



A Comparative Analysis of Customer Satisfaction with E-Banking in Public, Private, and Foreign Banks in Afghanistan

Author * **Karimullah Amani**
 Email karimullahamani5@gmail.com
 Orcid <https://orcid.org/0009-0003-6369-6543>

Author **Ajmal Arian**
 Email Ajmalarian1@gmail.com
 Orcid <https://orcid.org/0000-0001-7305-3910>

Abstract

This study investigates customer satisfaction with electronic banking (e-banking) services through a comparative analysis of public, private, and foreign banks in Afghanistan. Data were analyzed using descriptive and non-parametric statistical techniques to ensure robust findings. Primary data were collected from 300 bank customers using a structured questionnaire, and the reliability of the instrument was confirmed by a Cronbach's Alpha of 0.931. Descriptive analysis shows generally high levels of satisfaction across all banking sectors, particularly regarding transaction security, usability, and time efficiency. Inferential analysis using the Kruskal-Wallis H test ($\chi^2 = 2.475$, $p = 0.290$) and Chi-square test ($\chi^2 = 14.362$, $p = 0.073$) reveals no statistically significant difference in overall customer satisfaction among the three types of banks. Based on the results, banks are advised to enhance security and system reliability, improve user-friendly interfaces, and provide awareness programs and prompt customer support to maintain and increase satisfaction. The findings indicate that e-banking satisfaction in Afghanistan is relatively uniform across banking sectors, with variations occurring mainly at the service-attribute level rather than at the institutional level.

Keywords: Electronic Banking, Satisfaction, Afghanistan, Private Banks, Public Banks, Foreign Banks, Non-Parametric Tests

بررسی تطبیقی رضایت مشتریان از خدمات بانکداری الکترونیکی در بانک‌های دولتی، خصوصی و خارجی در افغانستان

کریم الله امانی

محصل برنامه ماستری امور مالی و بانکی، پوهنچى اقتصاد، پوهنتون کابل

karimullahamani5@gmail.com

<https://orcid.org/0009-0003-6369-6543>

نویسنده

نشانی برقی

نشانی ارکاید

پوهنمئل دکتور اجمل آربین

دیارتمنت اقتصاد ملی، پوهنچى اقتصاد، پوهنتون کابل

Ajmalarian1@gmail.com

<https://orcid.org/0000-0001-7305-3910>

* نویسنده

نشانی برقی

نشانی ارکاید

چکیده

این مطالعه به بررسی رضایت مشتریان از خدمات بانکداری الکترونیکی از طریق تحلیل مقایسه‌ای بانک‌های دولتی، خصوصی و خارجی در افغانستان می‌پردازد. داده‌ها با استفاده از تکنیک‌های آماری توصیفی و غیر پارامتریک تحلیل شدند تا اطمینان از صحت و اعتبار یافته‌ها حاصل شود. داده‌های اولیه از ۳۰۰ مشتری بانک از طریق پرسشنامه ساختاریافته جمع‌آوری شد و پایایی ابزار با ضریب آلفای کرونباخ ۰.۹۳۱ تأیید گردید. تحلیل توصیفی نشان می‌دهد که سطح رضایت در تمامی بخش‌های بانکی به‌طور کلی بالا است، به ویژه در ابعاد امنیت تراکنش‌ها، قابلیت استفاده و صرفه‌جویی در زمان. تحلیل استنباطی با استفاده از آزمون‌های کروسکال والس اچ تست (χ^2) = 2.475، $p = 0.290$ و مربع کای ($\chi^2 = 14.362$)، $p = 0.073$ نشان داد که تفاوت معناداری در رضایت کلی مشتریان بین سه نوع بانک وجود ندارد. یافته‌ها نشان می‌دهد که رضایت از بانکداری الکترونیک در افغانستان تقریباً در تمامی بخش‌های بانکی یکنواخت است و تفاوت‌ها عمدتاً در سطح ویژگی‌های خدماتی و نه در سطح مؤسسه‌ای مشاهده می‌شوند. بر اساس نتایج، توصیه می‌شود بانک‌ها با ارتقای امنیت و قابلیت اطمینان سامانه‌ها، بهبود رابط‌های کاربر پسند و ارائه برنامه‌های آگاهی بخشی و پشتیبانی سریع مشتریان، رضایت کاربران را حفظ و افزایش دهند.

کلید واژه‌ها: بانکداری الکترونیکی، رضایت، افغانستان، بانک‌های خصوصی، بانک‌های دولتی، بانک‌های خارجی

Introduction

The term “Electronic Banking” or “Internet banking” is referred to as a remote banking service, provided by the authorized banks, or their representatives through devices operated either under the bank’s direct control or management or under the outsourcing agreement (Khan, 2017). E-Banking conducts its operations through many channels. The delivery channels include direct dial-up connections, private networks, public networks etc., and the devices include telephone, Personal Computers including the Automated Teller Machines, etc. With the popularity of PCs, easy access to Internet and World Wide Web (WWW), Internet is increasingly utilized by banks as a channel for receiving instructions and delivering their products and services to their customers (Bendigeri, 2014). Without technology banking industry has remained static and rigid over many decades, but with the emergence of technology the banking industry of the world experienced rapid growth and development abruptly. In recent years the rapid growth of information technologies and techniques, specifically in banking sector, has led to drastic changes and brought many facilities in banking services. E-banking has not only connected people with faster banking services, but also provided people with convenient process of conducting the banking affairs (Gichuki and Jagongo, 2018).

The rapid advancement of information and communication technologies has significantly transformed the global banking industry, leading to the widespread adoption of electronic banking (e-banking) services. E-banking enables customers to perform a wide range of financial transactions electronically, including balance inquiries, fund transfers, bill payments, and account management, without the need for physical presence at bank branches. As banking services increasingly migrate to digital platforms, customer satisfaction has emerged as a critical determinant of the success, acceptance, and sustainability of e-banking systems (Toor et al., 2022). Satisfied customers are more likely to continue using electronic services, demonstrate loyalty, and recommend banking services to others, thereby enhancing institutional performance and competitiveness.

Customer satisfaction in the context of e-banking is a multidimensional construct that reflects customers’ evaluations of service quality, system usability, security, responsiveness, cost efficiency, and reliability of electronic services. Prior empirical studies consistently highlight that factors such as ease of use, perceived security, transaction accuracy, prompt service delivery,

and effective customer support play a decisive role in shaping customers' satisfaction levels with e-banking services (Altobishi et al., 2023; AlHaliq & AlMuhirat, 2023). Consequently, banks that invest in robust digital infrastructure and customer-oriented service strategies are better positioned to meet customer expectations and gain a competitive advantage in the financial market.

In developing and post-conflict economies, the role of e-banking is particularly important, as digital financial services can enhance financial inclusion, reduce transaction costs, and improve access to banking services for geographically dispersed populations. Afghanistan represents a unique and underexplored context in this regard. Over the past decade, the Afghan banking sector has experienced gradual technological adoption, with public, private, and foreign banks introducing various forms of e-banking services despite infrastructural, regulatory, and security challenges. Existing research indicates that Afghan bank customers increasingly rely on electronic banking services, and their satisfaction is influenced by factors such as trust, system reliability, and service responsiveness (Amiri, 2022). However, empirical evidence on how satisfaction levels differ across banking sectors remains limited.

Moreover, the coexistence of public, private, and foreign banks within the Afghan financial system provides a valuable opportunity for comparative analysis. Each banking sector operates under distinct ownership structures, management practices, and technological capabilities, which may result in variations in e-banking service quality and customer satisfaction outcomes. While international literature has extensively examined customer satisfaction with e-banking in various countries, comparative studies focusing on sectoral differences in fragile and emerging economies such as Afghanistan are scarce (Toor et al., 2022; Altobishi et al., 2023).

Against this backdrop, the present study seeks to conduct a comparative analysis of customer satisfaction with e-banking services across public, private, and foreign banks in Afghanistan. By empirically examining satisfaction levels and identifying sectoral similarities and differences, this research contributes to the existing literature on digital banking and customer satisfaction in developing economies. Furthermore, the findings offer practical implications for bank managers and policymakers aiming to enhance the effectiveness, reliability, and customer orientation of e-banking services in Afghanistan.

Problem Statement

Electronic banking (e-banking) has fundamentally reshaped the delivery of financial services by enabling customers to conduct transactions and access banking services seamlessly through digital platforms. Globally, e-banking has been linked to improved service efficiency, reduced transaction costs, enhanced convenience, and expanded financial inclusion (Sharma, 2011; Toor et al., 2022). These benefits have made e-banking a strategic priority for banks seeking to satisfy increasingly sophisticated customer expectations and to maintain competitive differentiation in a rapidly digitizing financial landscape (Altobishi et al., 2023). As a result, customer satisfaction with e-banking has become a vital performance indicator that reflects both the effectiveness of digital services and the extent to which banks meet users' needs and preferences (AlHaliq & AlMuhirat, 2023).

Customer satisfaction with e-banking is a multidimensional construct shaped by service quality dimensions such as reliability, ease of use, system security, responsiveness, and cost efficiency (Sharma, 2011). Research suggests that when e-banking platforms deliver high reliability and secure transactions, customers are more likely to express satisfaction and loyalty, which in turn strengthens banks' market positioning (Toor et al., 2022). However, variations in technological infrastructure, management practices, and resource allocation can lead to significant differences in service quality and customer satisfaction outcomes across different banking institutions (Altobishi et al., 2023).

In emerging and post-conflict economies such as Afghanistan, the adoption of e-banking presents both opportunities and challenges. On the one hand, digital banking services have the potential to enhance financial accessibility for underserved populations, reduce dependency on physical branches, and modernize the banking sector. On the other hand, Afghanistan's unique socio-economic environment-characterized by limited technological infrastructure, regulatory constraints, and varying levels of institutional capacity-introduces complexity to the provision of e-banking services. Preliminary studies within the Afghan context indicate that customer satisfaction with e-banking is influenced by trust, perceived security, and service responsiveness (Amiri, 2022). However, these studies often focus on single determinants or specific banking sectors, limiting a

comprehensive understanding of how satisfaction levels compare across different types of banks.

Furthermore, while the international literature underscores the importance of sectoral comparisons in understanding e-banking satisfaction- particularly between public, private, and foreign banks (AlHaliq & AlMuhirat, 2023) -such comparative research remains scarce in the Afghan banking environment. This gap in the literature is significant because public, private, and foreign banks operate under different ownership structures, management strategies, and technological capabilities, all of which can influence the delivery and perceived quality of e-banking services. Without empirical evidence on sectoral differences in customer satisfaction, banking administrators and policymakers lack the necessary insights to design targeted interventions that improve service quality and customer experience across the banking system.

Therefore, addressing this research gap is essential for advancing both academic understanding and practical application. This study aims to provide a comparative analysis of customer satisfaction with e-banking services across public, private, and foreign banks in Afghanistan, thereby filling a notable deficiency in the existing literature. By assessing sectoral differences in satisfaction levels and identifying key areas for improvement, this research not only contributes to the broader field of digital banking studies in emerging economies but also offers actionable insights for enhancing the effectiveness and customer focus of e-banking services in Afghanistan.

Research Questions

Main Question :Is there a statistically significant difference in customer satisfaction with e-banking among public, private, and foreign banks?

Sub- Research Questions

1. Is there a statistically significant association between the type of bank and customer satisfaction with e-banking services?
2. How does customer satisfaction vary across key e-banking service dimensions?

Research Significance

This study is significant because it provides a comparative analysis of customer satisfaction with e-banking services across public, private, and foreign banks in Afghanistan. As the banking sector in Afghanistan is gradually expanding its digital services, understanding how customers perceive and evaluate e-banking services is essential for improving service quality and

strengthening customer relationships. The findings of this research can help bank managers and policymakers identify differences in customer satisfaction among various types of banks and recognize key areas that require improvement.

Research Objectives

Main Objective :To assess the overall level of customer satisfaction with e-banking services in Afghanistan.

Sub-Research Objectives

1. To compare customer satisfaction with e-banking services across public, private, and foreign banks in Afghanistan.
2. To examine whether the type of bank is associated with differences in customer satisfaction with e-banking services.
3. To analyze customer satisfaction across key e-banking service dimensions.

Literature Review

Electronic banking (e-banking) refers to the provision of banking products and services through electronic channels, including internet banking platforms, mobile banking applications, automated teller machines (ATMs), and other digital interfaces (Daniel, 1999; Singh & Srivastava, 2018). This form of banking allows customers to conduct financial transactions remotely, thereby enhancing convenience, reducing operational and transaction costs, and minimizing dependence on physical bank branches (Aladwani, 2001; Pikkarainen et al., 2004).

From a theoretical standpoint, e-banking represents a fundamental shift toward technology-driven service delivery, where factors such as system reliability, accessibility, user-friendliness, and transaction security serve as critical determinants of perceived service quality and effectiveness (Aladwani, 2001; Yoon & Steege, 2013). Core e-banking functionalities-including balance inquiries, fund transfers, ATM services, bill payments, and online customer support-form the basis of customer evaluations and influence overall satisfaction and loyalty (Pikkarainen et al., 2004; Boateng et al., 2016).

Empirical studies indicate that the adoption and effective use of e-banking enhances operational efficiency, reduces manual errors, and improves customer experience, particularly in banking systems undergoing digital transformation (Yoon & Steege, 2013; Amin, 2007). In developing economies, e-banking is also considered a strategic tool for financial inclusion, enabling wider access to banking services for underserved populations (Boateng et al., 2016; Demirgüç-Kunt et al., 2018). However, the success of

e-banking depends largely on customers' perceptions of service reliability, security, ease of use, and responsiveness, as these factors directly affect trust and willingness to adopt digital financial services (Gefen et al., 2003; Rahi & Ghani, 2016).

Moreover, e-banking adoption is influenced by institutional characteristics such as type of bank (public, private, or foreign), regulatory frameworks, and the level of digital literacy among customers (Yadav, Moolchandani & Saini, 2024). Research suggests that private banks often outperform public banks in operational efficiency, while public banks are perceived to be more secure due to established reputations and government backing (Dua, 2025; Hoang & Nguyen, 2024; Angu & Gupata, 2024). Foreign banks may offer innovative services but sometimes face challenges in local customer trust and digital accessibility (Tandon, Goel & Bishnoi, 2016).

Customer satisfaction is a fundamental concept in service marketing and banking research, representing a customer's overall evaluation of a service based on the comparison between prior expectations and perceived performance (Oliver, 1980). In the context of electronic banking (e-banking), satisfaction reflects how users perceive efficiency, usability, security, responsiveness, and overall service quality of digital banking platforms (Liao & Cheung, 2008; Pikkarainen et al., 2004). Customers' satisfaction is crucial, as it not only affects their continued use of services but also influences loyalty and positive word-of-mouth promotion (Davis, 1989; Bhattacharjee, 2001).

The Expectation-Confirmation Theory (ECT) provides a key theoretical basis for understanding satisfaction. According to ECT, satisfaction arises when the perceived performance of a service meets or exceeds customer expectations (Oliver, 1980). Applied to e-banking, customers form expectations regarding transaction accuracy, system availability, response speed, and security. When these expectations are confirmed, satisfaction increases, reinforcing continued usage intentions (Bhattacharjee, 2001).

Complementing this perspective, the Technology Acceptance Model (TAM) emphasizes that perceived usefulness and perceived ease of use are primary determinants of user acceptance of technology-based services (Davis, 1989). In e-banking contexts, perceived usefulness relates to time-saving, operational efficiency, and convenience, whereas perceived ease of use concerns intuitive navigation, simple transaction processes, and minimal learning effort. Empirical studies consistently indicate that these two factors strongly influence customer satisfaction

across diverse banking environments (Pikkarainen et al., 2004; Cheng et al., 2006; Al-Qirim, 2007).

Furthermore, the E-Service Quality (E-SQ) framework highlights reliability, responsiveness, security, and quality of information as critical drivers of satisfaction in electronic service settings (Zeithaml et al., 2002; Parasuraman et al., 2005). Security, in particular, is a decisive factor in e-banking, as concerns over fraud or privacy can directly reduce trust and satisfaction (Yousafzai et al., 2003; Boateng et al., 2016). In developing countries, including Afghanistan, low digital literacy and infrastructural limitations amplify users' sensitivity to system reliability and security, making satisfaction contingent on both technological and contextual factors (Aladwani, 2001).

Empirical studies further illustrate these dynamics. Pikkarainen et al. (2004) found that usability, system reliability, and security were the strongest predictors of online banking satisfaction in Finland, while Cheng et al. (2006) highlighted responsiveness and ease of use as significant determinants in Hong Kong banks. Al-Qirim (2007) reported that trust, perceived usefulness, and information quality drive satisfaction in Middle Eastern and New Zealand banking contexts. Riquelme and Rios (2010) confirmed that in Latin America, satisfaction correlates with both technology acceptance constructs and service quality dimensions. These findings collectively underscore that satisfaction is a multidimensional construct shaped by both customer expectations and service delivery attributes.

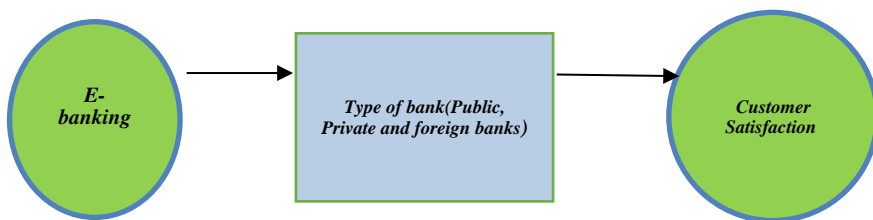
In the context of Afghanistan, satisfaction is influenced by demographic factors such as age, education, and income, as well as by the type of bank-public, private, or foreign (Karimi, 2018; Boateng et al., 2016). Understanding these determinants is essential for banks to design targeted awareness programs, improve service quality, and enhance customer trust, ultimately fostering broader adoption of e-banking services.

A substantial body of empirical research demonstrates that customer satisfaction with e-banking is a multidimensional construct, influenced by both technological and service-related factors. Core determinants consistently identified in the literature include service quality, transaction security, responsiveness to customer queries, system usability, cost efficiency, and ATM functionality (Al-Hawari et al., 2005; Singh, 2019). These dimensions collectively shape the overall perception of e-banking services and determine customers' willingness to continue using digital platforms.

Reliable electronic fund transfers, accurate balance enquiry systems, and the provision of sufficient and clear information are crucial in shaping satisfaction (Liao & Cheung, 2008; Saleh et al., 2025). Customers tend to evaluate e-banking platforms based not only on functional performance but also on how effectively these services meet their expectations in terms of accuracy, speed, and convenience. Security-related factors, including transaction safety, privacy, and fraud prevention mechanisms, are particularly critical, as they build trust and confidence, which in turn enhance overall satisfaction (Yousafzai et al., 2003; Boateng et al., 2016). Responsiveness through electronic communication channels—such as prompt email replies, chat support, or automated notifications—also plays a significant role in shaping satisfaction perceptions (Gerrard & Cunningham, 2003). Similarly, efficient ATM services, including ease of cash withdrawal, fund availability, and proper functioning, positively influence the user experience and convenience of e-banking (Pikkarainen et al., 2004).

In addition, cost efficiency and time-saving attributes are repeatedly shown to be important drivers of satisfaction, particularly in competitive banking environments where customers compare digital services across different institutions (Al-Hawari et al., 2005). Customers are more satisfied when e-banking platforms reduce transaction costs, save time, and minimize the need for physical branch visits. This is especially relevant in developing countries, where access to banking infrastructure may be limited, making digital channels critical for financial inclusion (Boateng et al., 2016).

Theoretical Model



Research Methodology

This study adopts a quantitative, descriptive-comparative cross-sectional design to examine customer satisfaction with electronic banking services across public, private, and foreign banks in Afghanistan. The design enables systematic comparison of satisfaction levels among banking sectors at a single point in time.

Population and Sampling

The target population consists of customers using e-banking services in selected public, private, and foreign banks operating in Afghanistan. Due to the unavailability of precise customer population data, a non-probability stratified convenience sampling approach was employed. The sample was divided into three strata based on bank type, and 300 respondents were selected, comprising 100 customers from each banking sector, ensuring balanced sectoral representation for comparative analysis.

Data Collection Instrument

Primary data were collected using a structured questionnaire adapted from established and validated e-banking satisfaction instruments. The questionnaire focused exclusively on customer satisfaction with e-banking services, covering aspects such as usability, security, service efficiency, information adequacy, and ATM functionality. Responses were measured on a five-point Likert scale. Content validity was ensured through expert review, and internal consistency reliability was confirmed using Cronbach's Alpha ($\alpha = 0.931$), indicating excellent reliability of the satisfaction scale.

Data Analysis Techniques

Data analysis was conducted using SPSS. Descriptive statistics (median and mode) were used to summarize satisfaction levels, as the data were ordinal. Normality tests indicated non-normal distribution; therefore, non-parametric statistical methods were applied. The Kruskal-Wallis H test was used to compare customer satisfaction across the three banking sectors.

Results & Discussion

This section presents the general characteristics of the respondents who participated in the study. Understanding the demographic profile is essential for describing the sample population, though no assumptions are made regarding its influence on e-banking satisfaction or other study outcomes.

Gender of Respondents

The first demographic variable considered is gender. The distribution of respondents by gender provides an overview of the sample composition. Detailed information is presented in Table 1.

Table1: Gender of the respondents

Type	Gender	
	Frequency	Percent
Male	202	67.3
Female	98	32.7
Total	300	100.0

Source: Researchers' findings

As shown in Table 1, the sample includes both male and female respondents, with males representing the majority.

Age of Respondents

Age provides a general overview of the participants' distribution across different age groups. Details are presented in Table 2.

Table2: Age of the respondents

Age groups	Frequency	Percent
18-25 years	105	35.0
26-35 years	173	57.7
36-45 years	18	6.0
46-60 years	4	1.3
Total	300	100.0

Source: Researchers' findings

As shown in Table 2, the majority of respondents are between 26–35 years, followed by the 18–25 years group. Older age groups are less represented. This information is provided purely for descriptive purposes.

Education of the Respondents

Education level describes the participants highest completed academic qualifications. Full details are in Table 3.

Table3: Educational Level of the respondents

Level of Education	Frequency	Percent
School Graduate	40	13.3
Diploma	30	10.0
Bachelor	194	64.7
Master	34	11.3
PhD	2	0.7
Total	300	100.0

Source: Researchers' findings

Table 3 indicates that most respondents hold a Bachelor's degree, with smaller numbers of school graduates, diploma holders, and postgraduate participants.

Occupation of the Respondents

Occupation provides an overview of the respondents' employment status. Complete details are given in Table 4.

Table4: Occupation of the respondents

Occupation	Frequency	Percent
Public sector's employee	45	15.0
Private sector's employee	138	46.0
Businessman	15	5.0

Jobless	102	34.0
Total	300	100.0

Source: Researchers' findings

As shown in Table 4, most respondents are employed in the private sector, followed by the jobless group. Fewer participants are public sector employees or businessmen.

Descriptive statistics of customers' satisfaction with E-banking

Customer satisfaction is a key indicator of the effectiveness and acceptance of e-banking services, reflecting customers' perceptions of service quality, usability, and efficiency. A descriptive comparison of satisfaction across public, private, and foreign banks provides insight into how well each banking sector meets customer expectations in Afghanistan. Table 5 presents the median and mode values of customer responses across the three banking sectors.

Statements	Public bank		Private bank		Foreign bank	
	Median	Mode	Median	Mode	Median	Mode
Balance Enquiry	4.00	4	4.00	4	4.00	4
Electronic transfer of funds	4.00	4	4.00	4	4.00	4
User-friendly of E-banking	4.00	4	4.00	4	4.00	4
Security of transaction is high	5.00	5	4.00	4	3.00	3
Promptness in attending given Answer and Quarries	4.00	4	3.00	2	4.00	4
Adequacy of information provided by bank	4.00	4	4.00	4	4.00	4
Give prompt responses to requests by e-mail or other means	5.00	4	5.00	5	4.00	3
Access to the bank by telephone	4.00	4	4.00	4	4.00	4
Saves time	4.00	4	4.00	4	4.00	4
Low cost and minimum resources	4.00	4	5.00	5	4.00	4

Safety of transaction	4.00	4	4.00	4	4.00	4
Easy cash withdrawal	2.00	2	4.00	4	4.00	4
Proper working of ATMs	4.00	4	4.00	4	4.00	4
Sufficiency of fund in ATMs	4.00	4	5.00	5	4.00	4
Full-fledged safety measures	3.00	4	4.00	4	4.00	4
Cash depositing Facility	4.00	4	3.00	5	3.00	2
Service provided by E-Banking is better than expectation	3.00	4	4.00	4	4.00	4

Table5: Descriptive statistics of customers' satisfaction dimensions

(1= *Highly Dissatisfied*, 2= *Dissatisfied*, 3= *Neutral*, 4= *Satisfied*, 5= *Highly Satisfied*)

The descriptive results show generally high customer satisfaction with e-banking services across public, private, and foreign banks in Afghanistan. Core services such as balance enquiry, fund transfers, user-friendliness, information adequacy, time-saving, and ATM functionality consistently record a median and mode of 4.00 across all bank types, indicating positive customer perceptions. Differences are mainly observed in security and operational aspects: public banks report the highest satisfaction with transaction security (median = 5.00), private banks perform better in cost efficiency and ATM fund sufficiency (median = 5.00), while foreign banks exhibit moderate but stable satisfaction levels across most indicators. Overall, the results suggest broadly favorable satisfaction with sector-specific strengths rather than substantial disparities.

Hypothesis Testing for Satisfaction

It is crucial to first assess the normality of the data. Evaluating whether the data follow a normal distribution helps determine whether parametric or non-parametric statistical tests are appropriate. To achieve this, two standard tests-Kolmogorov-Smirnov and Shapiro-Wilk-were applied to each item under the satisfaction dimension. The results of these tests are presented in the following table:

Table6: Test of normality for satisfaction dimension's items

Statements	Test of Normality					
	Kolmogorov-smirnov ^a			Shapiro-Wilk		
	Stat.	Df	Sig.	Stat.	Df.	Sig.
Balance Enquiry	.282	300	.000	.841	300	.000
Electronic transfer of funds	.327	300	.000	.818	300	.000
User-friendly of E-banking	.304	300	.000	.844	300	.000
Security of transaction is high	.306	300	.000	.831	300	.000
Promptness in attending given Answer and Quarries	.254	300	.000	.871	300	.000
Adequacy of information provided by bank	.293	300	.000	.856	300	.000
Give prompt responses to requests by e-mail or other means	.265	300	.000	.872	300	.000
Access to the bank by telephone	.303	300	.000	.850	300	.000
Saves time	.298	300	.000	.789	300	.000
Low cost and minimum resources	.321	300	.000	.807	300	.000
Safety of transaction	.323	300	.000	.813	300	.000
Easy cash withdrawal	.257	300	.000	.880	300	.000
Proper working of ATMs	.298	300	.000	.846	300	.000
Sufficiency of fund in ATMs	.265	300	.000	.874	300	.000
Full-fledged safety measures	.315	300	.000	.821	300	.000
Cash depositing Facility	.310	300	.000	.839	300	.000
Service provided by E-Banking is better than expectation	.297	300	.000	.790	300	.000

Source: Researchers' findings

The results show that all significance values are less than 0.05. This indicates that the data significantly deviate from a normal distribution. Therefore, non-parametric statistical methods are more appropriate for hypothesis testing.

Table7: Hypothesis testing for satisfaction's items

(1= Highly Dissatisfied, 2= Dissatisfied, 3= Neutral, 4= Satisfied, 5= Highly Satisfied)

The analysis revealed that while the majority of satisfaction indicators showed no statistically significant differences across the three banking sectors, a few items stood out with significant variation in perceptions. Specifically, the results demonstrated

Statements	Chi-Square	Sig.	Decision
Balance Enquiry	0.610	0.737	Accepted
Electronic transfer of funds	1.665	0.435	Accepted
User-friendly of E-banking	2.826	0.243	Accepted
Security of transaction is high	1.993	0.369	Accepted
Promptness in attending given Answer and Quarries	2.349	0.309	Accepted
Adequacy of information provided by bank	7.333	0.015	Rejected
Give prompt responses to requests by e-mail or other means	2.471	0.291	Accepted
Access to the bank by telephone	2.112	0.348	Accepted
Saves time	5.355	0.027	Rejected
Low cost and minimum resources	4.210	0.122	Accepted
Safety of transaction	3.423	0.181	Accepted
Easy cash withdrawal	1.979	0.372	Accepted
Proper working of ATMs	4.249	0.119	Accepted
Sufficiency of fund in ATMs	5.457	0.045	Rejected
Full-fledged safety measures	0.748	0.688	Accepted
Cash depositing Facility	0.593	0.743	Accepted
Service provided by E- Banking is better than expectation	8.190	0.017	Rejected

significant differences in satisfaction regarding the adequacy of information provided by the bank ($p = 0.015$), time-saving features of e-banking ($p = 0.027$), the sufficiency of funds in ATMs ($p = 0.045$), and whether the services provided by e-banking exceed expectations ($p = 0.017$). These findings suggest that customers of public, private, and foreign banks do not have a uniform experience in these areas. For the remaining items, such as balance enquiry, electronic fund transfer, ATM functionality, and security of transactions, no significant differences were found, indicating a general consistency in customer satisfaction across sectors for those dimensions.

To justify the transformation of individual satisfaction-related items into a single composite variable, it is essential to ensure the internal consistency and reliability of these items. The reliability of the satisfaction items was assessed using Cronbach's Alpha in

SPSS. The results of this reliability test are presented in the table below:

Table 8: Alpha Cronbach test for satisfaction items

Reliability Statistics	
Cronbach's Alpha	N of Items
.931	16

Source: Researchers' Findings

The Cronbach's Alpha value of 0.931 indicates excellent internal consistency among the 16 satisfaction-related items, confirming that they reliably measure the same underlying construct of customer satisfaction. So all items were combined into a single composite variable to ensure analytical simplicity while preserving statistical validity. Subsequently, the Kruskal-Wallis H test was applied to this composite measure to examine differences in customer satisfaction across public, private, and foreign banks. The results of this test are reported in the following table.

Test Statistics	
	Satisfaction
Chi-Square	2.475
Df.	2
Assym.Sig.	.290
a. Kruskal Wallis Test	

Table9: Kruskal Wallis H test for Satisfaction Dimension

Source: Researchers' Findings

Based on the results of the above table, the results of the Kruskal-Wallis H test for the composite variable "Satisfaction" show that the Chi-Square value is 2.475 with 2 degrees of freedom and an Asymptotic Significance (p-value) of 0.290.

Since the p-value is greater than 0.05, we fail to reject the null hypothesis. This means there is no statistically significant difference in customer satisfaction levels among the public, private, and foreign banks in the context of this study.

Analyzing the Relationship of Type of bank and Satisfaction

In order to evaluate whether the type of bank (public, private, or foreign) is significantly associated with the level of customer satisfaction in e-banking services, the Chi-square test of independence was conducted. The results of the Pearson Chi-square test are presented in the table below for further clarity:

Table 10: Chi- Square test of Type of bank and the level of Satisfaction

Chi-Square Tests			
	Value	Df	Asymptotic Significance(2-sided)
Pearson Chi-Square	14.362 ^a	8	.073
Likelihood Ratio	15.672	8	.047
Linear-by-Linear Association	2.087	1	.149
N of Valid Cases	300		

Source: Researchers' Findings

The Pearson Chi-square value is 14.362 with 8 degrees of freedom (df), and the asymptotic significance (p-value) is 0.073. Since this p-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis. This means that there is no statistically significant relationship between the type of bank and the level of customer satisfaction at the 5% level.

Prior studies emphasize that core e-banking functions-such as balance enquiry, electronic fund transfers, system usability, and time-saving features-are fundamental drivers of satisfaction (Pikkarainen et al., 2004; Liao & Cheung, 2008). The uniformly high median scores observed in this study across these dimensions confirm that Afghan bank customers positively evaluate the functional performance of e-banking platforms, aligning with the Technology Acceptance Model's assertion that perceived usefulness and ease of use enhance user satisfaction (Davis, 1989). The study's findings regarding security perceptions show partial convergence with the literature. Public banks recorded higher satisfaction in transaction security compared to private and foreign banks. This supports prior empirical evidence suggesting that customers often associate public-sector banks with greater institutional stability and perceived safety due to government backing and long-standing reputations (Yousafzai et al., 2003; Boateng et al., 2016). However, the relatively lower security satisfaction observed in foreign banks diverges from some international studies that associate foreign banks with advanced technological systems. This divergence may reflect contextual factors specific to Afghanistan, such as localized trust dynamics and customer familiarity rather than purely technological superiority.

Conclusion

This study investigated customer satisfaction with electronic banking services across public, private, and foreign banks in Afghanistan using descriptive statistics and non-parametric inferential tests. Primary data collected from 300 respondents were analyzed to identify both the overall level of satisfaction and statistically significant differences across banking sectors.

To assess sectoral differences in overall satisfaction, the Kruskal–Wallis H test was applied to the composite satisfaction index. The results show that there is no statistically significant difference in customer satisfaction across the three types of banks ($\chi^2 = 2.475$, $df = 2$, $p = 0.290$). This finding suggests that, despite observable variations in specific service attributes, the overall level of customer satisfaction with e-banking does not differ significantly between public, private, and foreign banks at the 5% significance level. Furthermore, the relationship between type of bank and level of satisfaction was examined using the Pearson Chi-square test of independence. The results indicate that the association between bank type and satisfaction level is not statistically significant ($\chi^2 = 14.362$, $df = 8$, $p = 0.073$). This implies that customer satisfaction levels are largely independent of whether the bank is public, private, or foreign. Although the likelihood ratio test showed marginal significance ($p = 0.047$), the Pearson Chi-square-being the primary test-does not provide sufficient evidence to reject the null hypothesis.

Recommendation

1. Strengthening sector-specific service attributes: Although no statistically significant difference in overall satisfaction was found across bank types (Kruskal–Wallis, $p = 0.290$), descriptive results indicate sectoral strengths. Banks should focus on improving specific service dimensions where relative weaknesses were observed rather than attempting broad structural changes.
2. Enhancing transaction security in private and foreign banks: Given that public banks recorded higher median satisfaction for transaction security (Median = 5.00), private and foreign banks should invest in visible security features, customer security awareness, and transparent communication to improve customers' perceived safety.
3. Improving operational efficiency in public banks: Lower satisfaction with ease of cash withdrawal in public banks (Median = 2.00) suggests a need to improve ATM functionality, cash availability, and system uptime to align performance with private and foreign banks.

4. Maintaining cost efficiency and ATM fund adequacy in private banks: Since private banks demonstrated higher satisfaction in cost efficiency and ATM fund sufficiency (Median = 5.00), these banks should maintain and standardize these practices to sustain customer satisfaction levels.

5. Uniform service quality standards across banking sectors: As the Chi-square test revealed no significant association between bank type and satisfaction level ($p = 0.073$), regulators and bank management should promote minimum service standards for e-banking across all sectors to ensure consistency in customer experience.

6. Targeted improvements rather than sector-based differentiation: Since overall satisfaction does not significantly vary by bank type, improvement strategies should be attribute-specific (e.g., security, responsiveness, ATM services) rather than sector-based, allowing more efficient allocation of resources.

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