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Research Article

# Relationship between banking service quality and customer satisfaction of commercial banks in Cumilla district, Bangladesh

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#### **ABSTRACT**

Commercial banking sector plays significant role in achieving economic development. Service quality in banking sector is vital issues for developing country like Bangladesh. The present study explores the relationship between customer satisfaction and service quality of the commercial banks in Cumilla district. The total number of sample was 400. The data was collected by face to face interview using structured questionnaire method. In questionnaire, the close ended and open ended questions were used to collect data. The principle point of the investigation is to evaluate the service quality of commercial banks in Cumilla and its effect on customer satisfaction. The SERVQUAL model considers five major components like responsiveness, reliability, assurance, empathy and tangibility. Five hypotheses have been used by considering five major factor of SERVQUAL model. The coefficients of SERVQUAL factors estimated by SEM approach, the factors like responsiveness, reliability, assurance, empathy and tangibility takes the coefficients value 0.67, 0.62, 0.60, 0.84 and 0.58 respectively. The results indicate that other independent variable remains constants, 1-unit change in responsiveness will build consumer loyalty 0.67 units; similarly, 1-unit change in reliability will build consumer loyalty by 0.62 units; 1-unit change in assurance will increase consumer loyalty by 0.60 units. Where, the results of empathy and tangibility also show positive coefficients are 0.84 and 0.58 respectively to explain the customer satisfaction. The study concluded that the considered five factors plays effective role to increase the service quality. The study findings might contribute to understand the customer's pulse and take necessary modification by the management, board of governance and policy makers.

Keywords: Bank; Service Quality; SERVQUAL Model; Structural Equation Model; Cumilla

# 1. INTRODUCTION

#### 1.1. BACKGROUND OF THE STUDY

The current banking market in Bangladesh is portrayed by an exact defense of their huge number comprising of both banking and other monetary organizations. Basically, these banking and other monetary foundations are seeking the possibly enormous market in the country. One of the significant patterns in the Bangladesh banking area today is the continuous and gradual exchange from customary direction to forceful drive. By this, the board is constrained to leave their shells or areas to participate in the sharing of the huge market to fulfill different requirements of clients. Note that consumer loyalty and administration quality are firmly interrelated. The higher the assistance quality given by an association, the higher is the degree of consumer loyalty. In Bangladesh, commercial banks



assume a vital part and are the biggest piece of monetary organization. The banking business in Bangladesh is gotten more coordinated because of the deregulation, liberation and technology. Accordingly, the market climate in financial area has gotten more competitive. The banking item and serviceable scale presently particularly homogeneous starting with one bank then onto the another bank and simultaneously the interest from bank clients are continue expanding where banks need to accomplish more successful industry change. Banks recently underscored on their items are slowly moved to be more client center which is corresponding with the social showcasing guideline where client reliability will be the fundamental focus.

The growth of a nation in various economic sectors is greatly affected by an efficient banking system. Financial companies, banks and NGO's are currently struggling to maximize their share of income in the national development (Banerjee et al., 2017; Rahman and Majumder, 2020). Among those institutions, banks have changed dramatically from conventional banking to a branchless banking structure. In order to participate additional efficiently with international institution, it is important for banks to better recognize changing consumer needs and implement the latest IT framework. In order to thrive and attain strength in the banking sector, service eminence is painstaking to be the essential issue. The bank accepts public deposits and generates credit. The capital markets can be used to carry out loan activities, either openly or indirectly. Banks are extensively regulated in most countries due to their importance to a country's financial stability. Many other countries have formalized a technique known as fractional reserve banking, in which banks keep liquid assets equal to only a percentage of their current assets. As every other service sector, in order to maximize benefit, the bank offers services to the public. The commercial bank's job is one of mobilizing savings by gaining and gathering customer deposits for safety purposes. The deposits of customers are essential to the activity of the bank and its expected outputs of minimizing profit. Therefore, banks are largely complete in terms of services provided for the client deposit. Therefore, in order to allow banks to attract new customers, there is a clear need for successful quality banking service. It was further emphasized that customers are perhaps the most significant for any company in demonstrating quality implementation of the banking industry and can be sustained as long as customer service quality is taken as an integral part of the banking business.

This study is an in-depth econometric analysis that seeks to develop a method for predicting the quality of service and customer satisfaction in Bangladesh's commercial banks. A lack of any useful tool to forecast and measure service quality in commercial banks and customer satisfaction provided the impetus for this research. For calculating perceived efficiency in banks, there are no currently accessible standardized scales (Nupur, 2010; Akhtar, 2011; Nahida Afroz, 2019). Although academic evidence on service quality, customer loyalty, customer retention, and customer relationships in general are replete with literature, there is a lack of empirical research directly related to predicting customer loyalty.



#### 1.2. PROBLEM STATEMENT

Siddiqi (2011), Karim and Chowdhury (2014) and Khan et al. (2018) note that the standard of service has declined in the banking sector of the country. In achieving organizational objectives, customer satisfaction and service efficiency are the most critical elements. The business strives to provide consistent customer satisfaction with the service it offers. As service quality plays a critical role in deciding customer satisfaction and in a bank's success to succeed in the viscous medium, in an organization's products, quality needs to be recognized and controlled. Along parallel tracks, satisfaction and efficiency have grown (Liljander and Strandvik, 1995; Ramachandran and Chidambaram, 2012; Kishada and Wahab, 2015). Customer satisfaction levels are now one of the key goals for banks to grow their market share. Customer satisfaction is a feeling and the consequence of that feeling varies from person to person, affecting customer loyalty in return. In order to discover the nature of the influence of service quality on customer satisfaction, the current study is undertaken.

#### 1.3. RESEARCH OBJECTIVES

The general objective of the study is to inspect the relationship between customer satisfaction and service quality of the commercial banks in Cumilla district, Bangladesh. However, the explicit objectives are:

- 1. to determine the level of service quality of commercial banks in Cumilla district;
- 2. to determine the level of customer satisfaction of commercial banks in Cumilla district.
- 3. to analyze the GAP score of SERVQUAL factors between customer prospect and perception of banking service quality.

#### 1.4. HYPOTHESIS STATEMENT

Before going further into research study, there are some basic hypothesis should be established to help this thesis examine the connection between independent variables and dependent variables. Throughout this research, will perform a test using the Statistical Package for Social Science (SPSS) and AMOS software's to see whether there is a connection between the 5 core (SERVQUAL) measurements of perceived service quality to the customer. The hypotheses are:

H1: Responsiveness and customer satisfaction (CS) have no association.

H2: There is no link between reliability and CS.

H3: Tangibility and CS have no link.

H4: Empathy and CS have no liaison.

H5: There is no link between CS and assurance.

The considered hypothesis will be tested in the subsequent sections. Whatever, then first hypothesis is justified by Raza et al. (2015) and Iberahim et al. (2016). They have rejected the 1st hypothesis of this study. The second hypothesis rejected by Shanka (2012) and Li et al. (2021). The 3rd hypothesis has been justified by Lenka et al. (2009) where Pakurár et al. (2019)



agree to reject the 4<sup>th</sup> hypothesis (H4). The last one is to interect between assurance and CS which hypothesis has been rejected by Alabboodi (2019).

# 2. LITERATURE REVIEW

A study allows the measurement of customer satisfaction by providing service quality in the banking industry in Bangladesh was revealed Islam and Ahmed (2005) directed an investigation in Dhaka city of Bangladesh to balance out primary variables which are identified with banking administration quality. Dhaka was gathered toss an organized poll by an example overview. Test was chosen arbitrarily while talking and information was gathered from 11 banks (4 are government, 6 are private and rest of 1 is from unfamiliar area). The different relapse investigation demonstrated that the main assistance quality factor is close to home thoughtfulness regarding the customers and others factors are as per the following: mistake free records, Security in exchange and tangle actual offices of the banks. A critical relationship between's administration quality elements and other assistance nature of banks situated in Dhaka city, Bangladesh. Masukujjaman and Akter (2010) need to assess the Bangladeshi clients fulfillment of the financial assistance quality (General banking, Credit banking and foreign banking) in Bangladesh. Test unit was chosen by judgmental examining and information was gathered from 480 clients by a meeting method with an organized poll. The information investigation results demonstrated that that overall financial help quality is better with contrast with credit banking administration and unfamiliar trade administration quality and the general assistance quality in private business bank in Bangladesh is moderate. Nupur (2010) directed an investigation on consumer loyalty of e-banking in Bangladesh. E-banking can improve its relationship with clients by giving speedier, quicker and solid support of face client. The investigation is led (2006-09) when individuals are delighted in e-banking as assistance. The authors utilize five dimensional SERVQUAL techniques (tangible, reliable, assurance, responsiveness and empthathy) to gauge the help quality. Information was gathered from 250 clients toss overview meet by a pre instant organized survey. The investigation show that the all the five measurements elements of administration quality emphatically affect clients fulfillment. The investigation additionally anticipates that dependability responsiveness and confirmation have more commitment to satisfy the ebanking clients in Bangladesh. Siddiqi (2011) has done an examination in the retail banking segment in Bangladesh to discover the interrelationship between administration quality, consumer loyalty and client loyality. Siddique survey writing and the writing audit affirm the interrelationship between administration quality, consumer loyalty with client loyalty. A study was directed with an organized poll and information was gathered from 100 retail banking clients. The outcomes show that all the assistance quality measurements are definitely recognized with CS and client is acknowledged with client loyalty in retail banking in Bangladesh. Compassion has most noteworthy relationship with consumer loyalty where substantial has least connection with consumer loyalty. The investigation recommends that SERVQUAL is a reasonable instrument to gauge administration quality in Bangladesh.



Asaduzzaman et al. (2012) have contended that consumer loyalty can assess the organization's exhibition by a bunch of satisfaction measurement which demonstrates the solid and powerless purposes of a business association. The creators attempt to introduce the first custom agreeable utilizing SERVQUAL instrument in the private business banking area of Bangladesh. Information has been gathered from 300 respondents and 20 respondents from 15 private business banks and test unit is chosen purposively. The outcome shows that there has been positive and critical connection between services quality measurements and consumer loyalty. Hossain and Jebran (2012) have directed an exploration to discover purchaser's customers' insight on broad financial exercises of a business bank. The paper gives a comprehension of various elements that influence buyer discernment on broad exercises of a bank. Here 3 components are created with the assistance of factor analysis. Face-to-face meet interview was directed between an economic analyst and a respondent. Information was gathered on a review. The review was unbending or 'organized' and utilizes shut inquiries. Information is effectively analyzed. Uddin and Akhter (2012) have done research to explore administration charge, seen worth, and consumer loyalty, consumer loyalty and its determinants of the banking business in Bangladesh. An exploratory factor investigation and underlying condition demonstrating was utilized to break down information. Estimation model and primary model demonstrate that help quality and reasonable assistance charge both straightforwardly affect consumer loyalty in a mass assistance industry. Afrin (2012) has done an examination utilizing SERVQUAL model to gauge the nature of client care in the banking area of Bangladesh and Information is gathered from 100 arbitrary clients utilizing a design poll chose from 5 significant commercial banks in Bangladesh. The review uncovered that client's prioritized "responsiveness" as the main component of administration quality and administration quality also needed in agriculture and agro production in Bangladesh (Prova and Rahman, 2021). Islam et al. (2013) have contend that giving consumer loyalty is business accomplishment in the serious business world and it is distinctive to set a standard principle to fulfill in help industry. In this way, banking industry needs to distinguish the variables that impact the client's choices. 49 organized close finished poll were get ready utilizing 9 factors on SERVQUAL model. Information was gathered toss a vis-à-vis meeting and five point scales has been utilized. The main factor was discovered items and methodology of administrations in settling on choices of client and they are unbiased in pace of interest and actual climate and backing. Karim and Chowdhury (2014) have led this examination to find the effect of administration quality on consumer loyalty in private area banks in Bangladesh. Five measurements in assistance quality (tangibility, reliability, responsiveness, empathy, and assurance) are considered as the base for this investigation. An organized poll with 5 point Likert scale has been utilized to gather the information by directing review. The example size is 110 and is picked on an advantageous premise. Aftereffect of the examination demonstrated that substance, dependability, responsiveness, confirmation and sympathy essentially and emphatically impacted client mentalities as far as fulfillment that is administration quality measurements are pivotal for consumer loyalty in private business banking area in Bangladesh. Saha et al. (2014) have led this investigation to take the assessments of various people groups in Rajshahi city, Bangladesh about the help quality in various business banks. Tests of 51 clients who have



their financial balance with various business banks having activities in Rajshahi city are chosen on accommodation premise. In the wake of going for long investigation of information we have discovered that five elements assuming significant part to satisfy client with respect to the financial administrations. Hence, consumer loyalty is the key for some banks to remain alive in rivalry. Sagib (2014) measures the mobile banking quality and consumer loyalty and loyalty in Bangladesh. It was hard to comprehend client insight and quality measurements in versatile banking as it was new field for Bangladesh where economic reform is an effective way of raising economic efficiency (Majumder and Rahman, 2020). In light of the current writing a bunch of measurements for quality help has been set up and gathered information from respondent utilizing an organized survey. The relapse investigation and corroborative factor examination results demonstrated that dependability, responsiveness, confirmation and security, comfort of area and proficiency and effectiveness to work are measurements seen administration quality for portable financial help.

Jesmin (2016) directed an examination for understanding the Bangladesh Krishi bank client discernments on various service qualities when client manage bank. 50 Information is gathered from the clients by talking employees toss an organized poll on non likelihood accommodation premise. Bangladesh Krishi bank are proficient to got together client assumption however the majority of the clients of the bank are not happy with the substantial quality or distinctive equipment given by the bank. Sarker and Uddin (2017) contends that the interest of banking administrations increments as the populace expands step by step and there the vital factor to pull in the client is give vender quality assistance to fulfill the client. The primary point of the examination is to assess the assistance quality on consumer loyalty in retail private banking in Bangladesh. Information was gathered from 229 retail banking client of various zone of Dhaka city toss a study. The relationship and relapse investigation show that sympathy, confirmation and dependability these three assistance quality have the critical impact on consumer loyalty. Khan et al. (2018) have done this examination to comprehend the relationship between administration quality and consumer loyalty to utilize versatile banking through structural equation model, since, Bangladesh is one of the quickest expanding portable financial specialist organizations in the world. A convenience sampling strategy was utilized to choose likely members in this investigation. Out of the circulated surveys, 240, finished and usable, were chosen for the examination which utilized fractional least squares structural equation model (PLS-SEM). The outcomes demonstrated that there are positive and huge impacts of all builds of administration quality, in particular, substance, dependability, responsiveness, confirmation and compassion on consumer loyalty for utilizing versatile banking. Islam (2020) demonstrate that visibility, responsiveness and representative responsibility have positive and huge impact on consumer loyalty, while dependability and admittance to support are found to have irrelevant effect on consumer loyalty of private financial administrations. The discoveries of this examination additionally uncovered that consumer loyalty has positive and huge relationship with client dependability. In any case, aside from respondents' occupation type, any remaining segment factors have no genuinely critical connection with consumer loyalty.



Whatever, to the end of this banter of inscription we may infer that by offering genuine benefit of money to clients, by offering premium quality to them as specify by their demands, the apparent penance might be controlled. The item or services offered should be important and useful enough and fit clients' insights to expand their fulfillment. At long last it very well may be proposed that in the present exceptionally dynamic and competitive environment, monetary organizations can win the trust and reliability of clients by offering premium quality administrations just as some other worth added offers at now and again to guarantee most extreme consumer loyalty and better monetary execution. This study will contribute in the sense of introducing new model and so far I know that, no study has been conducted in the study region.

# 3. METHODOLOGY

The research is conducted in Cumilla district, Bangladesh. The reasons for choosing this area are that it is one of the largest concentrations of commercial banks customers and branches. Also, the area is expedient for the researcher owing to limited time and financial possessions needed to explore the study.

#### 3.1. SAMPLE SIZE

All commercial account holders in Cumilla are the study population. We used judgmental sampling method to select the sample units that are willing to respond to the questionnaire from different commercial banks in the district of Cumilla. The reason behind choose the judgmental method is to our knowledge and expertise in the relevant field. Based on confidence level and accuracy rate, the sample size was calculated via Fisher's calculation. With the following assumptions, we may use Fisher's general formula for this function.

$$n = \frac{z^2 pq}{d^2} = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 385$$

Where,

n= the desired sample size, z= the standard normal deviate, p= the proportion in the target population, q=1.0-p=1.0-0.5=0.5 and d= Margin of error (5%).

#### 3.2. DATA ANALYSIS BY MODEL

SPSS and AMOS software is used to tabulate and evaluate the correct answer of the research questions. The Structural Equation Model (SEM) is used to analyse the results. The causal link between exogenous and endogenous variables are found in the Structural Equation Model. In addition, the Service SERVQUAL (responsiveness, reliability, assurance, empathy and tangibility) model will also be used to illustrate the banks' service efficiency.

Table 1. Selected Variable Details

Variable	Scale/Notation	Details
	Rs1-P	Bank provides quick service to the customers.
Responsiveness	Rs2-P	Banks keep customers informed, when services will be performed
	Rs3-P	Banker respond in any question of the customers.



Variable	Scale/Notation	Details
	TI-P	Bank's physical facilities and interior design of the Bank are visually
Tangibility	H-P	appealing
Tangibility	T2-P	Bank has Up-to-date equipment and instrument facilities.
	T3-P	Employees of bank are well decent and emerge neat.
	R1_P	Bank is loyal.
Reliability	R2_P	Bank tries to resolve any problem quickly
	R3_P	Bank provides their services at the time they assure to do so.
Accurance	A1-P5	The employees are very much polite while cooperate with the customers.
Assurance	A2-P	Employees have knowledge to answer my questions.
	E1-P	Bankers give individual consideration to the customers.
Empathy	E2-P	Bank has working hour's expedient to all their customers.
Empathy	E3-P	Bank has customers 'best interest at heart'. (Bank staff try to recognize
	E3-P	what customers' needs are)
Convios Ouglity	S2	Customer's satisfaction with the bank employees' attitude.
Service Quality	S3	Customer's satisfaction with the accuracy of information provided.

# 4. **RESULT ANALYSIS**

# 4.1. COMPONENTS ANALYSIS

The components are determined by the KMO and Bartlett's test, where this study analysed the variables which are deals with SERVQUAL factors. The structural Equation Model deals with two section one is, major model and another is structure model. The majored model consists with SERVQUAL factors and the structured model contains the factor of service quality. The result of KMO is presented in Table 2, for the components analysis is 0.96 which is appropriate for components determination for SEM analysis.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sam	.936	
	Approx. Chi-Square	5409.974
Bartlett's Test of Sphericity	Df	66
	Sig.	.000

Source: Author's Calculation

# **4.2. RELIABILITY TEST**

The point of a reliability study examination is to decide how much estimation is error-free and hence creates predictable outcomes. Cronbach's Alpha is a constant quality parameter that indicates how well the normal dynamic linkages among the things evaluating the criteria match each other. The connections between alpha coefficients and affiliation force are appeared in Table 3 and 4 for component 1 and component 2 respectively. The reliability test is needed for all inquiries in component 1 and component 2 that evaluate the autonomous and ward factors to dissect exactness and unwavering quality. The limit of the Cronbach's alpha is 0 to 1, the higher the interior exactness internal quality and this statement similar with (Zikmund et al., 2003; Sekaran and Bougie 2003; Brown, 2002; Bonett and Wright, 2015).



Table 3. Reliability Statistics for Component 1

Cronbach's Alpha	N of Items
.958	10

Table 4. Reliability Statistics for Component 2

Cronbach's Alpha	N of Items
.738	2

Source: Author's Calculation

As per the dependable guidelines for Cronbach's Alpha coefficient esteem, an alpha worth more noteworthy than 0.7 is viewed as overall quite adequate, and consequently the survey created is viewed as precise. The coefficient of Cronbach's Alpha is 0.958 for component 1 and 0.738 both of coefficients are greater than 0.7 which means the estimated variables are reliable.

# 4.3. CONFORMITY FACTOR ANALYSIS: SERVQUAL MODEL

Confirmatory factor analysis (CFA) is a multivariate factual method for identifying how successfully intentional factors handle build quantity. CFA and exploratory factor analysis (EFA) are similar procedures, but in EFA, data is primarily studied and data on the quantities of elements required to address the information is provided. All purposeful factors are identified with each idle variable in exploratory factor study. In any event, in CFA, experts can specify the number of pieces required in the data and which anticipated variable corresponds to which latent variable. The CFA is an apparatus that is utilized to affirm or dismiss the estimation hypothesis. Whatever, the CMIN estimation has been presented in Table 5. The CMIN value is 268.048 and the probability shows significant of statistics with 5% level.

Table 5. Results of CMIN Statistics

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	52	268.048	67	.000	4.001
Saturated model	119	.000	0		
Independence model	28	5329.826	91	.000	58.570

Source: Author's Calculation

#### 4.3.1. Estimated SERVQUAL Model

Data investigation was performed utilizing AMOS and SPSS programming, in the primary model, component analysis, and reliability and correlation analysis already discussed. In the mean time, the connection among responsiveness, tangibility, empathy, reliability and assurance goes through a relationship examination.



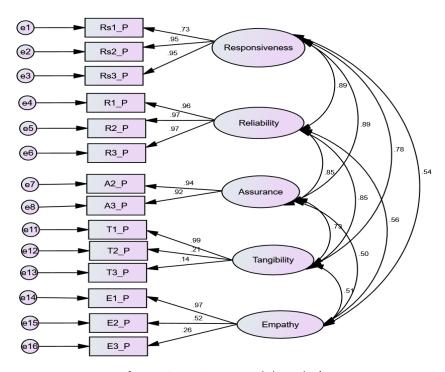


Fig. 1. SERVQUAL Model Analysis

Moreover, the displaying of multi-bunch underlying condition demonstrating assists with knowing whether the impacts are essentially extraordinary in any capacity on consumer satisfaction (CS). In this investigation, CS, which utilized both as structural model and SERVQUAL factors are measurement for estimation model, was excluded. Before the last investigation and theory test, the model consented to test the fit (the estimation model) in light of the fact that, if the estimation model isn't acceptable, the underlying model won't work. The accompanying estimation model or SERVQUAL factors examination (Fig. 1) is appropriate as it has been shown that the general estimation model matches the information well CMIN/DF=4.001 which is less than 5 and gives the evidence of model fit.

This examination applies a CFA model to look at the measurement model by utilizing SPSS, AMOS presented in Fig. 1. The reason for an estimation model is to depict how well the noticed pointers fill in as an estimation instrument for the idle factors. The appraisals of standard factor loadings were utilized to decide the legitimacy of the SERVQUAL measurements. The calculate loadings the CFA went from 0.73 to 0.99 for the SERVQUAL measurements except T2\_P, T3\_P, E2\_P, E3\_P which factors are also included in SEM analysis. Since each factor stacking on each measurement is more than 0.50, the united legitimacy for each component of the SERVQUAL scale was set up and given proof of develops legitimacy.

Moreover, SERVQUAL model indicates the covariance between five SERVQUAL factors to determine customer satisfaction. The covariance between responsiveness and reliability is 0.89, responsiveness and assurance is also 0.89, responsiveness and tangibility 0.78 and covariance between responsiveness and empathy is 0.54. Reliability and assurance is 0.85, reliability and empathy is also 0.56, reliability and tangibility 0.85 and covariance between



assurance and tangibility is 0.73, assurance and empathy is 0.50 where covariance between tangibility and empathy is 0.51.

# 4.4. STRUCTURAL EQUATION MODEL (SEM) ANALYSIS

# 4.4.1. Responsiveness to Customer Satisfaction

Responsiveness is characterized as "the readiness to help clients and give brief service" (Parasuraman et al., 1988). All the more explicitly, responsiveness is characterized as the ability or availability of representatives to offer types of assistance. It contains the idealness of administration (Babakus and Boller, 1992). JAVED (2018) characterized it as the energy to urge customers and to give incited benefits. In any case, Asubonteng et al. (1996) characterizes responsiveness like speed and idealness of administration conveyance. Responsiveness is the speed, brief client care, less holding up time and short lining time. Additionally, responsiveness is characterized as the ability or status of representatives to offer types of assistance. It contains the practicality of administration (Tyran and Ross, 2006).

Table 6. Results of Model fit CMIN: Responsiveness to Customer Satisfaction

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	16	3.034	4	.052	.758
Saturated model	20	.000	0		
Independence model	10	1268.675	10	.000	126.867

Source: Author's Calculation

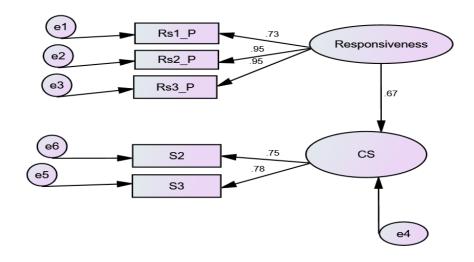


Fig. 2. Path Analysis (SEM): Responsiveness to Customer Satisfaction

Source: Author's Calculation

The results of SEM analysis responsiveness to customer satisfaction have been showed in Fig. 2. The first null hypothesis is assumed as  $H_1$ = "there is no positive relation between responsiveness and customer satisfaction" and alternative hypothesis is there is a positive relation between responsiveness and customer satisfaction. The major aim is to reject the null hypothesis. At that case, the result shows the coefficients is 0.67 which is positive and



significant at 5% level. The consumer loyalty increment on 0.67 units by the factor of responsiveness. On the off chance that other independent variable remains constants, 1-unit change in responsiveness will build consumer loyalty 0.67 units. The result clearly denied the first hypothesis.

# 4.4.2. Reliability to Customer Satisfaction

Reliability quality is to give guaranteed, reliable, exact and predictable administrations to the clients. In any case, unwavering quality relies upon taking care of client support issues, plays out the services precise the first run through; offers benefits on schedule, and keep a record of mistake free (Jiang, 2000). Ladhari (2009) demonstrated reliability as the main factor in ordinary assistance. Lam and Woo (1997) expressed reliability quality as to give exact and steady advantage or administration to the clients.

Table 7. Results of Model fit CMIN: Reliability to Customer Satisfaction

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	16	6.961	4	.138	1.740
Saturated model	20	.000	0		
Independence model	10	2034.294	10	.000	203.429

Source: Author's Calculation

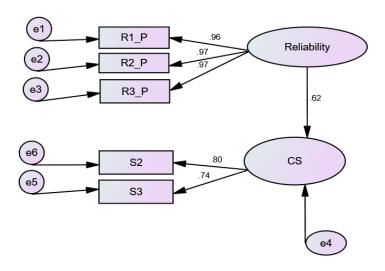


Fig. 3. Path Analysis (SEM): Reliability to Customer Satisfaction

Source: Author's Calculation

Fig. 3 depicts the efficiency of SEM analysis in terms of customer satisfaction. The alternative hypothesis is that there is a positive relationship between reliability and customer satisfaction, while the second null hypothesis is that there is no positive relationship between reliability and customer satisfaction. The most important goal is to rule out the null hypothesis. The consumer loyalty increment on a normal 0.62 units by the factor of reliability. On the off chance that other independent variable remains constants, 1-unit change in reliability will build consumer loyalty on a normal 0.62 units. The result clearly denied the first hypothesis. So the conclusion is like that there is a positive association between reliability to boost customer satisfaction in the study area. The result of model fit analysis shows in Table 7, the CMIN value 1.740 which is less than 5.



# 4.4.3. Tangibility to Customer Satisfaction

Agents, physical offices, supplies, and gear, as well as correspondence materials, are all called tangibles. Physical conditions that fill in as visible confirmation of the consideration and attention paid for the subtleties supplied by the service provider (Wakefield and Blodgett, 1999). Liu et al. (2015) summed up outcomes such as genuine service affirmation. Van Dyke et al. (1999) defined the substantial quality look of physical offices, equipment, people, and composed materials even more specifically. Physical assets, on the other hand, include actual offices and equipment, as well as the appearance and understandability of the workforce. Effects such as electronic devices, actual offices and their appeal (vibe, lighting, cooling, guest layout, etc.) might be mentioned in the context of significant worth, and last but not least, the association's administrations giving faculty (Tan and Kek, 2004; Qadri, 2015).

Table 8. Results of Model fit CMIN: Tangibility to Customer Satisfaction

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	11	1.937	4	.074	.484
Saturated model	15	.000	0		
Independence model	5	334.368	10	.000	33.437

Source: Author's Calculation

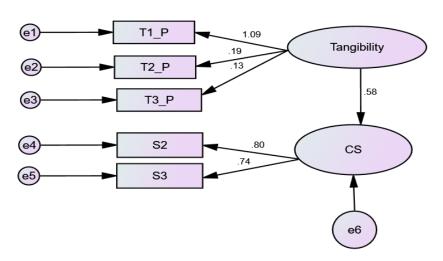


Fig. 4. Path Analysis (SEM): Tangibility to Customer Satisfaction

Source: Author's Calculation

Ladhari (2009) state that, substantial quality as the presence of physical offices, gear, work force, and composed materials. In this exploration, effects are the offices and the financial administrations offered by the representatives of the banks apparent by the bank account holders. Whatever, the  $3^{rd}$  Hypothesis is  $H_3$ = There is no positive relation between tangibility and customer satisfaction. Initially this hypothesis assumed as null hypothesis and the alternative hypothesis is assumed as there is a positive relation between tangibility and customer satisfaction. The coefficient of tangibility variable has been showed a positive sign which is indicates, the factors of tangibility helps to raise customer satisfaction. Estimated result in Fig. 4 determined to reject the null hypothesis.



# 4.4.4. Empathy to Customer Satisfaction

Sulieman (2013) expressed in their examination that the game plan of bank thinking about the individualized support of the separate customers. Finn (1991) identified that, empathy as a consideration and individual thoughtfulness regarding its customers. Bank representatives need to perceive their clients by name and offering explicit support to the individual clients that shows compassion. Table 9 presents the model fit probability of CMIN value significant at 1% level.

Table 9. Results of Model fit CMIN: Empathy to Customer Satisfaction

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	11	46.580	4	.000	5.645
Saturated model	15	.000	Ο		
Independence model	5	596.050	10	.000	59.605

Source: Author's Calculation

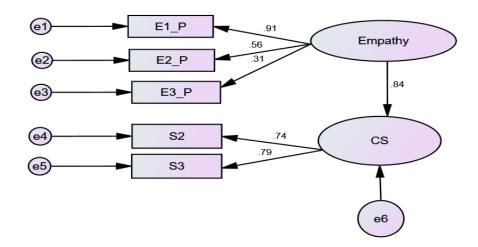


Fig. 5. Path Analysis (SEM): Empathy to Customer Satisfaction

Source: Author's Calculation

Fig. 5 shows the coefficients of customer service scale S2 take value 0.74 and S3 is 0.79 to determine the customer satisfaction. The coefficients of empathy is 0.84 which is positive and significant. The  $4^{th}$  Hypothesis is  $H_4$ = There is no positive association between empathy and customer satisfaction. Initially this hypothesis assumed as null hypothesis ( $H_0$ ) and the alternative hypothesis ( $H_1$ ) is assumed as, there is an affirmative relation between empathy and customer satisfaction. Through the coefficient value, the empathy factor is positively related to explain customer satisfaction which is rejected the null hypothesis.

# 4.4.5. Assurance to Customer Satisfaction

Ravichandran et al. (2010) presumes that the information that the passes with their trust and assurance. Ali and Raza (2017) in their examination expressed that it is the degree of information and graciousness of representatives for offering types of assistance and to assemble trust in client. Besides, talented workers who approach clients with deference and cause buyers to feel that they can believe the firm epitomize affirmation.



Table 10. Results of Model fit CMIN: Tangibility to Customer Satisfaction

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	13	2.492	1	.104	2.492
Saturated model	14	.000	Ο		
Independence model	8	841.036	6	.000	140.173

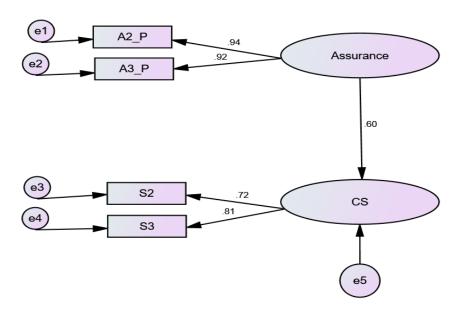


Fig. 6. Path Analysis (SEM): Assurance to Customer Satisfaction

Table 10 presents, model fit CMIN value is 2.492 which is less than 5. The model fit analysis with 10% level of significance. Appendix Table 15, 16 and 17 display the regression weights, intercepts, and variance results respectively and the estimated results are significant with 1% level. Whatever, the result of SEM analysis assurance to customer satisfaction has been showed in Fig. 6. The  $5^{th}$  hypothesis is assumed as  $H_5$ = "There is no positive relation between assurance and customer satisfaction" and alternative hypothesis is there is a positive relation between assurance and customer satisfaction. The main aim is to reject the null hypothesis. At that case, the result shows the coefficients of assurance is 0.60 which is positive and significant at 10% level. The results explain that, on the off chance that other independent variable remains constants, 1-unit change in assurance will build consumer satisfaction 0.67 units. Through this result, current study has to reject  $H_5$  meaning than the factor of assurance helps to increase customer satisfaction in the studied area. Through the analysis, summarize that the developed hypothesis with considering SERVQUAL factors has been rejected and there is a positive relations to increase the customer satisfaction.

# 4.5. GAP SCORE ANALYSIS

The sample was collected in several two perspectives where perception analysis is major part of this thesis and customer expectation from the banks and authority is the minor part of this study. Through the field survey, this study tried to found the GAP score between customer expectation and perception. The GAP score is presented in Table 11.



Table 11. Results of GAP Score

Variable	Total Value (Expectation)	Total Value (Perception)	Weighted Average (Expectation)	Weighted Average (Perception)	GAP Score
Responsiveness	5955	5597	14.88	13.99	0.89
Reliability	5926	5648	14.81	14.12	0.69
Tangibility	5917	5631	14.79	14.07	0.71
Empathy	5715	15156	14.28	11.49	2.78
Assurance	3988	3773	9.97	9.43	0.54

The results of GAP score analysis shows, the five SERVQUAL factors like as responsiveness, reliability, tangibility, assurance, and empathy are contains a gap to determine the customer satisfaction. The GAP score for responsiveness is 0.89 where the customer satisfaction and expectation doesn't equals, (Perception <Expectation) indicates the gap between customer services and customer expectations. The GAP score for reliability is 0.69 where the customer satisfaction and expectation has a gap, (Perception < Expectation) indicates the gap between customer services and customer expectations considering reliability factor. This result also estimates the GAP score for tangibility is 0.71 where the customer satisfaction and expectation doesn't equal, (Perception < Expectation) indicates the gap between customer services and customer expectations considering tangibility factor. The GAP score for the case of empathy is 2.78 which is indices more gap between perception and expectation. The GAP score for assurance is 0.54 where the customer satisfaction and expectation for assurance doesn't equals, (Perception < Expectation) indicates the gap between customer services and customer expectations for the case of assurance. Through the results analysis we can conclude that, the results of SERVQUAL factors are positive and significant to determine the customer satisfaction of commercial banks in Cumilla district. The estimated coefficients of SERVQUAL factors are positive and the finding is able to rejecting the hypothesis.

# 5. CONCLUSION AND RECOMMENDATIONS

# **5.1. CONCLUSION**

The present study explored perceptions of customer's satisfaction commercial bank service quality in Cumilla district. The total number of sample was 400. The data was collected by using questionnaire method and face to face interviewed. A well structured base questionnaire has been followed to collect the data. In questionnaire, the close ended and open ended questions were used to collect data. The principle point of the investigation is to evaluate the service quality of commercial banks in Cumilla and its effect on customer satisfaction. The examination likewise attempted to test the relationship that exists between service quality and consumer loyalty. The calculate loadings the CFA went from 0.50 to 0.99 for the SERVQUAL measurements except T2\_P, T3\_P, E2\_P, E3\_P which factors are also included in SEM analysis because of SERVQUAL model analyse and result analysis. This demonstrates that enhancements of service quality ought to be led on all the five assistance quality measurements, particularly the dimensions of responsiveness and



reliability. This examination additionally tracked down a positive connection between all assistance quality measurements and consumer loyalty. Likewise, the outcomes of this examination paper affirmed the hypothesis of written works in regards to the connection between administration quality measurements and consumer loyalty. Albeit this examination gives some critical bits of knowledge into administration quality in banks of Cumilla, there is as yet an opportunity to stretch out the discoveries to acquire a more complete comprehension of the idea of banking service. The future examination may feature the help quality in banking altogether, near investigation on SERVQUAL in banking sector. The future examination might be coordinated to break down the utilization of SERVQUAL to other assistance businesses by joining different elements of service quality. The findings of conformity factor analysis (CFA) for the prospect scale identified five factors of which factors are the similar as in the unique SERVQUAL model (responsiveness, tangibles, assurance, reliability). The measurement "empathy", which initially existed in the SERVQUAL model, has not been definite in this research properly and contained only one scale. The dimension "assurance" have two scales, responsiveness have three scale, tangibility has only one scale and reliability has three scale to determine SERVQUAL model and SEM analysis.

Outcomes of reliability analysis show that the Cronbach alpha incentive for majored model is 0.958 and structured model is 0.738 proposing that the two scales are profoundly reliable. This examination makes a commitment to the information about banking service quality and gives valuable data that could help bank the board in offering high support quality and expanding the clients' degree of fulfillment. The SERVQUAL scale has been demonstrated to be solid and reasonable for use by bank supervisors to improve comprehension of client assumptions and convey service as guaranteed. The SEM model's findings anticipate customer happiness based on criteria such as service quality, tangibles, reliability, assurance, and empathy. All of the variables are linked to consumer satisfaction in a positive and meaningful way. These findings corroborate the correlation analysis described in the result analysis sections. In SEM path analysis, the coefficients of significant variables like as reliability, assurance and responsiveness are 0.62, 0.60 and 0.67 respectively where, the variable of tangibles and empathy also found positive relation to determine customer satisfaction. The findings are guide to rejecting the developed hypothesis H<sub>1</sub> to H<sub>5</sub>. According to econometric findings, improving service quality is an excellent way to increase clients' satisfaction and loyalty to the company in the current competitive climate in Bangladesh. The main goal of this study is to determine the impact of various help quality measurements on customer loyalty and client reliability in the banking industry in Cumilla, as well as to portray the Bangladeshi situation. Studies show that customer service quality and all of its measurements, such as dependability, assurance, and responsiveness, have a significant and favorable link with client satisfaction and loyalty to their individual monetary aid. The stakeholders of this study will be beneficiaries from this study with adding a great contribution in existing literature.



#### **5.2. POLICY AND RECOMMENDATIONS**

In this section, this study implements and analyzed some important policies and activities which might helps to generate customer satisfaction for commercial banking sector in Cumilla. Recommendations and policies based on the empirical findings, it is suggested that commercial banks ought to give more product and services to pull in more clients and the directorial board need to direct and help the consistence perspectives. By keeping taking into account different components of administration quality, commercial banks may need to zero in on essential decision and give creative items to acquire upper hand. These days, potential objective market for commercial banks is accessible where they must choose between limited options other than to create, draw in and hold consumer loyalty. Likewise, the current investigation additionally brought up the assistance quality insight and consumer satisfaction, especially in commercial banks of Cumilla. Indeed, this study makes a remarkable commitment to the commercial banking industry of Bangladesh and established a framework towards a SERVQUAL model by presenting the conformity factor analysis (CFA). In this manner, accessibility of exceptionally competitive items and services with business consistence might be considered as a separation methodology to improve consumer satisfaction level. Since the representative client relationship is considered as profoundly intelligent in nature, the financial area of Bangladesh ought to guarantee administration greatness by leading a preparation program for its workers. This worker ability and service program may guarantee the most significant level of consumer satisfaction and bank reputation, explicitly concerning forefront officials. Moreover, the training program ought to likewise zero in on representative's relational abilities and client care so they comprehend the need of customized services. This will assist business keeps money with treating their clients in an expert and expected manner. Service disappointment will be instantly perceived and recuperated. Consequently, conveyance of the guaranteed service will be satisfied, which thus will bring about more noteworthy client maintenance and fulfillment in the commercial banks of Cumilla. Commercial banks in Cumilla should likewise rethink what level of service quality is effective by their clients regarding valuable banking products and services. In generally, the SERVQUAL and SEM measurements in our investigation model are positive and significant, which infers that the commercial bank managers and policy-makers ought to apply the symptomatic information of this examination to distinguish the holes in the service quality of commercial banks in Cumilla district. Moreover the findings of this study will also effective to overall banking sector in Bangladesh. There are some specific points of recommendations would be effective, those are:

- 1. Commercial banks ought to give more new banking product and services to pull in more clients.
- 2. Business consistence might be considered as a separation methodology to improve consumer satisfaction level based on customer demands.
- 3. Easy access of banking information would be effective to increase customer satisfaction.
- 4. The performance evaluation of working stuffs can helps to increase the service quality.



- 5. Variations of banking products can increase the level of customer satisfaction.
- 6. Electronic banking and information safety would be effective to increases the customer satisfaction.

#### 5.3. LIMITATION OF THIS STUDY

The desired data was collected from commercial bank in Cumilla where there are some limitations of this study like as, some of respondent are not well educated in this case the questionnaire survey doesn't possible that's why researcher deals with them a face to face interview to collect desired data. During the analysis time, the calculate loadings the CFA went from 0.50 to 0.99 for the SERVQUAL measurements except T2\_P, T3\_P, E3\_P which factors are also included in SEM analysis because of SERVQUAL model efficiency.

#### **Author Contributions:**

ES deals with substantial writing, empirical analysis and revision. MSI provide general guidance, proof reading and improved the draft.

# **Declaration of Interests:**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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