

TESTING SERVQUAL DIMENSIONS ON THE COMMERCIAL BANK SECTOR OF NORTHERN CYPRUS

Okan Veli ŞAFAKLI
Near East University, Department
of Banking and Finance, Nicosia

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Abstract

Although the philosophy of the servqual model developed by Parasuraman, Zeithaml and Berry is universally accepted and applied for measuring service quality in different sectors including banking, the sustainability of Servqual dimensions started to be questioned. Research has shown that cultural differences across countries may have the potential of generating different quality dimensions pertinent to the country and culture where the service is offered. In this respect, this study is conducted to examine the sustainability of Servqual dimensions towards the service quality of commercial banks in Northern Cyprus. As expected, factor analysis as the principal method of the research has necessitated the revision of servqual dimensions so as to reflect unique customer preferences in Northern Cyprus.

Keywords: Northern Cyprus, Servqual Dimensions, Commercial Bank

Introduction

Service quality has become an increasingly important factor for success and survival in the banking sector. This means that the provision of high quality service facilitates the achievement of the main targets relating to customer satisfaction and loyalty, market share, gaining new customers, productivity, financial performance and profitability (Cui et al., 2003:191). In this regard, servqual, developed by Parasuraman, Zeithaml and Berry (1988; 1991), is the most widely reported model for measuring customers' perceptions

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of service quality and consists of the five dimensions of service quality – tangibles, reliability, responsiveness, assurance and empathy (Blanchard and Galloway, 1994:7). The widely known 22-item, five-dimension servqual model also operationalized the term service quality. Despite all its disadvantages servqual is the most widely used instrument and probably the best that is available (Yavas, Bilgin and Shemwell, 1997:218).

A major criticism of the servqual model relates to the sustainability of its dimensional structure. In this respect, various investigations report different dimensions, so casting doubt on the universality of servqual's five dimensions (e.g. Cronin and Taylor, 1992; Babakus and Boller, 1992; Buttle, 1996; Lam, 2002; Jabnoun and Khalifa, 2005). It is argued that the variability in the nature of Servqual dimensions is the result of cultural differences across countries or ethnicities (Furer, Ching-Liu and Sudharshan, 2002). Customer values and beliefs, which change from one culture to another, largely determine the importance and perception of service quality. Other studies (Anderson and Fornell, 1994; Collier, 1994) relating culture to service quality are also available.

Even though there are a small number of papers (Nadiri and Hussain, 2005; Johns, Avcı and Karatepe, 2004; Araslı, Mehtap-Smadi and Katircioğlu, 2005a) related to the measurement of service quality in the banking and tourism sectors of Northern Cyprus, no study questioning servqual's dimensional structure in its particular application to the banking sector of Northern Cyprus has been encountered. Therefore, this study aims at contributing to the literature in this field so as to measure service quality and determine the dimensional structure pertinent to the banking sector of Northern Cyprus.

1 Conceptual roots of servqual

Those economic activities that typically produce an intangible product such as education, entertainment, food and lodging, transportation, insurance, trade, government, financial, real estate, medical, repair and maintenance-like occupations are defined as services (Heizer and Render, 1999). Services constitute an immaterial product produced to satisfy consumer needs (Kuriloff et al., 1993:247) and are carried out for someone else (Goetsch and Davis, 1998:104).

Service quality has two distinct constituents, the technical and the functional (Gronroos, 1984:36-84). Many researchers argue that, given their frequent inability to judge the technical quality of service, customers may see the functional service quality as the most important factor in a service transaction. On the other hand, much of the discussion about service quality measurement has revolved around the concept of dimensions of service quality where dimensions refer to a set of attributes which consumers use in evaluating the quality of service provided (Asubonteng, McCleary and Swan, 1996:62-81).

Similarly, many of the definitions of service quality revolve around the identification and satisfaction of customer needs and requirements (Cronin and Taylor, 1992:55-68; Parasuraman, Zeithaml and Berry, 1988; 1985). Parasuraman, Zeithaml and Berry (1985) argue that service quality can be defined as the difference between predicted, or expected, service (customer expectations) and perceived service (customer perceptions). If expectations are greater than performance, then perceived quality is less than satisfactory and a service-quality gap materializes. This does not necessarily mean that the serv-

ice is of low quality but rather that customer expectations have not been met and hence customer dissatisfaction occurs and opportunities arise for the better fulfillment of customer expectations.

The servqual scale is the principal instrument for assessing quality encountered in the services marketing literature (Parasuraman, Zeithaml and Berry, 1988; 1991). This instrument has been widely utilized by both managers (Parasuraman, Zeithaml and Berry, 1991) and academics (Babakus and Boller, 1992; Carman, 1990) to assess customer perceptions of service quality for a variety of services (e.g. banks, credit card companies, and repair and maintenance companies). The results of the initial published application of the servqual instrument indicated five dimensions of service quality which emerged across a variety of services. These dimensions include tangibles, reliability, responsiveness, assurance and empathy (Zeithaml, Parasuraman and Berry, 1990:176; Bressinger and Lambert, 1990; Crompton and MacKay, 1989). *Tangibles* are the physical evidence of service, *reliability* involves consistency of performance and dependability, *responsiveness* concerns the willingness or readiness of employees to provide services, *assurance* corresponds to the knowledge and courtesy of employees and their ability to inspire trust and confidence, and finally, *empathy* pertains to the caring, individualized attention that a firm provides its customers (Lassar, Manolis and Winsor, 2000:245-246).

In its original form, servqual contains 22 pairs of Likert scale statements structured around five service quality dimensions in order to measure service quality (Cronin and Taylor, 1992). Each statement appears twice. One measures customer expectations of a particular service industry. The other measures the perceived level of service provided by an individual organization in that industry. The 22 pairs of statements are designed to fit into the five dimensions of service quality. A seven-point scale ranging from “strongly agree” (7) to “strongly disagree” (1) accompanies each statement. The “strongly agree” end of the scale is designed to correlate with high expectations and high perceptions. Service quality occurs when expectations are met (or exceeded) and a service gap materializes if expectations are not met. The gap score for each statement is calculated as the perception score minus the expectation score. A positive gap score shows that expectations have been met or exceeded and a negative score demonstrates that expectations are not being met. Gap scores can be analyzed for each individual statement and can be aggregated to give an overall gap score for each dimension (Parasuraman, Zeithaml and Berry, 1988).

In the banking industry, gap analysis has been accepted as a critical tool to measure current levels of service quality (Lewis, 1991). There have been a number of empirical studies dealing with service quality in the banking sector in the application of servqual (e.g. Kangis and Voukelatos 1997; Angur, Nataraajan and Jahera, 1999; Jun et al., 1999; Jabnoun and Al-Tamimi, 2002; Al-Tamimi and Al-Amiri, 2003; Arashlı, Katurcıoğlu and Mehtap-Smadi, 2005b; Lee and Hwan, 2005).

2 Methodology

As pointed out above the main aim of the research is to measure service quality and determine the dimensional structure of the servqual model developed by Parasuraman, Zeithaml and Berry as it pertains to the banking sector of Northern Cyprus. Research ap-

plying non-probability convenience sampling¹ (Sekaran, 2003:276) to clients residing in the city of Nicosia was conducted during the period of January – February 2006. Subjects completed 415 questionnaires, representing a response rate of 83 percent. Because of the nature of the sampling method, customers that were conveniently available and that agreed to respond outside the commercial banks were interviewed. Seventeen percent of customers did not agree to respond. The sampling method reveals that sample characteristics do not have to be the same as the actual population. Though a subject closely related to this research, questioning the cultural characteristics of the actual population was not the subject of this investigation. Instead, it is argued that any deviation from the original dimensionality of servqual is probably due to the unique cultural values of the society. A literature review supports this argument even though other factors can also explain the deviation. In other words, diagnosing the actual reasons for the probable deviations is not the subject of the research. However, it should be emphasized that generalizing research findings to the overall population is not methodologically reliable and hence the limitation of the study.

The questionnaire used in the study consists of three parts (Appendix 1). Part 1 contains the demographic profile of respondents including gender, age group, marital status, education and the type of commercial bank they usually work with. Part 2 includes expectations of respondents using a seven-point Likert scale ranging from “strongly disagree=1” to “strongly agree=7” to measure the 22 items. Similarly to Part 2, Part 3 contains perceptions of respondents to measure the service quality of commercial banks for 22 items. Both demographic and servqual items were tested to check if they were parametric or not. According to the “One-Sample Kolmogorov-Smirnov Test” all variables proved to be normally distributed (Appendix 2). Accordingly, parametric tests have been applied in the study. servqual variables were subjected to principal factor analysis to identify a small number of factors that may be used to represent relationships among sets of inter-related variables.

The analysis and tests utilized in the study include frequency and percentage analysis, one-sample *t* test, independent-samples *t* tests, paired-samples *t* tests, one-way ANOVA test, factor analysis and reliability analysis.

3 Discussions of findings

3.1 Sample characteristics

The basic findings related to sample characteristics of clients examined in the survey are given in Table 1.

As can be seen in the table, the sample of clients assessing the service quality of commercial banks included more females (59.9 percent) than males, more first and master’s degrees (57.9 percent) than other categories and the percentage of married and sin-

¹ In non-probability sampling designs, the elements in the population do not have any probabilities attached to their being chosen as sample subjects. This means that the findings from the study of the sample cannot be confidently generalized to the population. As the name implies, convenience sampling refers to the collection of information from members of the population who are conveniently available to provide it.

gle categories are almost the same. Moreover, the majority of the respondents was between the ages of 25 and below (37.3 percent), and usually worked with local banks (48.6 percent).

Table 1 Sample characteristics

Factor	Category	Percentage
Gender	Male	40.1
	Female	59.9
Age group	25 and below	37.3
	26-35	31.8
	36-45	17.6
	46 and above	13.3
Marital status	Single	46.7
	Married	44.0
	Widow	9.2
Education	Primary school	1.7
	Secondary school	4.1
	High school	31.4
	First and master's degree	57.9
	Doctorate	4.9
Commercial bank clients usually work with	Turkish branch banks	38.4
	Local banks	48.6
	HSBC	13.0

3.2 Factor analysis results

As explained above, within the framework of the servqual scale, service quality measured as a gap score for each of the 22 items was computed by subtracting the expectation score from the corresponding perception score. The resulting 22 gap scores were then factor analyzed² (Green, Salkind and Ak, 2000:292) to confirm the existence of the five dimensions in the sample of clients. A factor analysis was conducted using varimax rotation (see Table 2). Regarding the pre-analysis testing for the suitability of the entire sample for factor analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.871 and the Bartlett test of sphericity (1989.786) was significant at $p < 0.01$, thus, indicating that the sample was suitable for factor analytic procedures. According to the analysis, factors with eigenvalues greater than 1.0 and factor loadings that are equal to or greater than 0.50 were

² Factor analysis is a technique used to identify factors that statistically explain the variation and covariation among measures. Generally, the number of factors is considerably smaller than the number of measures and, consequently, the factors succinctly represent a set of measures. From this perspective, factor analysis can be viewed as a data-reduction technique since it reduces a large number of overlapping measured variables to a much smaller set of factors.

retained. Seventeen items, loading under four dimensions, were extracted from the analysis leaving five items and these items explained 58.944 percent of the overall variance.

Table 2 Results of factor analysis on 17 items and its four dimensions

Factors and items	Original dimension	Eigenvalve	Factor loadings	Variance (%)	Cumulative variance (%)
<i>Reliability (Cronbach alpha= 0.771)</i>		5.596		15.689	15.689
8 An excellent bank provides its services at the time it promises to do so	Reliability		.747		
9 An excellent bank insists on error-free records	Reliability		.704		
5 When an excellent bank promises to do something by a certain time, it does so	Reliability		.691		
12 Employees in an excellent bank are always willing to help you	Responsiveness		.637		
<i>Tangibles (Cronbach alpha= 0.780)</i>		1.981		15.262	30.951
3 An excellent bank's reception desk employees are neat in appearance	Tangibles		.833		
2 An excellent bank's physical facilities are visually appealing	Tangibles		.824		
1 Excellent banks have modern looking equipment	Tangibles		.774		
4 An excellent bank's credit cards, cheques and similar materials are visually appealing	Tangibles		.609		
<i>Empathy (Cronbach alpha= 0.754)</i>		1.351		14.691	45.642
21 An excellent bank has the customer's best interest at heart	Empathy		.747		
22 The employees of an excellent bank understand customer specific needs	Empathy		.716		
20 An excellent bank has employees who give customer personal attention	Empathy		.704		
19 An excellent bank has working hours suitable for all customers	Empathy		.702		
<i>Customer orientation (Cronbach alpha= 0.745)</i>		1.092		13.302	58.944
14 Employees in an excellent bank inspire confidence in customers	povjerenje		.732		
7 An excellent bank performs the service right the first time	Reliability		.648		
18 An excellent bank gives customers individual attention	Empathy		.638		
6 When customers have problems employees in an excellent bank will be sympathetic and reassuring	Reliability		.522		
10 Employees in an excellent bank tell you exactly when the services will be performed	Responsiveness		.502		

Table 3 Average servqual scores of clients in Northern Cyprus

Dimension	item	Perception	Expectation	Servqual score
Reliability	8 An excellent bank provides its services at the time it promises to do so	5.19	5.68	-.4852
	9 An excellent bank insists on error-free records	5.58	5.91	-.3342 ^a
	5 When an excellent bank promises to do something by a certain time, it does so	5.43	5.78	-.3627 ^a
	12 Employees in an excellent bank are always willing to help you	5.16	5.56	-.3925 ^a
Tangibles	3 An excellent bank's reception desk employees are neat in appearance	4.83	5.19	-.3676 ^a
	2 An excellent bank's physical facilities are visually appealing	4.99	5.41	-.4234 ^a
	1 Excellent banks have modern looking equipment	4.93	5.33	-.4044 ^a
	4 An excellent bank's credit cards, cheques and similar materials are visually appealing	4.91	5.08	-.1671
Empathy	21 An excellent bank has the customer's best interest at heart	4.60	5.15	-.5488 ^a
	22 The employees of an excellent bank understand customers specific needs	4.42	4.80	-.3893 ^a
	20 An excellent bank has employees who give customers personal attention	4.63	5.09	-.4792 ^a
	19 An excellent bank has working hours suitable for all customers	4.64	5.18	-.5608 ^a
Customer orientation	14 Employees in an excellent bank insist confidence in customers	5.33	5.75	-.4118 ^a
	7 An excellent bank performs the service right the first time	5.30	5.72	-.4275 ^a
	18 An excellent bank gives customers individual attention	5.05	5.61	-.5697 ^a
	6 When customers have problems employees in an excellent bank will be sympathetic and reassuring	5.03	5.49	-.4681 ^a
	10 Employees in an excellent bank tell you exactly when the services will be performed	4.93	5.34	-.4083 ^a

^a Significant at 5 percent ($p < .05$) = Perception and expectation differ significantly at 5 percent

Overall alpha coefficient as the reliability analysis is 0.870. Items for each sub-scale were also subjected to reliability analysis. The alpha coefficients for the total scale were 0.771, 0.780, 0.754, and 0.745 respectively for the four dimensions. Reliability coefficient above 0.7 is considered sufficient (George and Mallery 2001:217). This supports the internal cohesiveness of the items forming each dimension. Therefore, the dimensions found in the study are not completely the same as servqual's original dimensions. While two of the original dimensions, "assurance" and "responsiveness",

are extracted, the new dimension of “customer orientation” is added to the servqual model to make it unique to the banking sector of Northern Cyprus. This dimension results from the personal judgment of the author, pursuant to the idea that the sets of interrelated variables included in the factor can be used to measure the “customer orientation” of the bank. There are four items of reliability, one item of which belonged to the original dimension of responsiveness. All items of the dimensions of tangibles and empathy are the same as the original items as shown in Table 2. There are five items of “customer orientation” that belonged to the original dimensions of assurance, reliability, empathy and responsiveness.

Servqual scores of clients

Respondents’ expectations and perceptions of service quality are included in Table 3. As shown in the table servqual scores for all items bear negative signs, indicating that expectations are greater than performance, perceived quality is less than satisfactory and a service-quality gap has materialized. Even though the servqual score for item 4 is negative, according to the paired samples *t* test the means of perception and expectation do not differ significantly at $p < .05$ ($.091(p) > .05$). In other words, for 16 out of 17 items banks fall short of expectations.

While the highest perception and expectation scores of the respondents were for item 9, the lowest perception and expectation scores of the respondents belonged to item 22.

Gap scores were calculated by reducing expectation scores from perception scores. The highest gap score was for item 18 “An excellent bank gives customer individual attention”. On the contrary, the lowest gap score was for item 4 “An excellent bank’s credit cards, cheques and similar materials are visually appealing” for which expectation and perception is not significantly different.

Table 4 shows mean scores of perceptions and expectations together with the servqual scores presented in line with four dimensions. The results have revealed that significant differences between expectations and perceptions of these four dimensions occurred. The highest gap score was for the empathy dimension while the lowest gap score was for the tangibles dimension. Based on the quality dimensions, empathy has the highest negative servqual scores. In other words, compared with other factors, the satisfactory level of emphatic behavior is lower.

Table 4 Servqual scores of quality dimensions

Dimension	Perception	Expectation	Servqual score
Reliability	5.3391	5.7525	-.4058 ^a
Tangibles	4.9189	5.2653	-.3516 ^a
Empathy	4.5782	5.0551	-.4849 ^a
Customer orientation	5.1360	5.6040	-.4673 ^a

^a Significant at 5 percent ($p < .05$) = Perception and expectation differ significantly at 5 percent

Table 5 The impact of demographic variables on the factors' servqual scores using analysis of variance

	Reliability	Tangibles	Empathy	Customer orientation
Sex				
Female	-.4367	-.3563	-.4275	-.3376
Male	-.3880	-.3521	-.5255	-.5538
(F)	.064	.449	2,374	.005
Age group				
25 and below	-.4681	-.3454	-.5272	-.5530
26-35	-.3367	-.2323	-.4121	-.3233
36-45	-.1051	-.3080	-.1786	-.3739
46 and above	-.8088	-.7123	-.9481	-.6704
(F)	2.490 ^b	1.243	2.493 ^b	1.227
Marital status				
Single	-.4872	-.3558	-.5190	-.6387
Married	-.3926	-.5336	-.4929	-.3209
Widow	-.0500	.5068	-.1714	-.2457
(F)	1.329	7.178 ^a	.711	3.118
Education				
Primary school	-.8571	-.0714	-1.4643	-.9143
Secondary school	-.8676	-.3088	-.6719	-.9467
High school	-.3230	-.4841	-.4897	-.4000
First and master's degree	-.4089	-.2874	-.4677	-.4699
Doctorate	-.3158	-.3375	-.2500	-.3474
(F)	.698	.388	.812	.810
Commercial bank clients usually work with				
Turkish branch banks	-.5603	-.3328	-.5034	-.6270
Local banks	-.3194	-.4524	-.5450	-.3844
HSBC	-.2050	-.1429	-.0800	-.3040
(F)	1.039	.581	1.224	1.221

^a $p < 0,01$

^b $p < 0,10$

Note: Means are represented in terms of factor scores

The impact of demographic variables on the factors' servqual scores

By referring to demographic characteristics of clients in Table 1 and servqual scores of four dimensions in Table 5 the independent sample samples t-test" and one-way ANOVA test were used to determine if the gap factor score means varied among different demographic characteristics. Findings indicated that only two of the characteristics, *age group* and *marital status* yielded significant differences at the 0.10 level in disparity of service quality.

- *Age group*: Age group of “46 and above” indicated a higher servqual score for the *reliability* dimension, than the age group “between 36 and 45” ($p=0.076$). Furthermore, age group of “46 and above” showed a similar pattern, indicating a higher servqual score for the *empathy* dimension than with the age group “between 36 and 45” ($p=0.071$)
- *Marital status*: Married respondents provided a greater servqual score for the *tangibles* dimension than non-married. However, two relationships proved to be statistically different. These are “between single and widowed respondents ($p=0.007$)” and “between married and widowed respondents ($p=0.001$)”. No significant differences existed between single and married respondents ($p=0.539$).

4 Conclusions and implications

The most popular and widely used instrument for measuring functional quality is servqual. Even though there are few opponents of its philosophy, its dimensions began to be questioned. The diverse cultural values that shape perceptions of quality can lead to diversification of the original servqual dimensions. In this respect, this study has been conducted in order to measure service quality and determine the dimensional structure pertinent to the banking sector of Northern Cyprus. As expected, the study has put forward servqual dimensions different from those in the original model. A new dimension that of “customer orientation” has been added to the servqual model while two of the original dimensions, “assurance” and “responsiveness”, have been extracted. Therefore the new servqual model has been reduced to four dimensions rather than five. These dimensions are *tangibles*, *reliability*, *empathy* and *customer orientation*. Regarding servqual scores, respondents reported negative results for all dimensions, meaning that expectations are greater than performance, and perceived quality is less than satisfactory and a service-quality gap materializes. This shows that all types of commercial banks, regarding which client quality perceptions did not differ significantly, should improve their service quality in order to overlap with clients’ expectations. Furthermore, it should be noted that apart from the age group and marital status other demographic characteristics yielded no significant differences in disparity of service quality.

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Appendix 1 A Questionnaire on measuring service quality of banking sector in Northern Cyprus

Part One: Please circle your responses to the following questions.

Factor	Category
1 Gender	Male
	Female
2 Age group	25 and below
	26-35
	36-45
	46 and above
3 Marital status	Single
	Married
	Widowed
4 Education	Primary school
	Secondary school
	High school
	First and master's degree
	Doctorate
5 Commercial bank you usually work with	Turkish branch banks
	Local banks
	HSBC

Part two customer quality expectations

Please rate the following 22 Servqual instruments by circling the number from “strongly disagree=1” to “strongly agree=7” accordingly to reflect your quality expectations from an excellent bank.

1	Modern looking equipment	1	2	3	4	5	6	7
2	Visually appealing physical facilities	1	2	3	4	5	6	7
3	Neat-appearing employees	1	2	3	4	5	6	7
4	Visually appealing materials associated with the service	1	2	3	4	5	6	7
5	Keeping promise to do something by a certain time	1	2	3	4	5	6	7
6	Showing sincere interest in solving a customer’s problems	1	2	3	4	5	6	7
7	Performing the service correctly the first time	1	2	3	4	5	6	7
8	Providing the service at the time the service was promised	1	2	3	4	5	6	7
9	Insisting on error-free records	1	2	3	4	5	6	7
10	Employees telling customers exactly what services will be performed	1	2	3	4	5	6	7
11	Employees giving prompt service to customers	1	2	3	4	5	6	7
12	Employees always being willing to help customers	1	2	3	4	5	6	7
13	Employees are never too busy to respond to customers’ requests	1	2	3	4	5	6	7
14	The behavior of employees instilling confidence in their customers	1	2	3	4	5	6	7
15	Customers feeling safe in their transactions	1	2	3	4	5	6	7
16	Employees being consistently courteous with their customers	1	2	3	4	5	6	7
17	Employee having the knowledge to answer customers’ questions	1	2	3	4	5	6	7
18	Giving customers individual attention	1	2	3	4	5	6	7
19	Operating hours convenient to all their customers	1	2	3	4	5	6	7
20	Employees giving customers personal attention	1	2	3	4	5	6	7
21	Having the customers’ best interests at heart	1	2	3	4	5	6	7
22	The employees understanding the specific needs of customers	1	2	3	4	5	6	7

Part three customer quality perceptions

Please rate the following 22 servqual instruments by circling the number from “strongly disagree=1” to “strongly agree=7” accordingly to reflect your quality perceptions from the bank with which you usually work.

1	Modern looking equipment	1	2	3	4	5	6	7
2	Visually appealing physical facilities	1	2	3	4	5	6	7
3	Neat-appearing employees	1	2	3	4	5	6	7
4	Visually appealing materials associated with the service	1	2	3	4	5	6	7
5	Keeping promise to do something by a certain time	1	2	3	4	5	6	7
6	Showing sincere interest in solving a customer’s problems	1	2	3	4	5	6	7
7	Performing the service correctly the first time	1	2	3	4	5	6	7
8	Providing the service at the time the service was promised	1	2	3	4	5	6	7
9	Insisting on error-free records	1	2	3	4	5	6	7
10	Employees telling customers exactly what services will be performed	1	2	3	4	5	6	7
11	Employees giving prompt service to customers	1	2	3	4	5	6	7
12	Employees always being willing to help customers	1	2	3	4	5	6	7
13	Employees are never too busy to respond to customers’ requests	1	2	3	4	5	6	7
14	The behavior of employees instilling confidence in their customers	1	2	3	4	5	6	7
15	Customers feeling safe in their transactions	1	2	3	4	5	6	7
16	Employees being consistently courteous with their customers	1	2	3	4	5	6	7
17	Employee having the knowledge to answer customers’ questions	1	2	3	4	5	6	7
18	Giving customers individual attention	1	2	3	4	5	6	7
19	Operating hours convenient to all their customers	1	2	3	4	5	6	7
20	Employees giving customers personal attention	1	2	3	4	5	6	7
21	Having the customers’ best interests at heart	1	2	3	4	5	6	7
22	The employees understanding the specific needs of customers	1	2	3	4	5	6	7

Appendix 2 One-sample Kolmogorov-Smirnov test for demographic and servqual items

Variables	Normal parameters ^{ab}		Most extreme differences				
	Mean	Std. deviation	Test distribution is normal	Positive	Negative	Kolmogorov -Smirnov Z-test	Asymp. sig. (2-tailed)
Gender	1,599	0,491	0,392	0,290	-0,392	7,978	0,000
Age	2,067	1,038	0,222	0,222	-0,152	4,514	0,000
Marital Status	1,625	0,648	0,300	0,300	-0,251	6,077	0,000
Education	3,601	0,723	0,337	0,242	-0,337	6,835	0,000
The bank being worked	1,753	0,679	0,260	0,248	-0,260	5,213	0,000
P1	4,932	1,750	0,148	0,119	-0,148	3,017	0,000
P2	4,993	1,672	0,185	0,115	-0,185	3,773	0,000
P3	4,835	1,613	0,176	0,099	-0,176	3,566	0,000
P4	4,915	1,655	0,191	0,104	-0,191	3,874	0,000
P5	5,429	1,503	0,193	0,148	-0,193	3,919	0,000
P6	5,027	1,699	0,170	0,123	-0,170	3,447	0,000
P7	5,296	1,555	0,206	0,137	-0,206	4,184	0,000
P8	5,194	1,529	0,172	0,119	-0,172	3,488	0,000
P9	5,578	1,495	0,203	0,171	-0,203	4,130	0,000
P10	4,934	1,642	0,139	0,104	-0,139	2,815	0,000
P11	5,247	1,590	0,191	0,135	-0,191	3,855	0,000
P12	5,161	1,594	0,176	0,124	-0,176	3,569	0,000
P13	4,661	1,708	0,148	0,097	-0,148	3,001	0,000
P14	5,333	1,570	0,191	0,144	-0,191	3,883	0,000
P15	5,029	1,622	0,163	0,112	-0,163	3,303	0,000
P16	5,448	1,473	0,203	0,146	-0,203	4,122	0,000
P17	5,110	1,497	0,149	0,113	-0,149	3,021	0,000
P18	5,053	1,657	0,189	0,120	-0,189	3,828	0,000
P19	4,642	1,771	0,147	0,092	-0,147	2,979	0,000
P20	4,629	1,768	0,140	0,100	-0,140	2,848	0,000
P21	4,603	1,856	0,133	0,098	-0,133	2,694	0,000
P22	4,417	1,922	0,136	0,091	-0,136	2,762	0,000
E1	5,335	1,689	0,195	0,162	-0,195	3,964	0,000
E2	5,412	1,599	0,188	0,160	-0,188	3,827	0,000
E3	5,186	1,697	0,176	0,143	-0,176	3,570	0,000
E4	5,075	1,777	0,168	0,139	-0,168	3,422	0,000
E5	5,781	1,559	0,254	0,217	-0,254	5,153	0,000
E6	5,486	1,579	0,211	0,169	-0,211	4,283	0,000
E7	5,718	1,403	0,251	0,180	-0,251	5,093	0,000
E8	5,683	1,518	0,219	0,193	-0,219	4,440	0,000

E9	5,905	1,398	0,243	0,217	-0,243	4,928	0,000
E10	5,338	1,686	0,191	0,162	-0,191	3,892	0,000
E11	5,624	1,497	0,236	0,179	-0,236	4,772	0,000
E12	5,562	1,517	0,220	0,172	-0,220	4,425	0,000
E13	4,954	1,731	0,161	0,119	-0,161	3,283	0,000
E14	5,755	1,404	0,222	0,188	-0,222	4,510	0,000
E15	5,362	1,616	0,183	0,155	-0,183	3,709	0,000
E16	5,716	1,374	0,206	0,175	-0,206	4,183	0,000
E17	5,655	1,371	0,191	0,163	-0,191	3,886	0,000
E18	5,613	1,436	0,212	0,167	-0,212	4,301	0,000
E19	5,184	1,725	0,197	0,146	-0,197	3,972	0,000
E20	5,092	1,680	0,175	0,128	-0,175	3,566	0,000
E21	5,145	1,734	0,202	0,142	-0,202	4,110	0,000
E22	4,798	1,868	0,159	0,119	-0,159	3,246	0,000

^a Test distribution is Normal.

^b Calculated from data.