

Factors Influencing Consumer Perception of Mobile Financial Services: A Case Study of bKash Among University Students

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Abstract

This study explores the core factors shaping consumer perceptions of mobile financial services (MFS), focusing specifically on bKash users among university students in Dhaka city. Using a quantitative research design, the research examines the influence of perceived value, brand trust, ease of use, security of transaction, affordability, and customer engagement on overall consumer perception. Primary data was collected from 280 respondents using a structured survey and analyzed via multiple linear regression. Findings shows the brand trust, perceived value, and ease of use significantly and positively influence consumer perception. Conversely, security, affordability, and customer engagement showed no statistically significant impact within this demographic. The study concludes that for tech-savvy, younger demographics, MFS providers must prioritize building intrinsic brand trust and delivering seamless, value-driven user experiences to create a positive perception towards the brand.

Keywords: Mobile Financial Services (MFS), Consumer Perception, Brand Trust, Perceived Value, Technology Adoption, Fintech

1 Introduction

The rapid growth of Mobile Financial Services (MFS) has fundamentally changed the financial landscape in Bangladesh, shifting everyday transactions toward digital platforms. Among these providers, bKash has emerged as a pioneering force, particularly among the tech-savvy, younger populations. However, as the digital ecosystem matures, relying solely on physical infrastructure and agent networks is no longer sufficient to sustain market leadership. For MFS providers to create deep, continuous engagement, it is critical to understand the intrinsic psychological and functional assessment that decides user preference. Therefore, this study examines the core factors affecting consumer perception of bKash, focusing specifically on university students in Dhaka City as a manifestation for the nation's digital early adopters. Using a quantitative research design, this study incorporates structured survey methods to systematically examine how perceived value, brand trust, ease of use, transaction security, customer engagement and affordability impacts overall consumer perception within Bangladesh's competitive mobile financial services sector.

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2 Background

One important aspect of mobile commerce is mobile financial services (MFS), which enable customers to pay their bills, make deposits, and send and receive money using mobile devices or applications (Al Saedi et al, 2020). This system has introduced a convenient, reliable, user-friendly and secure method of conducting transactions for both clients and agents (Chen, 2007). Mobile Financial Services (MFS) encompass a range of functionalities, including checking account balances and transaction histories, paying utility bills, transferring funds, adding money, managing portfolios and making online payments through mobile devices (Noami et al, 2019). Through the utilization of bank agents, mobile financial services are facilitated, enabling users to perform transactions at independent agent locations rather than exclusively within bank branches (Ahmed & Ahmed, 2018).

In 2020, globally, nearly 76% of mobile financial service (MFS) providers delivered their services through smartphone apps, with the MFS industry generating over \$3.45 billion revenue in 2022 (The Daily Star, 2024). South Asia is recognized as a rapidly growing region for the adoption of mobile financial services (MFS), with a surge of innovations aimed at reaching underserved populations (Siddiquie, 2014). Bangladesh, with a population of over 160 million people, presents a significant opportunity for MFS to thrive (Himel et al, 2021). Dutch Bangla Bank Limited (DBBL) pioneered MFS by launching its services on March 31, 2011, followed by bKash, which began its operations in July 2011, offering improved services in 2022. By early 2012, other banks began offering MFS, and currently, 13 Mobile Financial Services Providers (MFSPS) are providing services with over 1.83 million agents are providing these services across the country (Hasan & Alam, 2025). In Bangladesh, there are now around 237 million Mobile Financial Service (MFS) accounts holders. The overall number of MFS accounts increased from 215 million in 2023 to 237 million by 2025, according to current data from Bangladesh Bank representing an overall rise of 22 million accounts (Hasan & Alam, 2025).

bKash stands out as a pioneering digital financial service in Bangladesh, revolutionizing how people engage in financial transactions. Launched in July 2011, it has swiftly become an integral part of many lives, embodying the spirit of financial empowerment and accessibility. The company operates under the oversight of the Bangladesh Banking compliance with the Mobile Financial Services Regulation of 2018, ensuring a secure framework for its operations. With an expansive network exceeding 550,000 merchants and around 330,000 agents throughout the country, bKash facilitates seamless transactions for its vast user base, which consists of over 70 million active customers (bKash, 2024). The widespread presence of agents and merchants ensures that digital financial services are accessible to a diverse user demographic, including those in rural areas. To engage its customers and foster brand loyalty, bKash has launched several impactful campaigns over the years. The slogan "bKash koro" has become a part of everyday conversation, emphasizing the service's prevalence and usability (bKash, 2024).

Digital marketing communication is the sharing of information between companies and customers through electronic or digital channels. Digital marketing communication allows for more dialogic or interactive interactions between the sender and the recipient than traditional

marketing communication (Shankar & Grewal, 2021). This type of communication includes a number of platforms, including mobile communication, online display ads, paid and organic search engine advertising, and social media word-of-mouth (WOM) exchanges. For Mobile Financial Services (MFS) to succeed in Bangladesh, especially for bKash, the top MFS provider, digital communication is essential (Mulindi et al., 2024). Businesses and customers may engage and communicate in real time thanks to digital communication. To engage with consumers, bKash uses a range of digital marketing techniques, such as its mobile app, SMS alerts, and social media sites like Facebook and Instagram. Through the bKash app, customers can access services such as money transfers and bill payments, while receiving updates and promotions. Additionally, the use of Over-the-Top Communication (OVC) enhances customer communication beyond traditional methods. Platforms like Amar bKash on Facebook further facilitate customer support and interaction. This digital strategy aligns with the view that digital communication strengthens customer relationships, fostering loyalty and driving engagement, thereby positioning bKash as a leader in the competitive MFS sector in Bangladesh.

As the Bangladesh MFS ecosystem matures, service providers like bKash have to do more than just build agent networks. They also have to focus on building long-term user loyalty and behavioral intension. In this more competitive market, being able to get to a place is no longer the only thing that gives a business an edge. Instead, ongoing user adoption depends a lot on the psychological and functional evaluations that consumers make on their own. For digitally native demographics, especially university students who are early adopters and opinion leaders in the tech economy, these evaluations determine which platform they prefer. To stay ahead in the market, having a deep understanding of how core ideas like perceived value, brand trust, system ease of use, customer engagement, affordability and transaction security all work together to shape how people see a brand.

3 Literature Review

Consumer perception refers to how individuals interpret and form opinions about products or services based on their experiences and expectations. It plays a key role in shaping consumer decisions, loyalty and behavior (Kotler & Armstrong, 2017). It also suggests that, perception is influenced by factors such as prior experiences, marketing, and social influences. In mobile financial services, consumer perception is shaped by ease of use, security, and customer services (Makanyeza, 2017). Moreover, Bacile, (2020) emphasized that digital communication, including information about security and service quality, significantly impacts how consumers perceive these services. Thus, managing consumer perception is crucial for building trust and loyalty in mobile financial services (Winata et al., 2024).

Customer value is a measure of the net benefits received from a product relative to the costs incurred (Menon et al., 2005). This notion is strongly related to customer satisfaction, which in turn affects a stronger competitive position, a larger market share, positive word-of-mouth, customer loyalty, and retention (Blut et al., 2023). High customer value enhances consumers' willingness to pay premium prices (Liu et al., 2022). However, overstating customer value can erode consumer trust when expectations are not met (Blut et al., 2023). Furthermore, discrepancies between perceived and actual value may lead to customer dissatisfaction

(Anderson, 1973). Trust is essential for building strong customer relationships as it fosters emotional connections (Cardoso et al., 2022). Trust in mobile financial services is significantly influenced by enabling conditions, service quality, and satisfaction (Tun, 2020). Brand Trusts are particularly vital due to the sensitive nature of financial transactions (Chaudhuri & Holbrook, 2001). In MFS, customer perceived value and brand trust are closely interlinked, with research indicating that brand trust mediates the relationship between customer satisfaction and loyalty.

This strengthens consumer involvement and cultivates enduring brand loyalty. The degree to which a service or product is easy to use, enabling users to engage with it effectively and efficiently, therefore enhancing their overall pleasure and experience (Kotler & Armstrong, 2017). Conversely, Davis (1989) described ease of use as the extent to which an individual think that utilizing a specific technology will be effortless. By prioritizing user-friendly designs, organizations can significantly enhance customer experience, ultimately fostering greater satisfaction and loyalty. The concept of ease of use is intricately linked to customer satisfaction, especially as consumers increasingly rely on mobile platforms for financial transactions. Sutisna et al (2019) found that a user-friendly interface promotes engagement and increases the likelihood of repeat usage. However, it is crucial to recognize that excessive ease of use can lead to decreased customer satisfaction if not appropriately balanced. Finding the right equilibrium between simplicity and functionality is essential to ensure users feel both comfortable and empowered while utilizing mobile financial services (Lee et al., 2015). Despite the fact that mobile applications are on the cutting edge of mobile computation technologies, security concerns limit their adoption and spread (Balapour et al., 2020). Security is the primary factor that drive online enterprises, causing online consumers to create trust in the e-portal (Krishnan et al., 2024). When mobile financial services are safe, consumers feel more confident in performing transactions, resulting in increased adoption of mobile payments, digital banking, and mobile wallets (Xin et al., 2015). Furthermore, the availability of strong security measures, such as encryption and multi-factor authentication, ensures that users' financial information is secure, increasing their engagement with mobile financial platforms (Tran-Truong et al., 2025). Identity theft, unauthorized access to personal financial information, and financial losses are just a few of the serious repercussions that can arise from inadequate security measures and a breach (Hwang et al., 2021).

The ability and willingness to pay are embodied in affordability. Because it influences consumers' price sensitivity and purchasing power, it is crucial to their decision-making process (Notani, 1997). Customers are more inclined to buy a product if they believe it to be reasonably priced while yet offering adequate value (Zhao et al., 2021). Customers' price sensitivity frequently mitigates the impact of affordability perceptions on actual purchases, particularly when they perceive a product to be either expensive or easily affordable (Chaudhuri, A., & Holbrook, 2001). When mobile financial services are perceived as affordable, purchase intent is strongly influenced by these perceptions, and the intention to use such services becomes more direct (Chaudhuri & Holbrook, 2001). In contrast, when a financial service is viewed as expensive, consumers may hesitate to engage with it, even if their attitudes towards it are positive (Chaudhuri & Holbrook, 2001). This is because important decision-making

components like attitude-intention, subjective norm-intention, and purchase intention-buy linkages are moderated by affordability. The significance and intricacy of consumer engagement have increased dramatically over the last ten years (Rosado-Pinto & Loureiro, 2020). The voluntary and motivated investment of operant resources—such as cognitive, emotional, behavioral, and social knowledge and skills—as well as operand resources, such as equipment, into interactions with a brand is known as customer engagement. Both offline and online interaction are covered by this concept (Hollebeek et al., 2014). It involves the interactions between businesses, whether in a B2C or B2B context and consumers, facilitated through a range of online and offline channels. In earlier times, customer engagement was primarily influenced by traditional media outlets like television, radio and outdoor advertising, with companies focusing on peak viewing times or high-traffic locations to optimize their reach (de Vries et al., 2017). However, in contemporary contexts, customer engagement manifests in multiple ways, such as views, impressions, clicks, comments, shares, and other forms of interaction. These diverse touchpoints play a crucial role in the comprehensive engagement strategy, fostering stronger relationships with customers and impacting their purchasing choices as well as their continued involvement with the brand (Blasco-Arcas et al., 2016). Customer engagement plays a crucial role in the mobile financial industry by fostering deeper connections between users and financial service providers, thereby enhancing brand loyalty and customer retention (Al-Dmour et al., 2019). According to research by Albashrawi & Motiwalla (2017) suggest that, mobile financial services that actively engage customers through personalized interactions and value-driven content led to greater user satisfaction and increased transaction frequency.

Although MFS adoption in developed countries has been studied using a variety of technology acceptance models (Koh et al., 2018), empirical studies assessing the particular psychological and functional determinants of consumer perception in Bangladesh are still limited. Previous research in Bangladesh has mostly concentrated on wide user affordances (Hazra & Priyo, 2021) or macro-level financial inclusion (Akhter & Khalily, 2017). As a result, there is a significant knowledge gap on how factors like perceived value, brand trust, ease of use, security of transaction, affordability and engagement in particular influence the opinions of the urban youth group mostly university students that is digitally connected. Since this group is the main force behind digital financial ecosystems, closing this gap is important. To address this, the current study quantitatively evaluates these core variables among university students in Dhaka.

Theoretical Framework

The current study has its foundation in the Technology Acceptance Model and Value-Based Adoption Model (TAM and VAM). Both are chosen due to their demonstrated applicability to MFS studies and their ability to explain all the constructs studied in the present study, namely, perceived value, brand trust, ease of use, security of transaction, affordability and customer engagement.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theory that has been widely used in information systems and digital service adoption research and was originally proposed by Davis (1989).

TAM proposes that perceived usefulness, the extent to which an individual thinks that the technology system will improve his or her job performance, and perceived ease of use, the extent to which an individual thinks that using the technology will not require cognitive effort, are the two cognitive constructs that have the greatest influence on user acceptance of a technology system. This model assumes that these two perceptions influence the user's attitude toward the technology which further impacts on the user's intention to use and actual use of technology. TAM has been widely applied in mobile banking, digital payment platforms and fintech applications within economies developed and developing and has been consistently found to explain well the intentions to adopt and satisfaction with digital financial tools (Alalwan et al., 2022; Chaouali et al., 2023).

In the current research, TAM serves as the main theoretical support for ease of use (H3) and perceived value (H1) to a large extent. The ease of use construct maps well with TAM's dimension of perceived ease of use as the ease of use construct relates to the university students' perception of bKash's ease of use, the ease of use dimension correlates well with the ease of use construct. The ease of use dimension correlates well with the ease of use construct as both constructs map with each other in terms of ease of use maps onto the university student's perception of ease of use of bKash. Ease of interaction is not only a usability factor, but also a psychological precondition in the formation of positive perception for the digitally native generations that are interacting with an increasingly rich MFS (Chaouali et al., 2023). The perceived value construct, meanwhile, can be determined from the perceptions of TAM; users who believe that TAM can give them functional value such as saving time, money convenience, and transactional reliability, are more likely to assign high value to TAM and consequently form a more positive perception of the brand (Alalwan et al., 2022). Moreover, TAM is built on an attitude formation process from cognitive evaluation to intention to use, which can be used as a conceptual basis to explain the role of brand trust and customer engagement in making perceptual evaluations into continued intention to use.

TAM is also well suited to the Bangladeshi MFS environment as it was designed to describe adoption in a context where the user is encountering new technological systems and is making judgements about these systems based on little first-hand experience with them. For digital financial service adoption in Bangladesh, as a country where a considerable share of the customers of bKash is relatively new adopters of DFS who also include students from the university, the TAM is highly relevant (Himel et al., 2021). This logic supports the important hypotheses we validate in the study, as well as the non-significant constructs, including security (H4): once a technology is perceived as competent and reliable, secondary features like security can be overlooked and assumed without being investigated (Alalwan et al., 2022).

Value-Based Adoption Model (VAM)

One important weakness of TAM is its narrow scope to cognitive utility, which was addressed by Kim et al. (2007) with the Value Based Adoption Model (VAM). VAM theorises that the adoption of mobile services is as a result of the perceived value, which is the net assessment of the benefits received by the consumer in relation to the costs paid, both in terms of the usefulness and enjoyment of the service as well as the technical risk of the adoption and the

costs paid for the service. VAM is a benefits-minus-sacrifices model that accommodates a broader spectrum of adoption determinants, particularly in the MFS and mobile commerce environments where the perceived benefits of the technology coexist with financial considerations, trust and security perceptions, and create a dynamic relationship (Kim et al., 2007; Al-Okaily et al., 2021). VAM is an empirically validated factor for many emerging market studies of mobile payment adoption, with it always outperforming purely utilitarian models in predicting continued service use (Al-Okaily et al., 2021).

VAM is directly linked to the perceived value (H1) and affordability (H6) constructs in this research and plays an important theoretical scaffolding for brand trust (H2), security of transaction (H4), and customer engagement (H5). In the benefit-sacrifice framework developed by VAM, perceived value is the overall evaluative results where users integrate all the service attributes into an overall judgment (Kim et al., 2007). This net value assessment will be especially relevant to the university students who are highly engaged with the digital world but limited in both means and resources to purchase digital goods—electronic goods in Bangladesh is a resource-poor population. Affordability is a sacrifice side of VAM, which directly moderates the net value equation: When transaction fees, data charges, and agent costs are perceived as being too high relative to the value of the product or service received, perceived value decreases, and the consumer's perception is negatively affected (Al-Okaily et al., 2021). This makes affordability a value component rather than an attribute that is determined by price, so it could be situational as to how consumers perceive it being relevant to their overall impression of the service.

VAM has also offered a unified theory that can be used to explain brand trust (H2) in a value-based manner. A benefit-side variable in the context of VAM is the element of trust: As consumers gain trust in a brand, they feel less threatened and the overall value of the service increases, resulting in a greater positive perception (Kim et al., 2007). This is particularly true in the MFS environment, as financial transactions have irreversible effects and because brand reputation is a cognitive shortcut for assessing service reliability without direct experience (Winata et al., 2024). VAM can be theorised similarly with regard to transaction security (H4): strong security infrastructure decreases perceived technical risk associated with platform usage, and thereby decreases the sacrifice element and increases net perceived value. It is thus important to consider the non-significant finding of security in this study's results as evidence of construct saturation effects in line with the theoretical allowance of VAM (Al-Okaily et al., 2021) for construct saturation effects, which indicates that for the demographics of this study, security is no longer an active value driver but rather an expected baseline effort. Within VAM's benefits dimension, customer engagement can be defined as an experiential aspect of benefits, namely meaningful, non-intrusive engagement of the service relationship can create higher experiential benefits, but over-engagement or mismatching can actually create higher experiential costs that lowers net benefits and experiential value (Hollebeek et al., 2019).

Theoretical Integration: TAM and VAM in the MFS Context

In this study, the implementation of TAM and VAM is based on the theory's theoretical preferences, which are based on the strengths of each theory. TAM provides an explanation of

the cognitive appraisals that influence technology acceptance as mediated by usability of the interface and functional utility, whereas VAM places those appraisals within a consumer value context that considers the economic trade-offs, risk perceptions and dynamics of trust. The two factors cited above, namely cognitive accessibility of a digital platform (TAM) and economic value proposition (VAM) are both important and empirically separable and are becoming more widely recognised as relevant and important to adoption and perception in emerging economy contexts (Al-Okaily et al., 2021; Alalwan et al., 2022).

With respect to the specific case of adopting bKash for university students of Dhaka, the integration of TAM and VAM provides a possibility of going beyond reductionistic explanations of consumer perceptions and of capturing the multi-dimensional nature of the perception. TAM insightfully reinforces the study's focus on ease of use and functional utility, whereas VAM offers the theoretical structure for a broader understanding of perceived value, affordability, brand trust, perceived security and engagement as parts of the value assessment. This dual-theoretical interpretive ability reinforces the study's relevance to the MFS adoption literature by providing a comprehensive analysis of the reasons why not all the theorized factors that influence consumer perception are relevant in this context and for this population (Chaouali et al., 2023; Winata et al., 2024).

Previous research by the researchers of the MFS in Bangladesh has focused mainly on utilitarian acceptance factors of TAM or its extensions (UTAUT and UTAUT2), which limits the theoretical scope to utilitarian acceptance factors and prevents the value-economic factors in adoption, such as perceived value and cost, from being specified in theory (Hazra & Priyo, 2021; Himel et al., 2021). This is an attempt to fill this gap by combining the TAM with the VAM and brings the results into a broader theoretical discussion concerning the acceptance of technology and consumer value judgment, and how the two interact in the fast-changing South Asian digital financial services environment.

4 Research Framework and Hypotheses

According to the Technology Acceptance Model (TAM; Davis, 1989) and the Value Based Adoption Model (VAM; Kim et al., 2007), perceived value is the overall assessment of the benefits a product or services provides to the consumer compared to the cost of consuming the product or services (Zeithaml, 1988; Menon et al., 2005). The concept of perceived value in mobile financial services goes beyond just monetary aspects, also including functional value like saving time, reliability of transaction and convenience of service (Blut et al., 2023). Customers who feel high value in the service will be more likely to stay, to recommend the service to others and to have a high and sustained positive service perception of the brand (Lee & Lee, 2011). Value Based Adaption Model in particular identifies that user make a multidimensional cost-benefit analysis when assessing a digital service, balancing perceived usefulness and enjoyment with technical risk and financial loss (Kim et al., 2007). Perceived value also positively affects consumers' willingness to pay premium prices (Liu et al., 2022), and an overstatement of value may lead to consumers' non-fulfillment of their expectations, resulting in loss of trust (Keller, 2003). A comprehensive meta-analysis by Blut et al. (2023) also finds that perceived value is one of the most powerful drivers of customer satisfaction and

positive customer behavioral intentions across service industries. For Bangladeshi MFS, perceived value is a crucial factor in assessing the appraisal of bKash as university students make active cost-benefit judgments around the value of digital platforms (Himel et al., 2021). Thus, the following hypothesis is proposed:

H1: Perceived value has a significant positive influence on consumer perception towards mobile financial services.

Brand trust is the consumer's certainty that the brand will perform its functions and make its promises consistently under uncertain situations (Lau & Lee, 1999; Rai & Medha, 2013). It is based on the notion of predictability, competency, integrity and trustworthiness of the company as a whole (Gurviez & Korchia, 2003). For mobile financial service, in which users frequently share sensitive financial information, brand trust is a psychological precondition that is essential to adoption and continued usage, and not a feature that can be added on as an afterthought (Tun, 2020; Winata et al., 2024). In the VAM framework, trust is viewed as a benefit-side factor; with increased trust in a brand, decreasing perceived risk and increasing net perceived value result in a more positive overall service perception (Kim et al., 2007). Trust has been found to be a complex process in the context of technology acceptance by neuroscientific research by Krueger and Meyer-Lindenberg (2019). Cardoso et al. (2022) find experimentally that trust leads to emotional ties that result in long-term brand loyalty, whereas Sarwar et al. (2012) show that increased trust leads to increased customer retention. Chaudhuri and Holbrook (2001) also support the link from brand trust to brand affect, and to brand performance and brand loyalty, a relationship that is also consistently found in digital financial service contexts (Winata et al., 2024). While some authors indicate that brand trust may be negatively influenced by price sensitivity in some highly competitive markets (Delgado-Ballester & Munuera-Alemán, 2005), the majority of the literature has confirmed that brand trust is a strong and positive factor influencing the perception of MFS in emerging markets. Thus, the following hypothesis is proposed:

H2: Brand trust has a significant positive influence on consumer perception towards mobile financial services.

Ease of use, rooted in Davis's (1989) Technology Acceptance Model as the construct of perceived ease of use, refers to the degree to which a person believes that using a particular technology system will be free of cognitive effort. In the context of mobile financial services, ease of use encompasses intuitive interface design, streamlined navigation, and minimal cognitive load during transactions (Lee et al., 2015). TAM posits that perceived ease of use directly shapes user attitudes toward a technology and consequently influences adoption intention and actual use (Davis, 1989; Venkatesh & Davis, 2000). For a digitally active but heterogeneous user base such as Dhaka's university students, who span a range of technical proficiencies, interface accessibility is not merely a usability preference but a psychological precondition for positive service perception (Chaouali et al., 2023). Sutisna et al. (2019)

empirically demonstrate that user-friendly interfaces promote greater engagement and significantly increase the likelihood of repeat usage, a dynamic that is particularly salient in the competitive Bangladeshi MFS environment. Andersson (2021) further notes that as digital literacy becomes more heterogeneous across user populations, organizations must ensure a balanced equilibrium between simplicity and functionality so that users feel both empowered and comfortable. Lee et al. (2015) confirms that mobile platform usability — spanning simplicity, interactivity, and learnability — is a consistent antecedent of customer satisfaction, trust, and brand loyalty. Within TAM's theoretical logic, ease of use becomes especially powerful in the early and intermediate stages of adoption, before habitual use reduces its salience (Alalwan et al., 2022). For bKash users who are still actively evaluating the service, ease of interaction thus remains a meaningful driver of overall consumer perception. Accordingly, the following hypothesis is proposed:

H3: *Ease of use has a positive influence on customer perception towards mobile financial services.*

Perceived security refers to how secure a user feels about the mobile financial application from potential threats, such as unauthorized access, identity theft and data breaches (Thaker et al., 2022; Balapour et al., 2020). In the Value Based Adaption Model context, the security is on the sacrifice side of the value equation – increasing the perceived technical risk of a service, decreasing the overall perceived sacrifice of using the service and increasing the net perceived value, which in turn increases the consumer perception (Kim et al., 2007). Empirically, the use of strong security measures, such as end-to-end encryption, multi-factor authentication, and real-time fraud monitoring, has been associated with greater user trust and positive perceptions of MFS platforms (Hwang et al., 2021; Tran-Truong et al., 2025). On the other hand, lack of security measures is a proven anti-adoption factor, since the repercussions of a security failure in financial transactions, such as financial and reputational loss, are irreparable (Balapour et al., 2020). Xin et al. (2015) establish that the more consumers feel the platform is secure, the more they would be willing to engage in transactions and, therefore, the more they would be willing to adopt the platform. It is worth mentioning that according to VAM and empirically demonstrated by Al-Okaily et al. (2021), security can be regarded as a hygiene factor for demographically mature digital users, meaning that it is assumed to be present and its absence is heavily condemned, while its presence will not actively increase perception beyond a certain threshold. This theoretical consideration explains the non-significant result in the findings of the study. However, with the existing literature as the basis, the following hypothesis is proposed:

H4: *Perceived security of transaction has a significant positive influence on consumer perception towards mobile financial services.*

Customer engagement (CE) is described as the voluntary and intrinsic use of cognitive, emotional, behavioral, and social resources in interactions with a brand that happen both online

and offline (Hollebeek et al., 2014; Vivek et al., 2012). In the VAM context, meaningful engagement is a benefit-side variable, and well calibrated, tailored interactions amplify the experiential aspect of service value and intensify the consumer–brand relationship, which further contributes to a stronger net perceived value and positive brand perception (Kim et al., 2007; Hollebeek et al., 2019). Customer engagement takes many forms in the digital world, such as impressions, clicks, comments, shares and personal notifications, which all play a role in building consumer engagement and influencing buying decisions (Blasco-Arcas et al., 2016). Digital platforms provide many opportunities for MFS providers such as bKash to communicate in real time, two ways, and to help build positive perceptions and loyalty building blocks. Al-Dmour et al. (2019) find an empirical link between customer engagement and satisfaction and brand loyalty in digital financial services; Albashrawi and Motiwalla (2017) shows that personalized value-based MFS interactions increase satisfaction and frequency of transactions. De Vries et al. (2017) also confirm that social media messaging and targeted digital touch points play a key role in establishing brand equity and acquiring consumers. But Van Doorn et al. (2010) state that the amount of engagement and intrusion may also result in information overload and disaffection or poor brand perceptions where digital channels do not deliver on consumer expectations. The overload effect is especially applicable to a tech-savvy generation like university students in Dhaka, who are extremely attuned to the lack of relevance and quality of digital communication (Rosado-Pinto & Loureiro, 2020). Thus, engagement strategies need to be meaningful, not intrusive, and not repeated often, otherwise they are called “high frequency” engagement. Drawing on the broader engagement literature, the following hypothesis is proposed:

H5: Customer engagement has a significant positive influence on consumer perception towards mobile financial services.

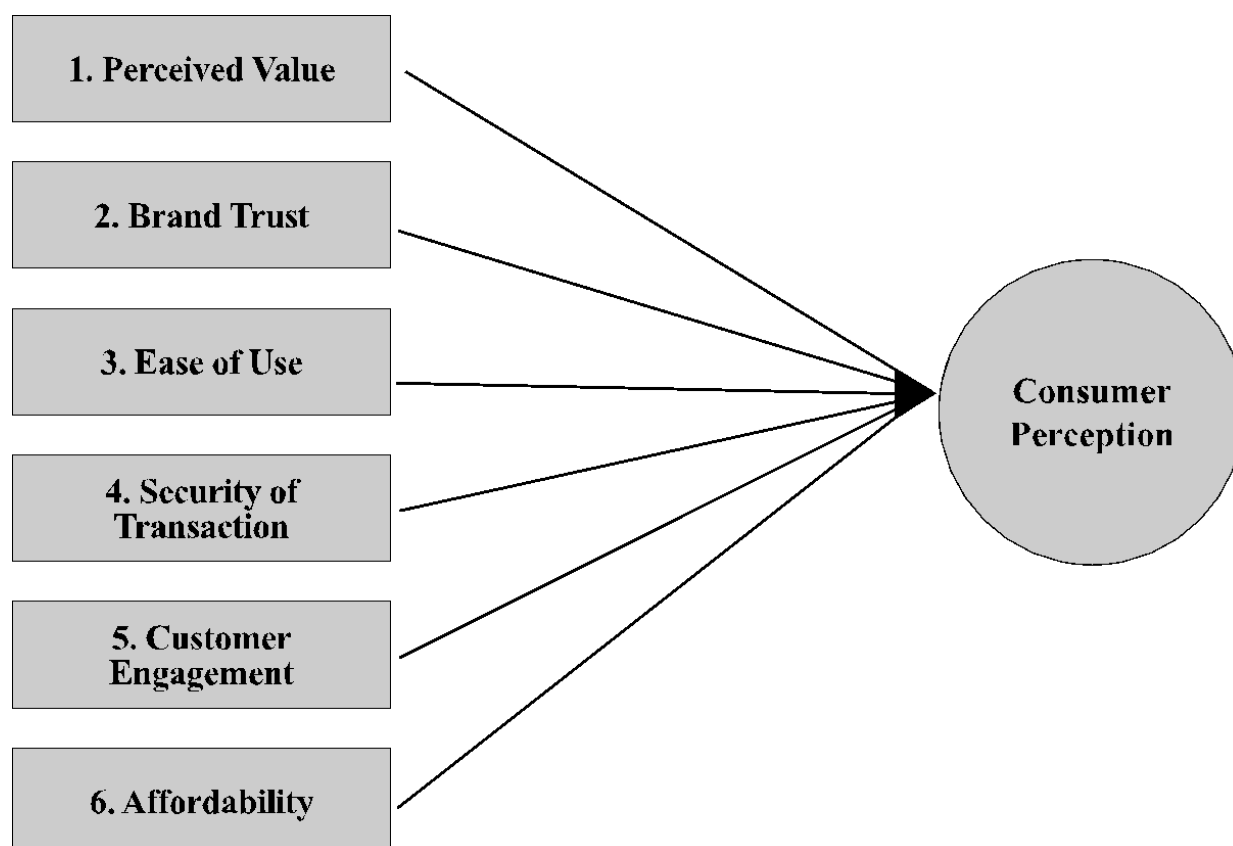
Affordability is one of the most important variables to consider in the process of purchase decision making because it directly affects the price sensitivity and effective purchasing power of the consumer and is the factor that influences the consumer's perception of their ability and willingness to pay for a product or service (Notani, 1997; Kotler & Keller, 2016). From a VAM perspective, affordability is a component of the sacrifice side of the value equation; when transaction costs, service fees and agent charges are seen as proportional and fair in relation to the benefits received, the overall net perceived value is enhanced, and the consumer's perceived value is improved (Kim et al., 2007; Al-Okaily et al., 2021). In the MFS market, a large part of which is composed of economically constrained, first generation digital financial services users, the perception of affordability has an even more significant impact on the overall service evaluation (Hazra & Priyo, 2021). Chaudhuri & Holbrook (2001) show empirically that purchaser's intent is more strongly and directly affected when the MFS is perceived as affordable, and there is an increase in the intention to use such services. Zhao et al. (2021) also conclude that perceived pricing fairness between the firm and the consumer significantly acts as a mediating role between consumer satisfaction and digital service usage intent, and Notani (1997) finds that perceived pricing fairness significantly interacts between attitude–intention and subjective norm–intention links and significantly influences actual purchase behavior.

Similarly, Akhter & Khalily (2017) show that cost-efficient MFS is essential to increase digital financial inclusion, a dimension that directly contributes to the number of active users, in developing economies such as Bangladesh. In other words, a consumer's functional attitudes can be positive but not translate into actual purchases when the financial service is too costly compared to its perceived value (Chaudhuri & Holbrook, 2001). This is thus clearly a positive relationship; the more affordable the services are perceived, the more positive the consumer view of mobile financial services is. Accordingly, the following hypothesis is proposed:

H6: Affordability has a significant positive influence on consumer perception towards mobile financial services.

4.1 Conceptual Model

This study's conceptual framework is built using six independent variables that could influence consumers' preferences when choosing an MFS provider, as seen in the figure:



5 Methodology

5.1 Sampling and Data Collection

The total number of university students who use bKash is included in the study's population. This study was carried out on a convenient sample of university students from Dhaka who are also bKash subscribers, spanning various age groups and genders for the researcher's convenience. The study specifically targeted university students in Dhaka due to their status as a highly tech-savvy demographic, distinguished by their frequent and ongoing interaction with digital platforms (Tomar, 2019). In Bangladesh's rapidly changing digital economy, this younger, more educated group is usually the main driver and early adopter base for mobile financial ecosystems (Himel et al., 2021). Consequently, their inherent dependence on mobile technologies renders them an ideal methodological approach for assessing the intricate functional and psychological constructs such as trust, perceived value, security, affordability, engagement and ease of use that influence the perception and ongoing adoption of mobile financial services (MFS) (Hazra & Priyo, 2021).

5.2 Sampling Technique and Sample Size Calculation

To choose the most convenient respondents from the university student network through their own referrals, the researcher used the snowball sampling technique, which was convenient in terms of both time and expense. Online surveys were used to gather data, and Google Forms was used to disseminate a self-created, organized questionnaire to the intended respondents. The researcher first reached out to fifty respondents as a convenience sample via a personal Facebook network because the Snowball sampling approach was employed. These first fifty respondents were referred to their own Facebook network, which was how the next respondents were chosen. Additionally, they were asked to use bKash to send the survey link to other familiar university students in Dhaka. Up until the conclusion of the data collection procedure, this procedure was maintained. In 2022, there were over 1,103,462 students enrolled in 57 universities in Dhaka (University Grants Commission, 2022). A proportional representative sample was determined using Cochran's (1963) sample size determination formula because the population size is limited and less than that of a large population.

$$n_0 = \frac{Z^2 Pq}{e^2}$$

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

In this case, q is 1-p, e is the intended level of precision (5%), and p is the estimated percentage (40%) of a characteristic. In addition, N is the population size, n is the sample size, and Z is the chosen critical value of the intended confidence level (90% confidence). This algorithm indicated that 258 respondents would be the minimal sample size needed for this investigation (see Appendix: A).

5.3 Data Collection Process

To collect data, 320 respondents were conveniently selected from various universities within Dhaka. Of these, 12 individuals did not utilize any mobile financial services application. As this study focused on examining the perceptions of MFS users, data from these 12 individuals were excluded. Furthermore, 28 participants did not use bKash services, resulting in a final sample size of 280 respondents. This sample size surpasses the minimum requirement of 258 participants as determined by prior sample size calculations. In the second week of November 2024, pretesting was done on a sample ten respondents who were all Dhaka based university students and questionnaire was edited based on the feedback of those respondents before starting the final data collection.

5.4 Measurement and Instrument Development

The survey instruments were developed by adapting validated measurement scales from established literature to ensure construct validity within the context of Bangladeshi Mobile Financial services. To measure the core independent variables, items for perceived value were adapted from foundation consumer behavior studies (Blut et al., 2023; Menon et al., 2005), while Brand Trust items were contextualized from Chaudhuri and Holbrook (2001). The Ease-of-Use variable's items was adapted from the Technology Acceptance Model (Davis, 1989). Furthermore, measurement items for Security of Transaction were drawn from mobile payment adoption paper (Balapour et al., 2020; Xin et al., 2015). Affordability was measured using items adapted from Notani (1997), and Customer engagement items were modified from interactive service frameworks (Hollebreek et al., 2024; Vivek et al., 2012). Finally, items assessing the dependent variable, consumer perception, were adapted from Makanyeza (2017). All independent and dependent variables were evaluated using a structured five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

5.5 Justification of Analytical Method and Assumptions

Multiple linear regression was used as the primary analytical technique to test the proposed hypotheses. Multiple linear regression is a highly robust and appropriate method when the research objective is to assess the direct predictive relationships between a set of independent variables and a single dependent variable, particularly when complex structure relationships such as mediation or moderation are not present (Hair et al., 2019). Prior to model estimation, the internal consistency of the survey was verified through reliability analysis. Cronbach's Alpha was calculated for all constructs, yielding values between 0.850 and 0.908, confirming that the adapted measurement items reliably captured their respective variables (Field, 2018). Furthermore, given the robust sample size (N= 280), the data satisfies the asymptotic normality requirements for parametric testing under the Central Limit Theorem, validating the use of regression for this dataset (Tabachnick & Fidell, 2013).

5.6 Data Analysis Tools

Both general and five-point Likert scale items were coded as continuous and categorical variables, respectively, to gauge the relative importance of various factors. The lowest form of the five-point Likert scale is 1 and the highest form is 5. Following the collection of primary data from the participants, hypotheses were developed and tested at a significance level of 0.05%. Using the statistical program SPSS, multiple regression analysis is used to examine and evaluate for data analysis.

6 Analysis and Findings

6.1 Descriptive Statistics and Sample Profile

The sample comprised 280 respondents, with a gender distribution skewed slightly towards males. Of the total, 157 (56.1%) identified as male, while 123 (43.9%) identified as female (See Appendix B). An analysis of the age distribution reveals a highly concentrated demographic profile that is strongly consistent with a traditional university student population. The majority of participants (224; 80.0%) were between 21 and 25 years old. The remaining age groups were distributed as follows: 18–20 years (16; 5.7%), 26–30 years (33; 11.8%), and 31 years and above (7; 2.5%) (See Appendix C). This indicates that the sample primarily consists of young adults, with a small representation from older age groups. Moreover, in terms of educational attainment, most respondents (226; 80.7%) reported being at the undergraduate level who are still studying. Other educational levels included graduation (19; 6.78%), post-graduate (34; 12.12%) and only 1 doctoral respondent (0.4%) (See Appendix D). The data demonstrates a concentration of participants in higher education stages, particularly at the undergraduate level. Collectively, the data confirm a strong concentration of participants at advanced stages of formal education, which is methodologically appropriate for a study examining the psychological and functional determinants of MFS perception among digitally engaged, urban university students in Dhaka.

6.2 Reliability Analysis

Strong internal consistency across all constructs is demonstrated by the reliability analysis of the variables under investigation, as shown by Cronbach's Alpha values (see Table 1). With five items, Consumer Perception (CP) obtained a Cronbach's Alpha of 0.883, demonstrating strong reliability. Likewise, with scores of 0.850 and 0.886, respectively, and each consisting of five items, Perceived Value (PV) and Brand Trust (BT) demonstrated strong dependability. Cronbach's Alpha ratings for Security of Transaction (SOT) and Ease of Use (EOU), both assessed using five questions, were 0.901 and 0.908, respectively, indicating excellent reliability. Furthermore, across five items each, Affordability (AD) and Customer Engagement (CE) showed high reliability with Cronbach's Alpha values of 0.856 and 0.867, respectively. These results indicate that the scales used for measuring these constructs are highly reliable and suitable for further statistical analysis.

Table 1 Cronbach's Alpha Values for Variables

Variable Name	Code	Cronbach's Alpha	No of Items
Consumer Perception	CP	.883	5
Perceived Value	PV	.850	5
Brand Trust	BT	.886	5
Ease of Use	EOU	.908	5
Security of Transaction	SOT	.901	5
Affordability	AD	.856	5
Customer Engagement	CE	.867	5

6.3 Model Summary and ANOVA

To evaluate the overall significance and predictive power of the multiple regression model, a combined model summary and ANOVA assessment was conducted. The results, detailed in Table 2 shows a moderate and statistically significant level of fit. The model summary displays the extent of the regression findings of the dependent variable, CP, which is reliant on the independent variables (Perceived Value, Brand Trust, Ease of Use, Security of Transaction, Affordability, and Customer Engagement). The relationship between independent factors and CP is indicated by the correlation coefficient ($R=.756$) showing a strong positive relationship. The coefficient of determination ($R^2=.572$) shows that the six predictor variables collectively account for 57.2% of the variance in consumer perception, which suggests a moderate level of fit. However, even after adjusting for degrees of freedom, the Adjusted R^2 is 0.562, which takes into account the number of predictors in the model, shows that these factors account for 56.2% of the variation in CP. The Standard Error of the Estimate 0.55566 captures the variation of the real values from the fitted values. A smaller value implies that the model has a better prediction capability.

Furthermore, the Analysis of Variance (ANOVA) confirms the overall statistical significance of the regression model. The F-statistics is highly significant ($F(6, 273) = 60.757, p < 0.001$). This result rejects the null hypothesis, confirming that the combination of perceived value, brand trust, ease of use, security of transaction, affordability, and customer engagement significantly predicts consumers' perception among the sampled demographic.

Table 2 Model Summary and ANOVA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.756	.572	.562	.55566	.572	60.757	6	273	.000
a. Predictors: (Constant), CE, PV, SOT, EOU, AD, PT									

6.4 The Result of Hypotheses Testing

The significance level for testing hypotheses is set at $\alpha=0.05$. Decisions on the acceptance or rejection of the hypotheses formulated in the preceding stage have been made by comparing the P-value of the independent variables with the degree of significance of the model. If the P-

value is greater than the significance level, the hypothesis was not supported; if it is less than the significance threshold, the hypothesis has been accepted. One can determine whether the response variable is more or less likely to occur in response to changes in the independent variables by using the independent variables coefficient. Table 3 displays the findings of the hypothesis test, together with the coefficient and P-value at the 95% CI.

Table 3: Result of Hypotheses Testing

H	Variables	Coefficient	P-Value	Result
1	Perceived Value (PV)	0.284	0.000	Supported
2	Brand Trust (BT)	0.330	0.000	Supported
3	Ease of Use (EOU)	0.212	0.002	Supported
4	Security of Transaction (SOT)	0.041	0.508	Reject
5	Customer Engagement (CE)	0.100	0.154	Reject
6	Affordability (AD)	-0.081	0.213	Reject

Analysis of the table reveals that perceived value, brand trust, and ease of use exhibit the strongest correlations with customer perception. Conversely, the impact of security of transaction, affordability, and customer engagement on customer perception was found to be statistically insignificant, as their associated p-values surpassed the established significance level.

6.5 Coefficient

The regression results (see Table 4) showed that Perceived Value (PV), Brand Trust (BT) and Ease of Use (EOU) are significant and positively related to Customer Perception (CP). Specifically, Brand Trust emerged as the strongest predictor of CP ($B = .330$, $p < .001$), followed by Perceived Value ($B = .284$, $p < .001$) and Ease of Use ($B = .212$, $p = .002$). These results indicate that an increase in trust, perceived value and usability is positively correlated with positive customer perception. However, Security of Transaction (SOT; $B = .041$, $p = .508$), Affordability (AD; $B = .100$, $p = .154$) and Customer Engagement (CE; $B = -.081$, $p = .213$) were not found to be statistically significant for CP, suggesting that these factors are not meaningfully associated with the perceived differences in customer perception in the present study. The overall results confirm the importance of trust, value, and usability in influencing customers' perceptions.

Table 4: Coefficients Value

Model	Unstandardized Coefficients	95.0% Confidence Interval for B
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		B	Std. Error	T	Sig.	Lower Bound	Upper Bound
1	(Constant)	.550	.183	3.011	.003	.190	.910
	PV	.284	.063	4.483	.000	.159	.409
	BT	.330	.076	4.328	.000	.180	.480
	EOU	.212	.068	3.133	.002	.079	.345
	SOT	.041	.062	.663	.508	-.080	.162
	AD	.100	.070	1.428	.154	-.038	.238
	CE	-.081	.065	-1.249	.213	-.210	.047

7 Discussion

This study focused on the factor that influences the consumer perception of bKash among the university students of Dhaka and found that among those factors, brand trust and perceived value have significant and positive impact on consumer perception, whereas security of transaction and affordability and customer engagement have not been found significant and positive. The results offer empirical evidence on the integrated use of the Technology Acceptance Model (TAM) and Value-Based Adoption Model (VAM) to explain consumer attitudes towards mobile financial services (MFS) in an emerging economy.

Brand trust was the most powerful predictor, when compared to all the other predictors. The discovery is corroborated with previous studies indicating that trust is a key psychological factor in the adoption of financial services, especially those involving sensitive transactions by users (Chaudhuri & Holbrook, 2001; Tun, 2020; Winata et al., 2024). This finding is also in line with the VAM view of trust as a value-enhancing benefit that decreases perceived risk and increases service evaluation (Kim et al., 2007). For university students, who are a digitally connected and money savvy group, trust in bKash seems to be a significant indicator of reliability, competence, and credibility. The discovery is another sign of the argument put forth by Cardoso et al. (2022) that trust fosters emotional connection to brands and positive customer perceptions. Hence, trust is a key factor in consumer perception in the MFS sector.

The second most important factor that influenced consumer perception was perceived value. This finding is similar to the VAM, which suggests that the users consider a service based on perceived benefits and costs as well as sacrifice they incur (Kim et al., 2007). The findings confirm the findings of previous studies that perceived value significantly positively influences customer satisfaction, attitudes and behavioral outcomes (Blut et al., 2023; Liu et al., 2022). When considering bKash, university students seem to be assessing the platform according to its convenience, efficiency, reliability and overall usefulness. Value perceptions are important and have a significant influence on overall judgments because this demographic is active in the use of digital platforms and in actively considering the value of alternative service providers. The discovery indicates that users are more inclined to form favorable perceptions when they

think the service provides them with important functional and experiential value, compared with the costs of the service.

The ease of use also had a significant positive influence on consumer perception. TAM's results align with this finding, in which perceived ease of use is seen as one of the major factors influencing the acceptance of technology, and positive attitudes toward technological systems (Davis, 1989). Previous studies also confirm that user-friendliness impacts engagement, satisfaction, and future use intentions (Lee et al., 2015; Sutisna et al., 2019; Chaouali et al., 2023). The simple and easy access of bKash platform is beneficial to the overall perception of the university students, who use digital technologies regularly in their daily life. The discovery shows that intuitive navigation, effortless cognition and effective transaction processes continue to play significant roles in consumer evaluation even amongst the digitally literate.

However, security of transaction did not show any significant effect on consumer perception. While previous studies have consistently found security as a key aspect of MFS adoption and trust formation (Balapour et al., 2020; Hwang et al., 2021; Tran-Truong et al., 2025), the current finding indicates a different security context at the university level. This result can be understood from the VAM point of view that states that the value of some service attributes becomes a hygiene factor after a certain time (Al-Okaily et al., 2021). Security for the respondents of this study might be considered as a basic expectation instead of a differentiating factor. Once a reasonable level of security is achieved, further enhancement will not significantly improve consumer perceptions.

This is also true for affordability, which was found to have a low overall impact on consumers' perception. Although financial service usage is clear that the concept of affordability is important in technology uptake (Notani, 1997; Zhao et al., 2021), its lack of significance in the present study could be the result of the characteristics of the sampled population. University students who actively use bKash may value convenience and reliability in their transactions, and may value the effectiveness of the transaction service more than getting the relatively small fees of the transactions. The finding indicates that cost may not be as important when users feel that there is enough added value and utility in using the service, which is consistent with the rest of the VAM proposition (Kim et al. 2007) that value assessments are often based on more than just the cost.

Lastly, customer engagement was not found to be significant in influencing consumer perception. While earlier studies have found connections between engagement and customer satisfaction, loyalty and relationship development (Al-Dmour et al., 2019; Hollebeek et al., 2014), the results of this study suggest that efforts to engage customers on their own might not significantly impact perceptions among digitally sophisticated customers. A possible factor is that students attending universities are often surrounded by messages and promotional content in the digital world, making engagement activities less distinctive or effective. This is in line with the findings of Rosado-Pinto and Loureiro (2020), who propose that digitally savvy consumers are more discerning in deciding how relevant and high-quality brand interactions should be. This means that engagement activities can only be part of positive perceptions if they provide some value that is meaningful and personalized.

In summary, the results reveal that the trust, value and usability aspects have the most significant influence on consumer perception with regards to bKash. These findings validate the significance of both TAM and VAM in determining the attitudes of MFS consumers and emphasize the importance of psychological and value considerations in consumer perceptions of digital financial services in Bangladesh's developing digital financial market.

8 Limitations and Future Research Direction

There are some important limitations of this study that should be taken into account. The study was conducted only among the University students in Dhaka, and the findings might not be applicable to the general population of mobile financial service (MFS) users in Bangladesh. University students tend to be more educated, tech-savvy and digitally connected than other user groups, and this may affect their perspectives differently to the urban, older and lower income populations. Secondly, snowball sampling was used to recruit the respondents which may cause sampling bias as the respondents were recruited through existing social networks, and this may reduce the representativeness of the sample. Thirdly, the cross-sectional design of the study only shows consumer perception at a single point in time, so that the changes in consumer perception after experiencing using MFS platforms cannot be analyzed. Lastly, other potentially relevant variables (perceived usefulness, service quality, social influence, perceived risk, customer satisfaction and digital literacy) were not considered in the analysis as this model explained a significant percentage of the variance in consumer perception ($R^2 = 57.2\%$).

The limitations of the study can be overcome in future through the use of more diversity and representative samples in various geographical and demographic segments of Bangladesh. A second approach for researchers is to use probability-based sampling methods in order to improve issues of external validity. It would also be beneficial to have longitudinal studies to investigate the changes in consumer perception over time as digital financial services become more mature and user experience increases. Further studies could also build on the current model, as well as adding further constructs from the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Value-Based Adoption Model (VAM), such as perceived usefulness, social influence, perceived risk, and customer satisfaction. Advanced analytical methods such as Structural Equation Modeling (SEM) might be used for deeper understanding of the direct, indirect, and mediation effects of these factors. These investigations would help in gaining a thorough knowledge of perception and adoption rate among the consumers in the fast-changing mobile financial services ecosystem in Bangladesh.

9 Conclusion

This study investigated the determinants of consumer perception toward bKash among university students in Dhaka by integrating constructs from the Technology Acceptance Model (TAM) and Value-Based Adoption Model (VAM). The findings revealed that brand trust, perceived value, and ease of use significantly and positively influence consumer perception, with brand trust emerging as the most influential predictor. In contrast, security of transaction, affordability, and customer engagement did not demonstrate significant effects. These results

suggest that as the mobile financial services (MFS) sector matures, consumers place greater emphasis on psychological and value-related benefits than on basic functional attributes that may already be perceived as standard service requirements. The study contributes to the growing literature on digital financial services in emerging economies by highlighting the importance of trust, value creation, and usability in shaping consumer perceptions. Furthermore, the model explained a substantial proportion of the variance in consumer perception, underscoring the relevance of these factors within the Bangladeshi MFS context. From a practical perspective, the findings indicate that service providers such as bKash should prioritize strategies that strengthen brand credibility, enhance customer value, and maintain intuitive user experiences to sustain positive consumer perceptions and competitive advantage in an increasingly digital financial ecosystem.

Reference

- Adel, R., & Wiesner, S. A. (2015). Conceptual approach for value driven performance in servitising companies. *International Journal of Services and Operations Management*, 21(4), 504-531.
- Afsar, B. (2014). Effect of perceived Price, Brand Image, perceived Quality and Trust on Consumer's buying Preferences. *Journal of Economics and Business Research*, 1, 7-20.
- Ahmed, J. U., & Ahmed, A. (2018). Agrani Doer banking: Agent banking business in Bangladesh. *Business Perspectives and Research*, 6(2), 154–164.
- Akhter, N., & Khalily, B. (2017). Impact of mobile financial services on financial inclusion in Bangladesh. Institute for Inclusive Finance and Development (InM), Working Paper, 52, 1-26.
- Al Amin, M., Arefin, M. S., Alam, M. S., & Rasul, T. F. (2022). Understanding the predictors of rural customers' continuance intention toward mobile banking services applications during the COVID-19 pandemic. *Journal of Global Marketing*, 35(4), 324-347.
- Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Algharabat, R. (2022). Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk. *Journal of Retailing and Consumer Services*, 40, 125–138. <https://doi.org/10.1016/j.jretconser.2017.08.026>
- Albashrawi, M., & Motiwalla, L. (2017). Privacy and personalization in continued usage intention of mobile banking: An integrative perspective. *Information Systems Frontiers*, 21(5), 1031–1043. <https://doi.org/10.1007/s10796-017-9814-7>
- Al-Dmour, H. H., Ali, W. K., & Al-Dmour, R. H. (2019). The relationship between customer engagement, satisfaction, and Loyalty. *International Journal of Customer Relationship Marketing and Management*, 10(2), 35–60. <https://doi.org/10.4018/ijcrmm.2019040103>
- Al-Okaily, M., Alqudah, H., Matar, A., Masadeh, R., & Alkhatib, A. A. (2021). Dataset on the acceptance of e-learning system among universities students under the COVID-19 pandemic conditions. *Data in Brief*, 32, 106176. <https://doi.org/10.1016/j.dib.2020.106176>
- Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, 62, 101293.
- Andersson, A. (2021). How to design a user-friendly mobile user interface with the power of visual usability?
- Anderson, R. E. (1973). Consumer dissatisfaction: The effect of disconfirmed expectancy on perceived product performance. *Journal of Marketing Research*, 10(1), 38–44. <https://doi.org/10.1177/002224377301000106>
- Aulia, S. A., Sukati, I., & Sulaiman, Z. (2016). A review: Customer perceived value and its Dimension. *Asian Journal of Social Sciences and Management Studies*, 3(2), 150-162.
- Balakrishnan, S., Venkatesan, K., & Hameed, M. S. S. (2021, May). An embarking user friendly palmprint biometric recognition system with topnotch security. In 2021 5th International Conference on Intelligent Computing and Control Systems (ICICCS) (pp. 1028-1032). IEEE.

- Bacile, T. J. (2020). Digital Customer Service and customer-to-customer interactions: Investigating the effect of online incivility on customer perceived service climate. *Journal of Service Management*, 31(3), 441–464. <https://doi.org/10.1108/josm-11-2018-0363>
- Balapour, A., Nikkhah, H. R., & Sabherwal, R. (2020). Mobile Application Security: Role of perceived privacy as the predictor of security perceptions. *International Journal of Information Management*, 52, 102063. <https://doi.org/10.1016/j.ijinfomgt.2019.102063>
- Balharith, M., Alghalyini, B., Al-Mansour, K., Tantawy, M. H., Alonezi, M. A., Almasud, A., & Zaidi, A. R. Z. (2023). Physical accessibility, availability, financial affordability, and acceptability of mobile health clinics in remote areas of Saudi Arabia. *Journal of Family Medicine and Primary Care*, 12(9), 1947-1956.
- Baltas, G. et al. (2010). The role of customer factors in multiple store patronage: A cost– benefit approach. *Journal of Retailing*, 86(1), 37-50.
- bKash. (2011). The History Of bKash. Available at: <https://www.bkash.com/>
- Brodie, R.J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66, 105-114. doi: 10.1016/j.jbusres.2011.07.029.
- Calder, B.J., Malthouse, E.C., & Schaedel, U. (2009). An Experimental Study of the Relationship between Online Engagement and Advertising Effectiveness. *Journal of Interactive Marketing*, 23, 321-331.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81–93. <https://doi.org/10.1509/jmkg.65.2.81.18255>.
- Chen, L. D. (2007). A model of consumer acceptance of mobile payment. *International Journal of Mobile Communications*, 6(1), 32. <https://doi.org/10.1504/ijmc.2008.015997>
- bKash. (2024). About. Retrieved April 22, 2026, from <https://www.bkash.com/en/about>
- Blasco-Arcas, L., Hernandez-Ortega, B. I., & Jimenez-Martinez, J. (2016). Engagement platforms. *Journal of Service Theory and Practice*, 26(5), 559–589. <https://doi.org/10.1108/jstp-12-2014-0286>
- Blut, M., Chaney, D., Lunardo, R., Mencarelli, R., & Grewal, D. (2023). Customer perceived value: A comprehensive meta-analysis. *Journal of Service Research*, 27(4), 501–524. <https://doi.org/10.1177/10946705231222295>
- Cardoso, A., Gabriel, M., Figueiredo, J., Oliveira, I., Rêgo, R., Silva, R., Oliveira, M., & Meirinhos, G. (2022). Trust and loyalty in building the brand relationship with the customer: Empirical Analysis in a retail chain in northern Brazil. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 109. <https://doi.org/10.3390/joitmc8030109>
- Chaouali, W., Souiden, N., & Ladhari, R. (2023). Explaining adoption of mobile banking with the theory of trying, general self-confidence, and cynicism. *Journal of Retailing and Consumer Services*, 70, 103153. <https://doi.org/10.1016/j.jretconser.2022.103153>

- Dam, T. C. (2020). Influence of brand trust, perceived value on brand preference and purchase intention. *The Journal of Asian Finance, Economics and Business*, 7(10), 939-947.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of Information Technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>
- de Vries, L., Gensler, S., & Leeftang, P. S. H. (2017). Effects of traditional advertising and social messages on brand-building metrics and customer acquisition. *Journal of Marketing*, 81(5), 1–15. <https://doi.org/10.1509/jm.15.0178>
- Delgado-Ballester, E., & Munuera-Alemán, J. L. (2005). Does brand trust matter to brand equity? *The Journal of Product and Brand Management*, 14(2/3), 187-196. Retrieved from <http://search.proquest.com/docview/220597840?accountid=17242>.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.
- GEÇİT, B. B., & TAŞKIN, E. (2020). The Effect of Value and Service Perceptions on Customer Loyalty for Electronic Commerce Sites; Mediator Role of Satisfaction and Trust. *Business Management Dynamics*, 10(5).
- Greve, G. (2014). The moderating effect of customer engagement on the brand image–brand loyalty relationship. *Procedia-Social and Behavioral Sciences*, 148, 203-210.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hasan, K. A., & Alam, M. N. (2025). Governance challenges in mobile financial services sector in Bangladesh: Extended executive summary. Transparency International Bangladesh. Retrieved from <https://www.ti-bangladesh.org/images/2025/report/mfs/Executive-Summary-Mobile-Financial-Services-Sector-En.pdf>
- Hazra, U., & Priyo, A. K. K. (2021). Mobile financial services in Bangladesh: Understanding the affordances. *The Electronic Journal of Information Systems 1 in Developing Countries*, 87(3), e12166.
- 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.
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. <https://doi.org/10.1016/j.intmar.2013.12.002>
- Hollebeek, L. D., Srivastava, R. K., & Chen, T. (2019). S-D logic–informed customer engagement: Integrative framework, revised fundamental propositions, and application to CRM. *Journal of the Academy of Marketing Science*, 47(1), 161–185. <https://doi.org/10.1007/s11747-016-0494-5>
- Hwang, Y., Park, S., & Shin, N. (2021). Sustainable development of a mobile payment security environment using Fintech Solutions. *Sustainability*, 13(15), 8375. <https://doi.org/10.3390/su13158375>
- Kim, B., et al. (2019). Technology acquisition strategy: A latecomer's perspective on integrating component suppliers with system integrators. *IEEE Transactions on Engineering Management*, 69(6), 2572-2587.

- Kim, H.-W., Chan, H. C., & Gupta, S. (2007). Value-based adoption of mobile internet: An empirical investigation. *Decision Support Systems*, 43(1), 111–126. <https://doi.org/10.1016/j.dss.2005.05.009>
- Koilada, D. K. (2019). Value-based digital transformation: innovating customer experiences. In 2019 IEEE Technology & Engineering Management Conference (TEMSCON) (pp. 1-5). IEEE.
- Kotler, P., & Armstrong, G. (2017). *Principles of Marketing-Global Edition*. 17th ed. Pearson.
- Krueger, F., & Meyer-Lindenberg, A. (2019). Toward a model of interpersonal trust drawn from neuroscience, psychology, and economics. *Trends in neurosciences*, 42(2), 92-101.
- Krishnan, V., Jayabalan, N., Guo, J., & Susanto, P. (2024). Decoding online shopping behavior in Malaysia: The critical influence of Consumer Trust. *Journal of Ecohumanism*, 3(8). <https://doi.org/10.62754/joe.v3i8.5095>
- Kumar, D. (2022). Prospects and challenges of mobile financial services (MFS) in Bangladesh. In *Handbook of research on social impacts of E-payment and blockchain technology*, 320-341.
- Kuvykaitė, R., & Tarutė, A. (2015). A critical analysis of consumer engagement dimensionality. *Procedia-Social and Behavioral Sciences*, 213, 654-658.
- Lau, G. T., & Lee, S. H. (1999). Consumers' trust in a brand and the link to brand loyalty. *Journal of market-focused management*, 4, 341-370.
- Lee, D., Moon, J., Kim, Y. J., & Yi, M. Y. (2015). Antecedents and consequences of mobile phone usability: Linking simplicity and interactivity to satisfaction, trust, and Brand Loyalty. *Information & Management*, 52(3), 295–304. <https://doi.org/10.1016/j.im.2014.12.001>
- Liu, C.-R., Kuo, T. M., Wang, Y.-C., Shen, Y.-J., Chen, S.-P., & Hong, J.-W. (2022). Perceived luxurious values and pay a price premium for Michelin-starred restaurants: A sequential mediation model with self-expansion and customer gratitude. *International Journal of Hospitality Management*, 103, 103185. <https://doi.org/10.1016/j.ijhm.2022.103185>
- Makanyeza, C. (2017). Determinants of consumers' intention to adopt mobile banking services in Zimbabwe. *International Journal of Bank Marketing*, 35(6), 997–1017. <https://doi.org/10.1108/ijbm-07-2016-0099>
- Menon, A., Homburg, C., & Beutin, N. (2005). Understanding customer value in business-to-business relationships. *Journal of Business-to-Business Marketing*, 12(2), 1–38. https://doi.org/10.1300/j033v12n02_01
- Mohd Thas Thaker, H., Mohd Thas Thaker, M. A., Khaliq, A., Allah Pitchay, A., & Iqbal Hussain, H. (2022). Behavioural intention and adoption of internet banking among clients of Islamic banks in Malaysia: an analysis using UTAUT2. *Journal of Islamic Marketing*, 13(5), 1171-1197.
- Mulindi, D. M., Kabaji, E., & Anyonje, L. (2024). Communication Strategies & Mobile banking adoption. *Jumuga Journal of Education, Oral Studies, and Human Sciences (JJEOSHS)*, 7(2), 18. <https://doi.org/10.35544/jjeoshs.v7i2.100>

- Naomi, M., Zameen, A. -E., Ahmed, W., & Danish, M. (2019, August). The usage of Mobile financial services in Bangladesh.
- Notani, A. S. (1997). Perceptions of affordability: Their role in predicting purchase intent and purchase. *Journal of Economic Psychology*, 18(5), 525–546. [https://doi.org/10.1016/s0167-4870\(97\)00022-6](https://doi.org/10.1016/s0167-4870(97)00022-6)
- Phillips, B.J., & McQuarrie, E.F. (2010). Narrative and Persuasion in Fashion Advertising. *Journal of Consumer Research*, 37, 368-392. doi:10.1086/653087.
- Rai, A. K., & Medha, S. (2013). The antecedents of customer loyalty: An empirical investigation in life insurance context. *Journal of Competitiveness*, 5(2), 139-163.
- Ranaweera, C., & Prabhu, J. (2013). The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting. *International journal of service industry management*, 14(4), 374-395.
- Rosado-Pinto, F., & Loureiro, S.M. (2020). ‘The growing complexity of customer engagement: A systematic review’. *EuroMed Journal of Business*, 15(2), 167–203. doi:10.1108/emjb-10-2019-0126.
- Sarwar et al. (2012). The effect of customer trust on customer loyalty and customer retention: A moderating role of cause related marketing. *Global Journal of Management and Business Research*, 12(6), 27-36.
- Setyawan, A. A., & Kussudiyarsana, I. (2015). Brand trust and brand loyalty, an empirical study in Indonesia consumers. *British Journal of Marketing Studies*, 4(3), 37-47.
- Shankar, V., & Grewal, D. (2021). Digital marketing communication in global marketplaces: A review of extant research, future directions, and potential approaches.
- Siddiquie, M. R. (2014). Scopes and threats of Mobile Financial services in Bangladesh. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 4(4), 36-39.
- Sutisna, M., Prayogo, A.D. and Sarah, I.S. (2019) ‘Evaluating website repeat usage using Webqual 4.0: A guide for E-commerce business’, *IOP Conference Series: Materials Science and Engineering*, 662(2), p. 022105. doi:10.1088/1757-899x/662/2/022105.
- Swift, R. S. (2011). *Accelerating customer relationships: Using CRM and relationship technologies*. Prentice Hall Professional.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson.
- The Daily Star (2024, January 28). Bangladesh’s rise in mobile money: A global perspective. Retrieved from <https://www.thedailystar.net/supplements/mfs-and-financial-inclusion-bangladesh/news/bangladeshs-rise-mobile-money-global-perspective-3529996>.
- The Financial Express (2024, November 17). MFS accounts increase by nearly 20m in one year. Retrieved from <https://thefinancialexpress.com.bd/trade/mfs-accounts-increase-by-nearly-20m-in-one-year>
- Tomar, A. (2019). Impact of technology in the life of a university student. *International Journal of Computer Applications*, 178(39), 31–37. <https://doi.org/10.5120/ijca2019919277>
- Tran-Truong, P. T., Pham, M. Q., Son, H. X., Nguyen, D. L. T., Nguyen, M. B., Tran, K. L., Van, L. C. P., Le, K. T., Vo, K. H., Kim, N. N. T., Nguyen, T. M., & Nguyen, A. T. (2025).

- A systematic review of multi-factor authentication in digital payment systems: NIST standards alignment and industry implementation analysis. *Journal of Systems Architecture*, 162, 103402. <https://doi.org/10.1016/j.sysarc.2025.103402>
- Tun, P. M. (2020). Building a theoretical research model for trust development: The case of mobile financial services in Myanmar. *The South East Asian Journal of Management*, 14(2), 173–193. <https://doi.org/10.21002/seam.v14i2.12345>
- University Grants Commission. (2022). 49th Annual Report 2022. Retrieved from https://ugc.gov.bd/sites/default/files/files/ugc.portal.gov.bd/annual_reports/940dc4ac_124d_4232_90b6_9dc548ac1f31/summery_65ddz74565dcf.pdf
- Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266.
- Van Noort, G., & Willemsen, L. M. (2012). Online damage control: The effects of proactive versus reactive webcare interventions in consumer-generated and brand-generated platforms. *Journal of interactive marketing*, 26(3), 131-140.
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of marketing theory and practice*, 20(2), 122-146.
- Weill, P., & Broadbent, M. (2018). *Leveraging the new infrastructure: how market leaders capitalize on information technology*. Harvard Business Press.
- Winata, H., Thoyib, A., Rohman, F., & Yulianto, A. (2024). From experience to loyalty: Understanding the dynamics of Customer Trust in Indonesia's Mobile Banking Industry. *Journal of Lifestyle and SDGs Review*, 5(1). <https://doi.org/10.47172/2965>
- Xin, H., Techatassanasoontorn, A. A., & Tan, F. B. (2015). Antecedents of consumer trust in mobile payment adoption. *Journal of Computer Information Systems*, 55(4), 1–10. <https://doi.org/10.1080/08874417.2015.11645781>
- Zhao, H., Yao, X., Liu, Z., & Yang, Q. (2021). Impact of pricing and product information on consumer buying behavior with customer satisfaction in a mediating role. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.720151>

Appendix

Appendix A

Sample Size Calculation using Cochran's Formula

$$n_0 = \frac{Z^2 Pq}{e^2}$$

Where:

- Z = Critical value at the desired confidence level (90% confidence level, Z=1.64)

- p = Estimated proportion of the population with the attribute (40%, $p=0.40$)
- $q=1-p = 0.60$
- e = Desired level of precision (5%, $e=0.05$)

Substituting these values:

$$n_0 = \frac{(1.64)^2 * 0.4 * 0.6}{0.05^2}$$

$$n_0 = \frac{0.6455}{0.0025}$$

$$n_0 = 258.2$$

Since the population size is finite, Cochran's formula for finite populations was used to adjust the initial sample size:

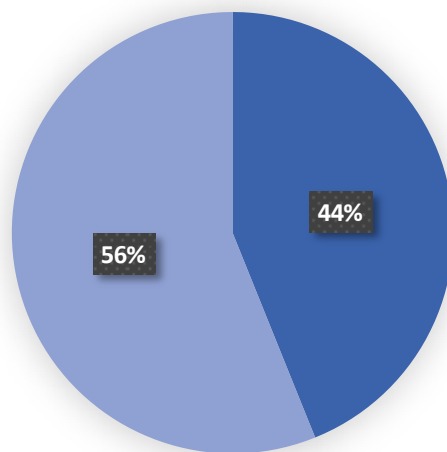
$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{1,103,462}}$$

$$n = \frac{258.2}{1 + \frac{(258.2 - 1)}{1,103,462}}$$

$$n = 258$$



Appendix B: Gender Distribution of the Sample



Appendix C: Age Distribution of Survey Respondents

		Frequency	Percent
Age Groups	18-20 years	16	5.7
	21-25 years	224	80.0

26-30 years	33	11.8
31 and above	7	2.5
Total	280	100.0

Appendix D: Education Level of Survey Respondents

	Frequency	Percent
Doctorate	1	.4
Post-Graduate	34	12.12%
Graduate	19	6.78
Undergraduate level	226	80.7%
Total	280	100.0