

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/279624892>

Determinants of service quality and impact of service quality and consumer characteristics on channel selection

Article in *British Food Journal* · July 2015

DOI: 10.1108/BJFJ-12-2014-0431

CITATIONS

47

READS

15,866

2 authors, including:



Md. Mohsan Khudri

Austin College

33 PUBLICATIONS 312 CITATIONS

[SEE PROFILE](#)

Determinants of service quality and impact of service quality and consumer characteristics on channel selection

Md. Mohsan Khudri

*Applied Statistics, School of Business Administration,
Uttara University, Dhaka, Bangladesh, and*

Saida Sultana

*Marketing, School of Business Administration, Uttara University,
Dhaka, Bangladesh*

Abstract

Purpose – The purpose of this paper is to seek the determinants of service quality and evaluate the impact of service quality and consumers' characteristics on channel selection in the context of beverage industry in Bangladesh.

Design/methodology/approach – Data were collected using convenience sampling method. Initially exploratory factor analysis was performed to extract the key dimensions of service quality and then structural equation modeling was employed to verify the causal relationships between the dimensions of service quality and service quality itself. χ^2 test was used to determine whether any association exists between service quality or demographic variables and choice of channel types. Cramer's V was performed to measure the strength of association. One-way ANOVA was carried out to identify significant impact of demographic variables on perception of service quality.

Findings – The research findings indicated that personal interaction, appearance, reliability, policy, and problem solving are the key determinants of service quality in terms of beverage industry in Bangladesh. It is observed that customers preferring factors like personal interaction and problem solving intend to purchase beverage items from super shop. Customers who are deemed socioeconomically high taking profession and monthly income into account prefer shopping at super shop. Customers who are female or married with no kid or service holders showed better satisfaction with service quality.

Research limitations/implications – Due to money and time constraints the study could not cover up the whole country. Conclusions and predictions to be applied to consumers in general may not be appropriate entirely since specific age group was deemed, given that the subject was beverage products.

Practical implications – The model proposed in this study will help managers and suppliers understand how consumers assess the quality of services. In order to strengthen brand and create brand loyalty, marketing planners, managers, and suppliers must be aware of the dimensions of service quality, and consumers' characteristics. Selecting an optimal sales channel is imperative for suppliers in order to make their products reach to target consumers.

Originality/value – Service quality plays crucial role in ameliorating customer satisfaction and creating competitive advantage whereas sales channels have impact on sustaining the long-term profitability of the company. This paper has contributed significantly to these issues and sought consumers' characteristics and preference as well.

Keywords Service quality, Channel, Structural equation modeling, Beverage industry, Consumer characteristics

Paper type Research paper



1. Introduction

Over the past few years the living standard and environment of people have been tremendously improved with the amelioration of global economy. This is reflected in the consumption patterns of people and their consciousness of quality of product and service. Nowadays, most of the people prefer eating outside due to their bustling life and have accustomed to it. They even neglect the balance in diet while eating outside. In the context of Bangladesh, substantial changes have been found after independence. The incidence of poverty has reduced to some extent with stability in the distribution of income and expenditure (Khudri and Chowdhury, 2013). Nutrition level has been augmented with a more diversified food consumption basket. In accordance with the report of HIES, monthly food expenditure was raised by 87.9 percent in 2010 compared to 2005 (HIES, 2010). The report also states that 54.81 percent of the total consumption expenditure was accounted to food and beverage at the national level in 2010. It is evident that people of this country spend bulk of their consumption expenditures on food and beverage. Abreast of our traditional food consumers of Bangladesh also like to have western food after 1980s. As a consequence of global marketing this was not too hard nut to crack for the consumers. One of the most promising industries in Bangladesh is the beverage industry which is burgeoning progressively. As per the quantam index of industrial production by industrial groups of Bangladesh, the growth in beverage industry is 115.19 percent in the 23 year (1988-1989: 2011-2012) period (BBS, 2013). This study has taken the beverage industry as target area.

A beverage is composed mainly of water which is used as a drink for the purpose of relieving thirst and introducing fluid to the body, nourishing the body, and stimulating or soothing the individual. Beverages are consumed mainly for their thirst quenching properties or stimulating effects. Three categories of beverages are commonly consumed which include carbonated non-alcoholic beverages or soft drinks, non-carbonated non-alcoholic stimulating beverages (e.g. coffee and tea) and alcoholic beverages (Sivasankar, 2002). Each beverage must be considered food in the broad sense, since all are made from food ingredients and subject to food laws and regulations, and all are consumed in large quantities.

On account of rapid development of other channels, direct selling/marketing channel has shrunk to some extent in recent years. The gradual advancement of wholesale stores, convenient stores, department store, super shop, online shopping, and mail orders has not only facilitated but also boosted the diversified development of beverage foods channels and caused a huge structural change in the prevalent sales channels.

Consumers' lifestyles have been changed radically by dint of globalization and urbanization. The level of their satisfaction now relies directly on the management and monitoring of individual service encounters (Shostack, 1984, 1987; Solomon *et al.*, 1985; Surprenant and Solomon, 1987). Service quality is deemed one of the most popular and potentially important marketing concepts which has been comprehensively discussed by both academicians and practitioners over the past decade. One of the grounds for its popularity is its strategic role and importance in gaining competitive advantage and strategic management decisions. Consumers reach satisfaction decisions by comparing product or service performance with prior expectations about how the product or service would or should perform. Taking the customers' cognitive and affective responses to the perception of service attributes into account, service marketers are now putting emphasis on satisfying consumers need in an effective and efficient manner. Since providing better service quality has turned into a rudimentary element for enterprises to bind a good relationship with their customers, seeking the ways to

enhance service quality with a view to attracting or retaining customers has become one of the burning issues in business (Parasuraman *et al.*, 1988, 1996).

Notwithstanding the rapid advancement of beverage industry the marketing channels of this industry are seldom studied. Progresses of the potential market of the beverage food industry and lack of allied studies regarding this industry have motivated to carry out this research. In this study we have paid heed to the significance of service quality and marketing channels as the channel structure has been drastically altered with the economic environment and many new channels have emerged for consumers. So, it is important to know how the service quality affects consumers' choice of selecting the channel.

This study aims to: first, identify the key dimensions of service quality affecting consumers' purchase decision; second, examine whether any association exists between dimensions of service quality and channel types; third, explore whether dimensions of service quality have significant impact on consumers' choice of channel types; fourth, check whether there is any statistical association between demographic variables and channel types; fifth, investigate whether the differences among various types of consumers affect their perception regarding service quality; and sixth, recommend a basis of decision making for beverage food manufacturers and suppliers with a view to helping them select a proper sales channel to aggrandize their profit.

2. Literature review

Measuring the service quality and customer satisfaction are the utmost critical factors in service marketing as the service sector has been flourishing since the past few decades. Researchers and marketers are placing their firm endeavor and discovering the service quality of different industries by comparing the customer expectation and customer perception about a particular service.

The delivery of quality services to customers works as a major strategy for the continuous existence and success of a business organization (Parasuraman *et al.*, 1985; Zeithaml *et al.*, 1990). Nakhai and Neves (2009) stated that a customer faces more complexity to measure the quality of service rather than that of a product. According to them, the perception of measuring service quality is to liken customer expectation to the actual service performance. In continuation of this, Chuang (2010) found later that service quality can be evaluated by discovering the differences between the customer's perceptions and expectations about a particular service offered by an organization.

According to Brady and Cronin (2001), there are two types of conceptualization regarding service quality – the American or the European perspective. The first one focusses on functional quality of service whereas the latter one considers two additional attributes like technical quality and image of service along with functional quality. Based on the conceptualization of service quality, Grönroos (1984) proposed two dimensions of it. Subsequently, in addition to Grunions' model, Rust and Oliver (1994) elucidated service quality dimensions through providing a three-component model based on a customer's evaluation of three dimensions of the service encounter. In accordance with this model, three components are the customer-employee interaction, the service environment, and the outcome.

It is conceptually arduous to segregate the notion of service environment from the concept of functional quality that has been suggested in the literature while previous research bolsters the contention that the service environment plays a significant role in influencing service quality perceptions (Bitner, 1992; Spangenberg *et al.*, 1996). For instance – Brady and Cronin (2001) proposed ambient conditions, facility design,

and social factors as three components of service environment. According to them, service environment is considered the element of service delivery process. They also recommended that the instruments of SERVQUAL model explain the determinants of quality service encounter as a part of the service delivery process.

SERVQUAL, a multiple-item scale, developed by Parasuraman *et al.* (1985, 1988) is frequently used in service marketing. In this model, the ten dimensions of service quality (reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the consumer, and tangibles) have been reduced to five (tangibles, assurance, responsiveness, reliability, and empathy) dimensions.

SERVQUAL gives more weight on the service delivery process rather than the other features of service (Kang and James, 2004). However, many researchers have expressed their reservation about the relevance of SERVQUAL dimensions with the criteria for measuring the service quality from the customer's point of view (Finn and Charles, 1991; Cronin and Taylor, 1992). Subsequently, a hierarchical model (DTR) for measuring the retail service quality was developed by Dabholkar *et al.* (1996) which is the composition of multiple levels and dimensions. They recorded customers' activities carefully with a view to identifying key factors affecting customers' perceptions of retail service quality. Interviews with some retail customers, in-depth interviews with six customers and a qualitative study on the thinking process of three customer's real shopping experience were used as tools to build up the mechanisms of a triangular research technique. These three separate methods accompanied with some modification of original SERVQUAL scale constructed a hierarchical factor structure scale is called Retail Service Quality Scale (RSQS).

Marketing channel is an organized network of agencies and institutions which performs all the functions required to link producers with end customers to accomplish the marketing task. It is a set of interdependent organizations that helps make a product or service available for use or consumption by the consumer or business user (Kotler, 2000). Most manufacturers determine their success or failure through the competency and efficacy of marketing channel members (e.g. agents, wholesalers, distributors, and retailers) by whom the products are sold. So, the consciousness about the performance of marketing channels is considerably growing among the manufacturers. The significance of managing relationship between customers and organizations that creates value by the appropriate distribution of activities to make the accessibility of products for customers at the right place and the right time is extensively recognized by the channel management-based research (Weitz and Jap, 1995). All these facts motivated us to have some idea on channel types and the factors affecting consumers' decision while selecting a channel.

3. Conceptual framework of service quality and marketing channel

Service quality is a multi-dimensional concept and byzantine phenomenon as well. Many dimensions of it have been empirically tested in the literature. Among the existing service quality models in the literature, the retail service quality model proposed by Dabholkar *et al.* (1996) was chosen in this study. Considering the flaws and inapplicability of other models to assess service quality accurately in a retailing environment, they developed a hierarchical model and validated it empirically to measure retail service quality distinctively. This model has been probed in a number of empirical investigations (Christo and Terblanche, 1997; Mehta *et al.*, 2000; Siu and Cheung, 2001; Kim and Jin, 2002; Meng and Elliott, 2009) and the most critical parts of which involve the verification of dimensions on which service quality is based. The model comprises five dimensions

including physical aspects, reliability, personal interaction, problem solving, and policy and three of these have two sub-dimensions each. In accordance with this model, the physical aspects have two sub-dimensions, including convenience and appearance; reliability includes correctness and commitment; and personal interaction involves confidence and courtesy. The scale is consisted of 28 items, 17 of which originated from the SERVQUAL scale and rest of the items was new and applicable to the retail industry. In the context of Bangladesh, the sales channels have been classified into five categories. The possible channel alternatives are direct selling/marketing, general food store, super shop, distributor and others. The conceptual framework of service quality and sales channel is depicted in Figure 1.

4. Hypotheses

The customer satisfaction regarding the service contact can affect the perceived service quality, and hence, the perceived service quality has received recognition as having a potential influence on repurchase intention, word of mouth, switching channels or stores, and customer loyalty (Bitner, 1990). Parasuraman *et al.* (1996) stated that consumer’s perception and evaluation of service quality could lead to many changes in behavior intentions and have positive or negative effect on channels. “Recommendation to others,” “increase customer loyalty,” and “repurchase intention” are deemed as the positive effect. On the contrary, the negative effect includes “customer complaint” and “customer switches to other channel or brand consumption.”

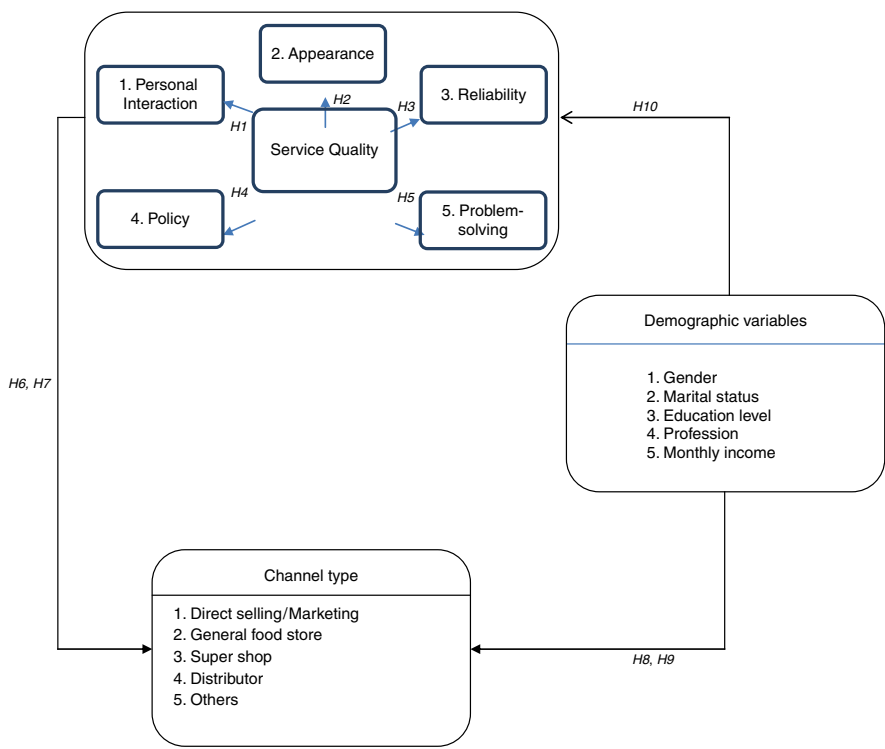


Figure 1.
Conceptual
framework of service
quality and
marketing channel

Kotler (2000) noticed that the factors influencing consumers' buying behaviors are subjected to the effects of culture, society, individual, and mentality of consumers. Individual factor comprises age, life cycle stage, profession, economic condition, lifestyle, personality, and self-concept. All these issues would affect purchase decision and consumers' choice of selecting a channel. The consumers having distinct demographic characteristics purchases the same merchandises with the diverse preferences of the choice of channel type.

It is assumed that significant difference exists between expected and perceived service on account of few demographic variables. Perceived service quality has significant impact on customer satisfaction which makes customer loyalty afterwards.

Based on the above discussions and suggested relationships in the existing literatures, the following hypotheses are formulated for this study:

- H1.* Personal interaction has a significant direct effect on service quality.
- H2.* Appearance has a significant direct effect on service quality.
- H3.* Reliability has a significant direct effect on service quality.
- H4.* Policy has a significant direct effect on service quality.
- H5.* Problem solving has a significant direct effect on service quality.
- H6.* Service quality is said to have association with consumers' choice of channel type.
- H7.* Service quality is said to have strong association with consumers' choice of channel type.
- H8.* Demographic variables are said to have association with consumers' choice of channel type.
- H9.* Demographic variables are said to have strong association with consumers' choice of channel type.
- H10.* Demographic variables cause significant differences in consumers' perceptions of service quality.

5. Methodology

A research framework was devised to test the aforementioned hypothesized relationships. Beverage market in Bangladesh was taken as the evidence for this purpose.

5.1 Questionnaire design

A self-administered structured questionnaire was developed to collect quantitative data pertaining to the various aspects of service quality and channel listed in the conceptual framework. The scale employed in the questionnaire included 28 statements pertaining to service quality. In order to assess the predictive validity of the scale, three questions were added additionally to the questionnaire concerning consumers' desires to visit the shop again, purchase and recommend the stores to their pals. Responses to all the statements in the questionnaire were measured on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The relative advantage of using an interval scale is that it allows researchers to apply diversified statistical techniques including arithmetic mean, standard deviation, product-moment correlations, regression analysis, and other statistics commonly employed in marketing research

(Malhotra, 1999). In addition, information on consumer's demographic characteristics such as gender, marital status, education level, profession and monthly income were asked in the questionnaire. The collected data were statistically processed to derive useful information later.

Two measures were adopted to verify the content validity of the scale after a preliminary questionnaire was designed. First, ten experts of the beverage industry were requested to assess whether the items were tapping the major constructs of interest in this study. Following a few minor editorial changes, the questionnaire was pretested subsequently using a convenience sample of 20 sales managers. Responses from the pretesting necessitated no further changes to the questionnaire. The statements used in the questionnaire to measure service quality are given in the Appendix.

5.2 Sampling design

The likelihood of beverage consumption is supposed to have strong link to 20-40 age segments in the market. Having deemed this fact, the aforementioned age group was defined as the target population of interest. Similar procedure was followed in another study related to beverage industry (Atilgan *et al.*, 2005). Dhaka division was chosen to select the sample respondents. The main ground for selecting this region is that it is the most densely populated area of Bangladesh. According to BBS (2011), Dhaka accommodates 32.83 percent of total population. Another reason is most of the people with diversified characteristics from different areas of Bangladesh are supposed to come here to earn their livelihood. These facts bolster the selection of Dhaka as targeted area.

Convenience sampling method was adopted to recruit the sampling units due to the accessibility and eagerness of respondents to respond to this study. As a matter of fact, convenience samples do not have the sufficient representative power to portray the entire population with greater accuracy. It has been affirmed that samples result in lack of validity and unbiasedness. Despite this fact, it is a prominent sampling technique and followed especially when the target population is students, any particular age or religious group or members of social organizations (Malhotra, 2007).

A total of 300 questionnaires were distributed and amid those, 211 usable questionnaires were received, resulting in an effective response rate of 70.33 percent. This figure conspicuously exceeds the critical sample size of 200 for developing structural equation models (Hair *et al.*, 1998).

Non-response bias was assessed employing two approaches. First, 40 non-respondents were chosen randomly and communicated through telephone as proposed by Churchill (1991). They were asked to provide information about personal characteristics and statements pertaining to service quality. χ^2 and *t*-test were performed to determine whether any difference found between respondents and non-respondents with respect to key responses. No significant statistical differences ($p < 0.05$) were discerned. Second, as advocated by Armstrong and Overton (1977), non-response bias was evaluated through investigating the difference between early and late respondents on the same set of factors. Non-significant results were found again. Consequently, non-response bias did not pose a significant problem ostensibly in this study.

5.3 Data analysis

The collected data were analyzed by undertaking a three step procedure. In the first phase, univariate analysis is done. Here, frequency distribution was used for showing the proportion of different demographic characteristics.

In the second step, the reliability of the overall scale along with each dimension was assessed using Cronbach's coefficient α (Cronbach, 1951). The overall scale as well as any dimension with the minimum Cronbach's α value of 0.70 was deemed reliable according to Nunnally (1978). Nevertheless, the item will be considered to be satisfactory if its Cronbach α value exceeds 0.6 (Malhotra, 1993). The validity of the various measurement items used in this study was assessed by performing three methods – content validity, construct validity, and criterion related validity. Again, construct validity includes convergent and discriminant validity. The content validity of any instrument relies on theoretical foundation, empirical studies, logical inference, and consensus view of experts. Principal component analysis (PCA) with an orthogonal rotation (Varimax) was performed on service quality measures in this step for two purposes. The first purpose was to extract the main factors of service quality and another was to examine the construct validity of the underlying constructs. Convergent validity measures the extent to which the scale correlates positively with other measures of the same construct. In contrast, discriminant validity assesses the extent to which measures of two separate constructs are relatively distinct from each other and their correlation values are neither absolute 0 nor 1 (Campbell and Fiske, 1959). Both types of validity were assessed through PCA as recommended by Churchill (1991). Factor with an eigenvalue greater than 1 was selected and an absolute factor loading of 0.5 was adopted as a cutoff point for choosing the item. The criterion related validity indicates the extent to which the constructs measured are related to a pre-specified criterion (Saraph *et al.*, 1989) and this validity was assessed through finding correlations among the overall scale, the individual dimensions and three dependent variables – intention to visit, purchase and recommend the store to others. A correlation analysis was also run on all the dimensions of service quality to examine the pattern of interrelationships amid the dimensions and check the discriminant validity as well. The next stage involved testing of a series of causal relationships between service quality and its dimensions. Hence, dimensions obtained from exploratory factor analysis were taken as the valid predictors of service quality. Structural equation modeling was used to evaluate the statistical significance of the model. Confirmatory factor analysis with partial disaggregation was performed instead of the traditional structural equations approach (or total disaggregation) on the five basic dimensions of service quality. Notwithstanding the traditional total disaggregation technique provides the most detailed analysis for testing constructs (each item is used as a separate indicator of the relevant construct), it tends to be troublesome on account of potentially high levels of random error in typical items including many parameters that must be estimated. In contrast, partial disaggregation permits one to proceed with meaningful research by combining items into composites to minimize higher levels of random error and hence, it retains all the features of structural equations, inclusive of accounting for measurement error, allowing for multiple, multidimensional variables and testing for hierarchical factor structures (Dabholkar *et al.*, 1996). With a view to operationalizing partial disaggregation in this study, items those are pertained to a given construct (dimension) were combined as suggested by Dabholkar *et al.* (1996) to create two composite indicators for each construct instead of several single-item indicators.

In the final phase, bivariate analysis (using cross-tabulation, χ^2 test and Cramer's V) was performed for exploring association between different pairs of variables. χ^2 test was adopted to explore whether service quality and demographic variables have significant effect on consumers' choice of channel type. Cramer's V was used as post-test to determine strength of association after χ^2 test has determined significance. It is a

way of calculating correlation in tables which have more than 2 × 2 rows and columns. One-way ANOVA was carried out to examine whether demographic variables would significantly affect perceptions of service quality. Turkey’s multiple comparison was also employed to test the significant difference between the means of every two populations. SPSS 16.0 and AMOS 4.0 were used to analyze the data.

6. Results

6.1 Frequency distribution of demographic characteristics

In this study there are 211 cases in total. A detailed percentage distribution of demographic characteristics of respondents was reported in Table I. It was observed that the percentages of female and male responses are 53.6 and 46.4 percent, respectively, indicating similar level of representation. The marital status of major respondents was single (53.6 percent). For the variable “Profession,” students (48.2) and service holders (43.6 percent) account for a higher percentage than the other categories. As a matter of fact, level of education and monthly income portray the socio-economic status of any population. Respondents having graduation and higher degree cover almost 62 percent of sampling units. This indicates that most of the respondents are highly educated. In all, 57 percent sample respondents’ monthly income lie in the range below BDT. 30,000-50,000 which obviously indicate that majority of respondents belong to middle class family.

6.2 Exploratory factor analysis

According to Kaiser (1974), the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy coefficient value greater than 0.8 indicates that the data are suitable for factor analysis. The KMO value of the data used for this study is 0.856. Furthermore, Bartlett’s test of Sphericity was found to be highly significant ($p < 0.001$). Consequently, the sample was appropriate for performing factor analysis. The statistics reported in Table II

Characteristics	Category	%
Gender	Male	53.6
	Female	46.4
Marital status	Single	53.6
	Married(with kids)	27.7
	Married (with no kid)	11.2
	Others	7.5
Education level	Primary/secondary	0.9
	Higher secondary	4.5
	Under graduation	32.7
	Graduation and higher	61.9
Profession	Student	31.1
	Homemaker	2.7
	Service	43.6
	Business	20.7
	Others	1.9
Monthly income	Below BDT. 30,000	31.8
	BDT. 30,000-50,000	25.3
	BDT. 50,001-70,000	17.3
	BDT. 70,001-100,000	12.5
	Above BDT. 100,000	13.1

Table I.
Frequency
distribution of
demographic
characteristics of
respondents

					Determinants of service quality
Factors	Items	Loadings	Eigenvalue	% of variance explained	
Personal interaction	P1	0.59	4.98	22.26	
	P2	0.63			
	P3	0.57			
	P4	0.66			
	P5	0.58			
	P6	0.64			
	P7	0.73			
	P8	0.79			
	P9	0.61			
Appearance	P10	0.60	2.74	14.73	
	P11	0.69			
	P12	0.57			
	P13	0.75			
	P14	0.68			
	P15	0.63			
Reliability	P16	0.61	2.53	10.24	
	P17	0.62			
	P18	0.71			
	P19	0.56			
	P20	0.69			
Policy	P21	0.67	2.36	9.51	
	P22	0.56			
	P23	0.76			
	P24	0.57			
	P25	0.56			
Problem solving	P26	0.57	2.13	8.38	
	P27	0.58			
	P28	0.62			

2087

Table II.
Results of factor
analysis

reveal that a five factor solution was achieved and the eigenvalues of these factors were 4.98, 2.74, 2.53, 2.36, and 2.13, respectively. All of these values were greater than 1, pointing out that the clustering was consistent and meaningful as well. These five factors together explained 65.22 percent of total variance. Moreover, the factor loadings of all the items were equal to or greater than 0.56 (Table II).

Factor 1: the first factor accounted for 22.36 percent of total variance and comprised nine items (P1-P9). These items narrated behavior and personality of employees, whether employees have knowledge to answer customers' questions and provide individual and prompt services. Hence, this factor was named "personal interaction."

Factor 2: this factor explained 14.73 percent of total variance and contained six items (P10-P15). These items delineated the overall appearance, facilities, and decoration of a store. Thus, this factor was labeled as "appearance."

Factor 3: this factor was composed of five items (P16-P20) and these items explained 10.24 percent of total variance for this factor. These items reflected the store's ability to perform service dependably, consistently and flawlessly. Thereby, the factor was defined as "reliability."

Factor 4: five items (P21-P25) constituted the fourth factor and 9.51 percent of total variance was explained by this factor. These items were related to quality of merchandise, making customers' purchase processes efficient and convenient and credit card policy (accepting most major credit cards and offering its own credit card). Therefore, this factor was named "policy."

Factor 5: three items (P26-P28) were found under the fifth factor and these items explained 8.38 percent of total variation for this factor. These items described mainly the willingness of store as well as its employees to solve customers' problems and handle complaints instantly. This factor was defined as "problem solving"[1].

6.3 Reliability and validity

The results exhibited in Table III indicated that the reliability coefficient (Cronbach's α) of overall scale was 0.92 and the reliability estimate of each dimension (factor) was also greater than 0.7. More specifically, the reliability estimates were 0.83 for personal interaction, 0.81 for appearance, 0.76 for reliability, 0.78 for policy, and 0.71 for problem solving. Hence, no modification of the scale is required since the scale possesses adequate reliability (Nunnally, 1978). Therefore, the questionnaire is expected to generate meaningful findings with a certain degree of consistency.

The content validity of the instrument used in this study is justified since all the measurement items were developed from a theoretical framework that was carefully derived and validated by Dabholkar *et al.* (1996) with the support of extensive literature review. Apart from that, opinion from experts was also taken and they concurred in their view. Results of PCA suggest that the items have convergent and discriminant validity since all the items exhibited factor loadings of 0.56 and above and eigenvalues of all the factors were greater than 1. Significant criterion related validity was found. The results depict that the whole scale has high correlation with the three variables – intention to visit (0.57), intention to purchase (0.65), and intention to recommend the store to others (0.54) (Table III). Thus, the predictive validity of the scale was verified. Both strong and moderate positive correlations were observed between dimensions and the aforementioned variables from Table III.

A correlation analysis was also performed to examine the strength of linear relationship between the dimensions of service quality and test the discriminant validity as well. The results presented in Table IV provided the evidence that except problem-solving rest of the dimensions have strong correlation with each other. Since the correlation coefficient values fall between 0 and 1, the dimensions are neither perfectly correlated nor having no correlation which proved the discriminant validity of the scale reasonably well.

6.4 Confirmatory factor analysis

The factor loadings and covariances obtained from the confirmatory factor analysis are shown in Figure 2. This paper follows seven basic measures of fit of the model, namely: likelihood-ratio χ^2 /degrees of freedom, goodness-of-fit index (GFI), root mean square

Table III.
Construct reliability
and criterion-related
validity of the
service quality scale

	No. of items	Construct reliability	Criterion-related validity with correlations		
			Intention to visit	Intention to purchase	Intention to recommend
Overall scale	28	0.92	0.57**	0.65**	0.54**
<i>Dimensions</i>					
Personal interaction	9	0.83	0.47**	0.40**	0.52**
Appearance	6	0.81	0.62**	0.51**	0.49**
Reliability	5	0.76	0.42**	0.57**	0.51**
Policy	5	0.78	0.48**	0.51**	0.47**
Problem solving	3	0.71	0.36**	0.55**	0.46**

Note: ** $p < 0.05$

error of approximation (RMSEA), Bentler's comparative fit index (CFI), adjusted goodness-of-fit index (AGFI), Tucker-Lewis index (TLI), and normed fit index (NFI).

All the criteria followed here are suggested by Hair *et al.* (1998) and Arbuckle and Wothke (1995). The χ^2 value of 56.52 with 25 degrees of freedom was found to be statistically significant ($p < 0.00$) (Table V). The GFI value of 0.98 is at acceptance level. The value of RMSEA is 0.074 which falls inside the acceptable range of 0.08 or less. It is observed that all the fit measures comply with the values recommended by Hair *et al.* (1998) and Arbuckle and Wothke (1995) except for the χ^2 /degrees of freedom. However, its value of 2.261 is acceptable in accordance with the suggestion of Segars and Grovers (1993) who mentioned that a value of less than 3 can be amenable. The results of this analysis along with the recommended values are summarized in Table V. As per results, all the fit indices provide strong support for the fitted model and all the five constructs (personal interaction, appearance, reliability, policy and problem solving) have significant impact on service quality in the context of beverage industry. Hence, the first five hypotheses of this study (H1-H5) are proven true.

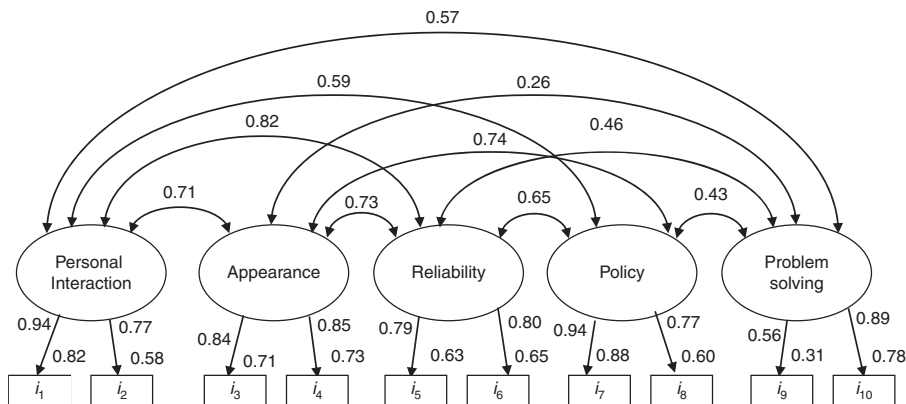
6.5 χ^2 test and Cramer's V

χ^2 test was adopted to check whether there is any association between the dimensions of service quality and consumers' choice of channel type. Amid the five dimensions, "personal interaction" and "problem solving" were found to be statistically significant at 5 percent level of significance. This reveals that employees' personal interaction

	Personal interaction	Appearance	Reliability	Policy	Problem solving
Personal interaction	1.00				
Appearance	0.52**	1.00			
Reliability	0.73**	0.59**	1.00		
Policy	0.52**	0.61**	0.57**	1.00	
Problem solving	0.47**	0.19*	0.36**	0.32**	1.00

Notes: * $p < 0.05$; ** $p < 0.01$

Table IV.
Correlation matrix



Notes: $i_1 = P1 + P3 + P4 + P6 + P8$; $i_2 = P2 + P5 + P7 + P9$; $i_3 = P10 + P12 + P14$; $i_4 = P11 + P13 + P15$; $i_5 = P16 + P18$; $i_6 = P17 + P19 + P20$; $i_7 = P21 + P23 + P25$; $i_8 = P22 + P24$; $i_9 = P26 + P28$; $i_{10} = P27$

Figure 2.
Confirmatory factor
analysis on the five
basic dimensions

and problem-solving attitude affect consumer's mind while selecting any channel. The value of Cramer's *V* between personal interaction and choice of channel type was 0.62 whereas it was 0.56 between problem solving and choice of channel type. This indicates that both dimensions have strong association with consumers' choice of channel type. Based on frequency of consumers' preference in terms of these dimensions, the channels can be ranked as follows: 1 – super shop; 2 – general food store; 3 – direct selling/marketing. We may state that customers who give priority to the aforementioned two factors tend to purchase beverage items at super shop as they were supposed to perceive better service quality there. Hence, *H6* and *H7* are partially supported.

χ^2 test was performed further to examine the effect of demographic variables on choice of channel type. Among the demographic variables taken into account in this study, only profession and monthly income had *p*-values (0.03 and 0.01, respectively) less than the level of significance, $\alpha = 0.05$, indicating that profession and monthly income would affect consumers' choice of channel type. From cross-tabulation (Table VI and Table VII), it was found that respondents belonging to better profession and having handsome income prefer purchasing from super shop. The value of Cramer's *V* between profession and choice of channel type was 0.48 whereas it was 0.53 between monthly income and choice of channel type, indicating that profession and monthly income have strong association with consumers' choice of channel type. Hence, *H8* and *H9* are supported to some extent but not altogether.

Table V.
Fit statistic in
the structural
equation model

Goodness-of-fit model index	Recommended value ^a	RSQS model
χ^2/df^b	≤ 2.00	2.26
Goodness-of-fit index	≥ 0.90	0.98
Adjusted goodness-of-fit index (AGFI)	≥ 0.90	0.91
Normalized fit index (NFI)	≥ 0.90	0.96
Tucker-Lewis index (TLI)	≥ 0.90	0.97
Comparative fit index (CFI)	≥ 0.90	0.95
Root mean square error of approximation (RMSEA)	≤ 0.08	0.07
Sources: ^a Recommended by Hair <i>et al.</i> (1998) and Arbuckle and Wothke (1995); ^b recommended value of ≤ 3.00 by Segars and Grover (1993)		

Table VI.
The contingency
table of profession
vs choice of
channel type

			Choice of channel type				Total (%)
			General food store (%)	Super shop (%)	Direct selling/ marketing (%)	Others	
Profession	Student	Individual	22	18	8	17	65
		% of total	(10.4)	(8.5)	(3.8)	(8.1)	(30.9)
	Homemaker	Individual	2	3	0	1	6
		% of total	(0.9)	(1.4)	0	(0.5)	(2.8)
	Service	Individual	33	49	2	8	92
		% of total	(15.6)	(23.2)	(0.9)	(3.8)	(43.6)
	Business	Individual	10	21	2	11	44
		% of total	(4.7)	(9.9)	(0.9)	(5.2)	(20.8)
	Others	Individual	2	1	0	1	4
		% of total	(0.9)	(0.5)	0	(0.5)	(1.9)
	Total	Individual	69	92	12	38	211
		% of total	(32.7)	(43.6)	(5.7)	(18)	(100)

6.6 One-way ANOVA

One-way ANOVA was performed to analyze whether consumers' characteristics significantly affect perceptions of service quality. Tukey's multiple comparison procedure was also employed to test the significant difference between the means of every two populations. Homogeneity test of the variance of the population was conducted before testing the effects of demographic variables on service quality. It was found that the variances of the population in terms of gender, marital status, education level, profession, and monthly income on perceptions of service quality were the same for all the populations, indicating the data were appropriate for one-way ANOVA. The results of ANOVA (Table VIII) reported that different types of gender, marital status, and profession had significant different perceptions regarding service quality.

F-value and *p*-value were found as 3.79 and 0.04, respectively, in the test with a view to measuring the effect of gender on service quality. Different genders having significant different perceptions of service quality were found at 5 percent level of

Table VII.
The contingency
table of monthly
income vs choice of
channel type

			Choice of channel type				Total (%)
			General food store (%)	Super shop (%)	Direct selling/ marketing (%)	Others	
Monthly income (BDT)	Below	Individual	31	17	7	12	67
	30,000	% of total	(14.7)	(8.1)	(3.3)	(5.7)	(31.8)
	30,000-	Individual	21	18	4	10	53
	50,000	% of total	(9.9)	(8.5)	(1.9)	(4.7)	(25.1)
	50,001-	Individual	12	19	2	4	37
	70,000	% of total	(5.6)	(9.0)	(0.9)	(1.9)	(17.5)
	70,001-	Individual	9	13	0	4	26
	100,000	% of total	(4.3)	(6.2)	0	(1.9)	(12.3)
Total	Above	Individual	3	22	0	3	28
	100,000	% of total	(1.4)	(10.4)	0	(1.4)	(13.3)
		Individual	76	89	13	33	211
			(36.0)	(42.2)	(6.2)	(15.6)	(100)

Table VIII.

ANOVA of
demographic
variables on
service quality

Demographic variable	Homogeneity test	<i>F</i> -test	<i>p</i> -value (Significance)	Tukey (multiple comparison procedures)
Gender	0.61	3.79	0.04*	There were not more than 3 groups of gender, so multiple comparison procedure was not conducted. In the comparison of means, the result can be obtained as follows. Female > Male
Marital status	0.68	8.92	0.000***	1. Married subjects (with no kid) > Married subjects (with kid(s)) 2. Married subjects (with no kid) > Unmarried subjects
Education level	0.73	0.53	0.81	—
Profession	0.52	3.13	0.003**	1. Service > Students 2. Service > Business
Monthly income	0.82	1.05	0.42	—

Notes: **p* < 0.05; ***p* < 0.01; ****p* < 0.001

significance. Tukey's multiple comparison procedure was not conducted in case of gender since it had not more than three groups. Comparing means the result showed that female respondents had higher satisfaction than male ones. Therefore, female subjects were more satisfied with service quality than that of male counterparts. In the test of the effect of marital status on retail service quality, F -value was 8.92, and p -value was 0.000, which was less than the level of significance, $\alpha = 0.001$. This indicated that respondents belonging to different marital statuses had different perceptions regarding service quality. In a further multiple comparison procedure among subjects with different marital statuses, the result disclosed that married respondents (with no kid) showed significantly higher satisfaction with service quality than that of married ones (with kid(s)) and unmarried ones. In the test of the effect of profession on service quality, F -value was 3.13, and p -value was 0.003, which was less than the level of significance, $\alpha = 0.01$. This implied that subjects of different professions had different perceptions regarding service quality. The further multiple comparison procedure disclosed that service holder subjects showed significantly higher satisfaction with service quality than those involved in business. The ANOVA results are shown in Table VIII. From the above results, it can be concluded that $H10$ (Demographic variables significantly affect one's perception of service quality) is partially supported.

7. Discussions

Service quality is receiving continuous attention from academic researchers, practitioners and managers. Taking this into account this study emphasized on identifying the key determinants of service quality and measuring its impact on selecting sales channel in the context of beverage industry in Bangladesh. Furthermore, this study sought to measure the impact of consumers' characteristics on channel selection. Several interesting findings emerged from the study and based on these findings, suggestions are proposed as a reference for beverage food suppliers as well as consumers.

Since most of the respondents were well educated in accordance with frequency distribution, it can be stated that the responses were consequence of their deliberation. The dimensions obtained from exploratory factor analysis were verified subsequently through performing reliability, validity analysis, and confirmatory factor analysis. All the tools averred that all the five dimensions, namely personal interaction, appearance, reliability, policy, and problem solving have dominant effect on service quality. Hence, these are deemed the key determinants and can be used to measure service quality. Amid the five dimensions, personal interaction accounts for the majority portion (22.26 percent) of total variance which is followed by appearance (14.73 percent). These two dimensions should be given the most importance while designing service. Service quality has strong association with future consumption behavior in the context of customers' intention to visit, purchase and recommend the store to others. This indicates that through ensuring service quality and continuous amelioration of it may make consumers loyal to the specific store. Each underlying dimension of service quality has significant influence on stimulating repeated store patronage and the spread of well word-of-mouth. Some other observations from this study are as follows: first, most of the customers who attached more importance to "personal interaction" and "problem solving" have proclivity for purchasing beverage foods from super shop which implies that super shops are ostensibly providing them better service than other sales channel; second, consumers belonging to standard profession (i.e. service, business) or consumers with better income are

more prone to purchase beverage items from super shop as it attempts to ensure better service than other sales channels; and third, consumers who are female or married with no kid or service holders have better satisfaction with service quality.

8. Managerial implications

Beverage food suppliers and marketing managers should pay more heed to factors affecting service quality which, if increased, will contribute significantly to their organization's reputation and brand loyalty. Service quality is strategically important for several reasons, such as creating brand loyalty, strengthening brand and creating threat to rivals, gaining high market share and new customers. Our research model has the potential to help managers and suppliers understand better how consumers assess the quality of services. The inter-correlations between the dimensions of service quality should also be considered.

Managers who intend to aggrandize their service quality and receive accolades, they have to have the alacrity to ascertain the following issues:

- Sales persons of the store have to be polite, helpful, and trenchant. Their acumen in anticipating customers' demand and capability of instilling confidence in the customers during their personal interaction with the customers create positive impression about the store.
- Owner or manager of the store should be aware of aesthetic standards as it will be reflected in appearance of the store. The store needs to be well-equipped with modern interior and exterior design, tidy, attractive and complete with a convenient store layout that enables the customers to seek what they need and to move around with comfort.
- Fulfilling all promises made to customers in due time, providing services flawlessly at the very first time and availability of merchandise create reliability of the store.
- Policy of the store should include high-quality merchandise, having convenient operating hours, discount or membership card, credit payment options, and ample parking spaces.
- The store must have to have alacrity to handle and resolve any complaint or problems encountered by the customers immediately, sincerely and professionally.

The employers must employ those sales personnel who are capable of assisting their customers well during their shopping. Sufficient trained, experienced and customer-oriented sales persons have to be employed in the store. All these things will increase the likelihood of customers' intension to visit again and recommendation to others.

Besides, suppliers need to identify which demographic variables would affect consumers' choice of channel type with a view to selecting an optimal channel to sell their products to their target customers. They are supposed to sell their maximum products at super shop as it offers diversified products with more shopping convenience. The results indicated that major portion of consumers in terms of the classification of monthly income and profession (42.2 and 43.6 percent, respectively) tend to purchase beverage foods from super shop. Therefore, suppliers can provide beverage products through market segmentation at super shop if they select those people having income more than 50,000 taka or service holders or business persons

as target customer. According to gender, marital status and profession, channel operators should propose service quality improvement programs for male, married with kid(s), unmarried consumers, business persons, and students on account of their lower satisfaction with service quality. For instance, they can provide playing facilities for children or nursing rooms for consumers who are married with kid(s), special discount for students, etc., to enhance customer satisfaction with service quality.

9. Limitations of study

Several limitations were associated with this study. The study considered the specific region instead of whole country owing to money and time constraints. Therefore, it was not feasible to delineate the scenario of whole country. Additional research may be required with diverse consumer groups. The study was carried out on Bangladeshi customers. Since the questionnaire was designed in English, there was a likelihood of misinterpreting the meaning of some statements by the customers. Hence, they may provide wrong answer unwittingly.

10. Conclusions

Since service quality is rudimentary marketing tool to create competitive advantage, beverage food providers should monitor on continual measurement basis and identify areas of activity that may be responsible for assuring standards of service quality. They may hire professionals at sales centers to give on-site explanation and consulting service as well. It will result in improving their business performance directly or indirectly and they will be capable of competing with efficacy in marketplace thereby. All the suggestions provided in this study will not only help getting insights of service quality and consumers' characteristics but also propel suppliers, marketing managers and owners of the stores towards the success.

Note

1. A listing of the 28 measures used in this study is included in the Appendix.

References

- Armstrong, J.S. and Overton, T.S. (1977), "Estimating nonresponse bias in mail surveys", *Journal of Marketing Research*, Vol. 14 No. 3, pp. 396-402.
- Arbuckle, J.L. and Wothke, W. (1995), *AMOS 4.0: user's guide*, United States of America: Smallwaters Corporation.
- Atilgan, E., Aksoy, S. and Akinci, S. (2005), "Determinants of the brand equity: a verification approach in the beverage industry in Turkey", *Marketing Intelligence & Planning*, Vol. 23 No. 3, pp. 237-248.
- BBS (2011), *Population & Housing Census 2011 – Preliminary Results: Bangladesh Bureau of Statistics*, Statistics Division, and Ministry of Planning, Dhaka.
- BBS (2013), *2012 Statistical Yearbook of Bangladesh: Bangladesh Bureau of Statistics*, Statistics & Informatics Division, and Ministry of Planning, Dhaka.
- Bitner, M.J. (1990), "Evaluation service encounters: the effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 No. 2, pp. 69-82.
- Bitner, M.J. (1992), "Servicescapes: the impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 No. 2, pp. 57-71.
- Brady, M.K. and Cronin, J.J. Jr (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, Vol. 65 No. 3, pp. 34-49.

-
- Campbell, D.T. and Fiske, D.W. (1959), "Convergent and discriminant validation by the multitrait-multimethod matrix", *Psychological Bulletin*, Vol. 56 No. 1, pp. 81-105.
- Christo, B. and Terblanche, N.S. (1997), "Measuring retail service quality: a replication study", *South African Journal of Business Management*, Vol. 28 No. 4, pp. 123-128.
- Chuang, P.T. (2010), "Incorporating disservice analysis to enhance perceived service quality", *Industrial Management & Data Systems*, Vol. 110 No. 3, pp. 1-21.
- Churchill, G.A. (1991), *Marketing Research: Methodological Foundations*, Dryden Press, Fort Worth, TX.
- Cronbach, L.J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 16 No. 3, pp. 297-334.
- Cronin, J.J. Jr and Taylor, S.A. (1992), "Measuring service quality: a re-examination and extension", *Journal of Marketing*, Vol. 56 No. 3, pp. 55-68.
- Dabholkar, P.A., Thorpe, D.I. and Rentz, J.O. (1996), "A measure of service quality for retail stores: scale development and validation", *Journal of the Academy of Marketing Science*, Vol. 24 No. 1, pp. 3-16.
- Finn, D.W. and Charles, W.L. (1991), "An evaluation of the SERVQUAL scales in a retailing setting", *Advances in Consumer Research*, Vol. 18 No. 1, pp. 483-490.
- Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18 No. 4, pp. 36-44.
- Hair, J.F., Andersen, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice-Hall, Englewood Cliffs, NJ.
- HIES (2010), "Report of the household income & expenditure survey 2010", Bangladesh Bureau of Statistics, Statistics Division, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.
- Kaiser, H.F. (1974), "An index of factorial simplicity", *Psychometrika*, Vol. 39 No. 1, pp. 31-36.
- Kang, G.D. and James, J. (2004), "Service quality dimensions: an examination of Grönroos's service quality model", *Managing Service Quality*, Vol. 14 No. 4, pp. 266-277.
- Khudri, M.M. and Chowdhury, F. (2013), "Evaluation of socio-economic status of households and identifying key determinants of poverty in Bangladesh", *European Journal of Social Sciences*, Vol. 37 No. 3, pp. 377-387.
- Kim, S. and Jin, B. (2002), "Validating the retail service quality scale for US and Korean customers of discount stores: an exploratory study", *Journal of Services Marketing*, Vol. 16 No. 3, pp. 223-237.
- Kotler, P. (2000), *Marketing Management: Analysis, Planning, Implementation and Control*, 10th ed., Prentice-Hall, Englewood Cliffs, NJ.
- Malhotra, N.K. (1993), *Marketing Research: An Applied Orientation*, Prentice-Hall, Englewood Cliffs, NJ.
- Malhotra, N.K. (1999), *Marketing Research: An Applied Orientation*, Prentice-Hall, Englewood Cliffs, NJ.
- Malhotra, N.K. (2007), *Marketing Research: An Applied Orientation*, Prentice-Hall, New Delhi.
- Mehta, R., Dubinsky, A.J. and Anderson, R.E. (2002), "Marketing channel management and the sales manager", *Industrial Marketing Management*, Vol. 31 No. 5, pp. 429-439.
- Mehta, S.C., Lalwani, A.K. and Han, S.L. (2000), "Service quality in retailing: relative efficiency of alternative measurement scales for different product-service environments", *International Journal of Retail & Distribution Management*, Vol. 28 No. 2, pp. 62-72.

- Meng, J. and Elliott, K.M. (2009), "Investigating structural relationships between service quality, switching costs, and customer satisfaction", *Journal of Applied Business and Economics*, Vol. 9 No. 2, pp. 54-66.
- Nakhai, B. and Neves, J.S. (2009), "The challenges of six sigma in improving service quality", *International Journal of Quality Reliability Management*, Vol. 26 No. 7, pp. 663-684.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its implication for future research", *Journal of Marketing*, Vol. 49 No. 4, pp. 41-50.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring customer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60 No. 2, pp. 31-46.
- Rust, R.T. and Oliver, R.L. (1994), "Service quality: insights and managerial implications from the frontier", in Rust, R.T. and Oliver, R.L. (Eds), *Service Quality: New Directions in Theory and Practice*, Sage Publications, Thousand Oaks, CA, pp. 1-19.
- Saraph, J.V., Benson, P.G. and Schroeder, R.G. (1989), "An instrument for measuring the critical factors of quality management", *Decision Sciences*, Vol. 20 No. 4, pp. 810-829.
- Segars, A.H. and Grover, V. (1993), "Re-examining perceived ease of use and usefulness: a confirmatory factor analysis", *MIS Quarterly*, Vol. 17 No. 4, pp. 517-525.
- Shostack, G.L. (1984), "Designing services that deliver", *Harvard Business Review*, Vol. 62 No. 1, pp. 133-139.
- Shostack, G.L. (1987), "Service positioning through structural change", *Journal of Marketing*, Vol. 51 No. 1, pp. 34-43.
- Siu, N.Y.M. and Cheung, J.T. (2001), "A measure of retail service quality", *Marketing Intelligence and Planning*, Vol. 19 No. 2, pp. 88-96.
- Sivasankar, B. (2002), *Food Processing and Preservation*, PHI Learning Pvt. Ltd, New Delhi.
- Solomon, M.R., Surprenant, C.F., Czepiel, J.A. and Gutman, E.G. (1985), "A role theory perspective on dyadic interactions: the service encounter", *Journal of Marketing*, Vol. 49 No. 1, pp. 99-111.
- Spangenberg, E.R., Crowley, A.E. and Henderson, P.W. (1996), "Improving the store environment: do olfactory cues affect evaluations and behaviors?", *Journal of Marketing*, Vol. 60 No. 2, pp. 67-80.
- Surprenant, C.F. and Solomon, M.R. (1987), "Predictability and personalization in the service encounter", *Journal of Marketing*, Vol. 51 No. 2, pp. 73-80.
- Weitz, B.A. and Jap, S.D. (1995), "Relationship marketing and distribution channels", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 305-320.
- Zeithaml, V., Parasuraman, A. and Berry, L. (1990), *Delivering Quality Service*, Free Press, New York, NY.

Appendix

Determinants of service quality

2097

Table AI.
List of items of the
service quality scale

Dimension	Statements
Personal interaction	P1. Employees in this store are able to answer customers' questions P2. The behavior of employees of this store instills confidence in customers P3. Customers feel safe in their transactions with this store P4. Employees of this store give prompt service to customers P5. Employees of this store tell the customers exactly when services will be performed P6. Employees of this store are never too busy to respond to customers' requests P7. This store pays individual attention to customers P8. Employees of this store are consistently polite with customers P9. Employees of this store treat customers politely over the telephone
Appearance	P10. This store is equipped with modern interior facilities and décor P11. The physical facilities at this store are visually appealing P12. Materials associated with this store's service (such as shopping bags, catalogs or statements) are visually appealing P13. This store has clean and attractive environment P14. The design of this store helps customers to find needed products easily P15. The design of this store makes it easy for customers to move around in the store
Reliability	P16. When this store promises to do something, it will do within time P17. This store provides its services at the time it promises to do so P18. This store performs the service right the first time P19. This store has merchandise available when the customers want it P20. This store insists on error-free sales transactions and records
Policy	P21. This store offers high-quality merchandise P22. This store provides convenient parking space for customers P23. This store has convenient operating hours for its customers P24. This store accepts most major credit cards P25. This store offers its own credit card
Problem solving	P26. This store willingly handles returns and exchanges P27. This store shows sincere interest to solve its customers' problem P28. Employees of this store are able to handle customer complaints directly and immediately

About the authors

Md. Mohsan Khudri is working as an Assistant Professor of Applied Statistics at the School of Business Administration of the Uttara University. He is performing the responsibility as BBA Program Coordinator in the same as well. He completed BS and MS (Thesis) in Applied Statistics from the University of Dhaka, Bangladesh. His research interests include marketing research, stochastic modeling, environmental statistics, and multivariate statistical analysis. He has already published several research articles in international peer reviewed journals and proceedings. He is working as an Associate Editor of *Biometrics & Biostatistics International Journal* published by MedCrave Group (USA). He is also working as an editorial board member of *ELK Asia Pacific Journals* of Social Sciences (India). In addition, he works as a reviewer of Climate published by MDPI (Switzerland). Assistant Professor Md. Mohsan Khudri is the corresponding author and can be contacted at: mkhudri@isrt.ac.bd

Saida Sultana is working as a Lecturer of Marketing at the School of Business of the Uttara University. She has a BBA and an MBA in Marketing from the East West University, Bangladesh. Her research focusses on marketing strategy and consumer behavior.

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com