Explicating Customer Satisfaction: A Survey On Private Commercial Banks

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INTRODUCTION

Customer satisfaction is a multi-dimensional facet. It is a behavioral issue coming out of the situation in perspective. Quality becomes an important and core dimension in satisfying customers. The situation seems that quality and satisfaction becomes parallel to each other. Thus, the importance of both service quality and customer satisfaction to service providers has received considerable attention in the marketing literature in recent years (Ibánez et al., 2006; Sureshchandar et al., 2002). Both have been associated with positive customer relational outcomes such as increased customer retention, market shares, and profitability (Meng and Elliot, 2009). Customer satisfaction has been an important theoretical and practical issue for most marketers and consumer researchers. Customer satisfaction has been considered a key to success in today's highly competitive business environment. The importance of customer satisfaction in strategy development for customers and market oriented firms cannot be undermined. It has increasingly become a goal for organizations to seek to deliver satisfaction with their products and services (Al-hawari, 2008). Customer satisfaction has been viewed as an important indicator of corporate competitiveness, since it has a positive link to customer loyalty and profitability (Cronin and Taylor, 1992; Oliver and Swan, 1989; Anderson et al., 1994). A better understanding of the satisfaction formation process can allow firms to improve their customer satisfaction and loyalty more effectively (Lien and Kao, 2008). In line with this, current research targets to explicate the satisfaction formation process among the clients in private commercial banks. Factors affecting customer satisfaction gives proxy to satisfaction formation process. Private commercial banks were selected to conduct the study due to the perceived satisfaction drive at the highest level in these organizations.

Customer perceptions and preferences have had an increasingly greater impact on a bank's success (Sureshchandar et al., 2002). Today, customers are more educated than ever before, they expect more value for money and they want better services and are willing to pay for it (Kim and Kleiner, 1996). The level of courtesy and assistance required by bank customers has increased dramatically as customers have upgraded their service standards (Yavas et al., 1997). It is important for banks to differentiate themselves on the basis of customer service in order to effectively compete in the modern competitive banking environment (Alexandris et al., 2002).Customer satisfaction has been closely interlinked with the quality of services. Service quality is defined throughout the research as customers' beliefs or attitudes about the degree of service excellence offered in the bank's physical location. Service quality has become more important because of its relationship with the level of financial performance, customer satisfaction, and retention (Van der et al., 2002). There should be more focus on understanding customer perceptions of service quality (Rust et al., 2000). Analyzing markets based on customer perceptions, designing a service delivery system that meets customer needs, and enhancing the level of service performance are very important objectives for banks to strive for to retain a competitive advantage (Yavas et al., 2004). The study is justified as practical insights are provided to bankers about the role of traditional services factors in satisfying their customers.

Service quality has remained one of the important issues in the marketing literature generally and the service marketing literature specifically (Jamal and Naser, 2003). It has been considered to be a critical measure of organizational performance. Practitioners and academics often tried to develop a measure of service quality in order to better understand its essential antecedents and consequences and to achieve a competitive advantage and build customer loyalty (Alexandris et al., 2002). Excellent service quality has been considered as an important prerequisite for establishing and having a satisfying relationship with customers (Lassar et al., 2000). Achieving customer satisfaction has also been considered a vital target for most service firms today. Increasing the level of customer

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satisfaction has been found to lead to improved profits, word-of-mouth recommendation and less marketing expenditure (Beerli et al., 2004). The relationship between service quality and satisfaction is, therefore, considered an important topic and strategic concern in this research (Lee et al., 2000). In general, the research in this area suggested that service quality should be considered an important indicator of customer satisfaction. Therefore, it is expected that all service quality factors have a positive influence on customer satisfaction.

OBJECTIVES OF THE STUDY

The broad objective of this study is to identify and analyze the extent of influence of service quality on customer satisfaction in private commercial banking sector in Bangladesh. The research also targets to identify the most influential factors of service quality advocated by customers. The study also tries to put more emphasis on whether and how human element of service quality, service delivery process, and tangibles quality have a direct impact on customer satisfaction in private commercial banking sector in Bangladesh. Having identified all the factors through pilot study, a careful attempt is made to find out the factors having more influence on the customer satisfaction while evaluating the service quality of a particular commercial bank.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

❁CUSTOMER SATISFACTION

There was an increase in conducting customer satisfaction surveys by many service industries **(Danaher and Haddrell, 1996)**. Increased research into customer satisfaction has been influenced dramatically by the variety of measurement scales used in customer satisfaction instruments tests **(Devlin et al., 1993)**. Customer satisfaction is defined generally as the feelings or judgments of the customer towards products or services after they have been used **(Jamal and Naser, 2003)**. Customer satisfaction in service industries has been approached differently by equity theory, attribution theory, the confirmation and disconfirmation paradigm, and satisfaction as a function of perception **(Parker and Mathews, 2001)**. Equity theory is essentially a social comparison theory in which an individual evaluates his *'inputs into'* versus *'outputs derived from'* a given situation relative to those of another, where this may be another person, a class of people, an organization, or the individual himself relative to his experiences from an earlier point in time **(Jacoby, 1976)**. Such theory deals with exchange relationships and the fairness or equity of these exchange relationships. One way to operationalize equity theory is to measure the fairness of each facet or attribute in the decision process **(Campbell and Pritchard, 1976)**. Attribution theory is a social psychology theory developed in 1958. The theory is concerned with the ways in which people explain (or attribute) the behavior of others or themselves (self-attribution) with something else. It explores how individuals *"attribute"* causes to events and how this cognitive perception affects their usefulness in an organization. The confirmation/disconfirmation paradigm provides the grounding for the vast majority of satisfaction studies **(Parker and Mathews, 2001)**. The confirmation/disconfirmation paradigm views customer satisfaction judgments as the result of the consumer's perception of the gap between their perceptions of performance and their prior expectations **(Parasuraman et al., 1994)**. However, the disconfirmation theory has been increasingly criticized by many marketing scholars **(e.g., Teas, 1994)**. In particular, **Teas (1994)** argued that the different definitions of expectations and the difficulties with measurement have undermined these models which used expectation concepts. However, to avoid the debate surrounding the nature of the expectation concept in measuring customer satisfaction, this research has followed an alternative approach. This approach initially depended on customers' actual evaluations of satisfaction, rather than on the gap between perception and expectations **(Cronin and Taylor, 1994; Teas, 1994)**.

❁SERVICE QUALITY

Service quality can be defined as the conformance to customer requirements in the delivery of a service **(Chakrabarty et al., 2007)**. Service quality is important to service firms because it has been shown to increase profit levels, reduce costs, and increase market shares **(Parasuraman et al., 1985)**. Moreover, service quality has been shown to influence purchase intentions **(Sullivan and Walstrom, 2001)**, and is used by some firms to strategically position themselves in the marketplace **(Brown and Swartz, 1989)**.Service quality is an abstract and elusive construct, and in the absence of

objective measures, consumers' perception of service quality is commonly assessed. Among the measurement instruments used to assess service quality, SERVQUAL **(Parasuraman et al., 1988)**, SERVPERF **(Cronin and Taylor, 1992)**, and the Retail Service Quality Scale (RSQS) *(Dabholkar et al., 1996)* have been the most prominent and most widely used instruments. **Parasuraman et al. (1988)** introduced SERVQUAL, a 22-item instrument that assesses five dimensions of service quality. The five dimensions are: **1) Tangibles** - physical facilities, equipment, and appearance of personnel, **2) Reliability** - ability to perform the promised service dependably and accurately, **3) Responsiveness** - willingness to help customers and provide prompt service, **4) Assurance** - knowledge and courtesy of employees, and their ability to inspire trust and confidence, and **5) Empathy** - caring, individualized attention the firm provides to its customers. The SERVQUAL instrument has demonstrated both excellent validity and reliability **(Babakus and Boller, 1992; Bolton and Drew, 1991; Cronin et al., 1992)** and applied to different industries, such as professional services **(Freeman and Dart, 1993)**, health care **(Lam, 1997)**, tourism **(Tribe and Snaith, 1998)**, business school **(Pariseau and McDaniel, 1997)**, and information systems **(Kettinger and Lee, 1994)**.

Grönroos (1984) proposed two dimensions of service quality, which are the technical quality and functional quality. Technical quality refers to the result or the outcome of the service, while functional quality refers to the process or the way the service has been delivered. The distinction of technical and functional qualities is parallel to the dimensions of perceived justice theory, namely distributive and procedural justices **(e.g., Cohen-Charash and Spector, 2001)**. According to the theory of justice, distributive justice deals with decision outcomes, while procedural justice deals with decision-making procedure or how the outcome distribution is arrived **(Lind and Tylor, 1988)**.

Mels et al. (1997) analyzed the data from four service industries and found that, in reality, SERVQUAL only measures two factors: intrinsic service quality (resembling what Grönroos termed as functional quality) and extrinsic service quality (which refers to technical quality). **Hui et al. (2004)** further suggested that reliability can be viewed as an outcome measure because customers judge it after their service experience. The other four dimensions are process attributes because they can be evaluated by the customers' during the service delivery.

It is commonly noted that service quality is an important determinant factor of customer satisfaction **(e.g., Parasuraman et al., 1988; Cronin and Taylor, 1992; Spreng and Mackoy, 1996)**. Evidence shows that service satisfaction is a function of both technical and functional performance **(Grönroos, 1995; Yi, 1993)**. Justice theory can provide plausible explanations for the impact of technical and functional qualities on satisfaction. Focusing on the perceived fairness of outcomes, distributive justice theory states that people will respond to unfair relationships by displaying certain negative emotions (dissatisfaction) **(Greenberg, 1990)**.

Several studies also support the notion that consumers make equity judgments with respect to outcomes, and the equity evaluations would then affect consumer's satisfaction **(Oliver and DeSarbo, 1988; Oliver and Swan, 1989)**. Defined as the perceived fairness of the means (or process) by which the ends are accomplished **(Lind and Tylor, 1988)**, procedural justice aims to enhance the probability of maintaining long-term productive relationship between parties, and has been shown to have a positive effect on consumer service satisfaction **(Greenberg, 1990; Konovsky, 2000; Tax et al., 1998)**. Although the effect of performance expectations on satisfaction is known to be contingent on the type of tangible products **(e.g., Churchill and Suprenant, 1982; Patterson, 1993, Tse and Wilton, 1988)**, few studies have tested this contingency concept in services. Research on organizational justice has also found that distributive justice is more important predictor of satisfaction with personal outcomes, whereas the reverse is true when people make more general evaluations **(Folger and Konovsky, 1989; Lind and Tylor, 1988; McFarlin and Sweeney, 1992)**. This suggests that the predictive roles of outcome perception (i.e., technical quality) and the perceived fairness of process (i.e., functional quality) may depend on the nature of the outcome in question. Next, we will explore this issue and propose the service types and alternative differentiation as moderators of the quality/satisfaction relationship for services.

The human element of service quality (Staff-customer interaction) refers to all aspects of staff/customer interaction in service delivery. The importance of the human element in forming the customer's perception of service quality has been identified by many marketing scholars **(Jabnoun and Al-Tamimi, 2003; Yavas et al., 1997)**. Employees have an important effect on customer service because customers today are better educated than ever before **(Mouawad and Kleiner, 1996)**. Further, frontline employees play a vital role in representing the firm in interactions with outside parties, and influencing the cognitions, attitudes and evaluations formed by customers **(Schneider and Bowen, 1995)**.

Thus, frontline employees were considered to be a main driver of customer satisfaction and favorable service quality perceptions. Finally, four out of the five SERVQUAL dimensions, were about human elements; reliability, responsiveness, empathy and assurance **(Sureshchandar et al., 2002)**. So, based on the above discussion we can develop our hypothesis that

H1: Human element of service quality has a positive impact on customer satisfaction.

Consistency of service delivery (Service delivery process) referred to the processes, procedures, and systems that would make service delivery a seamless experience **(Sureshchandar et al., 2002)**. It highlighted whether the service delivery process was standardized, streamlined, and simplified, so customers could receive the service without any problems. The structural aspects of the service delivery process have not, however, been adequately studied **(Sureshchandar et al., 2002)**. In the literature, there were a few marketing scholars who have tried to focus on the importance of the structural content of service delivery in service quality evaluation **(Danaher and Mattsson, 1998)**. The structural content of the service delivery process is considered important in service quality evaluation (Danaher and Mattsson, 1998). The relative degree and intensity of activities such as waiting and delays in delivering the service have a significant effect on service quality (Danaher and Mattsson, 1998). So we can draw this hypothesis that

H2: Service delivery process quality has a positive impact on customer satisfaction.

Tangibles of Service (Physical facilities) were one of the few dimensions that have been consistently used by different researchers **(Bahia and Nantel, 2000)**. However, tangibles refer to physical facets of the service facility; equipment, machinery, signage, communication materials etc. **(Bahia and Nantel, 2000; Parasuraman et al., 1985)**. It included the physical evidence of the service, except the personal appearance of staff which was included in the human element dimension. Employees and customers are usually influenced by the tangible facets of service in physiological, psychological, emotional, and cognitive ways **(Bitner, 1992)**. The intangible aspects of the staff customer interface have a considerable influence, both negative and positive, on service quality **(Voss and Johnston, 1995)**. Tangibles are associated with the impact on the customers' inferences about what service should be like and ,therefore, will influence the evaluation of service quality **(Zeithaml et al., 1993)**. Customer perceptions of tangibles were generally considered more important in the case of banks than other service industries such as securities brokerage, and product repairs and maintenance **(Parasuraman et al., 1988)**. So these above discussions help us to take this hypothesis that

H3: Tangibles quality has a positive impact on customer satisfaction.

METHODOLOGY

The research uses both primary and secondary data. The theoretical foundation of the paper comes from different research papers, thesis, texts and related documents. The literature review helps the researchers to grasp the core idea of customer satisfaction and quality related issues. On the basis of the literature review, the researchers conducted a pilot study with the results given in Table 1. A total of 30 respondents were strategically selected to conduct the pilot study holding senior positions (director level) in different commercial banks with head offices in Dhaka, the capital city of Bangladesh. A reliability test was done . Resulting Cronbach Alpha (Coefficient Alpha) above 0.7 for all factors indicated an acceptable level of reliability. A form of frequency distribution was done in the tables and different factors are ranked in terms of number of votes. The pilot study was conducted to identify the factors that mostly satisfy the customers. The factors that satisfy customers is situational that may be explained by a couple of factors. These factors incorporate all disparity in terms of geographical location, economy, earning levels, societal values, religious believes, literacy and other variables affecting the mindset. Another reason of the pilot study was to refine the test instrument.

On the basis of the factors identified in the pilot study stage, a structured questionnaire was constructed on Likert 7 point scale to conduct a market survey. The questionnaire included questions on each of the seventeen variables with at least 15 votes (50% of the respondents). Last three variables (Exterior, Teller Facility and Car Parking) in Table 1 have been discarded due to lower number of votes. In addition to the seventeen questions measuring seventeen factors, the questionnaire also included three questions measuring customer satisfaction itself. Thus, a questionnaire with 20 questions had been used as survey instrument for conducting the survey. A mall-intercept method was used to administer the survey, which was collected via face-to-face interviews. Respondents were asked to give their perception of the quality level across different factors as well as satisfaction level toward their bank on a seven point Likert scale ranging from 1, indicating the lowest to 7, indicating the highest. A total of 220 usable surveys were

collected with 30 rejections which gave a response rate of 88%. The surveys encompassed evaluations from twelve different banks and financial institutions within Dhaka city, Bangladesh.

Table 1: Result of Pilot Study

Rank	Frequency	Factors	Votes
1	26-30	Employee attitude	29
		Security system	28
		Location	28
		Prompt service	28
		ATM facility	27
		Convenient transaction hours	27
		Employee Expertise	27
2	21-25	Service charge	25
		Number of branches	24
		Intention to provide service	23
		Easy access to information	22
		Liquidity	22
		Comfort ability	22
		Discriminating customers	21
3	16-20	Credit card facility	19
		Loan sanctioning procedure	17
4	11-15	Tele banking	15
5	6-10	Exterior	10
		Teller facility	8
		Car parking	7

SPSS 11.0 is used for data manipulation. Factor analysis, the widely used data reduction technique, is used for grouping seventeen variables. The analysis reveals three categories titled as employee service quality, tangibles quality, and service delivery process quality. The factors that have been grouped in line with factor analysis are presented in Table 2.

Table 2: Grouping of Factors

Group 1: Service Quality	Group 2: Tangible Quality	Group 3 : Process Quality
Employee Attitude	Security System	Prompt Service
Employee Expertise	Location	Convenient Transaction Hours
Service charge	ATM Facility	Liquidity
Intention to Provide Service	Number of Branches	Discriminating Customers
Easy Access to Information	Comfortability	Loan Sanctioning Procedure
Tele Banking	Credit card facility	

These three groups represent three independent variables in a multiple regression model where customer satisfaction is considered as dependent variable and regressed. The regression model produces important findings for the bankers who may implement the recommendations to provide better services to their customers. Out of twenty variables, seventeen have been grouped into three groups representing three independent variables and the remaining three variables have been used to define dependant variables, i.e., customer satisfaction. Thus, the ultimate regression equation has become as,

$$Cus\_sas = \zeta + \xi_1 ser\_qty + \xi_2 tan\_qty + \xi_3 pro\_qty + \psi$$

Here, *Cus_sas* is the dependent variable; *ser_qty, tan_qty, pro_qty* are independent variables; ζ represents constant of the model; $\xi_{1,2,3}$represents beta coefficients of each independent variables and ψrepresents the error term.

ANALYSIS AND FINDINGS

This section provides the detail of research methodology section. For the sake of simplicity, the analysis and findings have been embedded in different steps of the research procedure.

❁Pilot Study : A pilot study is considered appropriate due to the assumption of perceived gap among practitioners and service recipients. As the outcome of the current research depends on the feedback of customers significantly, the feedback capturing system should be rigorous. Comments of the service recipients are divergent that necessitates a common survey instrument. An inclusive and closed questionnaire is considered best to make the analysis simple and rational. The purpose of the pilot study was to identify the factors on which the questionnaire will be based on. A pilot study automatically initiates pre-testing the questionnaire before its commercial use. It also supports brainstorming among the participants, resulting in a pervasive solution of the situation. Without pilot testing, the research may be very costly, resulting in wrong conclusion. The pilot study stage of the research identified a total of twenty variables affecting customer satisfaction in a bank. Out of twenty variables, three have been discarded in final questionnaire due to their insignificance measured in terms of number of votes. These three variables captured ten or lower votes out of thirty (less than 33%). The questionnaire also includes three questions explaining customer satisfaction itself.

❁Factor Analysis : Using seventeen variables as independent variables in regression model will make the model over-burdened and explanatory power of the variables may not be so strong. It would be better if all of the seventeen variables can be grouped to a manageable number, that will result in a strong model. Factor Analysis is used to do the job where all of the seventeen variables have been grouped into three. Factor analysis is a general name denoting a class of procedures used for data-reduction and summarizing. It is a multi-variate technique and is employed in this study for the purpose of analyzing the data. The Principal Component Method was considered to be appropriate as the primary purpose is to determine the minimum number of factors that would account for the maximum variance in the data collected. The data is analyzed by using SPSS version 11.0. Results of three factors have been extracted from the data collected. Only factors with Eigenvalue(s) greater than 1 were retained and others were ignored. By comparing the Varimax Rotated Factor Matrix with Unrotated Factor Matrix (entitled as component matrix), rotation has

Table 3: Rotated Component Matrix

Attributes	Factor Loadings		
	F1	F 2	F 3
X1	.154	.422	.233
X2	-5.528E-02	9.827E-02	.863
X3	.760	-4.258E-02	.193
X4	.298	.359	.496
X5	-7.853E-02	.433	-2.756E-02
X6	.664	-.327	.319
X7	6.619E-02	.757	.160
X8	.357	-.232	.474
X9	.741	3.167E-02	-.333
X10	3.016E-02	-4.113E-02	.455
X11	7.623E-02	.664	-1.225E-02
X12	-7.078E-02	.482	-8.526E-02
X13	.809	-.151	-3.515E-02
X14	.511	-.591	.287
X15	-8.776E-02	.788	5.954E-02
X16	-.207	.226	.428
X17	.789	3.395E-02	-1.217E-02

provided simplicity and has enhanced interpretability. From the rotated factor matrix, three factors have been extracted as shown in **Table-3**. These three factors have been used as independent variables in the regression model measuring customer satisfaction.

❁ **Multiple Regression Analysis :** With the result of factor analysis, we have run a multiple regression analysis considering three factors (staff quality, delivery quality and tangible quality) as independent variables. Customer satisfaction has been considered as dependant variable of the model. The result of the regression analysis is presented in **Table 4** indicating that the explanatory variables can explain 80% (value of adjusted R^2) of the total variability of the dependant variable '*Y (Customer Satisfaction)*'. According to the specification of Theil (1978), using adjusted R^2 is better than using R^2; our model explained 80% of the variation in the dependent variable. From the best of our Knowledge about regression, adjusted R^2 of 0.796 is acceptable enough when the variables are qualitative in nature and not measurable by absolute value (ratio scale). **Table 5** explains the dependability of the model as the F statistic showed very high value and appeared significant at 1% level.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908	.824	.796	.6409

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.068	3	11.356	127.643	.000
	Residual	73.122	178	.411		
	Total	**107.190**	**181**			

The ANOVA table (**Table 5**) shows the significance of the combined effect of explanatory variables in the regression model. The contribution of each explanatory variable requires individual coefficient values, which appear in **Table 6**. In the **Table 6**, we have got the significant explanatory variables. Additionally, the table provided the level of contribution by each explanatory variable to explain the dependent variable '*Y (Customer Satisfaction)*'. According to the unstandardized and standardized beta coefficient, we can arrange them according to their importance in explaining the dependent variable. The impact of '*staff quality'* became most important as its unstandardized and standardized beta coefficient are 0.273 and 0.328 respectively. The next important explanatory variable is '*delivery quality*', having unstandardized beta coefficient of 0.164 and standardized beta coefficient of 0.228. '*Tangible Quality*' ranked last with unstandardized beta coefficient of 0.185 and standardized beta coefficient of 0.193.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.388	.435		5.492	.000		
	Staff Quality	.273	.057	.328	4.824	.000	.827	1.209
	Delivery Quality	.164	.051	.228	3.222	.002	.766	1.305
	Tangible Quality	.185	.063	.193	2.912	.004	.868	1.152

The variance in the dependent variable explained by each explanatory variable is expected to be independent. As multicollinearity is essentially a sample phenomenon, the significant distinction is not between the existence and nonexistence of multicollinearity, but between its various degrees (Gujarati, 2003). So, evidence regarding the extent of multicollinearity in our regression is required. **Table 4** explains the dependability of the model as the F statistic showed very high value and appeared significant at 1% level. Multicollinearity is a high degree of correlation among several independent variables when a regression model incorporates a large number of independent variables. It is because some of them may measure the same concepts or phenomena. Existence of multicollinearity is not only a violation of OLS assumption, but also it violates the assumption that X matrix is full ranked, making OLS impossible.

When a model is not full ranked, that is, the inverse of X cannot be defined, there can be an indefinite number of least squares solutions. However, there is no clear-cut criterion for evaluating multicollinearity of linear regression models. Correlation coefficients of independent variable may be checked. But, high correlation coefficients do not necessarily imply multicollinearity. In multiple regression models, collinearity can be related to the existence of linear dependencies among the columns of the X matrix. For each regressor x_j, the tolerance *(Tol)* can be computed as, $Tol_j = 1-R^2_j$ where R^2_j is the coefficient of determination obtained in each of the R auxiliary regressions of the form:

$$x_{ji} = \delta_0 + \delta_1 x_{1i} + \square + \delta_{j-1} x_{j-1i} + \delta_{j+1} x_{j+1i} + \square + \delta_k x_{ki} + v_i$$

Thus, Tol_j shows the proportion of variance x_j, that is not accounted for by the remaining $k-1$ regressors and can be used as an index of the degree of collinearity associated to x_j . Another index of collinearity of x_j , called variance inflation factor (VIF) can be obtained as a measure of the increment of the sampling variance of the estimated regression coefficient of x_j (b_j) due to collinearity. It shows how multicollinearity has increased the instability of the coefficient estimates (Freund and Littell, 2000). Putting differently, it tells us how 'inflated' the variance of the coefficient is, compared to what it would be if the variable were uncorrelated with any other variable in the model (Allison, 1999). VIF_j can be computed as the *jth* diagonal value of the inverse of the R correlation matrix among the regressors or alternatively as $1/Tol_j$. However, there is no formal criterion for determining the bottom line of the tolerance value or VIF. Some argue that a Tol_j less than 0.1 or VIF_j greater than 10 roughly indicates significant multicollinearity. Others insist that magnitude of model's R^2 be considered, determining significance of multicollinearity. Klein and Nakamura (1962) suggests alternative criterion that R^2_j exceeds R^2 of the regression model. In this vein, if VIF_j is greater than $1/(1-R^2)$ or a Tol_j is less than $1/(1-R^2)$, multicollinearity can be considered as statistically significant. As **Table 6** indicates both Tol_j and VIF_j is within the range, causing no multicollinearity that may be of concern.Overall measures of collinearity which take all regressors into account simultaneously have also been suggested. The most often used overall collinearity diagnostic is the condition number (Belsley et al., 1980; Belsley, 1982). The condition number of a matrix is the square root of the ratio of the largest to the smallest eigen-values. A large condition number of the X'X augmented moment matrix, reflects the existence of one or more linear dependencies among the columns of X (Belsley et al., 1980).

Table 7: Coefficient Correlations

Model			Tangible Quality	Staff Quality	Delivery Quality
1	Correlations	Tangible Quality	1.000	-.103	-.289
		Staff Quality	-.103	1.000	-.356
		Delivery Quality	-.289	-.356	1.000
	Co-variances	Tangible Quality	4.030E-03	-3.710E-04	-9.355E-04
		Staff Quality	-3.710E-04	3.213E-03	-1.029E-03
		Delivery Quality	-9.355E-04	-1.029E-03	2.605E-03

When there is no collinearity at all, the eigenvalues, condition indices and condition number will all equal one. As collinearity increases, eigenvalues will be both greater and smaller than 1 (eigenvalues close to zero indicate a multicollinearity problem), and the condition indices and condition number will increase. An informal rule of thumb is that if the condition number is 15, multicollinearity is a concern; if it is greater than 30 multicollinearity is a serious

Table 8: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Staff Quality	Delivery Quality	Tangible Quality
1	1	3.956	1.000	.00	.00	.00	.00
	2	2.036E-02	13.939	.09	.01	.53	.09
	3	1.548E-02	15.988	.00	.67	.04	.32
	4	7.833E-03	22.474	.91	.22	.02	.59

Table 9

Statistics	Tol_j	VIF_j	Eigenvalue	Condition Index	Proportion of Variation
Critical Value	Less than $(1–R^2)$, roughly less than 0.1	Greater than $1/(1–R^2)$, roughly greater than 10	Less than .01	Greater than 50 (or 30)	Greater than 0.8 (or 0.7)
Method	R^2_j from a regression $X_j = X_{other}$		Principal Component Analysis on the X'X matrix		

concern. **Table 8** incorporates collinearity diagnostics data that again produces no data of serious concern.

CONCLUSIONS AND RECOMMENDATIONS

Studies on customer satisfaction in banks are not rare. But, the research methodology applied here applies a holistic approach. Thus, it carries some strategic importance to the customers and bankers as well. In this study, satisfaction generation process is prioritized. Keeping the customers' satisfied is more challenging for service providers in recent days due to the rapid change of satisfying factors among the customers. This study tried to explicate the customer satisfaction as it is perceived and experienced in private commercial banks in Dhaka, Bangladesh. The study reveals that customer satisfaction is explained by staff quality, tangible quality and delivery quality. Each of these quality measures has independent parameters. As per the study, '*staff quality*' is more satisfying folowed by '*delivery quality*' and '*tangible quality*'. Thus, bankers should concentrate more on human resources. In a service industry, the capacity of providing quality services depends on the skill and quality of human resources. If a good standard can be reached in terms of staff quality, the service providers should give more focus on how the services are delivered. Customers may be dissatisfied though a service firm owns good quality staff if the service delivery system is not well designed and practiced. Because at the end of the day, staff will be the property of the firm but delivered services will be the property of customers. Tangile quality receives least priority that is the incremental requirement. Once staff quality and service quality is guaranteed, only then it is wise to look after tangible quality. Investing more money in tangibility will not produce good results if a bank suffers from staff quality and delivery quality.

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