

# Adoption of cashless transaction and customer satisfaction: insights from emerging economy

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## Abstract

**Purpose** – The study aims to assess the level of customer satisfaction and their perception of adopting cashless transactions, considering the barriers and challenges faced by customers in using cashless payment systems in the context of an emerging economy like Bangladesh.

**Design/methodology/approach** – Primary data were collected using the convenience sampling technique, targeting individuals with prior experience using digital payment systems in Bangladesh. A total of 550 questionnaires were distributed, of which 470 were returned. After thorough data validation, 348 responses were deemed suitable for analysis. The survey aimed to assess users' perceptions of adopting cashless transactions (CLT) in Bangladesh. The study employed both descriptive and inferential statistical analyses to evaluate customer satisfaction with cashless payment systems.

**Findings** – The study reveals that customer satisfaction with cashless payment systems in Bangladesh is significantly influenced by factors such as security, usability and awareness. A positive correlation was identified between users' familiarity with cashless payment methods and their satisfaction levels. Additionally, perceived security and convenience emerged as critical determinants of customer satisfaction. To enhance satisfaction and promote the adoption of cashless payment systems, the study recommends increasing public awareness, streamlining user experiences and implementing robust security measures.

**Research limitations/implications** – The study suggests that increasing awareness, simplifying usage and ensuring security of cashless payment systems can significantly boost customer satisfaction. Service providers should focus on improving user experience and trust, while policymakers can use these insights to promote safe and inclusive adoption of digital payment methods.

**Practical implications** – It underscores the significance of establishing trust and guaranteeing usability to facilitate greater financial inclusion. Service providers must invest in user-friendly designs and secure systems, while governments need to develop frameworks that promote safe and inclusive cashless transactions.

**Originality/value** – While existing theories emphasize the impact of trustworthiness and perceived ease of use on customer satisfaction, this study offers context-specific insights into how these factors influence customer perceptions in Bangladesh. It underscores the critical role of security and user awareness in facilitating a successful transition to a cashless economy. This study offers substantial insight into the global transition toward digital economies, especially in emerging countries poised to move from traditional to cashless banking systems.

**Keywords** Cashless society, Customer satisfaction, Digital payments, Cashless transaction, Bangladesh

**Paper type** Research article

## 1. Introduction

In recent years, Bangladesh has undergone a significant move toward digital financial services, which is reflective of global trends toward a society that does not use currency.

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Technological progress and shifting consumer choice have accelerated the worldwide shift toward a cashless society. A similar trend toward online banking is taking place in Bangladesh, another emerging market. Within the context of the dynamic financial landscape of today, there is an increasing movement toward a cashless society. The state of Bangladesh, which possesses a vibrant economy and a technological infrastructure that is at the cutting edge, is the driving force behind this transition. As the country goes forward in the digital era, the concept of a cashless society has acquired a lot of popularity since it can promote efficiency, accessibility, and convenience (Ma, Gam, & Banning, 2017). With the advent of QR Payment and other digital payment systems, mobile banking and a meteoric rise in card and cardless transactions, Bangladesh has taken an important step toward becoming a cashless society. Not only does this revolutionary change have the potential to benefit the country's economy, but it will also raise living standards for millions of people.

It is essential, however, to have a solid understanding of the difficulties of customer satisfaction (CS) in connection to Bangladesh's cashless society, particularly because of the government's drive toward digitalization and the proliferation of digital payment systems within the country. On the road to a cashless society in Bangladesh, there are many possibilities as well as challenges to overcome. To begin, the widespread use of digital payment solutions can be attributed to the groundwork that has been created by the development of mobile phones and internet connectivity. Initiatives such as the government's Digital Bangladesh vision and the adoption of mobile banking services such as Bkash, Nagad, Rocket and so on have significantly contributed to the expansion of financial inclusion and the lessening of dependency on cash transactions (Afroze & Rista, 2022).

Additionally, people looked for alternatives that were safer and did not require contact, and the COVID-19 pandemic accelerated the switch to digital payment methods. On the other hand, there will be obstacles to overcome on the path to a society that does not use cash. Despite the tremendous pace at which technology is advancing, a significant number of individuals, particularly those living in rural areas, still lack the knowledge necessary to handle money or to have access to digital infrastructure (Kim, Tao, Shin, & Kim, 2010).

In addition, there are still some individuals who are hesitant to fully adopt digital payment systems due to the ongoing concerns around data privacy, cybersecurity, and the transparency of transactions (Akturan & Tezcan, 2012). A further factor that prevents the widespread adoption of cashless solutions is the existence of major behavioral and cultural barriers. A preference for cash transactions and a lack of faith in computerized payment methods are two examples of these types of preferences. The measurement of CS takes into account the experiences, perceptions and expectations of customers who use digital payment services. The reliability, accessibility, pricing, comfort of use and security of cashless transactions are some of the aspects that have a significant impact on the feelings that customers have toward these transactions (Dağhan & Akkoyunlu, 2016). For politicians, financial institutions and technology providers to have a better understanding of the various expectations of Bangladeshi consumers and to change their strategies and offers accordingly, they need to have a solid grasp of these factors. By reducing transaction costs, expanding financial inclusion and boosting acceptance of digital payment solutions, a satisfied customer base serves a dual purpose: it encourages the use of digital payment solutions and it boosts economic growth.

Since Bangladesh is heading toward a cashless society, it is important to study on the drivers of consumer satisfaction toward digital payment. We use the technology acceptance model (TAM) as an explanatory model, and focus on central precursors of use, such as perceived ease of use (PEU), trust and security. Ease of use and trust have been found to be important in adoption of mobile financial services (MFS) (Islam, Soumia, Rana, Madavarapu, & Saha, 2024a) and cryptocurrency (Islam *et al.*, 2023) in Bangladesh. In the same vein, cross-national studies have underscored the significance of these factors in the operability of digital payment systems (Jin & Xu, 2024a, b). Through its analysis of the Bangladeshi situation, this study provides practical recommendations for policymakers and businesses to increase the acceptance of digital payment and facilitate financial inclusion.

A cashless society, on the other hand, will not be able to attain its full potential if customers are not satisfied or hostile to the idea of such a society, which would be detrimental to all parties concerned. We want to accomplish this by conducting in-depth interviews, surveys, and data analysis to gain an understanding of how customers feel about digital payment systems and what they do to them. Our findings can be utilized by policymakers, companies and other stakeholders to address the concerns and wants of Bangladeshi users and to develop policies that encourage greater adoption and usage of cashless solutions.

The approaching cashless society in Bangladesh has the potential to have a significant impact on any aspect of the economy, including individuals, businesses and the economy as a whole. To effectively navigate this shift and reach the full potential of digital payments to push inclusive growth and prosperity in Bangladesh, it is essential to appreciate and address the complexities of consumer pleasure.

The research problem is to analyze the levels of CS with the shift toward a cashless society in Bangladesh. To address this problem, the following four research questions have been developed-

- RQ1. What is the awareness level of customers regarding various cashless payment options available in Bangladesh?
- RQ2. How do customers think about the ease of use of different cashless payment methods available to them?
- RQ3. How do customers perceive the security and trust features offered by different cashless payment methods in Bangladesh?
- RQ4. What is the customer level of satisfaction based on perceived awareness, ease of use and security and trust?

To find out the answer to the above four research questions following research objectives have been formulated. Within the framework of Bangladesh's cashless society, this research investigates the elements impacting consumer satisfaction.

The main objective of this study is to investigate the level of satisfaction among customers in Bangladesh regarding the cashless system, including mobile banking, Internet banking and digital wallet. Other specific objectives are to measure the awareness level of the customer in adopting the cashless payment transaction, to evaluate the ease of use of the cashless payment transaction of the customer and to explore the effectiveness of the security and trust of existing customers toward cashless transactions in Bangladesh.

This study looks into the current state of digital payment systems in Bangladesh, including e-wallets, QR codes, mobile banking, online banking, and card transactions. The goal of this research is to learn how consumers feel about digital payment systems, what they've experienced and how satisfied they are overall. It investigates the factors that impact happiness, such as the pros (like lower transaction costs, better financial security and time savings) and cons (like problems with security, reliability and infrastructure readiness, to mention a few). The goal of this research is to find out what Bangladeshi consumers want from digital payment systems in terms of ease of use, affordability, security and reliability. Digital payment usage in Bangladesh is projected to grow in the future, according to the study, when global trends, technological advancements and changing consumer behaviors are considered.

## 2. Literature review and hypothesis development

The movement toward a society that does not use cash is gathering momentum by the day. With the help of a mix of huge volumes of card and cashless transactions, mobile banking and digital payment technologies such as QR payment, Bangladesh is well on its way to becoming a society that does not need cash. We refer to a transaction as cashless when there is no exchange of actual currency between the parties involved. According to [Matthew and Mike](#)

(2016), each one of the transactions is carried out by utilizing a mobile financial service of some kind, whether it be an automated teller machine, a debit card, a credit card or something else entirely. According to the findings of the study, the operational efficiency of banks has significantly increased ever since the transition toward cashless transactions (Saha, Dey, & Hoque, 2022). The widespread rejection of cash as a form of payment is another consequence of a cashless society (The Business Standard [TBS]), which is in addition to the fact that individuals in that country will completely stop using cash as a method of payment.

A technique of electronic payment that does not include the use of actual cash and enables transactions to take place even when the parties involved are not in the same physical location at the same time (Hassan, Rahman, Afrin, & Rabbany, 2014). Through the utilization of the card and MFS, the transaction is carried out in this manner. The utilization of this technology allows for the achievement of self-sufficiency. According to Press Xpress (2024), the first cashless transactions in Bangladesh took place in 2018, and they were conducted using credit cards. According to The Daily Star (2024), the focus here is on gradually lowering dependency on physical cash as a result of the rapid transition toward digital payment methods. Customers' perceptions of the benefits and drawbacks of cashless transactions have a significant impact on the degree to which they are satisfied with the service they receive (Alhassany & Faisal, 2018). The findings of Himel *et al.* (2021) indicate that the aspects that contribute to satisfaction include the reduction of transaction costs, the improvement of financial stability and the reduction of the amount of time spent on the transaction. According to the findings of the research, a cashless system has produced modern banking that is more reliable and efficient than it has ever been before (Gupta & Hakhu, 2021). On the other hand, Rahman and Sloan (2015) conducted research and found that concerns regarding security, reliability and infrastructure readiness have been identified as key barriers that impact CS. Trust and security are the fundamental factors that influence CS in the context of a cashless society (Muhtasim, Tan, Hassan, Pavel, & Susmit, 2022). Research indicates that establishing trust in digital payment systems and ensuring robust security measures are essential for enhancing satisfaction levels (Ahmed, Ahmed, Ashrafi, Ahmed, & Annamalah, 2024). Studies have shown the importance of perceived trustworthiness and data security, which fosters a positive attitude toward a cashless society (Namahoot & Jantasri, 2023; Liu *et al.*, 2019).

According to the Bangladesh Bank data suggest that across several parameters, the number of physical branches, ATMs, POS, and CRM machines expansion is visible. Within roughly ten years, MFS providers like Nagad, BKash, Upay and Rocket saw huge sign-ups. As of November 2023, the MFS account stood at 22 crores, which connected with 13 MFS providers in Bangladesh. However, this account was 8.43 crores in the year 2018, an increase of 160% over the last four years (Rahman, 2024). A Study has found that younger customers and those with a higher level of education have greater satisfaction with digital payment services (Jaiswal, Mohan, & Deshmukh, 2023).

The average daily transaction through MFS is 129445.47 crore, according to another analysis based on data from the Bangladesh Bank. One example of such a framework is the MFS and electronic fund transfer regulations published by the Bangladesh Bank (Armeiy, Lipow, & Webb, 2014). One of the main reasons for the expansion of the Bangladeshi economy, according to Sum Chau and Ngai (2010), is the rise of cashless transaction systems, made possible by advancements in information and communication technology (ICT). Instantaneous payment card distribution, free money transfers and faster account opening are just a few of the benefits of cashless transaction systems over conventional banking. According to Saha *et al.* (2022) faster and more accurate transactions are now possible because of online banking's efficiency and efficacy, which has greatly enhanced service delivery. Financial institutions can't afford to fall behind in today's fast-paced, tech-driven world; they must embrace Internet banking if they want to be competitive (Armeiy *et al.*, 2014).

A study by Bhuiyan, Akter, and Islam (2024) stated that CS in companies that rely on one-time sales is different from customer happiness in sectors that rely on long-term relationships,

like retail banking. Meeting or exceeding client expectations on the level of service they receive is one way to boost CS. When customers feel that they have a say in the process and the service overall, they are more likely to be satisfied (Mukherjee & Nath, 2003). Here, the service's quality becomes relevant. Recognizing the importance of meeting customer needs and maintaining the highest standards of electronic banking service is crucial if Bangladesh is to develop toward a cashless society. Based on these findings of research, using green business models and technologies would help developing countries' officials stimulate economic growth. Technical innovation, safe environmental conditions, consistent renewable energy sources as well as ecological and economic development define digital transaction adaption and sustainable customer pleasure in emerging economies (Islam, 2023). A study found that perceived trust, privacy, and security influence acceptance of mobile banking (fintech) services rather than perceived risk. Crucially, among consumers, perceived security affects mobile banking adoption the most out of all the factors (Islam, Hasan, Tawfiq, Bhuiyan, & Faisal-E-Alam, 2024b). Recent investigations have shown the significant role of sophisticated modeling methods in delineating these dynamics. Jin and Xu (2023) applied vector error-correction modeling and directed acyclic graphs to study the causal associations among retail property prices across Chinese cities, revealing complex economic dependencies. Similarly, Jin and Xu (2024a, b) used machine learning techniques to forecast regional steel prices in East China and illustrated that machine learning takes non-linear price dynamics into account and improves forecasting accuracy. These methods are promising for examining the uptake of digital payments in developing countries.

The use of digital finance and monetary policy has a huge effect on economic growth and sustainability, especially in developing countries. Rana and Al Mamun (2024) investigate the impact of monetary policy in Bangladesh, and they have found that real interest rate, inflation rate and repo rate have a significant impact on GDP, and the exchange rate has less importance in this regard. Likewise, the operational procedures of monetary policy play important roles in managing money supply and money demand, where policy instruments such as interest rates and open market operations are important in Bangladesh's financial stability (Rana, Hossain, & Rekha, 2023). As for sustainability, Rana, Mamun, Islam, and Hossain (2024) emphasize the role of ESG in driving the sustainable development goals (SDGs) in South Asia, leading to renewable energy sources and improved regulatory quality.

The financial stability and performance of banks is also found to be the major contributors to the education-related SDGs in South and Southeast Asia where the bank Z-Score and the credit-to-deposit ratio have positive and statistically significant correlation with the SDGs (Rana, Islam, Al Mamun, & Rekha, 2025). Moreover, to increase the sustainability potential in Bangladesh banking, Blockchain is perceived as a game-changer where PEU and perceived usefulness are two more significant factors for adoption (Al Mamun, Islam, Karim, Siddieq, & Rana, 2025). These research findings together highlight the necessity of technological integration, sound monetary policy and financial stability for promoting economic growth and sustainable development in emerging economies.

### 2.1 Awareness of cashless payment

The expansion of MFS is contingent upon both technological progress and customer trust in some services (Bhuiyan & Rahman, 2013). Findings of another research represent that mobile banking has many advantages, such as making banking more efficient, making services more accessible to customers, and reducing costs (Alhassany & Faisal, 2018). The proliferation of illegal activities, including extortion, social crime, fraud and the like is one of the biggest problems with a cashless society. With over 30% of banks offering online payment gateway services, e-commerce is booming in Bangladesh.

There are multiple perspectives from which to view a cashless society. When discussing this study, the term "full awareness" is used to mean that all public payment options are digital means. Full awareness has received scant attention in the literature, with only a handful of

studies focusing on this specific stage of awareness (Rivera, 2019; Panda, Reddy, & Vaithianathan, 2022). Industry experts claim that Bangladesh may easily transition to a cashless society by using MFS. In the future, no one will be able to purchase anything from any store, market or marketplace without a cell phone.

According to Bhuiyan *et al.* (2024), the proposed technology satisfaction model states that customers' awareness of accepting new technologies is a crucial factor. Beyond the limitations of conventional money, the cashless payment system has enabled consumers to buy things like coffee and pay for them with their cell phones. Customers now find the system more user-friendly because of this. All things considered, artificial intelligence is becoming more and more used in business; Bangladeshi organizations are also beginning to embrace this technology to keep competitive in the worldwide market and enhance their operations. The factors that significantly affect the creation and application of these technologies have been the focus of numerous academic articles (Islam, Hasan, Redwanuzzaman, & Hossain, 2024c).

Researchers in a cashless society have shown a strong correlation between how easy technology is to use and how open people are to trying new things (Akturan & Tezcan, 2012; Szopiński, 2016). A study conducted by Riquelme and Rios (2010) found that customers' opinions and happiness with a cashless society are greatly affected by how useful they perceive modern information systems on mobile devices to be.

The purpose of this research is to collect a comprehensive picture of what customers want and expect from digital payment systems in terms of accessibility, cost, security, reliability and usability. According to Kamboh and Javaid Leghari (2016), this will be accomplished through the use of surveys, interviews and focus groups. When it comes to the adoption of digital payment systems by customers in Bangladesh, this study will take into consideration some factors, including awareness of use, trust, ease of use and technological familiarity. Their views regarding using QR mobile payments are much influenced by self-concept, perceived self-efficacy and habit. Furthermore, confirmed the results are a favorable influence of users' attitudes about utilizing QR mobile payments (digital Payments) on both behavioral intention and actual usage as well as a favorable effect of behavioral intention on the actual QR mobile payment (digital payments) use (Islam, Tamanna, & Islam, 2024d). These are some of the cultural variables that will be studied. Through the use of assessments and analyses, the purpose of this research is to provide insight into whether customers are satisfied or not and the areas of development.

H1 has been adopted from the study of the above kinds of literature:

- H1. Increased awareness of cashless payment methods positively influences customer satisfaction.

### 2.2 Perceived ease of use

The degree to which a user anticipates that a system will be easy to use is one definition of the term "perceived ease of use," which was coined by Davis in their 1989 publication. Sum Chau and Ngai (2010) suggest that artificial intelligence might be the answer for banks that are serious about finding solutions to the unique difficulties that their clients face. The fact that its significance stands out demonstrates this. As far as this issue is concerned, PEOU is consistently named as the most prevalent factor. If customers think the services are helpful, simple, and easy to navigate, they are more likely to employ digital payment methods (Yang, Mamun, Mohiuddin, Nawi, & Zainol, 2021).

According to Kamboh and Leghari (2016), the nation will undergo a significant transformation as a result of this, but if everyone else is also doing the same thing, then there is no cause for resistance. Rather than taking the initiative to facilitate the transition from paper currency to digital transactions, banks and other financial organizations should take advantage of this opportunity (Gomber, Kauffman, Parker, & Weber, 2018).

The purpose of this study is to investigate the various perspectives that consumers have on digital payment systems. These perspectives will include the consumers' preferences, experiences, and obstacles to cashless transactions. To find the answer to the research questions, this study will investigate the concept of how users perceive the ease of use of digital payment systems, with a particular focus on how customers find these systems to be easy to use. The simplicity of use of a financial technology solution is a significant factor in determining the likelihood that customers would accept that solution.

H2 has been adopted from the study of the above pieces of literature:

- H2. Customers who perceive cashless payment methods as easy to use are more satisfied with the service.

### 2.3 Perception of security and trust

Technological advancements are making financial transactions more convenient and luxurious for customers, which is changing the way financial institutions conduct these transactions. Conversely, issues with the technology's design, usability and acceptance arise with its introduction (Armeý *et al.*, 2014). Financial institutions in Bangladesh would send and receive electronic signals to transfer funds to establish a cashless transaction system. Real money like cash or cheques wouldn't be needed anymore if this happened. According to Davis (1989), the convenience of having one's paychecks deposited into one's bank or savings account instantly and the availability of cash through ATMs at any time are both great benefits to clients.

According to Amilan and Aparna (2023), cashless transactions have become more common. Consumer preferences and habits in Bangladesh are shaped by the country's rich cultural heritage, which includes a wide range of traditions and customs. Digital payment solutions are more often accepted in metropolitan regions due to factors including higher education levels and technological exposure (Akturan & Tezcan, 2012; Szopinski, 2016). On the contrary, those living in rural areas could be more hesitant to use cashless payment methods. The Bangladeshi government has enacted some policies and initiatives meant to increase accessibility to financial services and promote the usage of digital payment methods for customers (Alhassany & Faisal, 2018). Regulatory regulations create a setting that is favorable for the growth of ecosystems for digital payments. Kim *et al.* (2010), the security concerns that are associated with digital payment systems have a significant impact on the faith that customers have in their ability to engage in online transactions. It is feasible to influence the consumers' views of confidence and safety in digital payment systems by informing them and assuring them of the security of their payment options (Kim *et al.*, 2010; Suh & Han, 2003).

This can be accomplished by providing consumers with information. As a result of a lack of education regarding the security safeguards that are put into these systems, the general people may be reluctant to use electronic payment methods (Barakat & Hussainey, 2013). In addition, earlier research has shown that people's perceptions of security are negatively connected with their business intelligence and confidence in digital payment systems (Gupta & Hakhu, 2021). It was found that digital payment systems had a lower rate of adoption due to the association between the two conditions. According to Bangladesh Bank data, there has been rapid growth in card usage. At POS, the transaction value of the card jumped 58% from February 2020 to February 2023 touching taka 2,392 crores, in the meantime online payment grew 3.3 times in the same period to touch 1,072 crores (Bhuiyan *et al.*, 2024). The increasing number of digital infrastructures, such as mobile networks and internet access, has aided the adoption of cashless payment systems for customers (Alhassany & Faisal, 2018).

Innovations in ICT have provided innovative solutions to problems that conventional banking has long encountered, causing a sea change in Bangladesh's financial system (Riquelme & Rios, 2010). MFS providers like bKash, Nagad, Rocket and Upay have

capitalized on the widespread use of mobile phones to offer convenient and user-friendly digital payment options. A study found that consumers prefer credit/debit cards for payment, followed by mobile wallets. Privacy, security and convenience influence cashless transactions, and consumers are aware of information security. While digital payments may take time to become a preferred payment option, they may benefit consumers (Yuvaraj & Sheila Eveline, 2018). The vast majority of media outlets either started their Internet presence or continued to keep one up and running during this period. The rise of Internet shopping, which mostly gained popularity between the years 2019 and 2021, unquestionably brought about changes to the characteristics of the retail industry. Even though many people still prefer to purchase at brick-and-mortar stores, online shopping has grown more convenient than traditional retail (Akturan & Tezcan, 2012; Szopinski, 2016). According to the findings of the research, this may be the reason why there is a growing tendency toward cashless payment systems.

H3 has been adopted from the study of the above works of literature:

H3. Customers who perceive cashless payment methods as secure and trustworthy are more satisfied with the service.

2.4 Research framework from the research hypothesis

Much focus has been placed on the shift toward cashless payment methods due to the positive correlation between customer happiness and a growing understanding of cashless payment systems. The framework of the study shows the link between the dependent variable (DV) and the independent variables (IVs). It shows how consumer satisfaction is influenced by awareness of cashless payment, PEU, perceptions of security and trust. In the first hypothesis (H1), it is proposed that as customers get more informed about the various cashless payment options, their overall satisfaction with the service will rise (see Figure 1).

Based on Figure 1, the PEU of cashless payment alternatives is considered to be one of the most significant aspects in determining the level of happiness experienced by customers, as stated by the second hypothesis (H2). Customers have a greater likelihood of being satisfied with the services they receive when these methods are simple to comprehend and implement because they need less time and effort to complete transactions. As a result of the fact that the customers' opinions of the ease of use of the payment methods directly affect their overall service experience, it is essential to have user-friendly interfaces and streamline operations. In the third hypothesis (H3), the significance of cashless payment systems that are reliable and secure is discussed. Those clients who have faith in the safety of their financial transactions and personal information are more likely to be satisfied with the service they receive. Table 1 represents the Summary of previous studies in terms of what has been done, what is still missing and correspondingly contributions of this study.

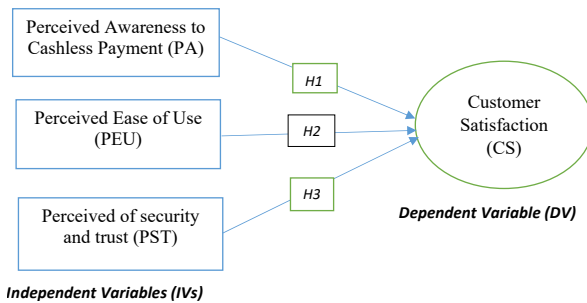


Figure 1. Research framework (adopted from previous literature). Source: Figure by authors

**Table 1.** Summary of previous studies in terms of what has been done, what is still missing and correspondingly contributions of this study

Study	What has been done	What is missing	Contributions of current research
Rana and Al Mamun (2024)	Studied the influence of monetary policy on GDP of Bangladesh, applying ARIMA and OLS techniques. Identified that interest rates, inflation and repo rates have strong effects on economic performance	Inadequate research on the implications of digital financial systems, such as mobile payments, on the efficiency of monetary policy	Further the connection between generation and digital payment adoption as well as economic stability, even at the level of customer satisfaction in a society without cash and in the macroeconomic realm
Rana et al. (2023)	Distinguished the instrumental variables of monetary policy of Bangladesh that affect the money supply and demand in the economy such as interest rates and open market operations	Lacking literature about the effect of these instruments on customer satisfaction and the digital payments system adoption in Bangladesh	Unifies consumer satisfaction with monetary policy, by evaluating the efficacy of digital payment instruments (mobile banking and QR codes) in transition to a cashless society in Bangladesh
Rana et al. (2024)	Researched the ESG (Environmental, Social, Governance) effect on SDGs in South Asia, including renewable energy and regulatory quality	Limited attention to user satisfaction in the context of digital payment systems and their implications in the financial ecosystem	Connects ESG Reflection in the Digital Payment, with particular to how digital transactions can contribute to the achievement of SDGs especially in terms of financial inclusion and sustainability in Bangladesh
Rana et al. (2025)	Examined the impact of banking stability in South and South East Asia on achieving the SDGs, and discovered that financial stability was highly associated with the objectives of the SDGs	Lack of deep analysis of consumer attitudes and satisfaction with banking systems especially with non-branch banking	Addresses the void by examining determinants of consumers' satisfaction, such as trust, security and usability, relating to mobile banking and digital wallets, and how these determinants impact SDG attainment
Al Mamun et al. (2025)	Studied the adoption of blockchain in the banking industry of Bangladesh, particularly ease of use and usefulness in promoting financial sustainability	No such study that addressed consumer satisfaction perception toward blockchain technology for digital payment system in Bangladesh	Offers practical understanding and knowledge of how blockchain technology could increase customer satisfaction for digital payments through trust and security to enable mass adoption
Bhuiyan et al. (2024)	Studied customer satisfaction in the banking industry and concluded that service quality significantly affects customer loyalty and satisfaction	Inadequate focus on the impact of digital banking platforms (including mobile financial services, MFS) on the long-term satisfaction of customers	Builds upon this work by examining how security, ease of use, and awareness drive satisfaction with mobile financial services and digital payment mechanisms in Bangladesh

(continued)

**Table 1.** Continued

Study	What has been done	What is missing	Contributions of current research
<a href="#">Saha et al. (2022)</a>	Discovered that the use of cashless mode of payment has increased the operational efficiencies of banks delivering more certain and streamlined banking services	It is more about operational efficiency rather than customer-centric stuff like satisfaction, trust in cashless systems	This examines the customer experience side of cashless transactions and traces the procedural enhancements to immediate results on customer satisfaction
<a href="#">Gupta and Hakhu (2021)</a>	Showed that the banking efficiency and financial system stability are improved in cashless economy	Does not emphasize the customer view of the trustiness of these systems	An analysis of the impact of customers' perceptions of security, trust and ease of use on transaction satisfaction for electronic marketplaces: A grounded theory study: RACT. How do customers' perceptions of security, trust and ease of use influence their satisfaction with digital payment systems: A consumer perspective on operational studies
<a href="#">Akturan and Tezcan (2012)</a>	Concentrated on the extent of mobile financial services' adoption and the influence of perceived ease of use and trust on the acceptance	There is a lack of an in-depth understanding regarding the effects of security risk and infrastructural failure on satisfaction in Bangladesh	Does the knowledge base on security and local infrastructure readiness lead to consumer satisfaction in Bangladesh transformation into a cashless society?
<a href="#">Alhassany and Faisal (2018)</a>	Emphasized the transaction cost and accessibility-efficiency of mobile banking	Fails to consider impediments to adoption and satisfaction, especially in rural areas	Contributes fresh thoughts in the dichotomy of urban-rural divide in the usage of digital payments covering trust and accessibility barriers
<a href="#">Rahman and Sloan (2015)</a>	Highlighted obstacles for cashless to be adopted, such as trust, security and infrastructure	Does not have a comprehensive framework linking customer satisfaction and those barriers	Establishes a holistic model that explains customer satisfaction has mediating role between perceived security and ease of use for cashless transactions in urban and rural adoption simultaneously
<a href="#">Ma et al. (2017)</a>	Looked at the direction the world is heading of becoming cashless, looking at convenience and efficiency	Did not measure customer satisfaction in the emerging markets such as Bangladesh	Reviews the Bangladesh context and examines how customers are satisfied with a cashless society and the adoption of it, and that gives an orientation to the emerging market (Bangladeshi cashless society)
<a href="#">Afroze and Rista (2022)</a>	Discussed mobile banking and digital products in Bangladesh, focusing on their contribution to financial inclusion	Consumer satisfaction regarding digital payment system is inadequate	Contributes to our understanding of the value of mobile banking services on consumer satisfaction, namely in terms of accessibility and convenience in Bangladesh

(continued)

Table 1. Continued

Study	What has been done	What is missing	Contributions of current research
Islam <i>et al.</i> (2024a, b, c, d)	Perceived ease of use and trust are important to accept mobile financial services and cryptocurrency	Primarily concentrated on adoption, but not satisfaction of cashless in Bangladesh	Extends the emphasis to customer satisfaction, connecting perceived ease of use and trust with customer satisfaction and general diffusion of cashless payment systems
Jin and Xu (2024a, b)	Applied machine learning to forecast market evolution and trends in China, providing forecasting methods	Though have been found a survey of these models to learn the role of the models in cashless payment adoption	Uses extensive modeling approaches to investigate factors influencing customer satisfaction and adoption of cashless payment systems in Bangladesh

Source(s): Authors, SPSS output

### 3. Research methodology

#### 3.1 Research design

In this case study, the author uses a descriptive and empirical research design to measure the CS of electronic payment systems in Bangladesh. Descriptive study is especially amenable for understanding the associations between variables, and makes an unmistakable presentation of the population. As the research is investigatory in nature, it can provide deep insights into the problems faced by the customers when using digital payment systems, making it an appropriate option for this study.

#### 3.2 Research sample and procedures

A nonprobability sampling technique was used to take primary data. This approach was adopted as it enables us to obtain information from respondents who are reachable and have previous experience with the use of digital payment services (e.g. e-wallet, QR code, mobile banking, online banking and card). The sample comprised Bangladeshis who were familiar with and experienced users of these systems.

A questionnaire containing structured questions was prepared and circulated with the help of Google Docs Forms. The survey invitation was reached to potential respondents through a special link for all those unique Facebook messaging and chat mechanisms. In the beginning, 550 forms were distributed and 470 responses were received. The responses were validated and verified and 348 were included for analysis, accounting for 63.27% of the sample. Among the respondents, 59.2% were male and 40.8% were female.

#### 3.3 Statistical method and data analysis

For data analysis, descriptive statistics, ANOVA, hypothesis testing and regression analyses were performed. The statistical techniques used here to test correlations and study hypotheses, are justified as follows. The respondents' awareness levels were measured on a 5-point Likert scale with 1 = Extremely Aware and 5 = Not Aware at all. This way it is possible to obtain a deep knowledge of CS in terms of easy to use, trusted, secure and aware.

#### 3.4 Justification for statistical approach

The selected statistical techniques are suitable for the purposes and the research questions of the present study. Demographic and satisfaction analyses, as generated through descriptive

statistics, are complemented by ANOVA and regression to test the significance of relationships among central factors such as perceived EOU, trust and CS. These techniques ascertain that the results obtained are statistically significant and strong enough to allow us to infer about the consumer satisfaction level for the cashless payment systems in Bangladesh.

*3.5 Adequacy of sample size*

The 348 samples for analysis are an appropriate number for the statistical tests of the ones implemented in this article. While a larger sample would have enhanced statistical power, the current sample is adequate to draw meaningful inferences regarding CS in Bangladesh. Second, 63.27% response rate is relatively good, and the demographic composition of gender balances the findings. Therefore, the sample size is deemed sufficient to serve the purpose of the study and yield valid findings.

**4. Empirical results**

*4.1 Demographic analysis*

The demographic study (see Table 2) identifies crucial characteristics of the 348 respondents' involvement in cashless transactions. The majority (54.60%) are between the ages of 18 and 25, with 36.78% falling between the ages of 26 and 35, demonstrating a high predisposition among young people. The gender distribution suggests that males (59.20%) participate more than females (40.80%). Students make up the largest occupational category (57.47%), followed by employees (23.85%), self-employed (8.91%) and unemployed (9.77%).

*4.2 Descriptive analysis*

In Table 3, the average perceived awareness (PA) is 1.84, which indicates that on average, the awareness is 1.84. If the sample mean is a reliable estimate of the true population mean, then the standard error of the mean is 0.047, which indicates that the sample mean is a reliable estimate.

PA has a standard deviation of 0.876, which suggests that the data are fairly dispersed around the mean. This is indicated by the fact that the standard deviation exists. As the square of the standard deviation, the sample variance is 0.767, which represents the average departure of the observations from the mean. This value is also known as the sample variance. Taking

**Table 2.** Demographic analyses

Variable	Group	Number	Percentage
Age	Under 18	2	0.57%
	18–25	190	54.60%
	26–35	128	36.78%
	36–45	20	5.75%
	46–55	7	2.01%
	56 and above	1	0.29%
	Total =	348	100%
Gender	Male	206	59.20%
	Female	142	40.80%
	Total =	348	100%
Occupation	Employed	83	23.85%
	Self-employed	31	8.91%
	Student	200	57.47%
	Unemployed	34	9.77%
	Total =	348	100%

**Source(s):** Authors, SPSS output

**Table 3.** Descriptive statistics of perceived awareness (PA)

Descriptive statistics		Perceived awareness (PA)
N	Valid	348
	Missing	0
	Mean	1.84
	Std. error of mean	0.047
	Median	2.00
	Mode	2
	Std. deviation	0.876
	Variance	0.767
	Skewness	1.037
	Std. error of skewness	0.131
	Kurtosis	0.932
	Std. error of kurtosis	0.261

**Source(s):** Authors, SPSS output

into consideration the fact that the value of kurtosis is greater than zero, this suggests that the distribution of the variable is leptokurtic.

The fact that the distribution of PA is positively skewed, as indicated by the skewness value of 1.037, shows that there is a greater number of observations associated with the higher end of the scale.

Based on [Table 4](#), the mean of the PEU is 1.73, indicating that on average. The standard error of the mean is 0.049, which suggests that the sample mean is a reliable estimate of the true population mean. The standard deviation of the PEU is 0.916, which indicates that the data is moderately spread out around the mean.

The sample variance is 0.839, which is the square of the standard deviation and represents the average deviation of the observations from the mean. This indicates that the distribution is characterized by heavier tails and a higher peak in comparison to a normal distribution. The kurtosis of 0.130 indicates that the distribution of PEU is platykurtic. The skewness of 1.066

**Table 4.** Descriptive statistics of perceived ease of use (PEU)

Descriptive statistics		Perceived ease of use (PEU)
N	Valid	348
	Missing	0
	Mean	1.73
	Std. error of mean	0.049
	Median	1
	Mode	1
	Std. deviation	0.916
	Variance	0.839
	Skewness	1.066
	Std. error of skewness	0.131
	Kurtosis	0.131
	Std. error of kurtosis	0.261

**Source(s):** Authors, SPSS output

**Table 5.** Descriptive statistics of perceived security and trust (PST)

Descriptive statistics		Perceived security and trust (PST)
N	Valid	348
	Missing	0
	Mean	1.95
	Std. error of mean	0.050
	Median	2.00
	Mode	1
	Std. deviation	0.938
	Variance	0.879
	Skewness	0.715
	Std. error of skewness	0.131
	Kurtosis	-0.404
	Std. error of kurtosis	0.261

**Source(s):** Authors, SPSS output

indicates that the distribution of PEU is positively skewed, meaning there are more observations on the higher end of the scale.

In [Table 5](#), the mean of the perceived security and trust (PST) is 1.95, indicating that on average. The standard error of the mean is 0.050, which suggests that the sample mean is a reliable estimate of the true population mean. The standard deviation of the PST is 0.938, which indicates that the data is moderately spread out around the mean. The sample variance is 0.879, which is the square of the standard deviation and represents the average deviation of the observations from the mean.

This indicates that the distribution is characterized by heavier tails and a higher peak in comparison to a normal distribution. When the kurtosis is smaller than zero, the distribution is referred to as a platykurtic distribution. This type of distribution is characterized by light tails. The kurtosis of -0.404 indicates that the distribution of PST is platykurtic. The skewness of 0.715 indicates that the distribution of PST is positively skewed, meaning there are more observations on the higher end of the scale.

#### 4.3 Reliability statistics

Cronbach's Alpha values of 0.70 or above are often considered an indicator of strong internal consistency ([Nunnally, 1978](#); [Hair, Black, Babin, & Anderson, 2010](#)). As demonstrated in [Table 6](#), this questionnaire has a Cronbach's Alpha of 0.856, indicating a good level of internal

**Table 6.** Reliability statistics

Reliability statistics	Cronbach's alpha based on standardized items	N of items
Cronbach's alpha		
0.856	0.856	4

**Source(s):** Authors, SPSS output

consistency among its items. This shows that the questionnaire's items are closely linked and accurately assess the same construct. According to [Taber \(2018\)](#), Cronbach's Alpha scores greater than 0.8 are regarded as outstanding, bolstering the instrument's dependability in this investigation. The high Cronbach's Alpha value of 0.856 is consistent with recent literature, emphasizing the importance of good internal consistency in ensuring the reliability of research instruments ([Taherdoost, 2016](#); [Gliem & Gliem, 2003](#)). This result shows that the questionnaire is a reliable method for measuring the targeted construct.

#### 4.4 Correlation analysis

PA: Based on [Table 7](#), the correlation coefficient between CS and PA is 0.606, indicating a moderate positive linear relationship between the two variables. As the PA increases, the CS of cashless transactions tends to increase as well.

PEU: There is a significant positive linear link between the two variables: the correlation coefficient between CS and PEU is 0.805, which indicates that the association is strong. The level of CS tends to rise in tandem with the PEU of a product or service (see [Table 6](#)).

PST: The correlation coefficient between CS and PST is 0.701, indicating a strong positive linear relationship between the two variables. Customer who feels secure using cashless transactions are more satisfied with their use (see [Table 7](#)).

#### 4.5 Regression analysis

The multiple *R*-value, or correlation coefficient between the independent and DVs, is 0.879. This implies a substantial positive correlation, implying that the IVs together account for a considerable percentage of the variance in the DV. According to [Plonsky and Ghanbar \(2018\)](#), an *R*-value near one indicates a significant association, which is consistent with the results of this investigation. The high *R*-value of 0.879 indicates that the IVs included in the study are highly related to the DV. This finding is consistent with earlier research, which emphasizes the necessity of identifying important predictors in regression models in order to better understand their influence on the outcome variable ([Hair, Sarstedt, Ringle, & Mena, 2012](#); [Nathans, Oswald, & Nimon, 2012](#); [Braun & Oswald, 2011](#); [Tabachnick & Fidell, 2013](#)). Based on [Table 8](#), With an *R*-squared score of 0.772, the model's IVs account for 77.2% of the variation in the DV. Indeed, it is so. This proves that the model works as expected under these conditions. Given that the adjusted *R*-square value of 0.694 is marginally lower than the *R*-square value, it

**Table 7.** Correlation matrix

Correlations		(PA)	(PEU)	(PST)	(CS)
Perceived awareness (PA)	Pearson correlation	1	0.539**	0.397**	0.606**
	Sig. (one-tailed)		0.000	0.000	0.000
	N	348	348	348	348
Perceived ease of use (PEU)	Pearson correlation	0.539**	1	0.544**	0.805**
	Sig. (one-tailed)	0.000		0.000	0.000
	N	348	348	348	348
Perceived security and trust (PST)	Pearson correlation	0.397**	0.544**	1	0.701**
	Sig. (one-tailed)	0.000	0.000		0.000
	N	348	348	348	348
Customer satisfaction (CS)	Pearson correlation	0.606**	0.805**	0.701**	1
	Sig. (one-tailed)	0.000	0.000	0.000	
	N	348	348	348	348

**Note(s):** \*\*Correlation is significant at the 0.01 level (one-tailed)

**Source(s):** Authors, SPSS output

**Table 8.** Regression analyses of H1, H2 and H3

Model summary				
Model	R	R-square	Adjusted R-square	Std. error of the estimate
1	0.879 <sup>a</sup>	0.772	0.770	0.426

**Note(s):** <sup>a</sup>Predictors: (Constant), Security and Trust, Awareness, Ease of use  
**Source(s):** Authors, SPSS output

is plausible that some of the IVs are not significantly impacting the model. The average deviation between the actual values and the values predicted by the model is a standard error of 0.426. Multiple R in the model is 0.879. It suggests that the linear association is 87.9% strong. The model's DV is the CS of a cashless society (CS), which has an 87.9% positive connection with the IVs, which are PA, PEU and PST across the customer. The R-square in our model is 0.772.

It signifies that the IV (PA, PEU, PST) can explain 77.2 % of the variance in the DV (CS). The adjusted R-square in our model is 0.770. This suggests that our inputs, and IVs (PA, PEU, PST) can explain 69.4 % of the variation in the targeted field (CS). It is preferable to have a minimal value of standard error close to zero. The standard error in the model is 0.426. In this particular instance, a standard error of 0.426 indicates that the predictions made by the model are relatively accurate, with only minor differences from the values that were seen or observed (see Table 8).

**4.5.1 Analysis of variance (ANOVA).** The ANOVA test was carried out on two different groups in this instance: the regression group and the residual group. Table 9 shows that three degrees of freedom (df) are associated with the regression group, which also has a sum of squares (SS) value of 211.810 and a mean square (MS) value of 70.603. Having 344 degrees of freedom, an SS of 62.42, and an MS of 0.181 are the characteristics of the residual group. 347 is the total number of df, and 274.230 is the total number of sum of squares (SS).

It may be concluded that there is a statistically significant difference between the means of the two groups, as indicated by the F-value of 389.096 and the p-value of less than 0.001 (see Table 9). It can be concluded that if the p-value for the F-statistic is less than 0.05, then there is a connection between Y and at least one IV. The significance F in the model is less than 0.05, which is almost near to zero. It indicates that at least one IV (PA, PEU, PST) is connected to CS.

**4.5.2 Coefficient analysis.** From the coefficient analysis (see Table 10) we can conclude whether the hypothesis is accepted or rejected. PA has a p-value of 0.836, going over the

**Table 9.** ANOVA statistics for H1, H2 and H3

ANOVA <sup>a</sup>						
Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	211.810	3	70.603	389.096	0.000 <sup>b</sup>
	Residual	62.420	344	0.181		
	Total	274.230	347			

**Note(s):** <sup>a</sup>Dependent Variable: Customer Satisfaction, <sup>b</sup>Predictors: (Constant), Security, Awareness, Ease of use  
**Source(s):** Authors, SPSS output

**Table 10.** Coefficients analyses for H1, H2 and H3

Coefficients <sup>a</sup>		Unstandardized coefficients		Standardized coefficients		
Model		B	Std. error	Beta	t	Sig.
1	(Constant)	-0.088	0.063		-1.386	0.167
	Awareness	0.017	0.081	0.016	0.207	0.836
	Ease of use	0.477	0.033	0.492	14.401	<0.001
	Security and trust	0.222	0.056	0.234	4.001	<0.001

**Note(s):** <sup>a</sup>Dependent Variable: Customer Satisfaction

**Source(s):** Authors, SPSS output

significance level of 0.05. This finding suggests that the null hypothesis should be rejected. PA does not appear to have a statistically significant effect on the DV, since the  $p$ -value is 0.836, which is more than the significance level of 0.05. PEU has a  $P$  value of less than 0.001, which is likewise lower than 0.05. It indicates that the test hypothesis is correct or should not be rejected. PST has a  $P$  value is less than 0.001, which is likewise lower than 0.05. It indicates that the test hypothesis is correct or should not be rejected (see Table 10).

#### 4.6 Hypothesis testing

Table 11 represents that the level of significance ( $P$  value) of hypothesis (H1) is 0.836 that is higher than 0.05 which gives clear result that H1 is rejected. PA of cashless payments for H1 does not have a significant positive influence on CS in the case of cashless payments in an emerging country, as demonstrated by the results of the hypothesis testing, which indicates that the hypothesis is rejected.

On the other hand, Table 8 illustrates that Hypothesis 2 (H2) is accepted, which demonstrates that the PEU variable has a considerable positive influence on consumer satisfaction when it comes to cashless payments. Similarly, Hypothesis 3 (H3) acknowledged that this indicates that clients who saw cashless payment options as trustworthy and secure are more satisfied with the financial transaction service, which means the PST variable has been accepted (see Table 11).

### 5. Theoretical and practical implications

Research of this kind could be beneficial to policymakers and business participants in Bangladesh and elsewhere by providing them with the opportunity to gain a better understanding of the advantages and disadvantages of cashless transactions. In conclusion, the findings of this research contribute to a better understanding of the intricate relationship that

**Table 11.** Hypothesis testing

Hypothesis	Level of significance ( $P$ value)	Accepted/rejected
H1	0.836	Rejected
H2	0.001	Accepted
H3	0.001	Accepted

**Source(s):** Table by authors

exists between cashless payment knowledge, usability, security and CS in Bangladesh. Taking into consideration these characteristics may result in some positive consequences, including the enhancement of CS, the advancement of financial inclusion and the advancement of digital transformation.

According to the findings of the study, a significant positive correlation exists between CS and knowledge of cashless payment methods. It is also likely that a greater number of individuals would be content with cashless options such as mobile wallets, online banking, and debit and credit cards if a greater number of individuals were made aware of these financial instruments. Enhancing the user experience, simplifying the transaction process and resolving connectivity issues would result in increased CS and the likelihood that they would use the service again.

The degree to which customers believe that cashless transactions are trustworthy and secure has a substantial bearing on the level of enjoyment they find in those transactions. Therefore, to increase the level of CS with cashless payment systems, providers need to place a high priority on security measures, build robust encryption protocols and foster trust. This information can be utilized by policymakers to design regulations and policies that will stimulate the adoption of cashless payment systems while simultaneously assuring the protection and security of both consumers and businesses. To give one example, promoting financial literacy initiatives is one way to increase the level of knowledge and trust that consumers have in businesses. Increasing the number of people who have access to the Internet and improving payment processing systems are two examples of investments that may be made in digital infrastructure to improve the widespread adoption and usage of cashless payment options.

## 6. Recommendation and future research direction

It is essential to educate and instruct both consumers and merchants on how to successfully use cashless payment systems to overcome any difficulties that may stand in the way of acceptance and to boost overall satisfaction. Providers and politicians are required to continuously monitor trends, solicit input, and modify cashless payment systems to accommodate shifting demands and preferences. This is necessary since technology is continually evolving, and consumers' preferences are also evolving. The initial section of the analysis is where the objectives and hypotheses of the study are presented to the reader. While laying the groundwork for the subsequent inquiry, it describes the assumptions that are associated with the awareness of cashless payment systems, the convenience of using them, and the perceived security of using them. It emphasizes the necessity of educating individuals, simplifying the usage of cashless payment systems, and ensuring that these systems are reliable and safe. The discussion of legislative implications, the development of infrastructure, the education of the general public, and the ongoing monitoring of the situation are all potential approaches to improve the customer experience with cashless payments.

To make this mode of payment accessible to a greater number of individuals, they are increasing how it can be processed. A significant number of notable marketers believe that credit cards have eclipsed all other forms of payment as the preferred means of payment for online purchases (Bhuiyan *et al.*, 2024). The procedure of accessing a company's services has been made easier for customers by enabling them to attach their cards to digital devices through the use of applications additionally, as our society moves away from cash, businesses will need to ensure that their clients can use digital payment solutions. This is a requirement for all businesses. Taking into consideration the important efforts made by other governments all over the world, it is inevitable that Bangladesh will join the ranks of nations that are heading toward a future without traditional currency transactions.

This study shows promising results; however, further studies involving specific demographic aspects affecting the favorability and use of cashless payments must be performed. Even though the results of this study are encouraging, there is a need for additional

research into the specific demographic factors that influence attitudes and behaviors concerning cashless payments. In addition, interventions that are aimed at improving awareness, usability and security could be evaluated through the use of longitudinal studies that track changes in levels of satisfaction with time. It is stated that to meet the growing demand for cashless transactions, financial institutions are making adjustments to the services they provide.

In addition, comparative studies for similar analysis of the effectiveness and consumer satisfaction and perception of cashless payment systems could be conducted for other emerging economies to explore differences across countries, particularly concerning Bangladesh. Comparative studies of this kind must focus on identifying best practices whilst understanding the specific contextual challenges of Bangladesh. Another critical aspect to explore is how the technological innovations in the cashless ecosystem (biometric authentication, blockchain integration, AI-driven fraud detection, etc.) affect the satisfaction and trust of users in cashless transactions. With the advancement of digital financial services, this has never been more critical – understanding the interplay of these emerging technologies will lessen the impact on consumer perceptions, behaviors and loyalty mechanics.

Lastly, government regulations, IT infrastructures and digital literacy programs can affect CS; so, the contributions of these factors to a cashless Bangladesh are worthy of examination.

## 7. Conclusion

According to the findings of the study, a favorable correlation was found between employee understanding of cashless payment systems and CS. There is a considerable correlation between the length of time that these tactics are utilized and the level of satisfaction that individuals experience. When it comes to CS, consumers who are more knowledgeable and have utilized cashless methods for a longer time are more likely to be satisfied. There is a direct connection between satisfied customers and straightforward payment solutions that do not require the use of cash, as indicated by the data. Providing users with the ability to readily access and make use of cashless solutions increases the likelihood that they will be satisfied with the service as a whole. The significance of user-friendly interfaces and seamless experiences in maintaining the satisfaction of drivers is brought into focus by this revelation.

One of the study's shortcomings is that there were only 348 respondents, which is a rather small sample size that would not accurately reflect Bangladesh's diverse population and could limit how far the results can be applied. Furthermore, only data from Bangladesh was gathered, making it difficult to compare consumer satisfaction with cashless payment systems in other nations or areas with distinct technology and cultural backgrounds. Lastly, the cross-sectional design of the study limits the capacity to analyze how consumer satisfaction has changed over time or in reaction to changing regulations and technological improvements.

Their impressions of the dependability and safety of cashless transactions have a significant impact on the degree to which consumers are satisfied with the customer service they receive. The likelihood of a customer being satisfied with their purchase increases when they have the perception that their transactions are trustworthy and safe. The establishment of trust and the implementation of robust security measures are necessary to promote CS and the widespread use of cashless methods. In contrast to perceived security and simplicity of use, which both positively contribute to CS, PA did not display a significant influence in the regression model. Additionally, PA did not demonstrate a significant influence. According to these findings, policymakers and industry players in Bangladesh ought to give higher priority to actions that aim to increase awareness, simplify the usage of cashless payment systems and reinforce security measures. This could be influenced by some factors, including investments in technology that is easy to use, stringent security regulations and public awareness campaigns. If stakeholders consider these elements and collaborate to boost customer happiness and speed

up the adoption of cashless payments, it will be possible to build a financial ecosystem that is more effective and equitable.

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