



## A STUDY ON THE INFLUENCE OF E-BANKING SERVICE QUALITY FACTORS ON CUSTOMER SATISFACTION

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### ABSTRACT

This study focuses on how service quality affects online banking customer happiness. As digital banking platforms grow faster, it's more important than ever to understand how good service quality can enhance customer experience and help keep customers coming back over time. The study wants to look at how customer satisfaction is connected to important aspects of service quality, such as how quickly the service responds, how secure it is, how efficient it works, how easy it is to use, and how dependable it is. Primary data was gathered from 150 e-banking users using a structured questionnaire that included a Likert scale. The data that is gathered will be looked at using methods like descriptive statistics, checking how reliable the data is, finding out if there are any connections between variables, and using multiple regression to see how different factors might influence each other. The results show that there is a good and meaningful connection between the different aspects of service quality and how satisfied customers are, with efficiency and how easy the service is to use being the most important factors. Overall, the findings show that when electronic service quality is better, customers tend to be more satisfied. The study shows that digital banks need to create safe, fast, and easy-to-use systems to make customers happier and stay ahead in the changing world of digital banking.

**Keywords:** E-banking, Service Quality, Customer Satisfaction, Reliability, Responsiveness, Security, Efficiency, Ease of Use.

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## 1. INTRODUCTION

The rapid rise of ICT has transformed the financial system into a digital, customer-focused one. Electronic banking, also called e-banking, has become a big change in the financial world. It lets customers do many banking tasks like moving money, paying bills, checking their accounts, and buying things online, all through easy-to-use digital tools. In today's competitive banking world, banks are focusing more on providing good electronic services to improve customer satisfaction and create lasting relationships.

Service quality in e-banking is seen as a complex idea that covers several important aspects like how dependable the service is, how quickly it responds to customer needs, how safe it is, how fast it works, how easy it is to use, and how often the system is available. Each of these dimensions affects how customers see how well electronic banking services work. Unlike traditional banking, which needs a lot of face-to-face help, e-banking uses technology a lot. So, how good the online services are becomes very important for customers to be happy. When customers think that digital banking is safe, reliable, and simple to use, they feel more satisfied. This makes them trust the bank more and stay loyal to it.

Customer happiness is now a major sign of how well an organization is doing in the digital age. People who are happy with their e-banking services tend to keep using them, tell others about them, and have a good opinion of the bank. On the other hand, issues like mistakes in transactions, worries about safety, or slow replies can make customers unhappy and push them to choose different companies.

The current research intends to examine how service quality affects online banking customer satisfaction. It also examines how service quality affects customer satisfaction, which can help banks enhance their online services and client interactions in the evolving world of digital banking.

### 1.1. Objectives of the study

**O1:** To determine the impact of services quality dimensions on customer satisfaction in e-banking.

## 1.2. Hypothesis of the study

**H01:** There is no significant relationship between service quality dimension and customer satisfaction.

## 2. LITERATURE REVIEW

The correlation of the dimensions of service quality and customer satisfaction related to e-banking has been heavily researched in the recent academic literature because of the increased dependence on digital banking platforms. Scientists underline that electronic service quality (e-service quality) is a multidimensional construct that is highly effective in defining customer perceptions, satisfaction, and loyalty within online banking settings (Parasuraman et al., 2005; Zeithaml et al., 2018). As the number of internet and mobile banking increases, banks are bound to provide credible, safe and efficient electronic services to foster their customers ever-growing expectations.

Service quality in e-banking refers to the efficiency and efficacy of online, mobile, and ATM banking services (Santos, 2003). Service quality dimension's reliability, responsiveness, assurance, empathy, and tangibles have been widely measured using Parasuraman, Zeithaml, and Berry's SERVQUAL model (1988). This model has been generalized to cover technology-related elements including security, privacy, system availability, and usability in e-banking (Parasuraman et al., 2005).

According to the recent research, the customers consider the quality of service in e-banking according to the designs of the websites, speed of transaction, accessibility and the accuracy of the information presented on the website, which all shape the effectiveness of digital banking services (Jun & Cai, 2001; Trivedi & Kairvi, 2025).

One of the results of service quality perception with consideration of e-banking services is customer satisfaction. Oliver (1997) refers to customer satisfaction as the fulfillment response by the consumer as a result of an expectation/service performance comparison. A number of empirical researches validate the fact that the dimensions of service quality play a critical role in customer satisfaction in the online banking settings (Amin, 2016; Shankar and Jebararayakirthy, 2019).



Reliability is ranked among the most important dimensions that influence customer satisfaction because customers anticipate factual and reliable transactions when they access the services of digital banking (Jun and Cai, 2001). In the same manner, responsiveness as the timeliness of service delivery and responsiveness has also been identified to have a positive impact on the level of satisfaction among e-banking customers (Iqbal et al., 2021).

The issue of security and privacy also contributes significantly to customer satisfaction because customers worry about the safety of their financial information when making an online transaction (Yousafzai et al., 2009). The literature shows that customer trust and satisfaction to e-banking services are greatly improved with perceived security (Alalwan et al., 2018).

Many empirical studies link e-banking service quality and consumer pleasure. Amin (2016) states that efficiency, reliability, and security are crucial to client satisfaction and internet banking loyalty. Shankar and Jebarajakirthy (2019) discovered that e-service quality dimensions positively affected customer satisfaction and usage intention in digital banking.

Khan et al. (2020) observed that responsiveness, assurance, and system quality affect online banking consumer satisfaction. Alalwan et al. (2017) have noted that ease of use and perceived usefulness boost consumer satisfaction and inclination to adopt digital banking services.

According to recent studies in the digital post-pandemic era, the role of the online banking aspect of service quality in the determination of customer satisfaction has been reinforced by the increased reliance on online banking as an aspect of service quality, which also includes system availability, speed of transactions, and user-friendly interfaces (Sharma & Malviya, 2021).

Security and trust are some of the key elements that determine customer satisfaction in e-banking services. Yousefzai et al. (2009) have highlighted that the customers trust online banking systems greatly depending on the perceived security and privacy protection afforded. In its turn, trust increases satisfaction and stimulates further improvement of using e-banking services.

Alalwan et al. (2017) also affirmed that trust is mediating between the customer satisfaction and service quality, which means that customers will be more satisfied when they believe that digital banking systems are secure and trustworthy. On the same note, Singh and Srivastava



(2022) established that policies related to privacy assurance and data protection also have a positive impact on customer satisfaction and loyalty in mobile banking services.

### **2.1. Research Gaps**

Many studies have examined how service quality affects online banking consumer happiness, but more study is needed. Service quality elements' effects on customer satisfaction are poorly understood, especially in developing countries. Most of the existing work examines each aspect of service quality separately rather than how they affect customer satisfaction. Additionally, AI-powered financial services and modern mobile app features haven't been examined adequately for their customer satisfaction benefits.

So, this study wants to fix these gaps by doing a real-world research project to look at how different aspects of service quality affect customer happiness with online banking services in a specific situation.

## **3. METHODOLOGY**

We examined how service quality affects online banking customer satisfaction in this section. The method allows for rigorous and systematic data collection, analysis, and interpretation to meet study goals.

### **3.1. Research Approach**

The quantitative study examines how service quality affects online banking customer happiness. A detailed and thoughtful way of studying is used to learn what customers think and to check how the different parts of the study are connected. This design allows for gathering data that can be measured and analyzed using statistical methods from people who regularly use electronic banking services.

### **3.2. Nature of the Study**

This study is based on real data gathered directly from people who use e-banking services. It looks at how various aspects of service quality affect customer satisfaction and offers useful ideas to help make digital banking services better and more effective.

### **3.3. Population of the Study**

The sample for this study includes people who use e-banking services, such as internet banking, mobile banking, and other online tools for making transactions provided by different commercial banks. The chosen people come from different backgrounds and have different amounts of experience using digital banking services.

### **3.4. Sampling**

A total of 150 respondents from the target population were selected for the study. Non-probability convenience sampling was employed to collect data from customers who were readily accessible and actively using e-banking services. The chosen sample size of 150 participants is considered adequate for conducting statistical analysis and for drawing meaningful conclusions within the scope of the study area.

### **3.5. Sources of Data**

The study uses primary and secondary data. A systematic questionnaire is given to e-banking customers to capture primary data. Secondary data from books, academic journals, research reports, and online databases support the study's theoretical framework and literature evaluation.

The study method uses a structured questionnaire to collect data. The questionnaire has two parts. Section A captures age, gender, education, occupation, and e-banking frequency. Section B evaluates statements on a five-point Likert scale from Strongly Disagree to Strongly Agree to assess service quality and customer satisfaction.

The service quality dimensions considered in this study include reliability, responsiveness, security, efficiency, and ease of use. Customer satisfaction is assessed through statements that reflect respondents' overall level of satisfaction with e-banking services.

### **3.6. Reliability and Validity of the Instrument**

The questionnaire questions' internal consistency is assessed using Cronbach's Alpha to assure study reliability. The measurement scale is reliable if Cronbach's Alpha is larger than 0.70. By aligning questionnaire items with service quality and e-banking literature, content validity is maintained. The measuring items must be linked to the service quality dimensions and customer satisfaction variables to ensure construct validity.

### **3.7. Data Collection Procedure**

A systematic questionnaire was given to 150 e-bankers. Participants will answer questions about their digital banking experiences, which will be categorized and processed for statistical analysis.

### **3.8. Data Analysis**

Descriptive statistics like frequency, percentage, mean, and standard deviation summarize demographics and response patterns.

Testing the study hypotheses and examining the relationship between service quality parameters and customer satisfaction using inferential statistics. Correlation analysis determines the strength and direction of links between variables, while regression analysis determines how service quality aspects affect customer satisfaction.

The regression model used in the study is expressed as:

$$CS = \beta_0 + \beta_1RL + \beta_2RS + \beta_3SE + \beta_4EF + \beta_5EU + \varepsilon$$

Where:

CS = Customer Satisfaction

RL = Reliability

RS = Responsiveness

SE = Security

EF = Efficiency

EU = Ease of Use

$\beta_0$  = Constant term

$\beta_1$ – $\beta_5$  = Regression coefficients

$\varepsilon$  = Error term

This model helps in determining the extent to which each service quality dimension influences customer satisfaction in e-banking.

#### 4. DATA ANALYSIS AND INTREPRETATION

**Table 1: Respondents Profile (n = 150)**

Demographic Variable	Category	F	%
Age	18–24 years	38	25.3
	25–34 years	52	34.7
	35–44 years	30	20.0
	45–54 years	20	13.3
	55 years & above	10	6.7
Gender	Male	82	54.7
	Female	64	42.7
	Others	4	2.6
Education	Undergraduate	46	30.7
	Postgraduate	72	48.0
	Professional Degree	32	21.3
Occupation	Student	40	26.7
	Private Employee	58	38.7

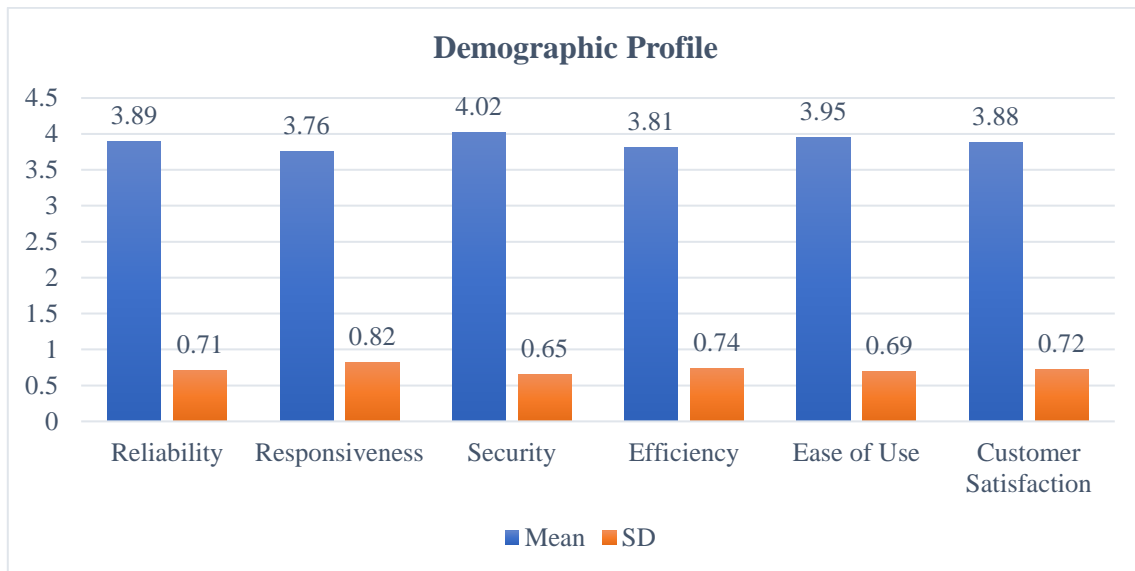
	Government Employee	22	14.7
	Business	18	12.0
	Others	12	8.0
Frequency of E-banking Usage	Daily	66	44.0
	Weekly	48	32.0
	Monthly	26	17.3
	Rarely	10	6.7
Total		150	100%

Table 1 indicates that the largest proportion of respondents falls within the 25–34 age group (34.7%), followed by those aged 18–24 years (25.3%), suggesting that young adults constitute the primary users of e-banking services. The sample includes a slightly higher percentage of male respondents (54.7%) compared to female respondents (42.7%). A significant share of participants are postgraduates (48.0%) and employees in private organizations (38.7%), indicating that e-banking is widely adopted among educated working professionals. Furthermore, 44.0% of respondents reported using e-banking services on a daily basis, reflecting a strong reliance on digital banking platforms.

**Table 2: Mean and S.D of Service Quality Dimensions**

Variables	N	Mean	SD
Reliability	150	3.89	0.71
Responsiveness	150	3.76	0.82
Security	150	4.02	0.65
Efficiency	150	3.81	0.74

Ease of Use	150	3.95	0.69
Customer Satisfaction	150	3.88	0.72



**Figure 1: Descriptive Statistics**

Table 2 reveals that respondents usually like e-banking services because all service quality categories have mean scores above 3.5. Security (4.02) and simplicity of use (3.95) scored highest, indicating that customers trust the platforms' safety and usability. Additionally, the mean customer satisfaction score (3.88) shows that respondents are usually satisfied with e-banking services.

**Table 3: Reliability Analysis (Cronbach's Alpha)**

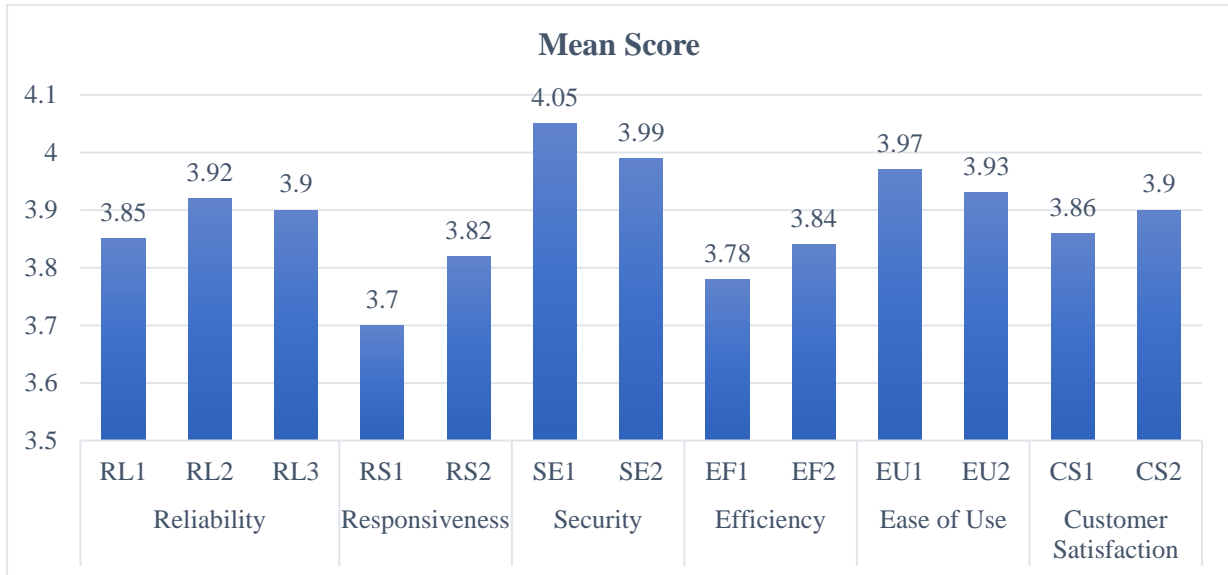
Construct	Number of Items	Cronbach's Alpha
Reliability	3	0.81
Responsiveness	3	0.79
Security	3	0.84
Efficiency	3	0.77

Ease of Use	3	0.83
Customer Satisfaction	3	0.86
Overall Scale	18	0.88

Table 3 shows that all constructs have Cronbach's Alpha values over 0.70, indicating good measurement scale internal consistency and reliability. Security (0.84) and customer satisfaction (0.86) are the most reliable, and the survey questionnaire's overall scale rating of 0.88 validates this.

**Table 4: Mean Score Analysis of Service Quality Dimensions**

Service Quality Dimension	Statements	Mean Score	Interpretation
Reliability	RL1	3.85	Agree
	RL2	3.92	Agree
	RL3	3.90	Agree
Responsiveness	RS1	3.70	Agree
	RS2	3.82	Agree
Security	SE1	4.05	Strongly Agree
	SE2	3.99	Agree
Efficiency	EF1	3.78	Agree
	EF2	3.84	Agree
Ease of Use	EU1	3.97	Agree
	EU2	3.93	Agree
Customer Satisfaction	CS1	3.86	Agree
	CS2	3.90	Agree



**Figure 2: Mean Score of Service Quality**

Table 4 reveals that all statements have “Agree” mean values, indicating favorable consumer attitudes regarding e-banking service quality dimensions. Security and usability score higher, demonstrating people view digital banking platforms as safe and simple. Table 4 suggests that positive service quality perceptions increase e-banking customer satisfaction.

**Table 5: Correlation Matrix between Service Quality Dimensions and Customer Satisfaction**

Variables	RL	RS	SE	EF	EU	CS
Reliability (RL)	1	0.62	0.58	0.60	0.55	0.71
Responsiveness (RS)	0.62	1	0.57	0.63	0.59	0.69
Security (SE)	0.58	0.57	1	0.61	0.64	0.73
Efficiency (EF)	0.60	0.63	0.61	1	0.66	0.75
Ease of Use (EU)	0.55	0.59	0.64	0.66	1	0.78
Customer Satisfaction (CS)	0.71	0.69	0.73	0.75	0.78	1

Table 5 shows customer satisfaction correlations with service quality parameters. Customer satisfaction is strongly correlated with all service quality variables. The highest predictor of customer satisfaction is ease of use ( $r = 0.78$ ), followed by efficiency ( $r = 0.75$ ) and security ( $r = 0.73$ ). Customer satisfaction is also positively correlated with reliability ( $r = 0.71$ ) and responsiveness ( $r = 0.69$ ). Table 5 shows that e-banking service quality improvements are associated to consumer satisfaction.

**Table 6: Multiple Regression Analysis**

Independent Variables	Regression Coefficient ( $\beta$ )	Std. Error	t-value	p-value
Constant	0.512	0.214	2.39	0.018
Reliability	0.214	0.067	3.19	0.002
Responsiveness	0.176	0.071	2.47	0.015
Security	0.231	0.064	3.61	0.001
Efficiency	0.248	0.069	3.59	0.001
Ease of Use	0.269	0.072	3.74	0.000

**Dependent Variable:** Customer Satisfaction

Customer satisfaction is the dependent variable in Table 6's multiple regression analysis. Positive and substantial regression coefficients ( $p < 0.05$ ) indicate that all service quality factors significantly impact customer satisfaction. Ease of use ( $\beta = 0.269$ ) is the most influential feature, followed by efficiency ( $\beta = 0.248$ ) and security ( $\beta = 0.231$ ). Significant positive impacts are observed in reliability ( $\beta = 0.214$ ) and responsiveness ( $\beta = 0.176$ ). Table 6 confirms that service quality dimensions affect e-banking customer satisfaction individually and collectively.

**Table 7: Model Summary**

<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>F-value</b>	<b>Significance</b>
0.84	0.71	0.70	68.52	0.002

Table 7 summarises the regression analysis model. The R value (0.84) shows a substantial correlation between service quality and customer satisfaction. Approximately 71% of customer satisfaction variance is explained by service quality characteristics in the model ( $R^2 = 0.71$ ). The model's good fit is confirmed by the updated  $R^2$  value of 0.70. Its F-value (68.52) and significance level of 0.002 show that the regression model is statistically significant. Thus, Table 7 shows that the model is robust and that service quality factors predict e-banking consumer happiness.

## **5. CONCLUSION AND FUTURESCOPE**

This study analyzes how service quality dimensions affect e-banking customer satisfaction. Overall, customer satisfaction is favorably and strongly associated with all service quality parameters, including reliability, responsiveness, security, efficiency, and simplicity of use. According to descriptive analysis, customers view e-banking as safe, secure, and simple. The correlation study proves that service quality aspects positively affect customer happiness, with simplicity of use and efficiency being the most important. Regression results show that each service quality measure improves customer satisfaction and explains a large amount of satisfaction variation. These findings imply that improving system security, operational efficiency, and platform usability can boost customer satisfaction. Rejecting the null hypothesis shows that e-banking customer happiness is highly tied to service quality. The study emphasizes the necessity of high-quality electronic banking services to improve customer satisfaction and develop long-term bank-customer relationships.

The analysis suggests various research avenues. First, future studies may increase the sample size and include respondents from different locations to improve generalizability. Second, website design, personalization, and technology innovation can be added to understand digital

banking experiences. Third, public and private banks could be compared for customer satisfaction and perceptions. Future research may examine how trust, perceived value, and customer experience mediate the relationship between service quality and satisfaction. Furthermore, longitudinal research could track client happiness as digital banking evolves. Finally, chatbots, mobile banking apps, and artificial intelligence may be explored to better understand how they affect service quality and consumer happiness in the quickly evolving e-banking environment.

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