



# “Relationship between e-service quality dimensions and online banking customer satisfaction”

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# RELATIONSHIP BETWEEN E-SERVICE QUALITY DIMENSIONS AND ONLINE BANKING CUSTOMER SATISFACTION

## Abstract

Recently, the demand for internet banking has been gradually increasing the number of online banking customers, where the banking clients or customers do not need to visit a bank branch for their transactions. The principal focus of this inquiry is to ascertain how various aspects of e-service quality relate to online banking customers' happiness, particularly with regard to Bangladeshi commercial banks. Data information was collected from three commercial banks in Bangladesh using an online survey questionnaire, and this study is quantitative and exploratory in nature. The study considered those bank customers who use frequently online/internet banking services. The sample size was n=200, and the study adopted a non-probability sampling approach. Five-point Likert scale was used to measure an item-wise question where "1" stands for "Highly Disagree" and "5" stands for "Highly Agree". The consequences of this study demonstrate that e-service quality dimensions play a significant role in creating customer satisfaction for online banking customers. The study proposes four hypotheses, and the hypotheses are accepted in this research. Based on this study, bank management should have utilized e-service quality dimensions such as perceived security risk, perceived ease of use, perceived website quality, and perceived responsiveness to create the relationship between e-service quality dimensions and online banking customer satisfaction. Bank management will receive some guidance on developing policies and strategies to improve the satisfaction level of online customers.

## Keywords

customer satisfaction, service quality, perceived security risk, perceived ease of use, website quality, responsiveness

## JEL Classification

M30, M31, G21

## INTRODUCTION

Recently, the service sector has become an earth-shattering segment on which a nation's societal and economic development depends (Yalley & Agyapong, 2017). Nowadays, the banking sectors play an important role in developing the economy as a service sector (Jahan et al., 2020). Lately, technology plays an important part in operating many aspects of human life in every sector, where e-service has changed everything in banking activities today. The Internet has made the life of countless numbers of people on the planet easy and simple. E-service quality is regarded as technology-based services to customers, and it also assists to improve the service to the customers in their transactions, so banks must use e-services to serve various online services to clients within 24 hours (Sasono et al., 2021). From previous research, one would assume that the effectiveness of e-services significantly and favorably affects customer satisfaction and perceptions (Chen et al., 2013). Nowadays, every organization faces challenges to stay in the fierce market where customers are regarded as the heart of every organization. Therefore, customer satisfaction is an indispensable com-

mitment of every organization. Today's banking institutions have adopted an e-service policy to provide online services to customers. From now on, quality service is a key indicator for banks to survive in a more competitive market. Nowadays, banks provide marketing services to consumers through using digital device tools and techniques, whereas internet bank users can access their accounts, get e-statements, observe accounting record, shop online, transfer money from one place to another, pay bills, etc. within a single moment. Therefore, e-service quality has a significant feature that directly influences online banking customer satisfaction (Ghane et al., 2011; Kaya et al., 2019). In the strategy literature, an important resource for banking organizations is customers, both retail or corporate. Henceforth, in this industry, customer satisfaction is a decisive fact that is closely related to service quality (Silvestri et al., 2017). Customer satisfaction depends on better service quality, and the crucial factor for success in the banking industry is service quality (Ozkan et al., 2019). Also, customer e-satisfaction will increase when e-service quality will expand among bank users, which helps to create an intention to get online services from anywhere in a short time (Khan et al., 2019). In this modern age, customer retention is the decisive fact in the banking industry due to changes in customers' demands. Therefore, banks need to deliver enjoyable and comforting services to customers. Past studies explain that e-service quality is an indispensable factor of banking organizations to stay in the competitive market (Martins et al., 2014). Therefore, banks should know the expectations of their customers' services and pay more attention to maintaining the quality of service. Another research recommends that there is no adequate research on utilizing online banking in poor nations due to the low internet penetration services among banks and customers (Al-Ajam & Nor, 2015; Tarhini et al., 2016). Simultaneously, the banking sector is regarded as the most essential financial sector of Bangladesh that has been experiencing a diversified situation today. Several local and foreign stakeholders directly participate in the banking sector. To achieve long-term objectives, the banks of Bangladesh compete with each other to attract a greater number of customers. Due to technological changes, banking activities have faced great competitive challenges where banks need to adopt these challenges, develop modern banking services, and keep technological quality services to retain customers. So the main concern of every financial organization is to maintain the charming service quality for customers. Commercial banks need to identify e-service quality dimensions to maintain better service quality and customer satisfaction. There is a deficiency of studies to measure the relationship between customer satisfaction and the effects of e-service quality parameters.

## 1. LITERATURE REVIEW

Perceived security risk is considered as the probability and uncertainty of expected results or outcomes (Ahmed et al., 2021). Besides, the perceived risk is the primary concern of growing e-commerce platforms for the reliable transactions of customers that occur when the achieved product does not support the expected advantages (Farivar et al., 2017). However, the perceived security risk assists to take consumers' decision to buy online-based products from a bank, and they face such assumptions owing to their previous experience with online transactions (Demir et al., 2019). Therefore, online perceived risks include: delivery, brand, finance, time, privacy, quality, etc., which harm customer satisfaction levels during online transactions (Adnan, 2014). Consequently, perceived security risk is a vibrant component of e-service that influences customer satisfaction

in online banking dealings (Barrutia & Gilsanz, 2009). Past studies also recommend that perceived security is the significant factor that influences customer satisfaction regarding online banking transitions (Faisal et al., 2020). Moreover, security or privacy is a significant factor to assist attention among customers, which assist to protect various personal information of customers (Ariffin et al., 2018). Furthermore, it is said that every customer will like the online services of banking institutions if their security or privacy is strong, and if the security is fragile then the customers will never choose the online services of banks or other organizations (Faisal et al., 2020).

Perceived ease of use is considered as the effortlessness and convenience of consumers while using digital tools and devices in online transitions (Stocchi et al., 2019). Besides, perceived ease of use is defined as the awareness of an individu-

al where an individual think that her/his performance will be expanded by using a digital device (Jahangir & Begum, 2008). On the other hand, perceived ease of use is regarded as a customer's judgment where they will be easy to use and learn techniques of online transactions (Dong et al., 2017). However, consumers' perception depends on the perceived ease of using technology in their online banking transactions where the customers can keep a strong sense of belief to learn easily, to acquire what is easy to recognize, the desired outcome and clear concept of using the internet (Maryanto & Kaihatu, 2021). A previous study also indicates that perceived ease of use maintains the relationship with customer satisfaction as an e-service quality dimension (Maryanto & Kaihatu, 2021). The prospective users of technology anticipate free difficulties to use internet banking activities that affects customer satisfaction (Tahar et al., 2020). Another study also explained that perceived usability and online-based consumer satisfaction are positively and significantly correlated (Aren et al., 2013).

A website is a crucial factor to display company information, which acts as the communication media between organizations and customers (Kleinlercher et al., 2018). Besides, website quality is explained as the performance and quality of the online transactions of customers, which are measured by the attractive design and by the simple, reliable, and effective process (Di Fatta et al., 2016). However, the quality of a website is a source of information for customers to use technology, which creates purchase intention and satisfaction with online products and services (Hsiao et al., 2010). Moreover, the fascinating feature of a customer or user perception is an eye-catching website that makes to establish positive relations between customer satisfaction and features of the given web page (Al-Debei et al., 2015). A prior study also assumed that the design features of a web page are the supreme yardstick of perceived e-service quality in the internet banking activities of customers (Qalati et al., 2021). Another study also prevailed that website quality reflects on website design, security, language, color, and ease of navigation, that affect customer satisfaction (Gazi et al., 2021). Nevertheless, Sharma and Bahl (2018) also illuminated that attractive web design reflects customers' purchase intention and customer satisfaction. Furthermore, past studies also recommend

that the essential features of website quality are trust, security, reliability, and customer service that help to create satisfaction among customers (Lee et al., 2016).

Responsiveness is a crucial indicator of online transactions, which is defined as the willingness to provide punctual and quick services, guidance, help, recommendations, etc., to the targeted customers in a prompt manner (Endara et al., 2019). However, customer responsiveness is regarded as the fast and efficient services to customers by the company, which creates motivation among the consumers (Vencataya et al., 2019). Moreover, the proper examples of responsiveness in banking industries are the closeness of branches, frontline skilled employees, automated teller machines, etc., which give support to the customers promptly in their transactions (Janahi & Al Mubarak, 2015). Also, Rahaman et al. (2021) assumed that responsiveness is a vital issue that would be taken into consideration by a bank or other financial or non-financial organization about expanding their customer satisfaction. Hereafter, the influential ingredient of customer delight and amusement in the financial system is the responsiveness that creates attractiveness among the customers to transact products (Vencataya et al., 2019). Previous studies also claim that there is a positive and significant relationship between responsiveness and customer satisfaction with commercial banking services in Bangladesh (Fida et al., 2020). Besides, responsiveness is a significant factor that refers to providing prompt services as per the demand of the customers (Parasuraman, 1998; Parasuraman et al., 1985). However, responsiveness is considered a positive and significant dimension of consumers that affects customer satisfaction (Ahmed et al., 2022). Consequently, prior research explained that responsiveness is the most imperative e-service quality dimension of online-based customers that respond timely and accurately to the orders of customers (Salleh et al., 2019; C. Madu & A. Madu, 2002; Barnes & Vidgen, 2001; Iberahim et al., 2016).

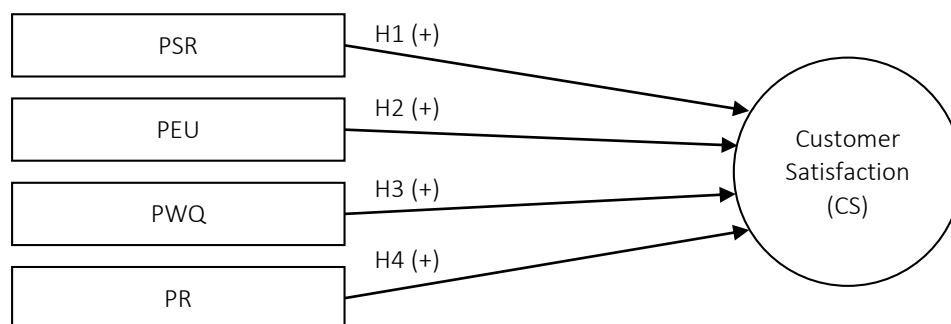
Consequently, the primary goal of this study is to ascertain the immediate impact of various defining features of e-service quality on customer satisfaction regarding online banking transactions and overcome the stated information-based research gap.

## 2. RESEARCH AIM AND HYPOTHESES

E-service quality dimensions, namely, perceived security risk (PSR), perceived ease of use (PEU), perceived website quality (PWQ), and perceived responsiveness (PR), have been considered as the determining factors of finding the relationship with customer satisfaction in this study. The following hypotheses have been proposed based on previous studies:

- H1: *PSR would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.*
- H2: *PEU would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.*
- H3: *PWQ would have a favorable impact on the gratification of current customers of the digital financial systems, such as the banking industry.*
- H4: *PR would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.*

Figure 1 designates the research framework that determines the effect of perceived security risk (PSR), PWQ, PEU, and perceived responsiveness (PR) on customer satisfaction with online banking (CSOB). The proposed research model and hypotheses are provided below in light of the substantial literature review (Figure 1).



**Figure 1.** Investigation framework

## 3. METHODOLOGY

The essential thinking of this study is to examine the connections between various defining features of e-service quality and the overall customer contentment of commercial banks. There are four dimensions in this research framework, namely, PSR, PWQ, PEU, and PR, which have been taken from the previous literature review. Moreover, specifically, a total of 20 items were adopted from past published articles to measure the study, which is adopted from Kayeser and Razzaque (2014), Blut (2016), and Rita et al. (2019). The study data were composed of three commercial banks in Bangladesh using an online survey questionnaire, and this study is quantitative and exploratory. Active online/internet banking customers were the targeted population of this study, and the demographic information and survey questionnaire is regarded as the first part and second part, respectively, in this study. Convenience sampling is used in this study because the online banking customers of commercial banks are unknown. In this study, 280 questionnaires were sent to bank customers of commercial banks limited in Bangladesh by using the Google form through e-mail with a cover letter for the convenience of customers. Five-point Likert scale was used to measure an item-wise question where '1' stands for "Highly Disagree" and '5' stands for "Highly Agree". The e-mail addresses of the existing online banking customers were obtained through support from a branch manager before sending the questionnaire to the respondents.

Out of 280 questionnaires sent, 240 responses were received from respondents, whereas 40 replies had to be discarded due to invalid entries. A total number of 200 samples was for the analysis based on the final response from the respondents. On the other hand, the "Cronbach Alpha ( $\alpha$ ) value" of 0.70 or more than

0.70 was used as the allowable value to justify the reliability of the variables. The reliability of PSR, PEU, PWQ, and PR was found reliable as PSR ( $\alpha = 0.910$ ), PEU = (0.835), PWQ = (0.724), and PR (0.786) respectively. In this study, to measure the hypothesis, a 5% significance threshold was utilized as an indicator, and SPSS software was used to analyze the data.

## 4. RESULTS

### 4.1. Demographic findings

Online/internet banking service users were the target population of this study, and the sample size was  $n = 200$ . Out of 280 questionnaires sent, 240 responses were received, whereas 40 responses were discarded due to invalid entries. In this regard, Table 1 depicts the demographic information of the respondents. With respect to demographic information, male and female banking customers were 65% and 35%, respectively, out of the total respondents. In terms of respondents' age, 5% of respondents were below 20 years, while 10% were between 21-30 years, besides 75 respondents (38%) were between 31-40 years. Finally, 48% of respondents were above 40 years in this study. Based on the types of bank customers, it is shown that borrowers accounted for 43% of the total 200 respondents, and 50% were depositors of the total bank customers, and 15 respondents (8%) were other customers of a commercial bank limited in Bangladesh. From the table, it can be said that out of 200 respondents, 45% have a master's degree, while 38% of respondents have a bachelor's degree. Besides, 18 respondents (9%) completed higher secondary certificates, whereas 9% of respondents completed their other degree regarding educational qualifications. Based on the occupational realizations, 33% were government job holders among 200 respondents, while 35% were private job holders. On the other hand, the semi-private respondents were 35 (18%), and 10% were self-employed, whereas the other job occupational rate accounted for 5% of 200 respondents. By examining the bank experience, there were 34 respondents (17%) whose experience was less than 5 years, whereas 38% of respondents' banking experience was between 5-10 years. Alongside, 30% of respondents' banking experience was between 11-15 years, and finally, 30 respondents (15%) have banking experience of more than 15 years (Table 1).

**Table 1.** Demographics profile of respondents

Items	Category	Numbers	Percentage
Gender	Male	130	65.0
	Female	70	35.0
Age	20 years or below	10	5
	21-30 years	20	10
	31-40 years	75	37.5
	Above 40 years	95	47.5
Type of Bank Client	Borrower	85	42.5
	Depositor	100	50
	Others	15	7.5
Educational Background	Master's Degree	90	45
	Bachelor Degree	75	37.5
	HSC	18	9
	Others	17	8.5
Occupation	Govt. Job	66	33
	Private Job	70	35
	Semi-Private	35	17.5
	Self-Employed	20	10
	Others	9	4.5
Experience with Bank	Less than 5 years	34	17
	5-10 years	76	38
	11-15 years	60	30
	Above 15 years	30	15

Note:  $n = 200$ .

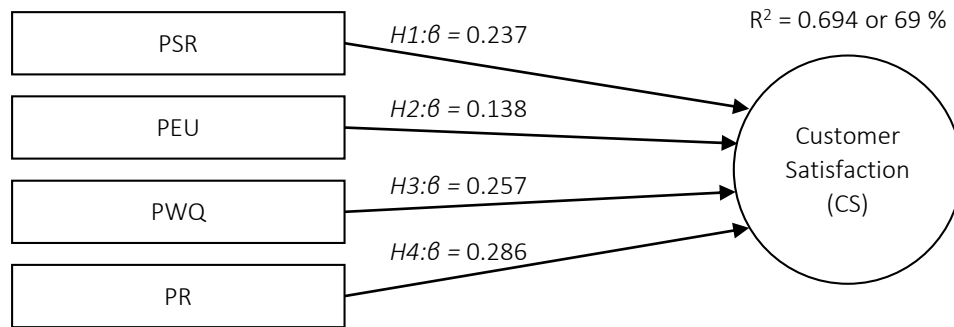
### 4.2. Testing of hypotheses

From Table 2, it is assumed that the Durbin-Watson value is 1.963, which is regarded as a tolerable value in this study. According to Durbin and Watson (1950), the recommended value ranges from 1.5 to 2.5, where the variance inflation factor (VIF) is found to fall under the down value of 5.00. Also, the allowable range of tolerance values is 0.1 to 1.0 (Kutner et al., 2004). Therefore, it can be said that there was no multicollinearity in this study based on this research framework.

**Table 2.** Regression analysis

Variables	$\beta$ value	t-value	Sig.	Tolerance	VIF
PSR	0.237	3.436	0.023*	0.379	3.245
PEU	0.138	3.567	0.000**	0.457	3.567
PWQ	0.257	4.568	0.034*	0.873	2.974
PR	0.286	3.367	0.052*	0.683	2.789
$R^2 = 0.694$ or 69 %	Durbin Watson value = 1.963				

Table 2 and Figure 2 indicate the regression coefficient results. On the other hand, the value of  $R^2$  is 0.694, which designates a 69% variance that



**Figure 2.** Regression coefficient result analysis

defines four independent variables, specifically Perceived Security Risk (PSR), Perceived Ease of Use (PEU), Perceived Website Quality (PWQ), and Perceived Responsiveness (PR). Therefore, the R<sup>2</sup> value of 69% has the relationship between e-service quality and customer satisfaction with online banking customers. Based on Table 2, it is assumed that PSR, PEU, PWQ, and PR have a positive and significant relationship between e-service quality dimensions and customer satisfaction of online banking activities, where all hypotheses are acknowledged at the 5% significance level. The consequences of the hypothesis test are summarized in Table 3.

**Table 3.** Hypothesis testing summary

Proposed Hypotheses	Decision
H1: PSR would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.	Accepted
H2: PEU would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.	Accepted
H3: PWQ would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.	Accepted
H4: PR would have a favorable impact on the gratification of current customers of the digital financial system, such as the banking industry.	Accepted

## 5. DISCUSSION AND IMPLICATIONS

The above-mentioned four hypotheses were tested using regression analysis according to the research objective. The present study appraises the significant impact and the relationship of e-service quality dimensions such as Perceived Security Risk (PSR), Perceived Ease of Use (PEU), Perceived website quality (PWQ), and perceived responsiveness (PR) on

online banking customer satisfaction. The first and most vigorous hypothesis is PSR that has a positive and significant effect on online banking customer satisfaction and it is accepted as ( $\beta = 0.237$ ,  $p < 0.05$ ). Therefore, these results correlate with the past findings as the PSR has a stronger influence on online banking customer satisfaction (Faisal et al., 2020). The second hypothesis of this study is that PEU has a positive and significant influence on customer satisfaction of online banking customers, and this hypothesis is accepted based on the determining value ( $\beta = 0.138$ ,  $p < 0.05$ ). Past studies also recommended that PEU has a positive effect on the satisfaction of online banking customers regarding e-service quality (Tahar et al., 2020). The PWQ is a positive and significant dimension of e-service quality that directly affects online banking service customer satisfaction and it is accepted as ( $\beta = 0.257$ ,  $p < 0.05$ ). This consequence is reliable to the earlier study that has an optimistic and significant effect on online banking customer satisfaction (Sharma & Bahl, 2018). The fourth hypothesis of this study is that PR helps to create satisfaction of bank clients with their online banking and it is accepted as the determining value of ( $\beta = 0.286$ ,  $p < 0.05$ ). This outcome is reliable to previous research. PR has a positive effect on online banking customer satisfaction (Fida et al., 2020). Therefore, customers' satisfaction with online banking activities is the central and crucial fact of banking operations. The determining results of this study indicate that the PSR, PEU, PWQ, and PR have a positive and significant impact on customer satisfaction with online banking in a developing country context such as Bangladesh. The number of banks in Bangladesh is growing rapidly, so it is necessary to determine e-service quality dimensions to ensure the satisfaction of online banking customers, especially commercial bank clients in Bangladesh.

## CONCLUSION AND FUTURE RESEARCH

In recent years, banking activities are related to digital technologies where bank clients receive their e-services in an instant. Also, the banking sector is an incredible sector of the economy of every nation in the world. Recently, financial sectors use modern technologies to decrease cost and competitiveness and expand the efficiency and effectiveness of online services for the targeted customers in the market. Currently, customers are considered a reliable source to fight and stay in the competitive market. In this study, it is said that PSR, PEU, PWQ, and PR have a positive and significant impact on the relationship between e-service quality dimensions and customer satisfaction. This study also explained that PSR, PEU, PWQ, and PR have a 69% variance in online banking customer satisfaction, which provides empirical findings and in-depth knowledge in the present study. There are some future research directions for this research purpose. This study has applied a quantitative approach to testing a conceptual model by embracing regression analysis through SPSS software. Therefore, future researchers might take both quantitative and qualitative approaches that will enrich the body of literature. Also, this study has taken four variables to measure the impact of e-service quality dimensions on online banking customer satisfaction. On the other hand, this study considered commercial banks. Consequently, future researchers might survey the clients of private and public banks for more accurate information regarding online transactions. In the long run, bank management should determine policies and strategies to grow customer satisfaction by providing pleasant and soothing online services.

## AUTHOR CONTRIBUTIONS

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