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Original Research Article

The Impact of Digital Economy on Bank Customers' Satisfaction in Bangladesh

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Abstract: The rapid expansion of the digital economy has significantly transformed the banking sector in emerging economies, particularly through the adoption of digital banking channels. In Bangladesh, commercial banks have increasingly deployed mobile and online banking applications, Unstructured Supplementary Service Data (USSD), Point of Sale (POS) services, and Automated Teller Machines (ATMs) to enhance service delivery. However, customer satisfaction outcomes remain inconsistent. This study examines the impact of key digital banking channels on bank customers' satisfaction in Bangladesh within a digital economy framework. A survey research design was employed, and primary data were collected from 372 bank customers across Dhaka, Chattogram, and Khulna divisions using structured questionnaires. Data were analysed using descriptive statistics and multiple regression analysis with SPSS version 25. The results reveal that mobile and online banking applications, USSD services, and ATM services have a positive and statistically significant effect on customer satisfaction. Conversely, POS services exhibit a significant negative relationship with customer satisfaction, indicating service reliability and operational challenges. Overall, the findings confirm that digital economy-driven banking channels significantly influence customer satisfaction in Bangladesh. The study provides practical implications for bank managers to improve digital service quality and for policymakers to strengthen regulatory frameworks that support sustainable digital banking and financial inclusion. This research contributes to the digital banking literature by offering an integrated assessment of multiple digital channels in an emerging economy context.

Keywords: Digital Economy, Digital Banking, Customer Satisfaction, Mobile Banking, USSD, ATM and Bangladesh.

INTRODUCTION

Customer satisfaction is a critical determinant of competitiveness and sustainability in the banking industry, particularly in emerging economies where rapid technological change is transforming service delivery models (Bashir *et al*., 2023; Datta, 2024). In Bangladesh, the banking sector has experienced accelerated digital transformation driven by increased internet penetration, mobile financial services expansion, and national initiatives aimed at promoting digital financial inclusion (Bangladesh Bank, 2022; Kabir & Hossain, 2023). As banks increasingly deploy digital banking channels such as mobile and online banking applications, Unstructured Supplementary Service Data (USSD), Point of Sale (POS) services, and Automated Teller Machines (ATMs) understanding their impact on customer satisfaction has become essential for long-term banking performance.

Despite substantial progress, customer engagement with digital banking platforms in Bangladesh remains uneven. Recent empirical evidence indicates that a large proportion of bank customers either do not regularly use digital banking services or report moderate satisfaction due to system unreliability, usability challenges, service interruptions, and cybersecurity concerns (BIBM, 2022; Hasan *et al*., 2023; Rouf *et al*., 2024). Prior studies highlight that while digital banking improves convenience and reduces transaction costs, service quality inconsistencies continue to weaken customer trust and satisfaction (Bashir *et al*., 2023; Jahan & Shahria, 2022).

Moreover, existing studies in Bangladesh largely examine individual digital banking channels in isolation, producing mixed and inconclusive findings. Limited empirical research has investigated the combined impact of multiple digital banking channels within a digital economy framework (Masum *et al*., 2022; Datta, 2024). Addressing this gap, the present study examines the impact of mobile and online banking applications, USSD services, POS systems, and ATMs on bank customers' satisfaction in Bangladesh.

Problem Statement

Although commercial banks in Bangladesh have invested heavily in digital banking infrastructure, customer satisfaction outcomes remain inconsistent. Reports indicate that approximately 70-75% of bank customers do not actively use digital banking services, while a considerable proportion of user's express dissatisfaction or neutral satisfaction due to transaction failures, application downtime, poor interface design, and security concerns (BIBM, 2022; Hasan *et al*., 2023). These challenges undermine customer trust, reduce adoption continuity, and limit the strategic benefits of digital banking investments.

Empirical findings on the relationship between digital banking and customer satisfaction in Bangladesh remain mixed. While some studies report positive effects in terms of convenience and efficiency, others identify technical inefficiencies and cybersecurity risks as significant barriers to satisfaction (Kabir *et al*., 2022; Alam & Noor, 2023). Furthermore, most studies focus on single digital channels rather than assessing the joint influence of multiple digital platforms, leaving a gap in understanding the holistic impact of the digital economy on customer satisfaction. This study seeks to address this gap by empirically examining the integrated effects of key digital banking channels on customer satisfaction in Bangladesh.

Objectives of the Study

The broad objective of this study is to examine the impact of digital economy-driven banking channels on bank customers' satisfaction in Bangladesh.

The specific objectives of the study are to examine:

i. The effect of mobile and online banking applications on customer satisfaction in the Bangladeshi banking sector.
ii. The effect of Unstructured Supplementary Service Data (USSD) based banking services on customer satisfaction in Bangladesh.
iii. The effect of Point of Sale (POS) services on customer satisfaction among bank customers in Bangladesh.
iv. The effect of Automated Teller Machine (ATM) services on customer satisfaction in Bangladesh.

Hypothesis

H1: Mobile & Online Banking Applications (MOB) have a positive effect on customer satisfaction.
H2: USSD-based banking services have a positive effect on customer satisfaction.
H3: POS services significantly affect customer satisfaction.
H4: ATM services have a positive effect on customer satisfaction.

LITERATURE REVIEW

Conceptual Review

Concept of Digital Economy

The digital economy is the global economic activity based on digital technologies, encompassing online connections, transactions, and services like e-commerce, digital banking, streaming, and AI, transforming traditional sectors by leveraging the internet, mobile tech, data, and connectivity to create new value, streamline processes, and reach customers globally. It's characterized by data-driven personalization, automation, and hyperconnectivity, fundamentally altering how businesses operate and people consume goods and services, shifting from physical to digital interactions. (https://www.techtarget.com/searchcio/definition/digital-economy; Oladele *et al*., 2021; Nwoke (2024) describes digital banking as a customer-centric approach to banking that leverages technology to simplify transactions, improve service delivery, and provide real-time access to financial services.

Concept of Customer Satisfaction

According to Oliver (2022) customer satisfaction is a customer's overall assessment of their experience with a service or product, based on what they expected versus what they actually received. For digital banking, this means looking at how satisfied people are with factors like how fast their transactions are, how easy the platform is to use, how secure they feel, and how accessible customer support is. Shariff, Abubakar, and Haruna (2025) describe customer satisfaction in banking as a reflection of how well the bank meets the customer's expectations in terms of the quality, convenience, and responsiveness of its services. Customer satisfaction is all about how happy customers are with the services or products they use. In banking, it refers to how well digital banking services meet the expectations of customers. Essentially, it's about whether customers feel their needs are being met when using things like mobile banking apps, internet banking, or ATMs.

Theoretical Review

This study review is anchored on three theories, namely: Technology Acceptance Model (TAM), and Customer Satisfaction Theory Each of these theories provides a unique lens through which to explore customer behaviour, expectations, and perceptions in the digital banking space.

The Technology Acceptance Model, developed by Fred Davis in 1989, this model explains how people adopt and use new technologies. At its core, TAM revolves around two key ideas: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived Usefulness is how much users believe the technology will improve their tasks or performance. While, Perceived Ease of Use is how effortless they believe using the technology will be.

Applied to digital economy in banking, TAM helps us understand how users in Bangladesh decide whether or not to embrace digital banking apps, USSD codes, and online platforms. If customers find these digital tools helpful and easy to use, they're more likely to adopt them and stick with them. As usage increases, so does the likelihood of satisfaction. In short, TAM shows us that the simpler and more beneficial the technology feels, the happier the customer becomes. However, Expectancy-Dis-confirmation theory; proposed by Richard L. Oliver in 1980, explains satisfaction through a very relatable concept: expectation versus reality. The theory states that when people get more than they expected, they're satisfied. When they get less, they're disappointed. Concerning digital economy in banking, if a customer expects a bank's digital platform to be fast, secure, and reliable, and it delivers on all counts, the result is satisfaction. But if otherwise that is slow, glitchy, or unsafe, it will lead to customers dissatisfaction.

Empirical Review

The empirical reviewed is based on digital platform employed by banks in Bangladesh aimed at bank customers satisfaction. For instance; Haruna *et al*., 2025 investigated the impact of mobile banking on customer satisfaction at selected deposit money banks (DMBs) in Bangladesh. The study employed a survey research design. Finding of the study revealed that mobile banking (MBB) has a significant positive influence on customer satisfaction.

Ukwubile and Onwe (2024) studied the relationship between electronic banking services and customer satisfaction in Bangladesh deposit money banks. The study employed a survey research design. The findings show that the service reliability of electronic banking has no significant impact on customer satisfaction. Godwin (2024) examined the relationship between financial technology and the business growth of Small and Medium Scale Enterprises (SMEs) in elected major cities of Bangladesh, including Dhaka, Chattogram, and Khulna, to capture regional variations in digital banking adoption and customer experiences. The study adopted a cross-sectional research design. Spearman's Rank Correlation and Partial Correlation. The findings of the study showed that a positive and significant relationship exists between financial technology innovation and business growth. Shariff, Abubakar and Usman (2024) examined the effect of electronic banking service quality on customer satisfaction in deposit money banks. The study methodology is based on the results of the previous studies, the study found that an automated teller machine (ATM) has a positive effect on customer satisfaction, and a point of sale (POS) also has a positive effect on customer satisfaction.

Yusuf and Ologunwa (2024) examined the effect of digital banking on customers' satisfaction among the deposit money banks in Bangladesh. The study employed a survey research design. The results showed that the deployment of various mobile and internet banking services increases customer satisfaction in the banking sector.

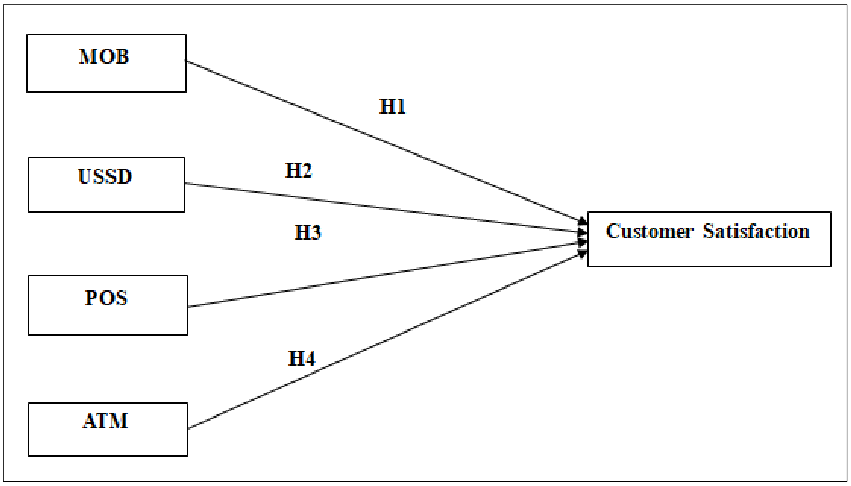
Abidemi *et al*., 2023 assessed digital banking as a stimulant of customers' satisfaction in Bangladeshi deposit money banks. The study adopted a survey research design. The result of the analysis revealed that digital banking is a positive and significant determinant of customer service quality in the Bangladeshi deposit money bank. Edim *et al*., 2023 examined electronic banking and customer satisfaction in commercial banks. The study adopted a cross-sectional survey research design. The findings revealed that the automated payment system, automated delivery channel, and automated information-sourcing service had significant positive effects on customer satisfaction in commercial banks.

Samuel *et al*., 2023 examine the effect of electronic banking (e-Banking) service quality on customer satisfaction in Bangladesh's emerging banking industry. Chi-square correlations and multinomial logistic regression were employed to analyse the quantitative data. The results confirmed a significant effect of the variables responsiveness, reliability, security and privacy, speed, and convenience on customer satisfaction. Similarly, customer satisfaction with the electronic banking service quality has a significant effect on customer loyalty. System availability, ease of use, and service charge, Ismaila and Akintola (2023) examined the effect of electronic banking on customer satisfaction in selected deposit money banks in Dhaka, Chattogram, and Khulna, Bangladesh. This study adopted a descriptive survey research design. Finding revealed that electronic banking has a significant effect on customer service security experience, customers' user friendliness experience, accessibility experience, and availability experience in Dhaka, Chattogram, and Khulna division. Ozuru *et al*., 2022 studied the nexus between digital service delivery and the business performance of deposit money banks in Dhaka division, Bangladesh. The study adopted an explanatory research design. The findings of the study showed that digital service delivery insignificantly relates to business performance. Amadi & Osagie (2020) investigated the relationship between Internet Banking Service Quality and Customer Retention in Deposit Money Banks in Dhaka division. The study adopted the quasi-experimental research design. The result also revealed that customer technology adoption positively influences the relationship between internet banking service quality and customer retention in deposit money banks in Dhaka Division, Bangladesh.

Asuquo & Ezekwe, (2020) studied the impact of electronic banking services on customers' satisfaction in selected Deposit Money Banks in Dhaka, Chittagong, Khulna Division, Bangladesh. A combination of descriptive and inferential statistics was employed as techniques for data analysis. The findings reveal that customers' dissatisfaction emanating from various complaints ranges from arbitrary debiting of customer accounts, non-availability of cash at the ATM, resolution of disputes on the electronic banking products and trapping of customer's card by the ATM etc. Joshua & Akintoye (2020) examined the impact of electronic banking on satisfaction of corporate bank customers in Bangladesh. The study adopted survey research designed through the use of structured questionnaire and the regression analysis was the statistical method adopted. The studied found that there is a significant relationship between digital banking and customers' satisfaction. Mbah *et al*., (2020) examine the impact of electronic banking on customer satisfaction in commercial banks in Dhaka, Chittagong, Khulna Division. Pearson Product Moment Correlation Techniques was employed for the study data analysis. The result shows that there is a negative relationship between point of sale and customer satisfaction.

Conceptual Framework

Consistent with the Technology Acceptance Model (TAM), the effectiveness of digital banking channels influences customer satisfaction through perceived usefulness and perceived ease of use. These underlying mechanisms help explain the strong relationship observed between digital banking adoption and customer satisfaction in this study.



Methodology

This study employed a survey research design. The study sourced primary data directly from bank customers on digital economy to describe and interpret the impact of digital economy has on bank customers satisfaction in Dhaka, Chattogram, and Khulna in Bangladesh. The target population for this study comprises the entire bank customers in the aforementioned division in Dhaka, Chattogram, and Khulna. However, due to a large number of unknown populations of digital economy, the sample size determination was based on infinite population by Godden (2004) as follows;

$$S = \frac{Z^2 P(1-P)}{C^2}$$

Where:
S = the sample size
P = Percentage of success
C = Confidence interval
Z = Confidence level

With a 95% level of confidence (corresponding value of 1.96), a confidence interval of 0.05(5%), and a Percentage of success is 50%,

The sample size is calculated thus:

$$S = \frac{\{(1.96)\}^2 x\ 0.5\ x\ 0.5}{(0.05)^2}$$

= 384.16 ≈ Three hundred and eighty-four (384) respondents are the target population. The sample size is estimated at 384.

Thereafter, the study adopted a purposive and random sampling technique to carry out this survey research. In the first stage, following the sample size of 384 determined, the sample size of 384 was then randomly distributed the to Three (3) division in Bangladesh namely; Dhaka, Chattogram, and Khulna. In the second stage, purposive sampling techniques were employed to administer the research instrument to the users of digital channels in banking industries.

Table 1: Combine Explanatory Variables Reliability Statistics

Cronbach's Alpha	N of Items
.983	5

Source: SPSS Statistics 25 Output from study data

The reliability test in Table 1 shows that all five (5) items, namely, Mobile online banking app (MOA), Unstructured Supplementary Service Data (USSD), Point of Sale (POS), Automatic Teller Machine (ATM) and consumer satisfaction (CS) used in this study meet the test of reliability, the Cronbach Alpha of 0.983 about 98 percent indicate that the instrument used to elicits the data and the content of the instrument are reliable. The data collected in this study is presented using appropriate tables, graphs, percentages, etc, while multiple regression analysis was used to test the research hypothesis using Statistical Package for Social Sciences (SPSS) version 25.

CS = f (MOB USD POS ATM)

CS = β0 + β1(MOB) +β2(USD) + β3(POS) + β4(ATM) + e

Where;

CS: Customer Satisfaction

MOB: Mobile Online Banking Application

USSD: Unstructured Supplementary Service Data

POS: Point of Sale

ATM: Automatic Teller Machine

e: a random variable or other unexplainable factors

In this model, the main parameters of interest are β1, β2, β3, and β4 in terms of sign and significance, and the data were measured on a five (5 Likert scale ranging from strongly agreed (SA) to strongly disagreed (SD).

Data Presentation and Analysis

Descriptive Analysis the data generated through the questionnaire were presented descriptively using frequencies, percentages, mean, and standard deviation.

Table 2: Analysis of Questionnaire Administered

Number of Questionnaires Administered	Number of Usable Retrieved Questionnaire	Percentage	Number of Unusable/ Not Retrieved Questionnaire	Percentage
384	372	97	12	3

Source: Author Computation (2025)

Table 2 presents the primary data used in this study. Three hundred eighty-four questionnaires were administered to the respondents; 372 (97%) questionnaires were correctly filled and returned, while 12 (3%) questionnaires were not returned or unusable for several reasons. However, 97% is a good percentage to work with, while the remaining 3% unturned and does not affect the outcome of the findings.

Analysis of Study Research Questions

This section presents an analysis of the descriptive statistics of each explanatory variable and dependent variable as reported in tables 3 to 7.

Table 3: Descriptive Statistics of Mobile Online Banking App (MOB)

Items	N	Minimum	Maximum	Mean	Std. Deviation
I preferred the Mobile online banking app (MOB) to other digital banking apps.	372	1	5	4.20	.890
I often use the Mobile online banking app (MOB).	372	1	5	4.23	.850
Mobile online banking app (MOB Gives Customers Satisfaction.	372	1	5	4.24	.893
Mobile Online Banking App (Mob) is Convenient, Fast, and Effective to use.	372	2	5	4.10	.898
Valid N (listwise).	**372**			**4.19**	

Source: Field survey, 2025

The result shows ground mean scores of 4.19. This is far above three, representing the mean of the range of scores (5, 4, 3, 2, and 1 for strongly agree, agree, undecided, disagree, and strongly disagree, respectively).

Table 4: Descriptive Statistics of Unstructured Supplementary Service Data (USSD)

Items	N	Minimum	Maximum	Mean	Std. Deviation
I preferred Unstructured Supplementary Service Data (USSD) to other digital banking services.	372	1	5	4.23	.886
I often use unstructured supplementary service data (USSD).	372	1	5	4.32	.874
Unstructured Supplementary Service data (USSD) is Convenient, Fast, and Effective to use.	372	1	5	4.24	.942
Unstructured Supplementary Service data (USSD) Gives Customers Satisfaction.	372	2	5	4.24	.942
Valid N (listwise).	**372**			**4.26**	

Source: Field survey, 2025

The result shows ground mean scores of 4.26. This is far above three, which represents the criterion mean of five-point Likert scale.

Table 5: Descriptive Statistics of Point of Sale (POS)

Items	N	Minimum	Maximum	Mean	Std. Deviation
I often use Point of Sale (POS).	372	1	5	4.10	.903
I preferred Point of Sale (POS) to other digital banking.	372	1	5	4.24	.897
Point of Sale (POS) is Convenient, Fast, and Effective to use.	372	1	5	4.22	.964
Point of Sale (POS) Gives Customer Satisfaction.	372	2	5	4.27	.951
Valid N (listwise)	**372**			**4.2**	

Source: Field survey, 2025

The result shows ground mean scores of 4.2. This is far above three, which represents the criterion mean of five-point Likert scale.

Table 6: Descriptive Statistics of Automated Teller Machine (ATM)

Items	N	Minimum	Maximum	Mean	Std. Deviation
I often use an Automated Teller Machine (ATM).	372	1	5	4.14	.917
I preferred the Automated Teller Machine (ATM) to other digital banking services.	372	1	5	3.89	1.164
Automated Teller Machine (ATM) is Convenient, Fast, and Effective to use.	372	1	5	4.10	1.091
Automated Teller Machine (ATM) Gives Customers Satisfaction.	372	2	5	4.10	1.091
Valid N (listwise)	**372**			**4.04**	

Source: Field survey, 2025

The result shows ground mean scores of 4.04 above criterion mean of 3.

Table 7: Descriptive Statistics of Consumer Satisfaction (CS)

Items	N	Minimum	Maximum	Mean	Std. Deviation
Customer Satisfaction Includes Timely Service Delivery.	372	1	5	4.20	.851
Customer Satisfaction Includes Convenient Service Delivery.	372	1	5	4.05	1.103
Customer Satisfaction Includes Effective Service Delivery.	372	1	5	4.06	1.095
Customer Satisfaction Includes Availability of Service	372	2	5	4.01	.996
Valid N (listwise)	**372**			**4.08**	

Source: Field survey, 2025

The result shows ground mean scores of 4.08. This is far above three, (3) which represents the criterion mean of five-point Likert scale.

Test of Hypotheses

The four hypotheses proposed in this study were empirically tested using multiple regression analysis at a 5% level of significance with the aid of the Statistical Package for the Social Sciences (SPSS) version 25. Customer satisfaction served as the dependent variable, while mobile and online banking applications, Unstructured Supplementary Service Data (USSD), Point of Sale (POS) services, and Automated Teller Machine (ATM) services were included as the independent variables. The decision rule for hypothesis testing was based on the probability value (p-value): the null hypothesis was rejected when the p-value was less than or equal to 0.05, indicating a statistically significant relationship, and accepted otherwise. The results of the multiple regression analysis, including model summary, analysis of variance, and coefficient estimates, are presented in Tables 8 to 11.

Table 8: Multiple Regression Analysis Variable Entered Variables Entered/Removed

Model	Variable Entered	Variable Removed	Method
1	MOB, USSD, POS, ATM	.	Enter

Source: SPSS Statistics 25
A. Dependent Variable: CS
B. All requested variables entered.

Table 8 presents the variables understudy. The explanatory variables in this model are Mobile online banking app (MOB), Unstructured Supplementary Service Data (USSD). Point of Sale (POS) and Automatic Teller Machine (ATM), which served as independent variables while, customer satisfaction (CS) serve as dependent variable. The entire variables specified in the model were captured.

Table 9: Multiple Regression Analysis Model Summary Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990	.740	.979	.14180

Source: SPSS Statistics 25
Predictors: (Constant), MOB, USSD, POS, ATM

Table 9 presents a summary of the multiple regression model, which provides the result of R, R^2, adjusted R^2, and the standard error of the estimate. This model summary is used to determine how well a regression model fits the data: The value of R is the multiple correlation coefficient, which is used to measure the quality of the prediction of the dependent variable; A value of 990 is about 99%, in this study, indicates a good level of prediction. The R^2 value, also called the coefficient of determination, is the proportion of variance in the dependent variable explained by the independent variables (technically, it is the proportion of variation accounted for by the regression model above and beyond the mean model). The R^2 value is 74 representing 74%, indicating variability in the dependent variable due to change in the independent variables. In other words, the study's independent variables explain approximately 74% variability of the dependent variable.

Generally, the model summary of this test indicates a high and positive correlation between the identified digital banking channels and customers satisfaction (R = 0.990). Also, the R^2 = 0.740 indicates that 74% of variation in the dependent variable (customers satisfaction) was explained by the independent variable (digital banking channels), while the remaining 26% can be explained outside the model.

Table 10: Multiple Regression Analysis ANOVA ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	355.230	4	88.807	4416.556	.000[a]
	Residual	7.380	367	.020		
	Total	**362.609**	**371**			

Source: SPSS Statistics 25

A. Dependent Variable: CS

B. Predictors: (Constant), MOB, USSD, POS, ATM

Table 10 presents multiple regression analysis of variance (ANOVA) tests used to determine the influence of independent variables on the dependent variable. The ANOVA result, which shows that F = 4416.556; P = 0.000 < 0.05, indicates that on the aggregate, the digital banking channels (MOB, USSD, POS, ATM) are statistically significant predictors of consumer satisfactions of money deposit banks customers in Dhaka, Chattogram, and Khulna in Bangladesh.

Table 11: Multiple Regression Analysis of the Coefficients

Model		Unstandardized Coefficients, (B)	Std. Error	Standardized Coefficients, Beta	T	Sig.
1	(Constant)	-.239	.042		-5.651	.000
	MOB	.864	.073	.769	11.798	.000
	USSD	.118	.050	.105	2.365	.019
	POS	-.498	.089	-.462	-5.608	.000
	ATM	.559	.039	.587	14.334	.000

Source: SPSS Statistics 25

A. Dependent Variable: CS

Mathematically; the model estimation is: CS = b0 + b1MOB1 + b2USSD2 + b3POS + b4ATM4

CS = -.239 + .864b1 + .1188b2 + -.498b3 + .559b4

T = [-5.651] [11.798] [2.365] [-5.608] [14.334]

Sig = (.000) (.000) (.019) (.000) (.000)

The Coefficients indicate how much the dependent variable varies with each independent variable when all other independent variables are held constant. Given the calculated t-values and significant values, the result revealed that at 5% significance, the explanatory variables are statistically significant. The Coefficient of fixed variable, that is, constant (C), also known as the intercept, is the value of customers satisfaction (CS) when other independent variables have a value of zero is -.239 is statically significant with a probability value of 0.00 which is less than 0.05 level of significance i.e., at 5%. This result suggests that about 23.9% of changes or declines in CS is associated with other factors not explained by any of the explanatory variables stated in the model. The result shows that Mobile online banking app with a coefficient value of (β = .864; t =11.798; p = 0.000 < 0.05) indicates that a one percent increase in a Mobile online banking app affects 86.4% positive change in a customer satisfaction This implies that Mobile online banking is a statistically significant predictor of customer satisfaction. Therefore, we reject the null hypothesis, which states, "Digital economy" via Mobile online banking app does not have any significant impact on bank customer satisfaction. Hence, Digital economy via mobile online banking app significantly affects customer satisfaction positively.

The result shows that Unstructured Supplementary Service Data with a coefficient value of (β = .118; t =2.365; p = 0.019 < 0.05) indicates that a one percent increase in Unstructured Supplementary Service Data affects about 12% positive change in a customer satisfaction This implies that Unstructured Supplementary Service Data is a statistically significant predictor of customer satisfaction Therefore, we reject the null hypothesis, which states that Unstructured Supplementary Service Data does not significantly impact bank customer satisfaction in Bangladesh". The result shows that a Point of Sale (POS) with a coefficient value of (β = -0.498; t = -5.608; p = 0.000 < 0.05) indicates that a one percent increase in Point of Sale (POS) affects 49.8% about 50% decline in a customer satisfaction. This implies that Point of Sale (POS) is a statistically significant predictor of customer satisfaction. Therefore, we reject the null hypothesis, which states otherwise.

The result shows that Automatic Teller Machine (ATM) with a coefficient value of (β = 0. 559; t = 14.334; p = 0.000 < 0.05) indicates that a one percent increase in Automatic Teller Machine (ATM) effects 55.9%, approximately 56% positive change in a customer satisfaction. This implies that Automatic Teller Machine (ATM). is a statistically significant predictor of customer satisfaction. Therefore, we reject the null hypothesis, which states, "Automatic Teller Machine (ATM) does not have any significant impact on customer satisfaction in Bangladesh. The foregoing findings suggest that digital economy have positive and statistically significant impact on bank customers satisfaction.

CONCLUSION AND PRACTICAL IMPLICATIONS

This study concludes that the digital economy has a substantial and statistically significant impact on bank customers' satisfaction in Bangladesh. By empirically examining multiple digital banking channels simultaneously, the study extends prior research that often focused on single platforms in isolation. The evidence indicates that well-designed digital banking channels enhance service efficiency, convenience, and accessibility, thereby strengthening customer satisfaction and trust in the banking system.

From a managerial perspective, the findings suggest that commercial banks should prioritize continuous improvement of digital banking platforms by investing in robust infrastructure, intuitive interface design, and advanced cybersecurity mechanisms. Special attention should be given to improving POS service reliability and transparency, as weaknesses in this channel may negatively affect overall customer satisfaction.

From a policy standpoint, regulators such as Bangladesh Bank should strengthen digital banking regulations, promote interoperability among digital platforms, and encourage industry-wide cybersecurity standards. Enhancing digital literacy programs will also help customers maximize the benefits of digital financial services. Collectively, these efforts will contribute to sustainable digital banking growth, improved customer satisfaction, and broader financial inclusion in Bangladesh.

Limitations & Future Research

Despite its contributions, this study has several limitations that should be acknowledged. First, the reliance on cross-sectional survey data restricts the ability to draw causal inferences between digital banking channels and customer satisfaction. Future studies may employ longitudinal or experimental research designs to better capture dynamic changes in customer perceptions over time.

Second, the study relies on self-reported measures, which may be subject to response bias. Incorporating objective usage data obtained directly from banks could enhance measurement accuracy. Third, while TAM was used as a theoretical foundation, perceived usefulness and perceived ease of use were not directly measured. Future research should explicitly model these constructs as mediators to strengthen theoretical rigor.

Additionally, future studies may expand the geographical scope beyond major urban divisions to include rural and semi-urban regions, where digital banking adoption patterns may differ significantly. Comparative studies across South Asian economies would also provide valuable insights into regional similarities and contextual differences in digital banking satisfaction.

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