018 (bKash, 2023).

In 2014, about 31% of adults had bank accounts in Bangladesh, which increased to 50% in 2017 (World Bank, 2018). However, there was no growth in the overall bank account ownership between 2017 and 2021, though the high growth of MFS reduced the gender gap by 19% in the same period (World Bank, 2022). This has become a possibility in Bangladesh because more than 68% of people have mobile phones ready to be used for MFS transactions. In the spirit of tapping this market opportunity, bKash has been maintaining a network of more than 180,000 agents in rural and urban areas with over 30 million registered customer accounts (bKash, 2023). Now over 17 million people in Bangladesh use bKash which handles more than 70 million transactions per day (bKash, 2023). This expansion is supported by the countrywide digital-compliant infrastructure with 96.05% teledensity and 61.07% internet density (BTRC, 2020).

bKash's affiliation with BRAC Bank reminds people of BRAC, the renowned international non-government organization (NGO), which has made bKash a reliable MFS option in Bangladesh. In addition to this institutional image, the involvement of VISA payment technology for its wallet services, QR scan-based payments, and digital receipts attracted technologically aware people to use bKash because they find it secure and convenient. Moreover, bKash has introduced different services in a

sequential manner, starting from the simplest person-to-person money transfer service which was the most demanded service by low-income people (IFC, 2016). Popular services of bKash include cash in, cash out, send money, mobile recharge, merchant payment, utility bill payment, and international remittance. In addition to these, interest on savings, loans from selected banks, cash backs, ticket purchase options for different transportation, and options for donation to voluntary organizations have made bKash attractive to its users.

bKash has been maintaining a special focus on the low-income group and it is also recognized by the global audience as in 2017, bKash was ranked 23rd among the 50 companies that had been changing the world through its economic and social contributions (Fortune, 2017). However, a recent study claims that involvement in the non-agriculture sector, having higher education, belonging to a non-poor household, and being located in urban areas are strongly correlated to MFA use (Akhter & Khalily, 2020). bKash users are overall satisfied with the services though they face some challenges (Himel et al., 2021). A study found that the service gap was relatively higher for bKash compared to the service gap of Rocket, the other MFS market leader (Rouf et al., 2019). Another study associated the challenges users face, with their lack of adequate knowledge of MFS (Baten & Kamil, 2010).

The process of holistic digitalization is still in its infancy in Bangladesh apart from some government services and urban-centric commercial initiatives (Hussain, 2015; Zaman, 2019). Some of the aspects of this rural-urban differential can be explained by the fact that while 43% of urban dwellers were at least aware of the Internet back in 2017, the corresponding figure for the rural dwellers was 30% (Watts, 2020). However, the nature of the COVID-19-led pandemic created a compulsion that eventually accelerated the digitalization process and increased people's reliance on digital technologies (Al Amin et al., 2023; Oldekop et al., 2020; Whitelaw et al., 2020). As a result, more people have started using digital banking services, particularly MFS, though conforming to the digital divide led to harsh realities for those who have opted out due to unavoidable reasons (Harrison, 2020; Mastercard, 2020; Payne, 2020; Watts, 2020). Experts believe that this trend toward digitalization will not change even after the pandemic ends, partly because this pandemic alone has not caused this sudden shift towards digitalization rather digital ecosystems have gradually become an integral part of the everyday realities of people (Martin, 2020; Sheng, 2020). These realities substantiate the need for understanding users' assessment of bKash so that MFS providers can upgrade their services in a market-pull manner.

Once mobile phones evolved into a pervasive technology, the services offered by bKash have become involved in the everyday lives of ordinary people in this country. However, the unprecedented impacts of the COVID-19-led pandemic have brought in undeniable changes along multiple dimensions which might have changed or altered the trends in the way bKash has been perceived by its users and non-users, as well as the ways it is positioned in terms of the readjusted macro-environmental factors. This contemporary reality has motivated the underlying inquiry of this research article and led to the following objectives :

- To understand users' perception of bKash services in the post-COVID-19 reality
- To make recommendations, reflecting customers' experiences, to foster enhancements of the services.

The following section on methodology is developed based on the above objectives that informed the nature of data required for this research and thereby guided the respective data collection methods and data analysis techniques.

2. METHODOLOGY

This research uses SERVQUAL as its conceptual framework as bKash is a service that is provided using both tangible and intangible elements. As a result, both quantitative and qualitative data are required to develop a rich understanding of the research topic. This is particularly necessary when customers' assessment of any technological system is concerned (Berry & Parasuraman, 1997).

This research uses a mixed method approach where quantitative data was collected using a questionnaire and qualitative data was collected through interviews. The reason behind adopting the mixed method is that– bKash is a well-known and matured service now (supporting the quantitative rationale), but no study ever assessed bKash services based on users' prime concerns about MFS, leaving the phenomenon yet to be explored (thus fitting in the qualitative landscape). The questionnaire was developed with the help of the data collected from a pilot short interview survey on 15 bKash users, selected from both urban and rural areas using a convenience sampling method. The interviewees represented farmers, housewives, microentrepreneurs, service holders, local businesspeople, garment workers, medium enterprise owners, college students, university students, self-employed persons, government allowance recipients' widows, fishermen, rickshaw pullers, pensioners, and economically well-off business person. The short interview survey was facilitated by an interview schedule that was designed based on the objectives of this research and the findings of the literature review, which were conducted before the data collection. Therefore, qualitative data collection preceded the quantitative questionnaire survey.

Stratified sampling was used to identify 22 key informants for interviewing, who were included in the 382 respondents, and the interviews were, on an average, 40 minutes long. The interviewee category is similar to what was used for the pilot study but the respondents who participated in the pilot were not included in the key informant pool. Five interviews were conducted over the telephone to match their preferences, while the rest were in person at interviewees' preferred locations. The interview schedule and the collected qualitative data guided the development of the questionnaire for the quantitative data collection. The interview preceded questionnaire-based data collection to support this. The author's personal and professional networks were used to distribute the questionnaire in the form of 'Google Forms' through emails and social networking sites (Facebook, WhatsApp, and LinkedIn) and in printed versions (to match with rural respondents' preferences). In these ways, 427 responses

were collected but only 382 were complete responses and hence were accepted. The sample size, therefore, conforms to the required size at 95% confidence, 5% margin of error, and 50% response distribution. In the Google Forms, both English and native Bengali languages were used so that respondents could understand independently. These multiple methods of data collection facilitated ensuring data triangulation and thereby fostered the reliability and validity of the analyses. The respondents' demographic profile is given in Table 1.

Among the accepted responses, 68.85% were from urban areas, and the rest were from suburban and rural areas. This is one of the limitations when policy implications are concerned because Bangladesh is predominantly a rural economy (Marinova & Hossain, 2006). Despite the female to male ratio of 51:49, women participants were relatively less (31.15%) in number which can be explained by the conservative patriarchal social reality (World Bank, 2019). Among the respondents, the profession of 37.7% were service holders, 17.02% were business, while the rest of them were predominantly students and involved in agriculture and other related activities.

Table 1 : Respondents' Profile

Locality	**Gender (total)**	**Profession**	**Total Respondents (Respondents Interviewed)**
Urban*	Male (185)	Service holder	95 (2)
		Business	36 (2)
		Others	54 (2)
	Female (78)	Service holder	25 (2)
		Business	9 (2)
		Others	44 (2)
Suburban and Rural**	Male (78)	Service holder	19 (2)
		Business	16 (2)
		Others	43 (2)
	Female (41)	Service holder	5 (1)
		Business	4 (1)
		Others	32 (2)
		Grand Total	**382 (22)**
* Respondents are from areas under city corporations. ** Respondents are from areas not under city corporations.			

Source: Author's construct

Interview data were transcribed, translated into English, and then analysed using the thematic data analysis technique- a five-step data analysis phase that includes getting familiarized with data, developing codes, identifying themes, reviewing and re-reviewing themes, and writing analysis. Quantitative data were analysed using

SPSS. The data collection period spanned the pandemic and post-pandemic periods, starting in June 2021 and ending in April 2022. A long period was needed due to the consequences of the pandemic and to cover the large sample size. Data analysis took place with a break of two weeks after the completion of data collection to minimize recency bias and to help maintain analytical distance.

While several studies investigated bKash and its operational and strategic realities (Chen & Rasmussen, 2014; IFC, 2016; Rahman et al., 2017; Rouf et al., 2019; Yesmin et al., 2019; Khan et al., 2020), none of those used SERVQUAL in a bottom-up manner– where the users' selected issues formed the SERVQUAL framework (Rahman et al., 2017; Rouf et al., 2019). The major significance of this research is that it developed the SERVQUAL framework based on the users' perspectives– gathered through the pilot study mentioned above. Rather than being literature-fed or researchers' judgement-fed, the SERVQUAL framework of this research is uniquely formed based on users' perspectives of the five dimensions of MFS, making it the perfect fit for the context. This aspect of the methodology is the major contribution to theory or academic discourses because no relevant literature referred to similar approach which uniquely and effectively incorporated ground reality in forming the components/constructs of the five dimensions of the SERVQUAL framework. Existing practice of using SERVQUAL in most cases resonated deductive approach because the components/constructs of the five dimensions were predefined- based on a different mid 1980s western reality rather than the one being investigated. The data that was used to develop the commonly used SERVQUAL framework was collected from respondents who were regular users of services including bank, credit card, appliance repair or maintenance, long-distance telephone, and securities brokerages which do not predominantly depict the realities of rural Bangladesh (Parasuraman et al., 1988). In this research, users of MFS proposed the components/constructs of the five dimensions of the SERVQUAL framework, reflecting their everyday realities which was then used to assess users' perspectives. This concept of context specific construct of SERVQUAL framework can be the next effective tool to assess service quality in a meaningful manner.

3. ANALYSIS AND DISCUSSION OF THE FINDINGS

The twofold weighted average approach was used to calculate the service gap with the help of the SERVQUAL framework. This approach provides relatively higher precision because both i) users' overall assessments of the importance of each of the five dimensions of SERVQUAL (Table 2) and ii) users' assessments of the importance of their selected components/ aspects of each of the dimensions, are incorporated in service gap measurement. This incorporation of user-defined factors and their weights, or bottom-up approach, is new while using the SERVQUAL framework but is essential because sustainable services critically depend on value co-creation which is operationalized in this approach (Bordian et al., 2023). The service components/ aspects related to each of the five dimensions were identified from the data collected by the pilot survey and presented in Table 3.

Table 2 : Importance of Each Dimension of the Services Quality

SERVQUAL Dimension	Aspect	Weights/ Points (%)
Tangibles	bKash interface design is related to operating the app on a mobile phone.	12.0
Reliability	bKash can perform the promised service dependably and accurately.	29.5
Responsiveness	bKash customer support is willing to help the customer and provide effective prompt services.	14.5
Assurance	bKash can inspire trust and confidence in users' minds.	36.0
Empathy	bKash pays caring and individualized attention to the individual user.	8.0
	Total points	**100**

Source: Author's construct

Table 3 : Service Components/ Aspects Selected by the Users

Service Dimension	Components/ Aspects Selected by the Users
Tangibility	i) quality of the mobile phone,
	ii) access to the service spots,
	iii) visual appeal of the services-related materials (posters, brochures, and banners),
	iv) comprehension of the services-related materials (posters, brochures, banners, and instruction details), and
	v) neatness of the employees (agents)
Reliability	i) time-bound promises are kept,
	ii) performs right the first time,
	iii) sincere interest in solving issues,
	iv) errorfree transactions, and
	v) the same level of services throughout the day
Responsiveness	i) respond to problems quickly,
	ii) employees are always willing to assist,
	iii) responsiveness of server systems,
	iv) fixing service failures, and
	v) effectiveness of customer services for all types of customers

Assurance	i) customer care employees have adequate knowledge,
	ii) safety feel about the transaction,
	iii) errorfree transactions,
	iv) confidence in the involvement of third parties in the payment process, and
	v) confidence in a smooth 24/7 user experience
Empathy	i) need for a bank to bKash money transfer,
	ii) transferring money to other MFS,
	iii) money-saving financial transactions,
	iv) app design provides smooth operating experiences, and
	v) interface upgrades address my needs better than before

Source: Author's construct

3.1 bKash End Users

Summary results of the gap calculations with and without weight and importance adjustments are presented in Table 4. It is evident that without incorporating the overall importance customers assign to the five dimensions of service quality, their maximum (6.658) expectations are about the responsiveness of bKash services whereas the minimum (6.16) expectations are about the tangibility aspects of the services. However, customers' highest frustration also lies with the responsiveness aspects as the services gap is highest (-0.852) for that dimension. The major issue that contributed to this consequence is the occasional unresponsive/inconsistently responsive server support which is also identified by the customers as the second most crucial factor along the responsiveness dimension. In the case of perceptions, the maximum (6.616) positive perception customers hold is along the reliability dimension whereas the minimum (5.402) is along the empathy dimension. These findings partially support the existing literature where responsiveness and empathy were found to have the strongest impact and tangibility is found to have the least impact (Khan et al., 2020), though the directions, either positive or negative, were not stated. This research also finds that these same two aspects have the highest influence over the service gap considering all the states– non-involvement of weights, weighted, and importance adjusted- but the respective gaps in all the cases are negative. However, the study identifies that, instead of tangibility, assurance has the least influence over the service gap. In the case of non-involvement of weights, the service gap along the assurance dimension is negative whereas after incorporating weight and importance, it becomes positive.

Table 4 : Result Summary

Dimensions	Average Expectation	Average Perception	Average Gap Score	Weighted Average Expectations	Weighted Average Perceptions	Weighted Average Gap Score	Importance (%)	Importance Adjusted Weighted Average Gap Score
Tangible	6.1600	5.9860	-0.1740	6.2441	5.7074	- 0.5368	12.0	- 0.0644
Reliability	6.3160	6.6160	0.3000	6.4445	6.7126	0.2681	29.5	0.0791
Responsiveness	6.6580	5.8060	-0.8520	6.6504	5.3733	-1.2772	14.5	- 0.1852
Assurance	6.5600	6.4500	-0.1100	6.6016	6.6031	0.0015	36.0	0.0005
Empathy	6.4120	5.4020	-1.0100	6.3701	4.8648	-1.5053	08.0	- 0.1204
				Total			**100.0**	

Source: Author's construct

In the case of non-involvement of weights, the two major issues contributing to the poor perception are customers' inability to transfer money from their banks to bKash accounts due to a very limited number of partner banks and the other one is their inability to transfer funds from bKash to other MFS and vice versa. Average gaps, without incorporating the overall importance customers assign to the five dimensions of service quality, are negative for all the dimensions of services except reliability. In the case of reliability, customers' perceptions are higher than corresponding expectations, implying high customer satisfaction, along with all the aspects of reliability except consistency of service quality at different points of time in a day for which customers encounter inconsistency. The major issue, in this case, is the network error that customers encounter mostly at midnight or later in the night.

In the case of weighted average calculations, customers' maximum (6.65043) and minimum (6.244126) expectations also remain aligned with the responsiveness and tangibility aspects of the bKash services that are already identified for calculations without incorporating weights. Similarly, customers' weighted average maximum (6.71256) and minimum (4.86483) perceptions also remain aligned with the reliability and empathy aspects of the bKash services; a pattern similar to what has already been identified through calculations without incorporating weights. Unlike gap calculation without incorporating weights, the weighted average gap is highest (-1.50528) for the empathy dimension. However, the reasons contributing to this gap are the two major issues discussed above- customers' inability to transfer money from their banks to bKash accounts, and their inability to transfer funds from/to bKash to/from other MFS. Customers' positive perception along the reliability dimension, that are already discussed above, results in the highest (0.26808) positive gap– implying a higher perception (6.71256) of service components related to the reliability aspects than they were related to the expectations (6.44448). All gap scores incorporating weighted average calculations remain in similar directions compared to those of the gap scores calculated without incorporating weights except for the assurance dimension. The gap score is negative (-0.11) (implying customers' experiential understanding

of the services components along the assurance dimension could not meet their corresponding expectations) when calculated without incorporating weights but it remains positive (0.0015) (implying customers experiences are better than whatever assurance related aspects they expected from bKash services) when calculated incorporating customer-assigned weights to respective aspects of assurance.

Customers not only have different priorities (weights) for the different aspects of services along each of the five dimensions of service quality but also have distinct priorities for each of the five dimensions when they consider each of those dimensions without incorporating different aspects of the respective dimension. This overall priority is termed as importance (Table 4). Customers assign the highest importance (36%) to assurance and the lowest (8%) to empathy. Therefore, it shows that service assurance is more important to them than empathetic services, though the realities are not this straightforward. However, patterns of both the positive and negative average gaps remain the same in the cases of incorporating and without incorporating the importance of the dimensions and priorities (weights) for the different aspects of services along each of the five dimensions. In the latter case, along the reliability dimension, the positive gap is 0.0790836 and along the responsiveness dimension, the negative gap is –0.18518675. All these variations in figures and importances undoubtedly demonstrate the complex ways customers evaluate service and that the evaluation might vary depending on the measures customers take to perceive the evaluation process.

3.2 Insights on bKash Services through Customers' Experiential Lens

Customers' high and low points about the components/aspects of bKash services along the five dimensions of service quality are presented below. Data that was used to develop the following insights (presented in sections from 3.2.1 to 3.2.5) were collected using the user-defined aspects (Table 3) of each of the dimensions of the service quality as per the SERVQAUL framework. Analyses on the aspects of tangibility, reliability, responsiveness, assurance, and empathy correspond to Table 5, Table 6, Table 7, Table 8, and Table 9, respectively. The insights presented below these tables should indicate where bKash needs to improve to minimize customers' dissatisfaction and where it needs to at least maintain, if not exceed, the current quality of services to keep the customers satisfied.

3.2.1 Tangibility Aspects

Respondents selected five issues related to the tangibility aspects of bKash services and shared their importance for respective issues that are used to develop Table 5.

Table 5 : Tangibles Through the Eyes of the Users

TANGIBLES		
Expectations (E1:E5)	**Perceptions (P1:P5)**	**Weight**
E1: bKash using experience will not be significantly shaped by the quality of the mobile phone. [Average Score: 6.17]	P1: bKash using experience is not significantly shaped by the quality of the mobile phone. [Average Score: 5.19]	46.70
E2: bKash services spots will be conveniently accessible. [Average Score: 6.22]	P2: bKash services spots are conveniently accessible. [Average Score: 6.59]	11.06
E3: bKash services-related materials (posters, brochures, and banners) will be visually appealing. [Average Score: 5.97]	P3: bKash services-related materials (posters, brochures, and banners) are visually appealing. [Average Score: 6.11]	10.10
E4: bKash services-related materials (posters, brochures, banners, and instruction details) will be easy to understand. [Average Score: 6.73]	P4: bKash services-related materials (posters, brochures, banners, and instruction details) are easy to understand. [Average Score: 6.04]	23.20
E5: Employees (agents) at bKash will be neat in appearance. [Average Score: 5.71]	P5: Employees (agents) at bKash are neat in appearance. [Average Score: 6]	08.94
	Total	**100**

Source : Author's construct

Most educated urban users are satisfied with the app interface, agent ecosystem, and promotional measures from bKash, though rural users have mixed experiences. The experience of bKash services is also shaped by the quality of the mobile phone, internet speed, and mobile operator's signal strength. All of these come from other partner companies of bKash which imply that bKash has only partial control over these components/aspects, particularly the mobile phones that are mostly not manufactured by any of the partners of bKash. Customers' bKash usage experience is considerably shaped by the quality of mobile phones which is also depicted by the following response by one respondent:

> "USSD (Unstructured Supplementary Service Data) based operating is good in that it does not need internet, but it is inconvenient for most of us at home. We want to work by touching options (buttons). It (USSD) sometimes does not respond properly… The quality of the mobile set influences the performance of the app (bKash). As a result, it (bKash) pushes some people to buy an expensive smartphone for smooth touch (interface), but then continuous changes in software force poor (economically) users to feel like being in a

> trap of buying newer smartphones which eventually forces many to reach out to agent-based bKash services despite their desire to operate on their own."

The above statement evidences a manufacturing philosophy that sometimes creates a vicious cycle for the poor bKash users who frequently need to buy newer devices for a better service experience due to software upgrades, which they struggle to afford. However, this device-related issue is not identified as a big problem by educated urban users which is also evidenced by recent literature (Afroze & Rista, 2022). As a result, rural users are found more inclined to avail agent-based bKash services for themselves rather than bKash app-based independent service options. Nonetheless, compared to the rural male, female users face more challenges in availing in-person agent-based services which are mostly rooted in the persisting patriarchal conservative social realities (Kabeer, 2000, 2012; Muzareba, 2016). A similar gendered aspect is also claimed by a recent study, though it was conducted only on urban users (Afroze & Rista, 2022). In the case of agent-based services, rural people argue that they would find it more assuring and credible if the service providers could wear bKash branded clothes. In their opinion, this would minimize the tension of losing money through malpractices and fraudulent activities.

3.2.2 Reliability Aspects

Respondents selected five issues related to the reliability aspects of bKash services and shared their importance for respective issues that are used to develop Table 6.

Table 6 : Reliability Through the Eyes of the Users

RELIABILITY		
Expectations	**Perceptions**	**Weight**
E6: When bKash will promise to do anything by a particular time, it will do so. [Average Score: 5.49]	P6: When bKash promises to do anything by a particular time, it does so. [Average Score: 6.74]	12.1
E7: bKash will perform the services right the first time. [Average Score: 6.54]	P7: bKash performs the services right the first time. [Average Score: 6.7]	24.4
E8: bKash will demonstrate a sincere interest in solving customers' issues. [Average Score: 6.57]	P8: bKash demonstrates a sincere interest in solving customers' issues. [Average Score: 6.82]	17.5
E9: bKash will ensure error-free transactions. [Average Score: 6.65]	P9: bKash ensures error-free transactions. [Average Score: 6.8]	38.4
E10: Levels of services will be the same at all times of the day. [Average Score: 6.33]	P10: Levels of services are the same at all times of the day. [Average Score: 6.02]	7.6
	Total	**100**

Source: Author's construct

Most users consider bKash as a reliable service, and users are gradually increasing their involvement in their everyday realities though some users, even the educated ones, still feel comfortable using traditional payment methods over MFS-facilitated ones for their utility bill payments. However, this feeling of reliability varies depending on users' demographic aspects, their technological readiness, and the quality of related technological frameworks. Technologically skilled male users are more inclined to use bKash compared to their counterparts. Nonetheless, technological glitches remain a consistent inconsistency for most of the bKash users. In most cases, server errors and/or network errors do not permit users to access bKash services. While this happens mostly around midnight, some users also encounter this issue during the daytime. Sometimes, despite the existence of a good telecommunication network, the app shows there exists no stable network connection that a phone restart occasionally can resolve. All the users interviewed faced these technical issues at least once and in most cases several times throughout their usage.

The lack of effective customer service is another consistent weakness. Customer service is claimed to be effective in developing awareness and addressing security concerns (Sathye, 1999). In the case of bKash, other than a few common issues, the web chat option as a means of customer service appears ineffective when the requested technical assistance is not common. In this case, customer care simply shares links to related wordy web pages rather than sharing the precise solution which makes this service less useful for many users. Users think that this approach is customer care representative-specific and could be avoided if employees are trained and their services are properly monitored. Most of the rural users claim that the agent-based services are not truly 24/7 which is a frequent reason for frustration.

3.2.3 Responsiveness Aspects

Respondents selected five issues related to the responsiveness aspects of bKash services and shared their importance for respective issues that are used to develop the following table.

Table 7 : Responsiveness Through the Eyes of the Users

RESPONSIVENESS		
Expectations	**Perceptions**	**Weight**
E11: bKash will respond to customers' problems quickly. [Average Score: 6.98]	P11: bKash responds to customers' problems quickly. [Average Score: 6.37]	16.5
E12: bKash employees will always be willing to assist customers. [Average Score: 6.83]	P12: bKash employees are always willing to assist customers. [Average Score: 6.91]	11.8
E13: bKash servers will never be unresponsive. [Average Score: 6.74]	P13: bKash servers are never unresponsive. [Average Score: 4.03]	29.4

E14: bKash will always fix service failures to keep customers satisfied. [Average Score: 6.45]	P14: bKash always fixes service failures to keep customers satisfied. [Average Score: 5.11]	31.6
E15: bKash will offer effective customer service options for customers of all sorts. [Average Score: 6.29]	P15: bKash offers effective customer service options for customers of all sorts. [Average Score: 6.61]	10.7
	Total	**100**

Source: Author's construct

Employees at bKash are found responsive to the issues encountered by respective users. However, the effectiveness of that response can be questioned as service gaps are perceived at the highest degree along this dimension. While users are happy with the customer care personnel who are found willing to assist the users with their varying levels of technical competencies, they suffer from twofold responsiveness issues– service failures in case of online customer care and technical glitches due to ineffective technological framework/design. Most of the service users claim that they find online customer care quite ineffective whenever they face technical problems that are not of the common categories. They argue that voice call service is rather useful in this respect but is expensive for them. Many of them do not find webchat effectively responsive because that often leads them to the related sources of information in the form of webpages rather than the specific piece of information sought.

The server error is claimed to be the most common issue faced by service users. As resolving technological issues requires related competencies that most users lack, encountering similar issues makes bKash services poorly responsive to them. The following words from one user reflect this reality:

"Network issues result in unresponsive app (application software) quite often, particularly at late night, although other apps work in that same network situation.… I needed to restart the mobile (phone) to get rid of this. It is annoying. I can fix it but most of the rural users will not be able to fix this on their own and will have to pay for their calls (phone calls) to fix it. bKash should sort this, and (voice) call services should be free in this respect."

3.2.4 Assurance Aspects

Respondents selected five issues related to the assurance aspects of bKash services and shared their importance for respective issues that are used to develop Table 8.

Table 8 : Assurance Through the Eyes of the Users

ASSURANCE		
Expectations	**Perceptions**	**Weight**
E16: bKash customer care employees will have adequate knowledge to answer customers' questions. [Average Score: 6.83]	P16: bKash customer care employees have adequate knowledge to answer customers' questions. [Average Score: 6.52]	16.8
E17: Customers will feel safe in bKash transactions. [Average Score: 6.8]	P17: Customers feel safe in bKash transactions. [Average Score: 6.89]	22.1
E18: bKash transactions will always be error-free. [Average Score: 6.55]	P18: bKash transactions are always error-free. [Average Score: 6.84]	35.6
E19: bKash will instil confidence in customers' minds even when payment is processed through a third party. [Average Score: 5.89]	P19: bKash instils confidence in customers' minds even when payment is processed through a third party. [Average Score: 5.2]	11.5
E20: Customers will feel confident to experience a smooth user experience with the bKash app 24/7. [Average Score: 6.73]	P20: Customers feel confident to experience a smooth user experience with the bKash app 24/7. [Average Score: 6.8]	14.0
	Total	**100**

Source: Author's construct

Most users find bKash transactions safe and error-free. They are confident about a smooth user experience with bKash. However, users have expressed their reservations about the technical knowledge of the customer care personnel. Most users claim that customer care personnel have inadequate technical knowledge, unlike other customer care services. They believe that this customer care personnel knows only the predefined matters. Users further argue that despite continuous efforts, made by bKash, to aware users of fraudulent activities, they remain worried every time they transfer money. They claim that they need to pay for phone calls to be sure of transferring to the right destination, which is expensive as the calls are not free.

Abuses of bKash and other MFS platforms sometimes affect users' confidence and trust in the overall bKash services, particularly in rural areas. Some elderly rural users claim that some young people have gotten involved in gambling and they use bKash and other MFS to pay money so that their parents and/or authorities cannot trace them. Those elderly users believe that the pandemic has led this socially undesirable application of bKash to reach an alarming level as the youth were confined to stay at home due to COVID-19 health protocol.

Some technologically aware users share that they find it risky to pay online when the bKash payment interface is embedded on the merchant's website rather than paying

directly on the bKash website or through well-known third-party online payment gateways. A university graduate urban user shares her following words on this:

> "Using bKash on a merchant's webpage is something I always try to avoid and am afraid of. I simply cannot trust the merchant's (merchant website's) direct involvement in the financial transaction rather I want the click on the payment button to take me to the bKash website. Sometimes I have no choice but to take the risks."

These words are evidence that bKash users prefer direct involvement of the bKash gateway in payment processing, rather than those of other third parties.

3.2.5 Empathy Aspects

Respondents selected five issues related to the empathy aspects of bKash services and shared their importance for respective issues that are used to develop the following table.

Table 9 : Empathy Through the Eyes of the Users

EMPATHY		
Expectations	**Perceptions**	**Weight**
E21: bKash will understand my needs effectively when it comes to the bank-to-bKash money transfer. [Average Score: 6.4]	P21: bKash understands my needs effectively when it comes to the bank-to-bKash money transfer. [Average Score: 3.34]	30.5
E22: Using bKash, I will transfer money to other MFS apps when in need. [Average Score: 5.78]	P22: Using bKash, I can transfer money to other MFS apps when in need. [Average Score: 3.06]	24.2
E23: bKash services will effectively help me save money when making financial transactions. [Average Score: 6.77]	P23: bKash services effectively help me save money when making financial transactions. [Average Score: 6.81]	22.5
E24: bKash app design will provide a smooth operating experience for me. [Average Score: 6.36]	P24: bKash app design provides a smooth operating experience for me. [Average Score: 6.88]	11.0
E25: bKash will continuously upgrade the interface with more options which will address my needs better than before. [Average Score: 6.75]	P25: bKash continuously upgrades the interface with more options that address my needs better than before. [Average Score: 6.92]	11.8
	Total	**100**

Source: Author's construct

Technologically skilled users like the bKash app design and the continual upgrades with increased options. Most users think bKash transactions help them save money as they can avoid the transportation costs required to opt for the out-of-home traditional banking facilities. However, they also encounter issues along three dimensions– a technological collaboration with partner banks, charges of services, and process design. Regarding technological collaborations with partner banks, many bKash user respondents share that they feel frustrated as they cannot transfer money from their bank accounts to their respective bKash accounts directly. This happens because bKash has enlisted only a limited number of banks (though the list of banks is increasing gradually) from where related account holders can transfer money to their respective bKash accounts. Users need more banks to be enlisted so that they can send money from their bank accounts directly to bKash other than visiting local agents at nearby shops. They also claim that they cannot transfer funds from one MFS platform to another MFS platform which they desperately need. In the case of the service charges, most of the users claim that bKash overcharges for the cash-out services through ATMs and/or bKash agents. Some users also claim that sometimes fund transfer becomes expensive when a small amount is involved. However, they are happy that by using bKash they could save other related costs, including time and transportation costs. Regarding process design, all the respondents claim that changing passwords is extremely inconvenient. Many of them avoid changing their password and/or keep a written or digital note of the password which risks leakage of that confidential code after they have to go through the difficult process of password change. While making password change a difficult process might be one design aspect of ensuring tougher security measures, it can also mean that people will be less inclined to change passwords even when it is necessary, implicating a vulnerability in the service design. The following comment from one highly educated bKash user depicts this scenario:

> "My bank card allows ten times the maximum amount bKash allows me to transact at a time but still changing the pin (password) of my (bank) card is extremely easy than changing bKash pin. It (changing bKash password) is so cumbersome that I rather left bKash unused for several months."

One interesting empathetic aspect is that– some users believe this COVID-19 led pandemic has worked as a social status equalizer because many economically well-off people who used to consider bKash as the means of financial transactions for the poor have now adopted bKash services to continue their personal and business affairs. Similar senses were identified in Thailand where well-off corporate customers were found less inclined to adopt mobile banking (Rotchanakitumanuai & Speece, 2004). This happened because bKash users could avoid going out during the pandemic as they could continue their business fully virtually with the help of an online bank-to-bKash fund transfer and bKash payment options.

4. CONCLUSIONS AND RECOMMENDATIONS

It can be said that mobile banking has radically transformed traditional banking activities with the advent of phone banking in the form of new products and services,

though traditional banking remains the mainstream banking platform. Nonetheless, the pervasive digital technology, specifically the proliferation of smartphone and internet use, has been the change agent in the areas of financial inclusion in Bangladesh and many other developing countries (Klein & Mayer, 2011, Akter et al., 2021). However, the persisting digital divide and low level of digital financial inclusion in the rural areas (Aziz & Naima, 2021) imply that portions of the MFS market remain unexplored while the urban market becomes more familiar with the services and at the same time becomes demanding in terms of service characteristics which are evident in the above analyses.

Customers of bKash expect a secure, convenient, smooth, uninterrupted, flexible, and dependable service. The government of Bangladesh, relevant regulatory authorities, and associations can contribute to the improvement and modernization of technological platforms and related rules and regulations to upgrade operational functionality. This can ensure secured and easy transactions and associated services, including more user-friendly software interfaces, money recovery options, claim options, money savings facilities, and reward on the transactions. Service quality can be improved further by enhanced user-friendly and effective management of activities through their personnel. Personnel can be made more energetic and enthusiastic through appropriate trainings and performance-based remuneration and reward packages. They will then be capable of providing the services to ensure the easiness and comfort of customers, making them more satisfied and loyal. This might be their key secret to retaining their market share, and/or exceeding it, and holding the product life cycle stage of maturity. Considering the increasing trend of demand for their service, bKash can plan to open a few new customer support centers.

While most of the related studies (Karjaluoto et al., 2002; Kabir, 2013) positioned different aspects of MFS dichotomously; this research depicted the ground reality without normalizing, by accommodating the degrees of both positivity and negativity of the same aspect rather than classifying each aspect dichotomously. The inclusion of 'importance' adjustments and weighted average calculations along with the qualitative approach facilitated this process which, as an analytical technique, is unique when related research on the selected context is concerned, and which ensured depicting the least unaltered ground realities. Based on the findings, the following recommendations are made that can help bKash fix the existing service-related issues faced by the users, and let it offer effective financial inclusion support to ensure satisfied MFS users:

- Government of Bangladesh (GoB), the state bank (Bangladesh Bank), and bKash shoukd take immediate steps to implement the Interoperable Digital Transaction Platform (IDTP) to facilitate inter-bank MFS transactions, given the initiative was taken over two years ago and the National Payment Switch Bangladesh (NPSB) was due to start operations in 2020 to support similar transactions. This would foster financial inclusion at the grassroots level. This research also evidences users' similar expectations which can be

comprehended by considering the components users selected to assess their empathy perspectives (Table 3).

- The safety and security of the bKash agents is a crucial issue and needs special attention. bKash should involve local-level administrations and build local capacity to ensure the safety and security of bKash agents who are scattered around the country. Introducing a dress code for the agents could be symbolic but powerful in this respect. The state bank should formulate respective policies so that safety is structurally enforced. However, this is to note that all MFS providers except Nagad are under the jurisdiction of Bangladesh Bank in Bangladesh.
- GoB and the state bank need to get involved in ensuring users' trust in the MFS. Formulation, enactment, and enforcement of related policies or guidelines might be useful in this respect. Ordinary users should be involved in the process to offer their insights to inform policy formulation. The regulatory framework should be the same for all MFS providers to ensure a fair level playing field for everyone. It must be remembered that sometimes, the discourse of the sense of security regarding MFS usage is derived from the lack of instances of break of security, and/or the lack of reporting of such security breach incidents, and/or a particular sense of perceiving MFS security, which in real sense does not indicate that the system is secured and not prone to any security breach. If proper measures are not in place, then security disruptions in the coming days might damage or destroy the MFS system as well as its good image in the minds of the millions of users in Bangladesh.
- Customers' expectations are escalating continually demanding constant initiatives to maintain and enhance service performances. Therefore, providers need to offer sophisticated, swift, safe, secure, smooth, synchronized, synergistic, uninterrupted, and fail-safe service to their customers.
- Promotional activities are required as most mainstream customers are more inclined toward the traditional banking system and often, they lack trust in mobile banking. Therefore, promotional messages need to emphasize building trust and reliability towards MFS. Promotional activities are not only required to acquire new customers but are rather crucial to retaining existing ones.
- To conform to financial inclusion effectively, bKash should be careful about updating its software system so that ordinary users do not feel the pressure of buying new mobile sets to be able to use the updated bKash system. New software updates should be compatible with the most used smartphones in rural Bangladesh. This is a structural issue mostly suffered by economically challenged users. GoB and the state bank should formulate a clear policy and should immediately enforce the policy so that new software updates would not force users to buy upgraded mobile phones, putting them under

further financial stress. Findings of this research also clearly reflected this phenomenon (section 3.2.1).

- bKash system should be regularly updated to minimize server errors. This issue is already evidenced by this research (section 3.2.2). Partner mobile operators should be invited to improve their technological framework to ensure better services. bKash can introduce a simpler version of their mobile app, which may be named bKash Light, that can function even when mobile network signals are weaker. GoB and the state bank should formulate a clear policy in this respect so that every MFS provider offers a lite version of their app to enable users living in poor mobile signal zones operate the respective app without any trouble.
- Customer care personnel should be regularly trained to offer effective services. bKash can acquire customer complaints and take measures to fix service loopholes. bKash should remember that users prefer to talk to human assistance about their issues, and paid phone calls demotivate them to do so. The call charge should be free or minimal. GoB and the state bank should devise clearly outlined policy in this regard. This study also identified this call charge issue (section 3.2.3).
- More private and public banks should be enlisted as bKash partners so that more users can utilize the bank-to-bKash fund transfer option. This research also revealed users' similar expectations which can be cross-checked by considering the components users selected to assess their empathy perspectives (Table 3). Specifically, bKash should ensure that farmers and unprivileged people who are normally out of the formal banking system but are eligible to open the *Tk-10 farmers' accounts*[3] can transfer funds from their bank accounts to their respective bKash accounts. GoB and the state bank should formulate clear policies in this respect so that all the MFS providers can foster financial inclusion for the farmers.
- Password changing process should be made easier to motivate users to change their passwords when required rather than leading them to take measures that either inadvertently increase the chances of leaking confidential information or demotivate them to use bKash altogether. Findings of this research clearly highlighted this technical issue (section 3.2.5).
- Two-way authentication can be introduced to facilitate accuracy in fund transfers and ensure users' confidence in the service. Participation of the fund recipient in the transaction could minimize abuse and cheating though at the cost of process redesigning.

3. As per the initiative from the GoB, farmers can open bank accounts by depositing only BDT 10 at any public and private bank in Bangladesh. This special provision was made to facilitate financial inclusion and fair distribution of different government financial assistances.

REFERENCES

Afroze, D., & Rista, F.I. (2022). Mobile financial services (MFS) and digital inclusion – a study on customers' retention and perceptions. *Qualitative Research in Financial Markets*, https://doi.org/10.1108/QRFM-06-2021-0095.

Akter, U., Anwar, S. R., Mustafa, R., Ali, Z., & Cumilla, B. (2021). Revisiting the Impact of Mobile Banking in Financial Inclusion among the Developing Countries. *International Journal of Financial Research, 12*(2), 62-74.

Akhter, N., & Khalily, M. B. (2020). An analysis of mobile financial services and financial inclusion in Bangladesh. *Indian Journal of Human Development, 14*(2), 213-233.

Al Amin, M., Muzareba, A. M., Chowdhury, I. U., & Khondkar, M. (2023). Understanding e-satisfaction, continuance intention, and e-loyalty toward mobile payment application during COVID-19: An investigation using the electronic technology continuance model. *Journal of Financial Services Marketing*, 1-23.

Amin, H. (2007). Internet banking adoption among young intellectuals. *The Journal of Internet Banking and Commerce, 12*(3), 1-13.

Aziz, A., & Naima, U. (2021). Rethinking digital financial inclusion: Evidence from Bangladesh. *Technology in Society*, 64, 101509.

Bangladesh Bank (2018). *Bangladesh Mobile Financial Services (MFS) Regulations, 2018*. Available at https://www.bb.org.bd/mediaroom/circulars/psd/jul302018psdl04e.pdf, accessed on 13 February 2023.

Bangladesh Bank (2022). *Mobile Financial Services*. Available at https://www.bb.org.bd/en/index.php/financialactivity/mfsdata, accessed on 13 February 2023.

Barnes, S. J., & Corbitt, B. J. (2003). Mobile banking: Concept and potential. *International Journal of Mobile Communications, 1*(3), 273-288.

Baten, M. A., & Kamil, A. (2010). E-banking of economical prospects in Bangladesh. *Journal of Internet Banking and Commerce, 15*(2), 1-10.

Berry, L. L., & Parasuraman, A. (1997). Listening to the customer--the concept of a service-quality information system. *MIT Sloan Management Review*, 38(3), 65.

bKash (2023). *Company Profile*. Available at https://www.bkash.com/about/companyprofile, accessed on 26 January 2023.

Bordian, M., Gil-Saura, I., & Šerić, M. (2023). The impact of value co-creation in sustainable services: Understanding generational differences. *Journal of Services Marketing, 37*(2), 155-167.

BTRC (2020). *Annual Report 2019-2020*, Bangladesh Telecommunication Regulatory Commission, Bangladesh.

Chen, G., & Rasmussen, S. (2014). *bKash Bangladesh: A Fast Start for Mobile Financial Services.* CGAP Brief. Washington, DC: World Bank.

Duncombe, R., & Boateng, R. (2009). Mobile Phones and Financial Services in Developing Countries: a review of concepts, methods, issues, evidence and future research directions. *Third World Quarterly, 30*(7), 1237-1258, DOI: 10.1080/01436590903134882

Fortune (2017). *Change the World*. Available at https://fortune.com/change-the-world/2017/search/, accessed on 10 March 2023.

Harrison, P. (2020). *Mobile Banking in the Pandemic Era: Why it's Such a Game Changer*. Available at https://thefintechtimes.com/mobile-banking-in-the-pandemic-era/, accessed on 22 January 2023.

Hawrylack, S. (2021). *Mobile Banking: What is Mobile Banking?*. Available at https://investinganswers.com/dictionary/m/mobile-banking, accessed on 22 January 2023.

Himel, M. T. A., Ashraf, S., Bappy, T. A., Abir, M. T., Morshed, M. K., & Hossain, M. N. (2021), Users' attitude and intention to use mobile financial services in Bangladesh: an empirical study. *South Asian Journal of Marketing, 2*(1), 72-96. https://doi.org/10.1108/SAJM-02-2021-0015

Hussain, R. (2015). The emerging digital culture of Bangladesh: Problems and prospects. *Journal of Philosophy, Culture and Religion, 6*, 18-25.

International Finance Corporation [IFC]. (2016). *bKash, IFC Inclusive Business Case Study*. Available at https://documents1.worldbank.org/curated/en/560181506580665929/pdf/119870-BRI-PUBLIC-bKash-Builtforchangereport.pdf, accessed on 2 January 2023.

Kabeer, N. (2000). *The Power to Choose: Bangladeshi Women and Labour Market Decisions in London and Dhaka*. London: Verso Publications.

Kabeer, N. (2012). *Women's economic empowerment and inclusive growth: labour markets and enterprise development*. Discussion Paper, 29/12, London: SOAS.

Kabir, M. R. (2013). Factors influencing the usage of mobile banking: Incident from developing country. *World Review of Business Research, 3*(3), 96-114.

Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International Journal of Bank Marketing, Emerald, 20*(6), 261-272.

Khan, A. G., Mahmud, M. S., & Lima, R. P. (2020). Investigating the relationship between service quality and customer satisfaction of BKash in Bangladesh. *International Journal of Financial Services Management, 10*(1), 1-17.

Klein, M. U., & Mayer, C. (2011). Mobile banking and financial inclusion: The regulatory lessons. *World Bank Policy Research Working Paper*, 5664.

Lee, J. N., Morduch, J., Ravindran, S., Shonchoy, A., & Zaman, H. (2021). Poverty and migration in the digital age: Experimental evidence on mobile banking in Bangladesh. *American Economic Journal: Applied Economics, 13*(1), 38-71.

Mallat, N., Rossi, M., & Tuunainen, V. K. (2004). Mobile banking services. *Communications of the ACM, 47*(5), 42-46.

Maliha, S. R., & Aziz, M. N. (2020). User perspective towards M-banking in Bangladesh: A case study based on university students. *International Journal of Business and Management Future, 4*(2), 1-5.

Marinova, D., & Hossain, A. (2006). Principles for self-reliance and sustainability: case study of Bangladesh. In *Proceedings of the Anti-Poverty Academic Conference with International Participation, Institute for Sustainability and Technology Policy, Murdoch University, Perth*. Institute for Sustainability and Technology Policy, Murdoch University.

Martin, K. (2020). *How Banking Will Change After COVID-19*. Available at https://www.hsbc.com/insight/topics/how-banking-will-change-after-covid-19, accessed on 22 January 2023.

Muzareba, A. M. (2016). *E-learning and wellbeing of those in poverty in Bangladesh*. Doctoral dissertation, University of Sheffield.

Muzareba, A. M., & Parvin, S. (2009). Mobile telecommunication market in Bangladesh. *Journal of Business Studies, 30*(1), 101-121.

Muzareba, A. M., & Rahman, M. (2014). Information and communication technology, climate change and poverty the intertwined factors in the changing development platform: A Bangladesh perspective. *D.U. Journal of Marketing, 17*, 1-14.

Oldekop, J. A., Horner, R., Hulme, D., Adhikari, R., Agarwal, B., Alford, M., Bakewell, O., Banks, N., Barrientos, S., Bastia, T., Bebbington. A. J., Das, U., Dimova, R., Duncombe, R., Enns, C., Fielding, D., Foster, S., Foster, T., Frederiksen, T., Gao, P., Gillespie, T., Heeks, R., Hickey, S., Hess, M., Jepson, N., Karamchedu, A., Kothari, U., Krishnan, A., Lavers, T., Mammana, A., Mitlin, D., Tabrizi, N. M., Müller, T. R., Nadvi, K., Pasquali, G., Pritchard, R., Pruce, K., Rees, C., Renken, J., Savoia, A., Schindler, S., Surmeier, A., Tampubolon, G., Tyce, M., Unnikrishnan, V., & Zhang, Y. F. (2020). COVID-19 and the case for global development. *World Development, 134*, 105044.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Payne, K. (2020). *How the Pandemic has Accelerated the Adoption of Online and Mobile Banking*. Available at https://www.fool.com/the-ascent/banks/articles/how-the-pandemic-has-accelerated-the-adoption-of-online-and-mobile-banking/, accessed on 17 February 2023.

Phaneuf, A. (2021). *State of Mobile Banking in 2021: Top Apps, Features, Statistics and Market Trends*. Available at https://www.businessinsider.com/mobile-banking-market-trends, accessed on 22 January 2023.

Rahman, A., Hasan, M., & Mia, M. A. (2017). Mobile banking service quality and customer satisfaction in Bangladesh: An analysis. *The Cost and Management, 45*(2), 25-32.

Rotchanakitumanuai, S., & Speece, M. (2004). Corporate customer perspectives on business value of Thai internet banking. *Journal of Electronic Commerce Research, 5*(4), 270-286.

Rouf, M. A., Babu, M. A., Khatun, M. A., Rasel, M., & Kumar, A. (2019). Measuring customer's satisfaction level and service gap between bKash and Rocket in Bangladesh. *American Journal of Marketing Research, 5*(2), 29-35.

Sathye, M. (1999). Adoption of internet banking by Australian consumers: An empirical investigation. *International Journal of Bank Marketing, Emerald, 17*(7), 324-334.

Sheng, E. (2020). *Coronavirus Crisis Mobile Banking Surge is a Shift that's Likely to Stick*. Available at https://www.cnbc.com/2020/05/27/coronavirus-crisis-mobile-banking-surge-is-a-shift-likely-to-stick.html, accessed on 22 January 2023.

Suoranta, M. (2003). *Adoption of Mobile Banking in Finland*. Doctoral dissertation. Jyväskylä University Printing House, Jyväskylä and ER-paino, Lievestuore.

The Daily Star (2021). *Nagad, the world's fastest-growing MFS*. Available at https://www.thedailystar.net/pr/news/nagadthe-worlds-fastest-growing-mfs-2071877, accessed on 11 February 2023.

Tiwari, R., & Buse, S. (2007). *The Mobile Commerce Prospects: A Strategic Analysis of Opportunities in the Banking Sector.* Germany: Hamberg University Press.

Tracy, P. (2020). *Mobile Banking*. Available at https://investinganswers.com/dictionary/m/ mobile-banking, accessed on 10 February 2023.

Watts, G. (2020). COVID-19 and the digital divide in the UK. *The Lancet Digital Health, 2*(8), E395-E396.

Whitelaw, S., Mamas, M. A., Topol, E., & Van Spall, H. G. (2020). Applications of digital technology in COVID-19 pandemic planning and response. *The Lancet Digital Health, 2*(8), E435-E440.

World Bank. (2018). *The Global Findex Database 2017 – Measuring Financial Inclusion and the Fintech Revolution*. World Bank Group.

World Bank. (2019). *World Population Prospects: 2019 Revision UN*. World Bank Group.

World Bank. (2022). *The Global Findex Database 2021 –Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19*. World Bank Group.

Yesmin, S., Paul, T. A., & Uddin, M. M. (2019). bKash: Revolutionizing mobile financial services in Bangladesh?. In Sikdar, A., and Pereira, V. (Eds.) *Business and Management Practices in South Asia: A Collection of Case Studies,* 125-148. Palgrave Macmillan.

Zaman, A. (2019). How the digital economy is shaping a new Bangladesh. *World Economic Forum*, 1-4.