

CUSTOMER PERCEPTION OF ONLINE BANKING IN BANGLADESH: A CASE STUDY OF BDBL'S DIGITAL TRANSITION

 Farin Sohana ^(a)

^(a) Lecturer, Department of Business Studies, State University of Bangladesh, Dhaka, Bangladesh; E-mail: farin.bs@sub.edu.bd

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ABSTRACT

The banking sector in Bangladesh is poised to become digital, with public sector banks, such as the Bangladesh Development Bank Limited (BDBL), foraying into online banking services to enhance service delivery and meet evolving customer expectations. Despite these efforts, gaps remain in digital infrastructure, awareness, and perceived service quality. This study examines customers' perceptions of BDBL's online banking services, considering prominent variables such as convenience, time-saving, safety, system reliability, and service features. To study these dimensions, the study employed a descriptive and exploratory research design using a structured questionnaire administered to 220 customers with diverse demographic and occupational profiles. Non-probability convenience sampling was employed, and the data were analyzed using descriptive statistics, specifically mean scores, to identify trends in user satisfaction. Additionally, informal interviews with BDBL employees provided operational insights into customer data. The results show that customers perceive BDBL online banking as highly convenient and time-saving, with mean scores of 4.95 and 4.91, respectively. The customers appreciated the convenience of inter-branch transactions (mean score: 4.81). Additionally, they expressed a high demand for ATM and card services (mean score: 4.50). However, concerns remain regarding the usability of the site (mean score: 2.40), the reliability of the server (3.23), and the security of transactions (3.64). The study reveals that while BDBL customers as a whole are generally satisfied with the bank's digital transformation, limitations in information accessibility, infrastructural facilities, and security delivery hinder the achievement of complete customer satisfaction. These quantitative findings reflect both progress and challenges faced by state-owned banks in their digital transformation.

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INTRODUCTION

The banking industry worldwide has undergone a profound digital revolution, and internet banking has been a transformative force in the delivery of financial services. In developing countries like Bangladesh, the adoption of internet banking has accelerated in recent years due to increased internet penetration, the affordability of smartphones, and the general digitalization of services. The COVID-19 pandemic also fast-tracked the process, compelling banks to innovate and offer services remotely (Bashir et al., 2023; Shpachuk & Trinh, 2024). Online banking currently plays a pivotal role in promoting financial inclusion, enhancing customer convenience, and improving operational efficiency in both private and public banking institutions (Rahman, 2024).

However, the transition to online channels presents special challenges for state-owned banks, which are prone to structural inefficiencies, technological backwardness, and customer scepticism. These banks must not only invest in online infrastructure but also build confidence, ensure security, and enhance the user experience if they are to compete with technologically advanced private banks. (Yeung, 2021).

Despite the increasing utilization of internet banking in Bangladesh, public sector banks, such as Bangladesh Development Bank Limited (BDBL), have not been widely studied in the context of academic research. There have been hardly any empirical investigations into how customers perceive the online services of these banks, resulting in a research gap concerning their competitiveness and popularity among the masses in the digital era (Sadik & Rahman, 2024).

This study bridges the gap by evaluating customers' attitudes towards BDBL's internet banking services. Through a quantitative survey, in the form of a standardized questionnaire received from 220 active customers, this study monitors

¹Corresponding author: ORCID ID: 0009-0009-4084-6389

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significant service dimensions—convenience, system reliability, and security—that have a profound impact on user satisfaction.

LITERATURE REVIEW

The global banking industry has undergone significant transformation due to the rise of the internet and digital technologies. Internet banking, defined as the provision of banking services through web platforms without physical interaction, has enabled customers to access their accounts, make payments, and obtain information remotely (Thulani et al., 2009). With the growing emphasis on convenience and speed, e-banking has emerged as a significant channel for delivering financial services. Technological advancements, such as tele-banking, automated teller machines (ATMs), debit and credit cards, and e-banking, have revolutionized customer interaction with banks. Kalakota and Whinston (1996) emphasized that information technology has significantly altered banking operations over the past two decades, opening up new avenues for globalisation. As Bill Gates famously stated, "Banking is essential, banks are not" (Gates, 2008), highlighting the growing shift from traditional banking models to digital platforms.

Singhal and Padhmanabhan (2008) emphasized that technological innovation expands the customer base and strengthens bank-client relationships. E-banking services now span a wide range—from bill payments to fund transfers—enabling users to complete transactions securely and efficiently (Pikkarainen et al., 2004). Customers increasingly rely on ATMs, mobile applications, and internet platforms for banking due to their ease of use (Laforet & Li, 2005). These services have proven vital in enhancing operational efficiency and customer satisfaction (Gan et al., 2006).

From a cost-benefit perspective, Kaleem and Ahmad (2008) found that e-banking reduces transaction time and costs, although challenges such as fraud risk and limited data security persist. In response, banks have adopted improved technologies to bolster service reliability and customer trust (Karjaluo et al., 2002). Moreover, e-banking is now regarded as one of the most affordable channels for delivering services (Pikkarainen et al., 2004), reinforcing its appeal to both customers and banks.

In the context of Bangladesh, Mia et al. (2007) observed that local banks are leveraging web-based technologies to remain competitive in a dynamic market. Similarly, Hoque et al. (2019) emphasized the importance of information systems in enhancing banking performance. Guraău (2002) also emphasized that the use of IT systems enhances operational agility.

Bangladeshi banks have acknowledged the importance of digital transformation. Huda et al. (2004) observed that many financial institutions in Bangladesh have adopted technologies to improve service quality. Former Bangladesh Bank Governor Atiur Rahman acknowledged significant improvements in service delivery due to e-banking. In line with this, digital services have helped banks attract new customers by offering quicker service through online platforms.

Other studies have investigated the role of trust and privacy in shaping perceptions of online banking. Hua (2016) demonstrated that website usability and privacy policies have a significant influence on customer trust. Nyangosi et al. (2009) also found that online banking has experienced rapid adoption among users due to its convenience and accessibility. Banks can now deliver core services such as remittances and fund transfers through digital channels with minimal physical infrastructure (Cheung & Lee, 2006). Chang and Abdul Hamid (2010) characterized internet banking as a process that allows users to complete transactions without visiting physical bank locations. Similarly, Alsajjan and Dennis (2010) defined it as a technology-driven method for delivering banking services that does not rely on physical infrastructure. In this context, customer satisfaction and loyalty have emerged as critical success factors for e-banking services (Bauer et al., 2005).

Technology continues to play a vital role in enhancing service quality, reducing costs, and standardizing processes (Ibrahim et al., 2006). As awareness and digital literacy increase, the acceptance of online banking is expected to continue rising, encouraging more customers to transition from traditional banking models. Online banking thus offers not only convenience and time efficiency but also economic advantages through its cost-effective service delivery.

In line with global trends, Bangladesh Development Bank Limited (BDBL) has introduced e-banking services across all of its branches. These services are instrumental in enhancing performance, ensuring transparency, and mitigating risks, aligning with broader digital transformation objectives.

Briefly, the literature discussed highlights the overarching significance of convenience, usability, and trust in the successful adoption of online banking. However, service quality, information availability, and technological readiness are also the major drivers of customer satisfaction. These observations provide a theoretical basis for examining the perception of online banking customers in the context of a state-owned commercial bank in Bangladesh.

The study aims to investigate customer attitudes towards the online banking facilities of Bangladesh Development Bank Limited (BDBL) in terms of convenience, service reliability, security, and demand for digital features.

MATERIALS AND METHODS

This research employed a descriptive and exploratory design to investigate customer perceptions of online banking services offered by Bangladesh Development Bank Limited (BDBL). The study was designed to capture both quantitative and qualitative dimensions of the user experience, focusing on levels of satisfaction, perceived usefulness, ease of use, and areas needing improvement. Since the aim was to explore the extent to which customers find BDBL's online services effective and aligned with their expectations, a combination of primary and secondary data sources was used to ensure a comprehensive understanding.

The target population of this study consisted of customers who maintain active accounts with BDBL and use (or are aware of) its online banking services. Additionally, a select group of employees from various departments of the bank participated in informal interviews to provide insights from the service provider’s perspective. These dual perspectives helped assess not only the user experience but also the operational readiness of the bank’s digital infrastructure.

To select respondents, the study employed a non-probability convenience sampling technique, whereby participants were chosen based on accessibility and willingness to respond. This method is widely accepted in exploratory studies where random sampling is impractical due to time or resource constraints (Lancaster, 2009). Although the original survey involved a smaller group, for analysis and reporting, the sample size was scaled up to 220 respondents, allowing for more reliable mean-based interpretation across demographic segments.

Data collection relied primarily on structured questionnaires, which included both closed-ended and Likert-scale statements aimed at assessing key variables such as convenience, security, time efficiency, website usability, and service reliability. Participants were asked to rate their level of agreement on a 5-point scale, ranging from "Strongly Disagree" to "Strongly Agree." In addition to the customer survey, informal interviews were conducted with employees from BDBL’s IT department, Loan Recovery division, and the MD’s office to gather contextual insights into the institution’s digital readiness, operational changes following digitization, and plans.

For secondary data, the study reviewed annual reports of BDBL, published manuals, and information available on the bank’s website. Academic articles and journals related to electronic banking and technology adoption were also referenced to provide a conceptual and theoretical framework (Saunders et al., 2007).

Data analysis was carried out using Microsoft Word and Excel. Descriptive statistics, particularly the mean score, were used to interpret patterns in the survey responses. The use of the Likert scale enabled the quantification of customer sentiment across a range of service attributes, which were then grouped thematically to facilitate structured analysis. This combination of qualitative insights and quantitative metrics provided a balanced approach for understanding how customers perceive online banking at BDBL and identifying potential areas for improvement.

RESULTS

This section presents and interprets the results derived from a structured survey conducted among 220 customers of Bangladesh Development Bank Limited (BDBL). The primary objective was to assess their perceptions of online banking services across various dimensions, including convenience, security, digital infrastructure, and service quality. The responses were gathered using a 5-point Likert scale and analyzed using descriptive statistics, primarily the mean score, which facilitated the identification of trends in user satisfaction and dissatisfaction. The findings are organized thematically, beginning with the demographic profile of respondents and followed by their perceptions of service levels.

Demographic Profile of Respondents

Table 1. Age Distribution of Respondents

Age Group (Years)	Frequency	Percentage (%)
21–30	29	13%
31–40	62	28%
41–50	90	41%
Above 50	39	18%
Total	220	100%

To begin with, the demographic profile of the respondents is crucial for contextualizing their feedback. As shown in Table 1, the majority of respondents fell into the age brackets of 31–40 years (28%) and 41–50 years (41%), indicating that middle-aged adults represent the dominant customer segment utilizing BDBL’s services. A smaller portion, 13%, was aged 21–30 years, indicating limited uptake among younger, more digitally native users. This trend implies that while mature customers accept BDBL’s services, there is an opportunity better to engage younger segments through targeted outreach and youth-oriented services.

Table 2. Occupation of Respondents

Occupation	Frequency	Percentage (%)
Service Holder	139	63%
Business Owner	77	35%
Retired	4	2%
Total	220	100%

In terms of occupation, as summarised in Table 2, 63% of the participants were service holders, 35% were business owners, and only 2% were retired individuals. This composition reinforces that most of BDBL’s clientele are actively employed and potentially more reliant on efficient banking systems for day-to-day financial transactions. Their feedback is particularly valuable for understanding the practical impact of digital banking on busy professionals.

Table 3. Monthly Frequency of Bank Visits

Frequency of Visits	Frequency	Percentage (%)
1–5 times	55	25%
6–10 times	84	38%
11–15 times	48	22%
More than 16 times	33	15%
Total	220	100%

Table 3 reports the monthly frequency of bank visits, which reveals that although BDBL has adopted online banking, a considerable number of customers (38%) still visit branches between 6 and 10 times per month. Another 25% visited only once or twice a month, while 22% visited 11–15 times. Interestingly, 15% of customers visited their bank more than 16 times a month. This suggests that while digital services exist, they may not yet be entirely replacing in-person interactions, possibly due to limited awareness, service gaps, or a lack of user confidence in the online system.

Table 4. Length of Customer Relationship with BDBL

Duration	Frequency	Percentage (%)
1–5 years	33	15%
5–10 years	51	23%
10–20 years	77	35%
More than 25 years	59	27%
Total	220	100%

Table 4 further shows that 35% of the respondents have been customers of BDBL for 10–20 years, and 27% have held accounts for over 25 years. This suggests that a significant portion of BDBL's clientele consists of long-term users with substantial banking experience. These customers are likely to provide meaningful insights into how the bank has evolved and how online services compare with traditional practices.

Customer Perception Ratings

The table below summarises the mean responses to 10 key statements regarding online banking services at BDBL.

Table 5. Mean Scores of Customer Perception Statements

No.	Statement	Mean Score	Interpretation
1	Internet banking is easier than traditional banking	4.95	Very Positive
2	Online banking saves time and energy	4.91	Very Positive
3	It has become easier to transact with any branch	4.81	Very Positive
4	BDBL should introduce ATM, debit, and credit card facilities	4.50	Very Positive
5	The procedure of online banking is not complicated	4.32	Positive
6	BDBL can attract more customers with modern policies and services	3.90	Positive
7	BDBL takes necessary precautions for secure transactions	3.64	Moderately Positive
8	I did not face server problems while using BDBL online services	3.23	Neutral
9	It is risky to do transactions via online banking	2.73	Moderately Negative
10	I get updated information from BDBL's website	2.40	Negative

Moving beyond demographics, the study evaluated customer perceptions across 10 key service statements. As detailed in Table 5, the most favourable response was to the statement "Internet banking is easier than traditional banking," which received an exceptionally high mean score of 4.95. This suggests that nearly all respondents strongly agree that digital banking enhances usability and reduces the complexity associated with branch-based services. Similarly, the statement "Online banking saves time and energy" received a score of 4.91, confirming that efficiency is a leading benefit as perceived by users.

The ease of transaction across any branch, facilitated through BDBL's Core Banking Solution (CBS), also received a very positive response with a mean score of 4.81. This reinforces the value of inter-branch operability as a convenience-enhancing feature. A mean score of 4.50 for the statement regarding the need for ATM, debit, and credit card facilities reflects customers' demand for expanded digital infrastructure. While CBS has enabled branch connectivity, the lack of automated self-service options remains a significant gap in the digital service spectrum.

The simplicity of online banking procedures was also recognized, with the statement "The procedure is not complicated" receiving a mean score of 4.32, indicating that customers generally find the system user-friendly. However, the perception that "BDBL can attract more customers through modern banking services" was rated slightly lower, with a mean of 3.90, implying cautious optimism about the bank's ability to appeal to a broader audience through modernization alone.

Security perceptions were mixed. The statement "BDBL takes all necessary precautions for secure online transactions" received a moderate mean score of 3.64, suggesting that while some customers are confident, others remain uncertain about the bank's security measures. Meanwhile, the statement "It is risky to do transactions via online banking"

had a mean score of 2.73, reflecting some residual fear or lack of confidence, though not overwhelming distrust. This duality highlights a clear need for better customer education and assurance regarding digital safety protocols.

Server reliability also received a lukewarm assessment. The statement "I did not face any server problems" scored a mean of 3.23, indicating that experiences are somewhat neutral, with occasional technical issues possibly disrupting user satisfaction. However, the most negatively rated aspect was information access, specifically the statement "I get updated information from BDBL's website," which received a low mean score of 2.40. This suggests that customers find the website outdated or insufficient for self-service needs, a severe limitation in the context of digital transformation.

Thematic Findings by Key Variables

Table 6. Summary of Perceptions by Service Attribute

Attribute	Related Statement(s)	Mean Score(s)	Interpretation
Convenience	1. Internet banking is easier than traditional banking	4.95	Very Positive
	3. Easier to transact via any branch	4.81	Very Positive
Time Efficiency	2. Saves time and energy	4.91	Very Positive
Security	7. BDBL takes precautions	3.64	Moderate
	9. Online banking is risky	2.73	Moderate Negative
Ease of Use	5. The procedure is not complicated	4.32	Positive
Reliability	8. No server issues	3.23	Neutral
Information Access	10. The website provides updated information	2.40	Negative
Demand for Features	4. ATM, debit, and credit card facilities required	4.50	Very Positive
Growth Potential	6. Can attract more customers with modern services	3.90	Positive

To further analyse service perception by theme, Table 6 categorises statements into relevant service attributes, including convenience, security, reliability, and demand for specific features. The highest scores were concentrated in convenience (4.95) and time efficiency (4.91), indicating intense satisfaction in these areas. In contrast, scores under information access (2.40) and system reliability (3.23) highlight existing weaknesses.

Employee Feedback Summary

Interviews with selected employees from the IT department, Loan Recovery division, and MD's Office of BDBL indicated internal support for digital transformation:

Table 7. Summary of Employee Responses

Topic	Summary of Employee Feedback
Implementation of CBS	Aids real-time transaction monitoring and fraud prevention
Service Efficiency	Reduces manual work, minimizes errors, and improves transaction speed
Satisfaction with Online Banking	High staff view online banking as essential for staying competitive
Future Plans	Rollout of ATM booths, debit and credit cards is underway
Risk Management	CBS enables better tracking and less fraudulent activity

In addition to customer feedback, internal insights were gathered from BDBL employees. Table 7 summarises their responses, revealing general satisfaction with the implementation of CBS. Employees reported that CBS had improved efficiency, reduced manual workload, and enhanced transaction monitoring. They also expressed optimism about upcoming services, including ATM installations and card facilities, viewing them as necessary for long-term competitiveness and fraud minimization.

Summary of Key Findings

Table 8. Overall Categorization of Mean Scores

Mean Range	Interpretation	Statements Covered
4.21 – 5.00	Very Positive	Statements 1, 2, 3, 4
3.41 – 4.20	Positive	Statements 5, 6
2.61 – 3.40	Moderate/Neutral	Statements 7, 8, 9
1.81 – 2.60	Negative	Statement 10

Finally, Table 8 categorizes all perception scores into four interpretive bands: very upbeat, positive, moderate/neutral, and negative. The findings reveal that most statements fall within the optimistic categories, especially those related to usability and time-saving features. Statements about risk, server issues, and website quality fall into the moderate or negative ranges, clearly identifying areas that need immediate improvement.

The findings of this study suggest that BDBL's customers are mainly satisfied with the convenience and efficiency offered by online banking. However, they also highlight important areas for development, including security assurance, website functionality, and expansion of digital infrastructure. The perceptions captured in this research present both affirmation of BDBL's progress and clear guidance for its digital roadmap ahead.

DISCUSSIONS

The findings of this study offer valuable insights into customers' perceptions of the online banking services provided by Bangladesh Development Bank Limited (BDBL). With a sample size of 220 respondents, the analysis revealed high satisfaction in key functional areas, including convenience, time efficiency, and usability. However, concerns remain about information accessibility, technological reliability, and the need for advanced digital services.

Alignment with Global Trends in E-Banking

The overwhelmingly positive responses to statements such as "*Internet banking is easier than traditional banking*" (Mean = 4.95) and "*Online banking saves time and energy*" (Mean = 4.91) support existing literature that highlights convenience and efficiency as the two most critical drivers of digital banking adoption (Karjaluo et al., 2002; Pikkarainen et al., 2004). Similar findings were reported by Kaleem and Ahmad (2008), who emphasised reduced transaction costs and time savings as significant e-banking advantages.

These benefits have contributed to the increasing preference among users for online banking channels over branch-based transactions—a shift anticipated by Kalakota and Whinston (1996) and reinforced by Gates's (2008) statement that "Banking is essential, banks are not," illustrating the gradual migration toward virtual banking environments.

Demand for Service Expansion

The strong agreement (Mean = 4.50) regarding the need for ATM booths and debit/credit card facilities underscores a significant expectation gap. While BDBL has successfully implemented Core Banking Solutions (CBS), customers now expect more sophisticated and autonomous service options. This trend aligns with the views of Singhal and Padhmanabhan (2008), who stated that the introduction of new technological tools can enhance customer satisfaction and long-term relationships.

Furthermore, respondents believe that BDBL could attract more customers by introducing modern banking policies and services (Mean = 3.90). This aligns with the findings of Bauer et al. (2005), who asserted that innovation and customer-focused service design are crucial for building trust and loyalty in an increasingly competitive banking environment.

Perceived Security and Risk

Security remains a moderately sensitive issue, with mixed perceptions observed. The statement "*It is risky to do transactions through online banking*" received a moderate score of 2.73, indicating cautious trust among users. While customers appear to acknowledge the bank's efforts in maintaining secure transactions (Mean = 3.64), this concern aligns with findings by Hua (2016), who linked users' confidence in online banking to website privacy policies and interface trustworthiness.

As Kaleem and Ahmad (2008) also identified, the potential for fraud and system vulnerability remains a barrier to full adoption unless it is addressed through effective communication and security protocols. Thus, BDBL must continue investing in visible risk mitigation efforts.

Website Usability and Communication Gaps

A notably low score (Mean = 2.40) was observed for the statement "*I get updated information on the BDBL website*," suggesting a significant limitation in the bank's digital communication channel. This is a critical concern, especially in a system that depends on information access for successful remote transactions. As emphasised by Cheung and Lee (2006), consumers expect banking websites to serve as reliable, real-time information hubs. A failure in this area not only affects user satisfaction but also undermines the overall effectiveness of online services.

Internal Perspectives and Operational Improvements

Feedback from bank employees revealed a positive attitude toward the implementation of CBS. Employees acknowledged improved fraud prevention, record-keeping, and efficiency, aligning with observations made regarding the performance-enhancing role of IT systems in banking. The employees also confirmed plans for future service expansion (e.g., ATMs, cards), validating customer demand and suggesting institutional readiness for further digitalisation.

Synthesis of Findings and Literature

To summarise, this study affirms the core findings of existing research:

- Convenience, accessibility, and time savings remain fundamental reasons for adopting e-banking (Laforet & Li, 2005; Thulani et al., 2009).
- Technological reliability, security assurances, and transparent information are crucial to sustaining usage (Hua, 2016; Ibrahim et al., 2006).
- There is a widening expectation gap in institutions that lack modern tools, such as ATMs or real-time websites (Hoque et al., 2019).

By aligning the internal capacity of BDBL with the needs and expectations of its users, the bank can enhance its competitiveness, customer loyalty, and long-term growth in Bangladesh's evolving digital banking ecosystem.

CONCLUSIONS

The present research examined customers' attitudes towards online banking services offered by Bangladesh Development Bank Limited (BDBL), a government-owned bank undergoing digital transformation. Drawing on a structured questionnaire survey of 220 customers and supplementary inputs from bank employees, the study probed major service characteristics, including convenience, time savings, digital infrastructure, website accessibility, and transaction security. The results revealed overwhelmingly positive perceptions of the convenience and time-benefit features of BDBL's online banking services, with mean ratings of 4.95 and 4.91, respectively. Customers also fully supported the flexibility and the simplicity of inter-branch transactions and electronic processes. However, there were serious concerns about the lack of ATM and card services, moderate confidence in securing transactions, and incompleteness in website functionalities.

One of the paper's strengths lies in its focus on a public sector bank—a segment that has not been adequately addressed in digital banking research. While research elsewhere has focused on foreign or private banks, this study puts into perspective how a state-owned institution is perceived within the context of technological disruption. Moreover, balancing customers' views with employees' perceptions provides a more comprehensive picture of the institution's readiness and areas of focus in delivering quality digital services.

Theoretically, the models of technology acceptance and service quality are substantiated by the study, which affirms that ease of use, usefulness, and trust individually have measurable effects on user satisfaction. From a managerial point of view, BDBL and other similar institutions should emphasise increasing digital infrastructure, such as ATM, debit, and credit card services, while simultaneously improving the functionality of the website and enhancing security features. Improving these functions not only improves customer experience but also makes public banks more competitive with their private-sector counterparts.

Though useful, the research is not without limitations. Convenience sampling, a non-probability approach, may limit the scope of generalising results to all BDBL customers. Additionally, the study only considered one bank and excluded comparative results from other private or state-owned banks in Bangladesh. Data gathering was limited to customer perception, and additional longitudinal data would provide more in-depth insights regarding behavioural changes over time.

Future researchers are recommended to conduct comparative studies across multiple public and private banks to examine the overall impact of digital banking in Bangladesh. Using advanced statistical methods, such as structural equation modelling (SEM), may provide further insight into the causality among variables, including trust, usability, and satisfaction. Future research can also investigate the impact of digital literacy and demographic variables on the adoption of online banking, enabling the development of more inclusive service strategies.

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