

# Investigating Structural Relationship among Service Quality Dimensions, Customer Satisfaction, and Customer Loyalty for Conventional Bank Customers: Evidence from Bangladesh

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## ABSTRACT

Customers of the banks are highly servicing sensitive in Bangladesh. The quality of service has become an integral part of customer satisfaction. Day by day, It has been demonstrated that customer satisfaction and loyalty are linked to service quality. There is also a link between service quality and customer satisfaction, and customer loyalty in banks. Therefore, this paper investigated the effect of service quality factors on customer satisfaction and the relationship between customer satisfaction and customer loyalty in conventional banks in Bangladesh. A survey was conducted on 13 different conventional banks in Bangladesh. Using simple random sampling, 220 customers were selected as a sample from selected conventional banks for this study. The research was carried out using a structured questionnaire. The SPSS software was used to analyze the demographic data. Multivariate analysis technique like Factor Analysis and Structural Equation Modeling (SEM) was used to identify the influential factors for the bank's customer loyalty by using SmartPLS3 software. The study found that all service quality factors such as assurance, reliability, responsiveness, and tangibility are the influential factors except empathy.

**Key words:** Service Quality, Structural Equation Modeling, Customer Satisfaction, Customer Loyalty, Conventional Banks, Bangladesh

## INTRODUCTION

Bangladesh is on its way to development. Banks, predominantly private commercial banks have significant contribution in the development process (Hossen et al., 2021). There are almost 47 private commercial banks in Bangladesh. The fast growth of the service sectors and their increasing relevance in global economies has brought attention to the issue of service quality, making it a critical consideration (Mahadeo and Durbarry, 2008). Furthermore, the intangibility, heterogeneity, inseparability, and perishability of services, as well as the high involvement aspect of the service delivery system/experience itself, have enhanced the need for greater service quality (Arasli et al., 2005; Uz Kurt, 2010). As a result, service quality has become a prominent focus for practitioners, managers, and researchers in recent decades, owing to its significant impact on corporate performance, lower expenses, customer satisfaction, customer loyalty, and profitability (Chang and Chen, 1998). More specifically, & Yieh et al. (2007) emphasizes the necessity of

investigating the linkages between service quality, customer satisfaction, trust, and customer loyalty, including direct and indirect impacts.

### Research Objectives

The primary goal of this research is to investigate the structural relationships among service quality dimensions, customer satisfaction, and customer loyalty for conventional bank customers of Bangladesh. However, to achieve the main objective the following specific objectives are to be sought:

- To determine the influential factors that define the service quality of the conventional banks,.
- To investigate the relationship among service quality factors, customer satisfaction, and customer loyalty in the conventional banking sector of Bangladesh.
- To make some suggestions for how to enhance the customer satisfaction as well as customer loyalty of conventional banks in Bangladesh.



## LITERATURE REVIEW

### Tangibility

Physical buildings, tools or equipment used to perform services, and employee appearance are all examples of tangible. Signs, comfort, accessibility, spaciousness, functioning, and cleanliness are examples of physical facilities (D'Cunha and Suresh, 2015). Furthermore, this component is mostly linked to service variety in order to match client expectations (Caruana, 2002). The physical proof of the service, such as the appearance of the tools, equipment, and physical facilities utilized to offer the service, is known as tangibility. Davis et al. (2003) summarize tangibles like the physical confirmation of the service. Finally, in the present research, tangibles are the facilities and the banking services offered by the providers of the conventional banking sector in Bangladesh.

### Reliability

Service consistency and dependability are part of reliability, which refers to the capacity to supply the service that customers want reliably and accurately (Parasuraman et al., 1985). Providers deliver services on time and follow their commitments, especially when it comes to billing accuracy, keeping accurate records, and delivering services to customers on time (Kondasani and Panda, 2015). The term Reliability can also be defined as an amalgamation of the right order accomplishment; accurate records; precise reference; right in the bill; results are more accurate than commissions; keep the promise of service. Also, reliability is the most significant factor in banking services (Yang and Fang, 2004).

### Responsiveness

The willingness or preparedness of a service provider to deliver prompt service is referred to as responsiveness (Parasuraman et al., 1985). It deals with timeliness, such as delivering swift customer service, setting up appointments as soon as possible, sending the transaction slip to the client as soon as possible so that the customer does not get the wrong impression, and calling the customer as soon as possible (Calisir et al., 2014). Customer satisfaction is expected to improve if service providers respond more quickly to clients (Parasuraman et al., 1985). It also contains realizing the desires and requirements of the customer, easy operation time, and individual attention provided by the staff, attention to the problem and customers' safety in their dealings (Kumar et al., 2009). Finally, in the present research, responsiveness is the facilities and the banking services offered by the providers of the conventional banking sector in Bangladesh.

### Assurance

Employee knowledge, civility, and the capacity to transmit trust and confidence are all examples of assurance. Employees should be knowledgeable and skilled in order to deliver the greatest service to their

consumers. Courtesy is defined as civility, respect, consideration, and kindness, as well as consideration for the property of the consumer. Trustworthiness, believability, and honesty are all terms used to convey trust and confidence. It entails thinking about the customer's best interests, such as the features of contact employees (Kitapci et al., 2014).

### Empathy

Empathy refers to a caring attitude toward consumers, as well as a thorough understanding of their needs and the provision of personalized service. The ability to respond to client needs, such as identifying regular customers and learning their individual wants, is referred to as capacity to understand customer needs (Parasuraman et al., 1985). Ananth et al. (2010) exhibit compassion in their research of private sector banks, provide personal attention and easy operation time; give personal attention, and understand the specific needs of customers. Fitzsimmons and Fitzsimmons (2000) suggest that empathy contains approachability, sensitivity, and efforts to understand customer needs. Provider empathy and customer relationship have a positive influence on customer satisfaction (Fitzpatrick, 1991; Zarei et al., 2012).

### Customer Satisfaction

In fact customer's satisfaction is the consumer's assessment of goods and services in terms of expectation that has been rendered by the customer (Kotler and Armstrong, 2012). Customer satisfaction is positively influenced by service quality (Yee et al., 2010). Zaim et al., (2010) researched and found that tangibility, reliability and empathy play a pivotal role for customer satisfaction, but Mengi (2009) found that responsiveness and assurance are more important. Yee et al., (2010) examined a contrast of service quality with Bangladesh perspective where service quality is found to be really important. In reality, service quality has a positive link with customer happiness, with empathy having the most positive correlation, followed by assurance and tangibility. Furthermore, Baldinger and Rubinson (1997) recognized and experienced the impact as well as influence on customer satisfaction in the Malaysian retail banking market the inclusion of empathy and assurance played a dominant role in development. Arasli et al. (2005) found that for customer satisfaction, reliability was one of the key factors. Finally, several studies have acknowledged the paradigms of service quality as the antecedents of customer satisfaction (Lau et al., 2013; Saghier & Nathan, 2013).

### Customer Loyalty

Customer loyalty is characterized as a combination of behavioral and attitudinal loyalty, with a focus on the behavioral side of the equation (Baldinger and Rubinson 1997; Dick and Basu 1994). Using a multi-item scale termed the SERVQUAL model, Parasuraman et al. (1985) define service quality as the relative perceptual distance

between customer expectations and assessments of service experiences and service quality. Loyalty is a multi-dimensional phenomenon with both positive and negative responses (Zeithaml et al., 1996; Azam et al., 2021). Customer loyalty is defined as a strong desire to repurchase or patronize a favored product in the future, despite changing circumstances (Oliver, 1997).

**Interrelationships between Service Quality Dimensions and Customer satisfaction**

Researchers performed research on customer loyalty and argued that service quality has influence on customer satisfaction and produces customer loyalty (Chang et al., 2009). Some of the reviewed literatures are as follows: Zeithaml et al. (1998) established a conceptual model that combines service quality, customer satisfaction, and loyalty into a single framework. Service quality, according to the model, is determined by reliability, certainty, responsiveness, empathy, and tangibles. Customer satisfaction is determined by several elements, including the quality of the service and product, the pricing, and the situational and personal aspects.

**Interrelationships between Customer Satisfaction and Customer Loyalty**

Customer satisfaction is a predictor of customer loyalty, according to the majority of experts (Faullant et al., 2008; Leverin and Liljander, 2006; Terblanche and Boshoff, 2006). Customer satisfaction and customer loyalty have a significant positive relationship (Donio et al., 2006; Hess and Story, 2005).

**Hypothesis**

- H<sub>1</sub> Tangibility has positive impact on customer satisfaction in the conventional banking sector in Bangladesh
- H<sub>2</sub> Assurance has positive impact on customer satisfaction in the conventional banking sector in Bangladesh
- H<sub>3</sub> Reliability has positive impact on customer satisfaction in the conventional banking sector in Bangladesh
- H<sub>4</sub> Responsiveness has positive impact on customer satisfaction in the conventional banking sector in Bangladesh
- H<sub>5</sub> Empathy has positive impact on customer satisfaction in the conventional banking sector in Bangladesh
- H<sub>6</sub> Customer satisfaction has positive impact on customer loyalty in the conventional banking sector in Bangladesh

**CONCEPTUAL FRAMEWORK**

The goal of this research is to investigate the conventional banks of Bangladesh, on the basis of different factors like tangibles, reliability, responsiveness, empathy, assurance,

customer satisfaction, and customer loyalty. We will look at figure no. 01 which is a conceptual model for demonstrating the link between various service quality factors, customer satisfaction and loyalty.

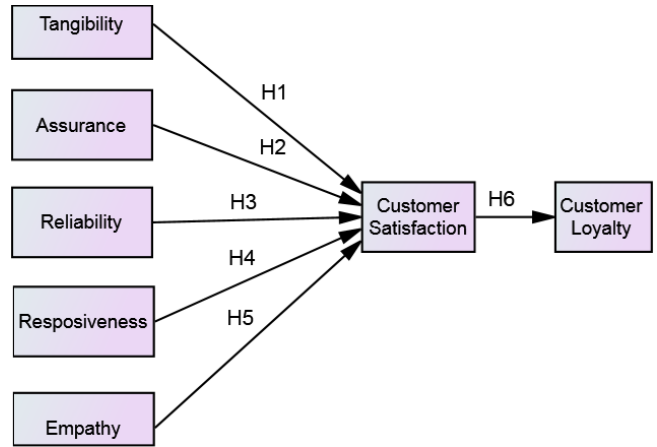


Figure 1: The conceptual framework of the customer service quality factors, customer satisfaction and customer loyalty of the conventional banks of Bangladesh.

**METHODOLOGY OF THE STUDY**

This study attempts to identify the influential factors concerned with the use of different factors of service quality on conventional banking sector customers in Bangladesh. To conduct the study, the data has been collected from primary sources. Primary data were collected from the different conventional banks' customers in Bangladesh.

**Determination of Sample Size**

The sampled customers can be determined by using the following formula suggested by Yamane (1967). The formula used in this study is shown below:

$$n = \frac{N}{(1 + Ne^2)}$$

Where,

n=Sample Size

N= Population

e=Level of Precision

Our population size was more than 1000000 and we want to consider the level of precision is 7%, so our calculating minimum sample size is 204 by using above mentioned formula, but we have used 220 sample data for showing better results.

A structured questionnaire with the 5-point scale was developed for the items related to influence of service quality factors on private commercial banks in Dhaka city of Bangladesh. The survey employed a 5-point scale ranging from 1 to 5, with 1 indicating strongly disagrees and 5 indicating strongly agrees. The questionnaire's

reliability coefficient is shown in Table 2. According to Nunnally (1994), Hair et al. 1998, Fornell & Larcker, (1981); Henseler et al. (2009), the cronbach's alpha, composite reliability, and average variance retrieved from the questionnaire are all within acceptable limits. A survey was conducted on different conventional banks' customers in Bangladesh. Before resuming the interview, the interviewers were adequately taught on the items that constitute the questionnaire for data collection. The sample respondents were selected by using the simple random sampling method. After collecting 234 data, incomplete, biased, and or abnormally answered data were discarded through scrutinizing process and finally 220 data were used in the analysis. The reliability of all items in the questionnaire has been tested by using SPSS software. Along with descriptive statistics, inferential statistical techniques such as Factor analysis, and Structural Equation Modeling (SEM) were used to analyze the data by using SPSS (Statistical Package for Social Science) and SmartPLS (statistical software). In this study, Structural Equation Modeling (SEM) has been conducted to identify the influential factors; those factors have been affected on customer satisfaction and customer loyalty of those banks.

**ANALYSIS AND FINDINGS**

**Convergent Validity**

According to Hair et al. (1998) convergent validity could be measured through factor loadings, composite

reliability and the average variance extracted. The results of the measurement model (Table 1) show that the loadings for all items exceeded the recommended value of 0.50 (Hair et al. 1998). Composite reliability (CR) values ranged from 0.795 to 0.871 which exceeded the recommended value of 0.70 (Hair et al. 1998).

**Discriminant Validity**

The correlations between the measures of potentially overlapping constructs were examined. The square root of the average variance extracted for each construct is bigger than the levels of correlations involving the construct in the model, and items load more strongly on their own constructs in the model (Fornell and Larcker, 1981).

Table 1: Test of Reliability value of different service quality factors, customer satisfaction, and customer loyalty of conventional banking sector in Bangladesh

	Cronbach's Alpha	Composite Reliability	(AVE)
Assurance	0.756	0.860	0.672
Customer Loyalty	0.788	0.876	0.702
Customer Satisfaction	0.871	0.921	0.795
Empathy	0.776	0.870	0.690
Reliability	0.686	0.826	0.613
Responsiveness	0.722	0.842	0.640
Tangibility	0.720	0.842	0.642
	Customer Loyalty	Customer Satisfaction	
R Square	0.436	0.590	
R Square Adjusted	0.435	0.586	

Table 2: Discriminant validity test of different service quality factors, customer satisfaction, and customer loyalty of conventional banking sector in Bangladesh

Validity	Mean	S.D	1	2	3	4	5	6	7
1. Assurance	3.16	0.77	0.820						
2. Customer Loyalty	3.09	0.82	0.569	0.838					
3. Customer Satisfaction	3.12	0.84	0.616	0.660	0.892				
4. Empathy	2.95	0.74	0.605	0.395	0.553	0.831			
5. Reliability	3.32	0.94	0.612	0.524	0.628	0.592	0.783		
6. Responsiveness	3.03	0.87	0.628	0.489	0.708	0.627	0.629	0.800	
7. Tangibility	3.16	1.04	0.539	0.493	0.603	0.568	0.609	0.626	0.801

**The Coefficient of Determination**

Table 1 shows that the coefficient of determination; R-square is 0.590. This means that the five independent variables are; assurance, reliability, responsiveness, empathy, and tangibility moderately explained 59.0% of the variance in customer satisfaction of conventional banking sector in Bangladesh.

Table 3: Personal Information of the customers of conventional banking sector in Bangladesh

	Conventional Banks' Customers		
		Frequency	Percent
Gender	Male	150	68
	Female	70	32
	Total	220	100
Age of the respondents	18-30 years	90	41
	31-45 years	75	34
	45 years and above	55	25
	Total	220	100

Table 3 shows that near about 68% of the customers were males. The age distribution of majority customers 90 (41 %) out of a total of 220 were aged between 18-30. Again very small number of the customers whose age over 45 years.

**Exploratory Factor Analysis**

EFA is a vast applied statistical technique in social science. A total 220 usable survey responses were analyzed in this section. Also this factor analysis technique has been used to examine the relationship between different factors in service quality dimension of private commercial banking sector customers. The five factors that have found from rotated factor matrix, have been discussed in the following paragraphs:

**Factor-1 (Assurance):** This includes three variables: the behaviors of bank instill confidence in people, People feel safe in their transactions with the bank, and bank is consistently courteous with people. So, it provides a basis for conceptualizing of a dimension which may be identified as assurance factor.

**Factor-2 (Empathy):** This includes three variables: bank gives people individual attentions, bank has operating hours convenient to all the people, and bank has peoples'

best interest at heart have the principal factors. So, it provides a basis for conceptualizing of a dimension which may be identified as reliability factor.

**Factor-3 (Reliability):** This includes three variables: bank keeps promise in giving services by promising time, bank shows a sincere interest in solving people's problems, bank provides hassle-free service to the people have the principal factors. So, it provides a basis for conceptualization of a dimension which may be identified as reliability factor.

**Factor-4 (Responsiveness):** This includes three variables: bank gives prompt service to the people, bank is never too busy to respond to people's requests, and bank insists on error-free records have the principal factors. So, it provides a basis for conceptualization of a dimension which may be identified as responsiveness factor.

**Factor-5 (Tangibility):** This includes three variables: bank has up to date equipment, bank's physical facilities are visually appealing, and banks are well dressed and neat in appearance have the principal factors. So, it provides a basis for conceptualization of a dimension which may be identified as tangibility factor.

**Table 4:** Cross Loadings of conventional banks data analysis in Bangladesh

	Assurance	Empathy	Reliability	Responsiveness	Tangibility
ASN1	<b>0.802</b>	0.505	0.481	0.476	0.438
ASN2	<b>0.857</b>	0.476	0.536	0.546	0.451
ASN3	<b>0.799</b>	0.511	0.486	0.519	0.438
EMP1	0.470	<b>0.823</b>	0.474	0.452	0.464
EMP2	0.546	<b>0.856</b>	0.532	0.603	0.531
EMP3	0.488	<b>0.813</b>	0.464	0.499	0.411
REL1	0.379	0.425	<b>0.716</b>	0.343	0.435
REL2	0.462	0.404	<b>0.802</b>	0.516	0.444
REL3	0.575	0.552	<b>0.826</b>	0.586	0.545
RES1	0.490	0.478	0.507	<b>0.813</b>	0.497
RES2	0.510	0.560	0.435	<b>0.763</b>	0.434
RES3	0.512	0.484	0.553	<b>0.823</b>	0.556
TNG1	0.333	0.472	0.410	0.414	<b>0.778</b>
TNG2	0.556	0.518	0.568	0.573	<b>0.882</b>
TNG3	0.374	0.365	0.471	0.504	<b>0.736</b>

AVE=Average Variance Extracted, C.R=Composite Reliability, Cronbach's alpha, VIF=Multicollinearity Statistic

Note: AVE>0.50 (Fornell & Larcker, 1981; Henseler et al., 2009), Composite Reliability>0.70 (Hair et al. 1998), Cronbach's alpha>= 0.60, (Nunnally, 1994).

Generally, A global fit measure (GOF) was conducted for path modeling; it is defined as the geometric mean of average communality and average R-square (especially endogenous variables) (Chin, 2010) (see the formula). In this study, GOF value was 0.63 (R-square = 0.59, AVE = 0.68 for customer satisfaction). So, the value of GOF exceeded the largest cutoff value (0.36), and it was indicated that the proposed model of this study had better to explain power than that based on the recommended value of GOF<sub>small</sub> = 0.1, GOF<sub>medium</sub> = 0.25, and GOF<sub>large</sub> = 0.36 (Akter et al., 2011).

**RESULTS OF MULTIVARIATE ANALYSIS - PARTIAL LEAST SQUARE (PLS)**

A multivariate analysis technique-'Partial Least Square (PLS)' was used to identify the significant relationship among service quality factors (e.g. assurance, reliability, responsiveness, empathy and tangibility), customer satisfaction and customer loyalty. Table 5 shows that every factor of service quality dimensions are strongly related to customer satisfaction except empathy factor and also

customer satisfaction is strongly related to customer loyalty. The every values of VIF has been shown that there is no multicollinearity effect among those factors. This study

suggests that the policy makers of conventional banking sector of Bangladesh should focus more on the factors like assurance, reliability, responsiveness, and tangibility.

**Table 5:** Summary Results of the Model Constructs

Hypothesis	Relationship between two factors	$\beta$ -coefficient	T Statistics	P Values	VIF	Decision
H1	Tangibility-> Customer Satisfaction	0.153	3.368	0.001	1.97	Yes
H2	Assurance -> Customer Satisfaction	0.176	4.101	0.000	2.05	Yes
H3	Reliability->Customer Satisfaction	0.181	4.150	0.000	2.14	Yes
H4	Responsiveness->Customer Satisfaction	0.378	6.037	0.000	2.32	Yes
H5	Empathy->Customer Satisfaction	0.016	0.347	0.729	2.03	No
H6	Customer Satisfaction -> Customer Loyalty	0.660	22.362	0.000	1.00	Yes

Collinearity Statistic (VIF) The rules of thumb for the VIF are as follows: VIF < 3; no problem, VIF > 3; potential problem, VIF > 5; very likely problem, VIF > 10; definitely problem

**CONCLUSION**

The major purpose of the current study is to determine the influential factors that define the service quality of the conventional banks in Bangladesh. The study sought to investigate the relationship among service quality factors, customer satisfaction, and customer loyalty in the conventional banking sector of Bangladesh. According to hypothesis H1, there is a strong positive relationship between tangibility and customer satisfaction because the p-value is less than 0.01. That means as the willingness and ability of bank employees’ increase, customer satisfaction also increases. According to hypothesis H2, there is a strong positive relationship between assurance and customer satisfaction because the p-value is less than 0.001. This positive relation means that if the bank employees ensure the better service, customer satisfaction also increases. According to hypothesis H3, there is a strong positive relationship between reliability and customer satisfaction because the p-value is also less than 0.001. This positive relation means that as bank employees’ performance and reliability increase, customer satisfaction also increases. Based on hypothesis H4, there is a strong positive relationship between responsiveness and customer satisfaction because the p-value is less than 0.001. It means that as banks’ responsiveness increase, customer satisfaction also increases. According to hypothesis H5, empathy and customer satisfaction has no relationship because the p-value is higher than 0.05. According to the hypothesis H6 indicates that there is a perfect positive relationship between customer satisfaction and customer loyalty. That means that as the customers are satisfied, there is a high chance for loyalty. From the above study, the result has been shown that near about 68% of the customers were males. The age distribution of majority customers 90 (41 %) out of a total of 220 were aged between 18-30. Again a very small number of the customers whose age over 45 years. That’s mean the customer is well known about the service quality of the conventional banking sector. They have also known how to deliver the better service quality

for the customers. Previous studies have been shown that customer-perceived service quality and customer satisfaction are the most important success factors of business competition for service providers. Customer satisfaction has been found to positively and significantly affect customer loyalty. Our structural equation findings that assurance, tangibility, reliability, responsiveness have a positively influences on customer satisfaction. So, the finding of the paper will show that customer loyalty is related to customer satisfaction and then customer satisfaction is related to four service quality factors like assurance, tangibility, reliability, and responsiveness.

**Managerial Implications**

This study has outlined that there are relationship among service quality factors, customer satisfaction and customer loyalty in the conventional banking sector of Bangladesh. This study has also expressed that every factors of service quality except empathy are positively and moderately related to customer satisfaction. This study also recommends that partial factors of SERVQUAL are an appropriate tool for measuring the bank service quality in the context of Bangladesh. Therefore, bank managers can apply four service quality factors like assurance, tangibility, reliability, and responsiveness except empathy to assess the bank service quality in Bangladesh. But the manager should investigate why the customers can not feel the factor of empathy. And it is advisable for the managers to take some initiatives to overcome this lacking for the purpose of customers want. Also, the study factors and the suggestions dictate the managers to take the initiatives to improve the service quality of the conventional banking sector in Bangladesh. In this study responsiveness show the highest positive relation with customer satisfaction. The main concept of responsiveness is the employee’s responsibility for better service delivery to the customers. Therefore, it can be concluded by informing that the Bangladeshi bank managers should provide better services to the valued customers considering the service quality factors with due emphasis on responsiveness.

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