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Determinants of Customer Satisfaction of Banking Industry in Bangladesh

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Abstract

This study aims to investigate, through the development and operationalized constructs of service quality, service charge, perceived value, and customer satisfaction; customer satisfaction and its determinants of the banking industry in Bangladesh. An exploratory factor analysis and structural equation modeling was used to analyze data. Measurement model and structural model indicate that service quality and fair service charge both have positive direct impact on customer satisfaction in a mass service industry (i.e., banking industry). It was further observed that they also have indirect influence on customer satisfaction through perceive value, i.e. perceived value has mediating role between quality, charge fairness and satisfaction. Bank managers are recommended to formulate operations and marketing strategies that focus on desires of customers to enhance level of satisfaction.

Keywords: Service quality, Service charge, Perceived value, Customer satisfaction, Banking industry.

1. Introduction

In modern economics, service sector plays significant role side by side manufacturing and other sectors. Banking sector performs its activities economically and socially in a country. Service managers of such service factory are more concerned about their quality of service and client satisfaction (Olorunniwo et al., 2006). The central bank of Bangladesh is Bangladesh Bank. The financial system as well as financial sector of Bangladesh is dominated by commercial banks. The banking system includes of four government owned commercial banks, thirty private commercial banks, nine foreign commercial banks, and five specialized development banks. Some new private commercial banks will enter in the market very soon. Bangladesh Bank is the supreme authority of financial sector, and it regulates all banks and non-bank financial institutions.

In Bangladesh, commercial banks provide some products and service to their clients (website of Bank Asia). Banking services include mobile banking, SME banking, internet banking, SMS banking, credit card, ATM services, foreign currency account, locker

service, and loan and advances (term loan, car loan, education loan, housing loan, micro group credit, micro credit enterprise, etc.). They also offer corporate banking, loan syndication, real-time online banking for corporate clients. Service quality, service charges, perceived value and customer satisfaction are the key sources of success in any service factory (Olorunniwo and Hsu, 2006). Issues that affect service quality and customer satisfaction have operational and marketing orientations. To understand the dimensions of service quality and for measurement of customer satisfaction it is important to know under which typology commercial banks are belong. In this regard, the classification given by Schmenner (1986) is important. Schmenner divided services under four quadrants based on labor intensity and customer interaction. Labor intensity is the ratio of labor cost to the machinery and equipment value. On the other hand, customer interaction is defines as, the joint measure of customer contact and customization of services. Under this categorization, commercial banking services belong to mass service category. In commercial banking sector, there are high labor intensity and low customization of services. Mass service also includes retailing, wholesaling, schools, traditional long-distance ground trucking. Another three quadrants of services are: service factory (airlines, hotels, trucking, resorts and recreation), service shop (hospital, restaurant, auto and their services), and professional service (accounting firms, audit firms, medical clinics, law firms).

The improvement of service quality, perceived value, and satisfaction ensure customer loyalty (Kuo et al., 2009; Lai et al., 2009; Wu and Liang, 2009). Since the studies regarding service quality, perceived vale, and customer satisfaction issues in banking industry is limited and there is no available measurement scales for service quality and customer satisfaction, especially in Bangladesh, this study efforts to propose the measurement scales for factors affecting customer satisfaction and for customer satisfaction itself. The objectives of this study are firstly, to recognize the influencing factors of customer satisfaction and post-purchase intentions. Secondly, to examine the interrelationship between customer satisfaction and influencing factors of satisfaction such as service quality, service charge, and perceived value. The result of this study has managerial and academic implications. Managers of commercial banking service providers can use the findings as sources of reference to manage their business and improve their service quality, and academicians can use the finding for application of service marketing field and further extension of this topic or related topics.

The rest of the paper is structured as follows. The next section provides the theoretical discussion and hypotheses of the study. The following two sections outline research methodology and offer statistical analysis and major findings of the study. The last section presents discussion, theoretical and managerial implications, limitations of this study, and guidelines for further study.

2. Theoretical background and hypotheses development

2.1.1 Service quality

The gap between customers' expectation and real performance of a service is termed as service quality (Parasuraman et al., 1985; 1988). Parasuraman et al., (1988) developed the SERVQUAL model as mentioning five dimensions such as tangibility, responsiveness, reliability, assurance, and empathy. In 1992, Cronin and Taylor proposed the alternative method, referred to as SERVPERF. They argued that, to assess service

quality, perception of customers regarding the performance of service provides better results than using SERVQUAL. Along with other researchers in 1994, Parasuraman et al. also mentioned that measurement method using SERVPERF is better than using SERVQUAL, though SERVQUAL can provide better diagnostic results of service quality. The dimensions (i.e. tangibility, responsiveness, reliability, knowledge, and accessibility) of service quality for mass service as well as banking service will be dominant.

2.1.2 Service charge

In finance service charge is termed as the amount of payment requested by the seller of services. Service charge as well as price is determined by several factors such as willingness of the buyer to pay, willingness to accept, costs, markup, legal environment, intensity of competition price substitute products, etc. Price fluctuations in many service industries results in price-performance and the level of price-performance stability moderates the relationship between performance potential and successive performance and satisfaction judgments (Voss et al., 1998). The perceived price fairness related to different level intangible services has direct or indirect effect on customer loyalty in case of banks, auto repair and maintenance shops, and (gasoline) filling stations (Lien and Yu-Ching, 2006).

2.1.3 Perceived value

Perceived value is customers' psychological assessment regarding the product and service about the utility of that product or service comparing with expectation. Recently value perceptions have been focused by marketing researchers and managers to explain customer satisfaction and loyalty (Lin and Wang, 2006). To assess value perception customers consider perceived benefits relative to sacrifice (Lee et al., 2007). Except monetary sacrifice perceived value assessment includes social psychological perspective and non monetary costs such as search cost, transaction cost, negotiation cost, and consumption of time (Kuo et al., 2009; Chen and Tsai, 2008).

2.1.4 Customer satisfaction

Customer satisfaction is the authentic expression of the status of satisfaction will differ from person to person and product/service to product/service and is an appraisal of how products and services of a company meet up or exceed customer anticipation. Satisfaction is the consequence of a number of both psychological and physical factors which associate with satisfaction behaviors. Kotler (2000) defined satisfaction as: "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations". Organizations can accomplish customer satisfaction by satisfying their customers' needs and wants (La Barbera and Mazursky, 1983). Customer Satisfaction is customers' collective conception of a firm's service performance (Johnson and Fornell, 1991).

2.2 Relationship among the variables

With the consumption of any product or service customers have some benefits expectation based on their advance sacrifice of resources. Perceived value is the appraisal of the expected benefits with actual performance of the products or services. Several scholars examined association between service quality and perceived value in their studies and found positive relationship between them (Hutchinson et al., 2009; Kuo et al.,

2009; Lai et al., 2009; Turel and Serenko, 2006; Wu and Liang, 2009). They found high service quality is correlated with high perceived value. And experience about service quality positively and significantly persuade perceived value of a customer (Chen and Chen, 2010). On the other hand, According to the satisfaction model customer satisfaction is influenced by service quality. When customers get expected service quality, it leads to higher satisfaction (Hutchinson et al., 2009). Service quality is the determinant of customer satisfaction (Cronin and Taylor, 1992) and by ensuring good service quality; service providers can enrich customer satisfaction (Kuo et al., 2009). Service quality has direct positive influence on customer satisfaction and post-purchase intentions (Gerpott et al., 2001; Kim et al., 2004; and Lin and Wang, 2006). So, we posit:

H1: Service quality has positive effect on perceived value in banking services.

H2: Service quality has positive effect on customer satisfaction in banking services.

Customers are always cost concern. Reduction of outlays related with purchasing process, is one the way to enhance perceived value (Chen and Hu, 2010). Customer value is a function of service quality and service charge. It provides a competitive advantage when firms take cost-cutting imitative to ensure customer value (Spiteri and Dion, 2004). Real price competitiveness is an important determinant of customer value. Price satisfaction increases the value perception and there is a direct relationship between price and value (Ralston, 2003). Price has an impact on customer buying behavior and value perception. Price/service charge needs special consideration to assess value perception of customers, not generalized along with other factors (Lockyer, 2005). Again, Customer satisfaction is affected by the price/service charge awareness (Iyer and Evanschitzky, 2006; Varki and Colgate, 2001). Price level, value for money and special offers may result in both satisfaction and dissatisfaction and price fairness, price perceptibility and price processibility may result in dissatisfaction for customers (Zielke, 2008). In addition to the various levels of product/service price, a mixture of price awareness dimensions have potentiality to intimidate the customers' satisfaction (Diller, 2000; Matzler and Pramhas, 2004; Matzler et al., 2006). Perceptions of customers about price/service charge fairness have been major concern due to huge interest of mass people (Xia et al., 2004, Martin et al., 2009). Therefore, we propose:

H3: Fair service charge has positive effect on perceived value in banking services.

H4: Fair service charge has positive effect on customer satisfaction in banking services.

Customer satisfaction is positively influenced by perceived value. The extent of satisfaction depends on extent of perceived value and higher level of perceived value lead to higher level of customer satisfaction (Kuo et al., 2009; Turel and Serenko, 2006). Customer satisfaction tends to positive post purchase behavior, thus, satisfaction plays a mediating role in the relationship of perceived value and behavioral intentions (Lin and Wang, 2006). Among the determinants of satisfaction perceived value is the important one (Chen and Chen, 2010) and perceived value plays mediating role between service or product quality and customer satisfaction (Chen and Tsai, 2008). Service quality and fair service charge both have significant, direct effects on perceived value. Then, perceived value influences on customer satisfaction that lead to positive behavioral intentions, i.e. customer loyalty (Lai et al., 2009)

H5: Perceived value has positive effect on customer satisfaction in banking services.

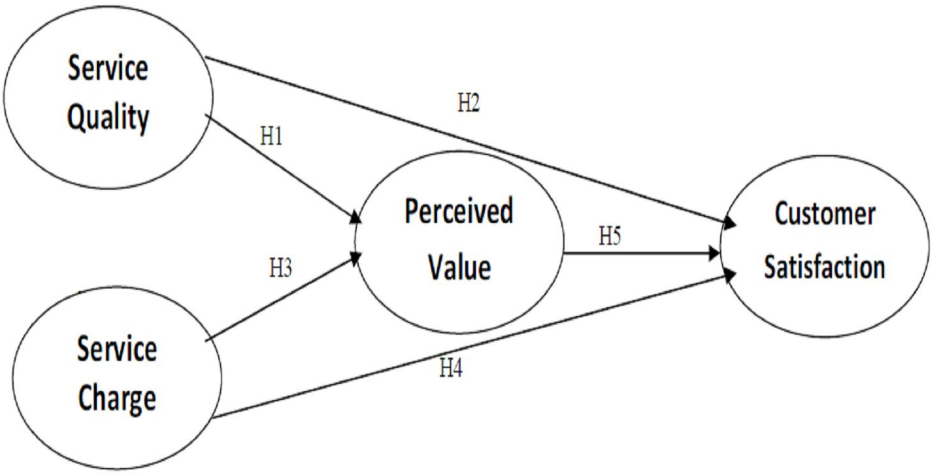

Figure-1: Hypothesized research model

3. Research methodology

3.1 Scale development

The scale as well as the questionnaire was designed according to the existing literature and experts' opinions. To design attitude rating scale of respondents we have reviewed management, marketing, and operations management literature. Some items were directly adopted from previous survey instrument to operationalize the constructs in this study. Few new items also included in different constructs to get good response from data collection through survey. The questionnaire has two parts. The first part was intended to understand the personal information of respondents using nominal scale. The second part consists the perceptions of respondents regarding the constructs of the model. All constructs were measured using multiple items by a seven point Likert-type scale (1= strongly disagree, 2= disagree, 3= moderately disagree, 4= neutral, 5= moderately agree, 6= agree, and 7= strongly agree).

3.2 The Sample

Total 400 questionnaires were distributed to the general people who have at least one bank account. The questionnaire was distributed on random basis. And 335 responses were received, of which 322 were complete and usable (response rate is 84 percent, whereas, effective response rate is approximately 96 percent). Sixty-one percent (61 percent) respondents were men and 39 percent were women. 62 percent respondents were up to thirty years, 13 percent were thirty-one to forty years, 16 percent were forty-one to fifty years, and 9 percent were above fifty years old. 26 percent respondents were involved in government service, 30 percent were in private service, 26 percent were in business, and 18 percent were housewife respondents. 36 percent respondents completed up to college level education, 46 percent completed graduation, and 18 percent completed post-graduation. The frequency distribution for monthly income was as follows: 54 percent up to Taka 20,000 (Taka is the Bangladeshi currency unit), 27 percent between Taka 20,001 and Taka 30,000, 13 percent between Taka 30,001 and Taka 40,000, 4 percent between Taka 40,001 and 50,000, and 2 percent above Taka 50,000. The

summary statistics of the survey are shown in Table 1. In order to control common method biases, it was assured to respondents that there was no right or wrong answers and they should provide answer as honestly as possible and no information will be shared with other person or organization. It has been also assured that the respondents' identity will not be disclosed, i.e. as like answers to be anonymous and the information of this survey will be used for researchers' academic purpose.

Table 1: Summary Statistics of Questionnaire Survey

Constructs	No. of items	Mean	SD*	Sources of scale
Service quality	6	5.135	1.404	Olorunniwo et al., 2006; Olorunniwo and Hsu, 2006
Service charge	3	6.278	0.963	Kim and Lee, 2010; Zielke, 2008
Perceived value	3	5.658	1.154	Chen and Tsai, 2008; Cronin et. al., 2000; Hutchinson et al., 2009; Lai et al., 2009
Customer satisfaction	5	5.622	1.076	Lin and wang, 2006; Olorunniwo et al., 2006

SD* = standard deviation

4. Analyses and Results

AMOS 17.0 was used as the analysis instrument and structural equation modeling (SEM) was employed in this study to test proposed model and hypotheses. Maximum likelihood method was adopted for parameter estimation. Measurement model and structural model test were used to test fitness of the model. The exploratory factor analysis (EFA) was performed to understand underlying relationship of factors. A Bartlett sphericity test was performed to verify whether the data were appropriate for factor analysis. A KMO (Kaiser–Meyer-Olkin) value of 0.856 and significance level of .000 were obtained using Bartlett's sphericity test, which implies that the inter-correlation matrix contains sufficient common variance to make factor analysis worthwhile. For EFA, the Principal Component Analysis (PCA), with varimax rotation and eigenvalue greater than 1 was used. As a conservative heuristic, a cut-off point as 0.50 (suppress absolute value less than 0.50) was imposed in factor analysis that enhance the total reliability of the questionnaire. We restricted the number of factors to four as the theoretical background of this study has total four underlying factors. Table-2 shows the rotated factor loadings and their respective eigenvalue and cronbach alpha values. It is notable that all calculated alpha values are above the widely recognized rule of thumb of 0.70 (Nunnally, 1978), that expresses a good internal consistency among items within each construct.

Table 2: Result of factor analysis

No.	Service quality	Service charge	Perceived value	Customer satisfaction
Sq1	0.912			
Sq2	0.926			
Sq3	0.932			
Sq4	0.904			
Sq5	0.924			
Sq6	0.782			
Sc1		0.883		
Sc2		0.846		
Sc3		0.823		
Pv1			0.845	
Pv2			0.899	
Pv3			0.775	
Cs1				0.755
Cs2				0.653
Cs3				0.759
Cs4				0.782
Cs5				0.758
Eigenvalue	6.648	3.275	1.737	1.354
Cumulative percentage of explained variance	39.107	58.372	68.587	76.553
Cronbach alpha	0.961	0.875	0.834	0.836

Overall cronbach alpha is 0.895.

4.1 Measurement model

To have a more rigorous interpretation of customer satisfaction, confirmatory factor analysis (CFA) was conducted. The CFA model or Measurement model was applied to identify and determine the relationships of variables in the model. To evaluate the goodness-of-fit of model several measures of indices are used as suggested by Hair et al. (1998), Iacobucci (2010), Schumacker (1992): Chi-square/degrees of freedom ($\chi\sqrt{/df}$) ratio, root mean-square error of approximation (RMSEA), goodness of fit index (GFI), normed fit index (NFI), comparative fit index (CFI), incremental fit index (IFI). As Table-3 shows $\chi\sqrt{/df}$ = 1.886, RMSEA = 0.056, GFI = 0.944, NFI = 0.961, CFI = 0.981, and IFI = 0.981. All measures fulfill the suggested values. Therefore, CFA model can be said as a good fit model.

Table-3: Goodness of Fit Statistics for Measurement Model and Structural Model

	Suggested values	**Measurement model values**	**Structural model values**
Absolute measures			
$\chi^{\sqrt{}}$/df	<3	1.886	1.727
RMSEA	<0.06	0.053	0.048
GFI	>0.90	0.944	0.948
Incremental fit measures			
NFI	>0.90	0.961	0.965
CFI	>0.90	0.981	0.985
IFI	>0.90	0.981	0.985

The measurement model was further evaluated for reliability and validity, after achieving the well fit indices. The amount of variance in an item because of underlying construct is indicated by item reliability. Standardized loading greater than 0.70 demonstrate item reliability, but standardized loadings ≥ 0.50 are also acceptable (Chin, 1998; Hair et al., 1998). For construct reliability, value ≥ 0.70 is required that intends to the degree to which an observed variable reveals an underlying factor. Table-4 presents the item reliability and construct reliability results. Standardized loadings ranged from 0.555 to 0.949 indicating good item reliability. All values of construct reliability were above the threshold value (i.e. 0.70) indicating high level of reliability for all the constructs.

Table-4: Measurement Model Results

Constructs and variables	Standardized loadings	t-statistics	Construct reliability (CR)	Average variance extracted (AVE)
Service quality				
Sq1	0.911	21.187**	0.95	0.79
Sq2	0.942	22.439**		
Sq3	0.949	22.739**		
Sq4	0.872	19.655**		
Sq5	0.892	20.496**		
Sq6	0.764	16.642**		
Service charge				
Sc1	0.921	20.574**	0.88	0.72
Sc2	0.896	19.836**		
Sc3	0.702	14.056**		
Perceived value				
Pv1	0.789	16.091**	0.84	0.64
Pv2	0.889	18.370**		
Pv3	0.713	14.070**		
Customer satisfaction				
Cs1	0.750	13.764**	0.83	0.51
Cs2	0.792	15.185**		
Cs3	0.735	14.149**		
Cs4	0.555	7.838**		
Cs5	0.704	14.066**		

**Indicates significance at $p < 0.01$ level.

CR= (∑ Standardized loadings) √ / [(∑ Standardized loadings) √ + ∑ (measurement indicator error)]

AVE = ∑ (Standardized loadings√) / [∑ (Standardized loadings√) + ∑ (measurement indicator error)]

After being assured that a scale instrument provides necessary levels of reliability, this study stepped to scale validity. Convergent validity and discriminant validity were tested under construct validity in this study. Convergent validity assesses the degree to which dimensional measures of the same concept are correlated. To assess convergent validity average variance extracted (AVE) is used (Fornell and Larcker, 1981; Hair et al., 1998). Representation of unobserved constructs by items is truly denoted as higher as the average variance extracted is higher. For unobserved construct the average variance extracted (AVE) should be more than 0.50 (Hair et al., 1998). Table-4 shows the average variance extracted (AVE) values for constructs ranged from 0.51 to 0.79 exceeded the

threshold value 0.50, supportive evidence for convergent validity. Moreover, in a CFA setting, t-statistics related to factor loadings is assessed to measure convergent validity (Rao and Troshani, 2007). All items offer good measures to their respective latent construct because of all t-statistics values are statistically significant at 0.01 level and confirmed convergent validity of the constructs. Average variance extracted (AVE) is also used to assess discriminant validity (Fornell and Larcker, 1981). The role of thumb is that the average variance extracted (AVE) values should be greater than corresponding squired inter-construct correlation estimates (SIC) in the model. Table-5 shows the average variance extracted (AVE) estimates in the diagonal values and corresponding squired inter-construct correlation estimates (SIC) values, supportive evidence for discriminant validity. For example, average variance extracted (AVE) estimate for service charge was 0.72 and corresponding squired inter-construct correlation estimates (SIC) values were 0.08, and 0.36 for perceived value and customer satisfaction respectively, an indication of discriminant validity.

Table-5: Squared correlations between constructs

	Service quality	**Service charge**	**Perceived value**	**Customer satisfaction**
Service quality	**0.79***			
Service charge	0.03	**0.72***		
Perceived value	0.06	0.08	**0.64***	
Customer satisfaction	0.19	0.36	0.14	**0.51***

*Diagonal elements are average variance extracted (AVE)

4.2 Structural model

Table-3 shows the common model-fit indices, recommended values and results of the test of structural model fitness. As shown in Table-3, comparison of all fit indices with their corresponding recommended values (Hair et al., 1998; Iacobucci, 2010; Schumacker, 1992) the evidence of a good model fit was exposed. Given the good fit of the model, the estimated path coefficients of the structural model were then examined to evaluate the hypotheses.

Table-6: Path analysis of structural model

Casual path	Hypotheses	Path coefficient	t-statistics	Results
Service quality → perceived value	H1	0.206**	3.444	Supported
Service quality → customer satisfaction	H2	0.303**	5.401	Supported
Service charge → perceived value	H3	0.260**	4.309	Supported
Service charge → customer satisfaction	H4	0.523**	8.552	Supported
Perceived value → customer satisfaction	H5	0.159**	2.710	Supported

**indicates significance at p< 0.01 level

Table-6 depicted the empirical results of structural model by path analysis. The path coefficients along with hypotheses and t-values of the latent constructs are visualized in Figure-2, where hypotheses were drawn in the solid lines. The empirical results support all hypotheses (i.e., H1, H2, H3, H4 and H5). The empirical results found significant positive relationship among service quality, fair service charge, perceived value and customer satisfaction. It is notable that there is a direct and indirect effect of service quality on customer satisfaction. On the other hand, fair service charge has also significant direct and indirect effect on customer satisfaction.

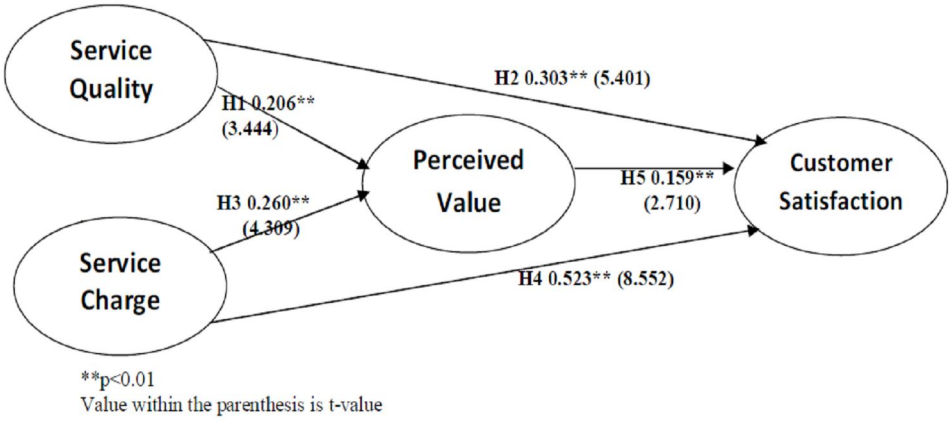

Figure-2: Outcome of Hypothesized Structural Model

5. Conclusions and implications

The scales developed for service quality, service charge, perceived value, and customer satisfaction were tested using a diversified data set collected by a questionnaire survey in Bangladesh. Structural equation modeling (SEM) including measurement model and structural model was employed in this study to test proposed model and hypotheses. The

results demonstrate that service quality and fair service charge both have direct positive influence on customer satisfaction. They have also indirect role on customer satisfaction through perceived value. This study contributes in the branch of consumer behavior in terms of theory development and managerial implications especially in banking industry in a developing country like Bangladesh.

This study finds service quality and fair service charge both have significant positive impact on customer satisfaction in banking industry of Bangladesh. This result is consistent with finding of other scholars (Cronin and Taylor, 1992; Hutchinson et al., 2009; Iyer and Evanschitzky, 2006; Varki and Colgate, 2001). Usually, service quality is the important predictor of customer satisfaction, but this study establishes service charge fairness has great impact on customer satisfaction simultaneously with service quality. This result has managerial implications. In order to successfully operate the banking business managers should emphasize the quality and charge fairness. It is a complex process to make customers satisfied and maintenance of satisfaction and that require investment of tangible and intangible resources. Thus, the positive effect of quality, and fairness of service charge, makes customers satisfied. Managers should have planning to ensure service quality, competitive service charges.

Again, the empirical results show perceived value has the mediating role between service quality, service charge and customer satisfaction. It implies that quality and charge fairness both have indirect impact on customer satisfaction through perceived value, which is similar to the other studies (Kuo et al., 2009; Lai et al., 2009; Turel and Serenko, 2006). This result also offers implications for banking industry in Bangladesh. Managers should know what customers want and how they become satisfied. From a managerial perspective, service quality, fair service charge and perceived value is an important influencing factor on customer satisfaction. Firms should understand the importance of quality assurance, charge fairness, and value of the service to customers. Perceived value is influenced by service quality and charge fairness. At the same time, they have positive direct influence on customer satisfaction. Therefore, bank managers should develop a systematic assessment program to monitor service quality, perceived value and satisfaction of customer. Bank clients should be informed about the activities of bank management regarding customer satisfaction issues. Banks can communicate with their present and prospective clients by website, leaflet and poster, advertisement, seminar and conference, etc.

A limitation of this study is focusing on only mass service. Another limitation is not a big data set (n = 322) and only focuses on one sector (commercial banking). Future study should utilize this methodology for several industries in mass service to confirm the model identified for customer satisfaction. Finally, further study should address the customer satisfaction issues on other typology of service such service factory, service shop, and professional service.

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