

# Functional Service Quality Satisfaction of Islamic and Conventional Credit Card Users in Malaysia

*(Kepuasan Kualiti Perkhidmatan Fungsian Pengguna Kad Kredit Islamik dan Konvensional di Malaysia)*

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## ABSTRACT

*The objective of this paper is to deepen the understanding of customers' satisfaction among credit card users. The study employs the Servperf model to evaluate the functional service quality dimensions of satisfaction of credit card users of Islamic versus conventional banking in Malaysia. The comparison between different types of credit card users is examined using factor analysis and regression. The dimensions are found to be robust for different types of credit card users, except for the Assurance dimension. The dimension did not form significantly in the factor analysis whenever respondents, who are Islamic credit card users, are included. Meanwhile, all of the dimensions are found in the regression analysis to have positive relationships with customer satisfaction, which are consistent with the theoretical prediction. This is the first contextual study conducted in the credit card industry that compares the functional service quality satisfaction of Islamic credit card users with conventional credit card users.*

*Keywords: Credit card users' satisfaction; Islamic credit card; functional service quality*

## ABSTRAK

*Tujuan kertas kerja ini adalah untuk mendalami pemahaman tentang kepuasan pelanggan dalam kalangan pengguna kad kredit. Kajian ini menggunakan model Servperf untuk menilai dimensi kualiti perkhidmatan fungsian perbankan Islam dan konvensional di Malaysia. Perbandingan antara jenis-jenis pengguna kad kredit yang berbeza dijalankan menggunakan analisis faktor dan regresi. Semua dimensi kepuasan didapati mempunyai ketahanan untuk kumpulan pengguna kad kredit yang berlainan, kecuali dimensi jaminan. Dimensi ini tidak dapat membentuk secara signifikan semasa analisis faktor dijalankan terutamanya apabila ianya melibatkan pengguna kad kredit Islamik. Sementara itu, semua dimensi didapati mempunyai hubungan positif dengan kepuasan pelanggan dalam analisis regresi dan konsisten dengan jangkaan teoretikal. Kajian ini adalah kajian kontekstual yang pertama dijalankan untuk industri kad kredit, membandingkan kepuasan kualiti perkhidmatan fungsian pelanggan kad kredit Islamik dan konvensional.*

*Kata kunci: Kepuasan pengguna kad kredit; kad kredit Islamik; kualiti perkhidmatan fungsian*

## INTRODUCTION

The major contribution of this paper is that it is the first contextual comparative study examining the difference between the satisfaction of Islamic credit card users (ICCU) and conventional credit card users (CCCU) employing the Servperf (Cronin & Taylor 1992; Cronin & Taylor 1994) instead of the Servqual (Parasuraman et al. 1985; Parasuraman et al. 1988; Parasuraman et al. 1991; Parasuraman et al. 1994) in Malaysia. The Malaysian banking system embraces a parallel banking system, which allows both conventional and Islamic banking systems to operate side by side. Beginning with the establishment of the first Islamic bank in 1983 and the establishment of the Islamic banking industry in 1993, the Islamic banking industry in Malaysia has grown at an enormous rate. The Islamic banking industry is strongly supported by the Malaysian government and widely accepted by the

Malaysian consumers. In addition, Islamic banks have brilliantly managed to offer products and services, which have the same function as their conventional counterparts. However, the Islamic banking in Malaysia is still relatively new, marking its 30th year of establishment, compared to conventional banking. Hence, it is unfair to compare between the two banking systems. Nevertheless, questions concerning whether Islamic banking service quality is better than, or at least on par with, its conventional counterpart cannot be avoided since customers continue to have the option to choose between the two banking systems.

The subject of Islamic banking is selected for examination in the present study because it is one of the national key result areas in the context of Malaysia. Nevertheless, customer satisfaction is still under researched in Islamic banking literature. Furthermore, the present study is motivated by the proposition that customer

satisfaction varies with different products and services offered. Therefore, this paper investigates and compares the service quality provided for a specific banking product: credit cards.

The Islamic credit card is chosen because it is a relatively new credit facility offered by the Islamic banks. Islamic credit cards are also considered to be one of the highest income generating and fastest growing banking products. Additionally, a gap in the literature exists concerning the satisfaction level of different groups of credit card users. The credit card users in Malaysia can be categorised into three different groups: ICCU; CCCU; and those that use both types of credit cards (I/CCCU). The formation of these groups in the credit card industry results in questions concerning whether religious factors have an effect on customer satisfaction. A comparison between the satisfaction level of CCCU and ICCU groups adds to existing banking literature by determining whether any differences exist despite the fact that the main function is virtually identical (i.e., providing consumer credit facilities).

This paper is organised into five sections with the objective of determining whether any differences exist between the satisfaction levels of different groups of credit card users using Servperf. The next section discusses the literature review, followed by the methodology section that explains how the data are collected and analysed. The findings from factor and regression analysis are discussed in section four, followed by a discussion and conclusion in the last section.

## LITERATURE REVIEW

### CUSTOMER SATISFACTION IN BANKING LITERATURE

A large number of studies concluded from the early 80s until present attempt to answer the question regarding the customer satisfaction due to the dynamic of the nature of the banking industry and consumers. The dynamic evolution of banking and consumers also results in research examining customer satisfaction continuing to evolve. A considerable amount of literature has been published concerning customer satisfaction in the context of banking. The present study reviews 39 articles published between 1999 and January 2011 using a systematic database keyword search in five major selected databases (i.e., Scopus, Web of Sciences, Proquest, Ebscohost, and EconLite). Most of the studies focus on conventional banking, while studies in the context of Islamic banking customer satisfaction are very limited (Naser et al. 1999; Othman & Owen 2001; Muslim & Zaidi 2008; Masood et al. 2009; Osman et al. 2009; Haque 2010; Khattak & Rehman 2010; Sadek et al. 2010). In addition, various methods are developed and introduced to measure customer satisfaction from service quality perspectives, including the Bankserv, Servperf and Servqual models. More studies employ

Servqual or modified Servqual to measure banking service quality compared to other measurement tools (Newman & Cowling 1996; Othman & Owen 2001; Han & Baek 2004; Arasli et al. 2005a; Muslim & Zaidi 2008; Wong et al. 2008; Kanning & Bergmann 2009; Kumar et al. 2009; Ladhari 2009; Osman et al. 2009; Sadek et al. 2010). However, criticisms of the Servqual (Blanchard & Galloway 1994; Gounaris 2005) resulted in the creation of alternative models such as Servperf (Cronin & Taylor 1992; Angur et al. 1999; Abdullah et al. 2004), Bankserv (Avkiran 1994) and other models (Levesque & McDougall 1996; Stafford 1996; Johnston 1997; Bahia & Nantes 2000; Lassar et al. 2000; Aldlaigan & Buttle 2002; Cui et al. 2003; Malhotra et al. 2005; Mukherjee & Nath 2005; Petridou et al. 2007; Guo et al. 2008).

Servperf is claimed to be superior in instances where only the performance of the service quality is measured rather than using disconfirmation theory (Cronin & Taylor 1992; Angur et al. 1999; Othman & Owen 2001; Abdullah et al. 2004; Osman et al. 2009). Therefore, the present study utilises Servperf instead of Servqual.

In addition, the generalization of much published research on the Servqual model is also problematic in the context of Islamic banking. Othman and Owen (2001) modify Servqual to include the *Shari'ah* Compliance dimension alongside the five existing Servqual dimensions (i.e., reliability, assurance, tangible, empathy and responsiveness). The modification is intended to cater the non-service quality related dimension into the Servqual model, (Othman & Owen 2001; Muslim & Zaidi 2008; Osman et al. 2009; Haque 2010; Sadek et al. 2010). Since the modification of the model, which is often referred to as CARTER, the model has gained acceptance for the measurement of customer satisfaction in Islamic banking. In general, literature on banking customer satisfaction can be segregated into two major domains: conventional banking and Islamic banking (See Appendix 1 for the list of articles). The literature can be further disaggregated into several major topics of research. Nine topics of research exist in the context of conventional banks: segmentation; determinants of service quality and customer satisfaction; critics of Servqual; disconfirmation theory; comparative study; importance of service quality dimensions; technological based service quality; culture; and loyalty. Five major topics exist in the context of Islamic banking: the impact of a bank's reputation on customer satisfaction; compliance with *Shari'ah* as an additional dimension of the Servqual dimensions; different impacts of culture on service quality perceptions and customer satisfaction; and different demographic segmentation of the banking customers affecting customer satisfaction.

The review reveals that the present study can contribute to existing literature by comparing the satisfaction of users of Islamic and conventional banking using Servperf. In addition, the present study also attempts to make product specific contextual contributions to the understanding of satisfaction among ICCU and CCCU.

## CREDIT CARD AND ISLAMIC CREDIT CARD LITERATURE

A systematic search performed on the topic of Islamic credit cards provides evidence that empirical studies concerning Islamic credit card user satisfaction are very uncommon in Islamic banking literature. Because the focus of the present research is Islamic credit cards, the terms Islamic or *Shari'ah* credit cards are detected in the title, summary or keywords of the articles. More specifically, the central search topics include credit card, credit card satisfaction, Islamic credit card and *Shari'ah* credit card.

Table 2 represents the number of papers found according to the search terms in each database. The searches utilising credit card as a keyword uncovered a plethora of studies on credit cards, but very few articles deal specifically with ICCs, especially when the search keywords in the last five rows are specified for exact matches. The figures in Table 2 reflect that a structural gap exists between the number of studies conducted for credit card satisfaction and those studies dealing with conventional credit cards and with Islamic credit cards. The researchers believe that one possible reason contributing to the lack of studies conducted in this area is the lack of knowledge concerning the structure of Islamic credit cards. The Islamic credit card product structure is complex because the products underlying the contracts are a blend of different, complicated contract structures, such as *wadiah*<sup>1</sup>, *kafalah*<sup>2</sup>, *ujrah*<sup>3</sup> and *tawarruq*<sup>4</sup>. Such complex product structures may inhibit researchers who generally have limited knowledge regarding *Shari'ah* to venture into an in-depth study of Islamic credit cards. Moreover, the Islamic credit card industry is novel compared to other Islamic banking products and conventional credit cards since Islamic credit card products were only introduced less than a decade ago. Therefore, most of the studies concerning Islamic credit cards still focus on product development and pre-purchase behaviours. Even though structural differences imply that Islamic credit cards have yet to catch the attention of researchers in the academic industry, the subject provides a vast area of scientific

exploration opportunities. Specifically, the topics found with the search term of Islamic credit cards and cross referenced articles include ownership and behaviour (Abdul-Muhmin & Umar 2007; Haji Shahwan & Mohd Dali 2007; Abdul-Muhmin 2008; Mohd Dali et al. 2008); instruments and structure (Noor & Azli 2009); mobile credit card (Amin 2007; Amin 2008); patronage factors (Amin 2012; Mohd Dali et al. 2013); and E-commerce (Zainul et al. 2004; Muhammad et al. 2011).

Because of the paucity of relevant literature, the researchers have to source customer satisfaction and service quality literature from other contextual settings as a basis for developing a customer satisfaction model for the context of Islamic credit cards to ensure that the measurement developed is established upon a sound theoretical basis.

## ISLAMIC CREDIT CARD CUSTOMERS' SATISFACTION CONCEPT

Customer satisfaction in the context of Islamic credit cards is defined, for the purposes of the present study, as:

Customer satisfaction with Islamic credit cards is the cognitive and affective response pertaining to the service and non-service qualities provided by Islamic banks, which confirm their perceived expectations, ideal performance and past experience in terms of technical (outcome), functional (process) and religious and ethical service quality (religion and ethical), and is determined at a specific time, but is not limited to a lifetime duration.

The definition is integrated from the cognitive and affective responses of consumers (Giese & Cote 2000) in terms of four different dimensions that affect customer satisfaction: are functional (Parasuraman et al. 1988); technical (Groenroos 1982; Groenroos 1984); religious (Othman & Owen 2001; Othman & Owen 2002); and ethical service quality. Banks' abilities in fulfilling complicated customers' satisfaction are becoming more challenging, especially when the customer satisfaction is derived from service quality and non-service quality

TABLE 2. Search result of credit card, credit card satisfaction, Islamic credit card and *Shari'ah* credit card in the five databases

Database	Scopus	Web of Sciences	Proquest	EbscoHost	EconLit
Search Keyword	# of articles				
Credit card	2462	1083	19898	1086	348
Credit card satisfaction	138	20	4893	-	-
Islamic credit card	2	-	538	-	1
<i>Shari'ah</i> credit card	-	-	36	-	-
<i>Shari'ah</i> credit card	-	-	18	-	-
"Credit card"	2290	777	964	922	281
"Credit card satisfaction"	-	-	4	-	-
"Islamic credit card"	-	-	5	-	1
" <i>Shari'ah</i> credit card"	-	-	-	-	-
" <i>Shari'ah</i> credit card"	-	-	-	-	-

Note: '-' means that no article was found and "" indicates search by the whole phrase.

dimensions. Non-service quality, which is also known as religious and ethical service quality, refers to religious and ethical factors. The time duration of satisfaction needs to be considered since the costumers satisfaction of Muslims is not only confined to the life of the customer. Instead, customer satisfaction involves two horizons: during the lifetime of the customer; and the hereafter (i.e., life after death) in which case obtaining God's satisfaction will be incorporated in the total satisfaction of the customer.

Cleveland et al. (2011) posit that a successful marketing strategy must be consumer-oriented by focusing on the family as the basic economic unit; and being market-oriented in its pricing, evaluating individual customer and customer segment needs. Therefore, it is not surprising that banks that successful apply consumer-oriented marketing strategies within an Islamic environment will survive (Shook & Hassan 1988; Obaidullah 2005). Muslim customers who abide by the rules and regulations of Shari'ah will require that their Islamic credit cards are Shari'ah compliant. Therefore, to optimize the satisfaction of their customers, the Islamic banks must fulfil that requirement. In brief, understanding the needs of customers is paramount in formulating successful marketing strategies. The present study focuses upon functional service quality (FSQ) by examining whether differences between the different groups of credit cards users exist.

#### FUNCTIONAL SERVICE QUALITY

FSQ can be defined as the process or how the service is provided (Gro'nroos 1982; Gro'nroos 1984; Gro'nroos 1990; Mentzer et al. 1999; Lassar et al. 2000) and comprises the manners and/or care of the personnel delivering the service (Lassar et al. 2000). Several authors use Servqual as FSQ (Lassar et al. 2000; Kang & James 2004). Servqual was developed by Parasuraman et al. (1985) and originated from the findings of twelve focus groups. Parasuraman et al. (1985) develop a questionnaire comprising 22 items, with each consisting of ten variables. The variables are grouped into five dimensions in subsequent papers (Parasuraman et al. 1991; Parasuraman et al. 1994). The FSQ dimensions are based upon the five service quality dimensions of the Servqual instrument: reliability, assurance, tangible, empathy and responsiveness (i.e., RATER).

The literature also reveals that the relationships between FSQ dimensions and satisfaction are positive except for the sample from India Angur et al. (1999), which documents negative results for responsiveness, empathy and reliability.

As shown in Table 4, most of the FSQ dimensions are positively related to customer satisfaction. Nevertheless, some studies also reveal that some of the FSQ dimensions are not significant in affecting customer satisfaction, such

TABLE 3. Five Functional Service Quality Dimensions (RATER)

Dimensions of Service Quality	Measurement of Service Quality
Reliability (5 items)	"The ability to perform the promised service dependably and accurately or consistency of performance" (Lassar et al. 2000).
Assurance (4 items)	"The knowledge and courtesy of employees and their ability to inspire trust and confidence".
Tangibles (4 items)	"The appearance of physical facilities, equipment, and personnel".
Empathy (5 items)	"The level of caring and individualised attention the firm provides to its customers".
Responsiveness (4 items)	"The willingness to help customers and provide prompt service".

Source: Adapted from Parasuraman et al. (1988).

TABLE 4. FSQ results in banking satisfaction

No	Authors (Year)/ Country	Sample	R <sub>1</sub>	A	T	E	R <sub>2</sub>
1.	Parasuraman et al. (1988)/USA	200	+	ns	ns	ns	ns
2.	Levesque and McDougall (1996)/Canada	325	+	na	na	+	na
3.	Angur et al. (1999)/India – Servqual	143	na	na	+	+	-
4.	Angur et al. (1999)/India – Servperf	143	-	na	+	-	+
5.	Lassar et al. (2000)/ USA and South America	65	ns	ns	ns	+	ns
6.	Han and Baek (2004)/Korea	740	+	na	+	+	+
7.	Arasli et al. (2005c)/Cyprus	260	+	+	ns	na	+
8.	Arasli et al. (2005b)/Cyprus – Turkish	138	+	+	ns	+	na
9.	Arasli et al. (2005b)/Cyprus – Greek	130	+	+	ns	+	na
10.	Muslim and Zaidi (2008)/Malaysia	440	+	+	+	+	+
11.	Ladhari (2009)/ Canada	193	+	+	ns	+	+

Notes: + indicates a positive result; - indicates a negative result; na indicates variables are not investigated; and ns indicates variables are not significant. Abbreviations: R<sub>1</sub> = Reliability, A = Assurance, T = Tangible, E = Empathy, and R<sub>2</sub> = Responsiveness.

as the tangible and assurance dimensions. Therefore, the following hypotheses are developed:

- H<sub>1</sub> Reliability positively affects FSQ satisfaction.
- H<sub>2</sub> Assurance positively affects FSQ satisfaction.
- H<sub>3</sub> Tangible positively affects FSQ satisfaction.
- H<sub>4</sub> Empathy positively affects FSQ satisfaction.
- H<sub>5</sub> Responsiveness positively affects FSQ satisfaction.

## RESEARCH METHODOLOGY

An online internet-based structured survey is developed to obtain responses from Malaysian credit card holders. The survey uses a standard interview format emphasizing fixed response categories; systematic sampling; and loading procedures combined with quantitative measures and statistical methods (Hill 1996). The majority of researchers in the business field utilise this type of technique. The present study has the option to use internet-based surveys or traditional mail surveys. Internet-based surveys can be performed in four manners: websites; email questionnaires; text formatted forms sent as an email attachment; and downloadable text formatted forms posted at a designed file transfer protocol (FTP), which can be returned by fax or mail (Furrer & Sudarshan 2001). No differences exist in regards to question structures between the internet-based form of surveys and the traditional mail surveys (Furrer & Sudharshan 2001), but the former has a faster response. The study uses the Servqual scale developed by Parasuraman et al. (1988) for the five dimensions and a self-reported FSQ question using 5 point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree).

The present study employed the web survey or online survey, created by Google since it reaches a bigger target audience; and is faster and cost effective. The researchers made a cover page using a domain main (phdsurvey.nuradli.com/survey.htm) to avoid the long Google URL address and to make the survey look professional. The convenience and snowball sampling methods are used during the selection of the respondents. The usage of convenience sampling is preferred for theoretical consumer research and is justified by Calder, Philips and Tybout (1981) following Popper's falsification theory of science (John G. Lynch 1982). Calder, Philips and Tybout (1981) argue that even though generalization requires sampling that represents the population, it is not necessarily required for a theory application.

The survey was opened for response from 7<sup>th</sup> of November 2011 until 7<sup>th</sup> of December 2011. A total of 666 respondents from Malaysia participated in the survey. The respondents needed to answer a screening question concerning whether or not they owned a credit card before completing the entire survey. In addition, the respondents were also asked about their preference or ownership of credit cards. Upon completion of the screening questions, 96 of the respondents were not credit card users and another ten were using international credit cards from

other countries. The final sample consists of the 560 usable respondents comprised of 186 (33.2%) respondents that fall within the CCCU group (own and use conventional credit cards only); 219 (39.1%) respondents that fall within the ICCU group (own and use Islamic credit cards only); and the remaining 155 (27.7%) respondents that fall within the I/CCCU group (own and use both conventional and Islamic credit cards).

Table 5 shows the demographic profiles of the respondents. The distribution between the male and female respondents for the present study is similar, but the response from female credit card users was slightly higher. Another interesting characteristic of the credit card users is reflected in the respondents' age. A sharp increase is indicated for respondents aged between 31 and 40 years in all three groups of cards users. All groups also reveal a similar pattern in terms of number of credit card users, which decreases in relation to increases in age. With respect to the highest education background, the majority of the credit card users have a master degree. Interestingly, the numbers of respondents in the ICCU groups that have a master degree or PhD are higher than the CCCU and I/CCCU groups. It is also interesting to note that the religious background of the three different credit card users reveals that respondents in the ICCU group have a high level of religious education both at high school and university levels, and so do the respondents in the CCCU and I/CCCU groups.

## FINDINGS

Factor analyses are conducted on four groups: the full sample (ALL); ICCU; CCCU; and I/CCCU. The researchers use varimax orthogonal for the rotation of factors. This type of rotation produces factors that are unrelated to each other (Hair et al. 2006). The Kaiser-Meyer-Olkin (KMO) result quantifies the degree of inter-correlations among the variables; and the appropriateness of the factor analysis (Hair et al. 2006). Table 6 summarizes the findings of the factor analysis for the CCCU, ICCU, I/CCCU and ALL groups.

All four KMO values are above 0.90, which indicates that the data are appropriate for factor analysis. The total variance explained for two of the three groups is above 0.70, which is acceptable. Meanwhile the total variance explained for the ICCU group is 68.29%. However, the total variance explained for the ICCU group exceeds the minimum requirement of 0.6 (Ghozali 2006; Mohd Dali 2010). Additionally, the factor loadings for the communalities in four groups are above the minimum value of 0.5. Therefore, the factors are acceptable and the results show that all five of the dimensions of FSQ emerged from the factor analysis for the CCCU group and ALL. However, all dimensions of FSQ except the assurance dimension emerged from the factor analysis for the ICCU and I/CCCU groups.

TABLE 5. Demographic profiles for all respondents (N = 560)

Characteristics	ALL		CCCU		ICCU		I/CCCU	
	N	%	N	%	N	%	N	%
Type of Credit-card Owned	560	100	186	33.2	219	39.1	155	27.7
Gender								
Male	270	48.3	86	46.2	109	50.0	75	48.4
Female	289	51.7	100	53.8	109	50.0	80	51.6
Total	559	100	186	100	218	100	155	100
Age								
Below 20	1	.2	1	.5	0	0	0	0
21-30 years	125	22.3	43	23.1	47	21.5	35	22.6
31-40 years	306	54.6	95	51.1	122	55.7	89	57.4
41-50 years	98	17.5	33	17.7	43	19.6	22	14.2
51-60 years	25	4.5	10	5.4	6	2.7	9	5.8
Above 61 years	5	.9	4	2.2	1	.5	0	0
Total	560	100	186	100	219	100	155	100
Highest Education Background								
High School	5	.9	2	1.1	2	.9	1	.6
Diploma	34	6.1	13	7.0	13	5.9	8	5.2
Degree	188	33.6	71	38.4	59	26.9	58	37.4
Master	234	41.9	73	39.5	93	42.5	68	43.9
PhD	98	17.5	26	14.1	52	23.7	20	12.9
Total	559	100	185	100	219	100	155	100
Highest Religious Education Background								
No formal education	55	9.9	23	12.5	21	9.7	11	7.1
Primary school	48	8.6	20	10.9	13	6.0	15	9.7
High school	246	44.2	82	44.6	91	41.9	73	47.1
University	194	34.9	57	31.0	84	38.7	53	34.2
Pondok* education	3	.5	1	.5	2	.9	0	0
Middle East Universities	10	1.8	1	.5	6	2.8	3	1.9
Total	556	100	184	100	217	100	155	100

Note: \* *Pondok* is a traditional religious education system. ALL refers to the full sample. ICCU refers to Islamic credit cards users. CCCU refers to conventional credit card users. I/CCCU refers to respondents who use both Islamic and conventional credit cards.

TABLE 6. Factor analysis comparison between the CCCU, ICCU, I/CCCU and ALL groups

Analysis	# of items Servqual	Servperf			
		CCCU n = 189	ICCU n = 217	I/CCCU n = 149	ALL n = 555
KMO		0.932	0.926	0.911	0.954
$\Sigma$ VE		74.99	68.29	73.775	71.94
# of dimensions		5	4	4	5
Reliability	5	4re	4re+1as	4re + 3as ( $\alpha = 0.918$ )	4re
Cronbach $\alpha$		( $\alpha = 0.872$ )	( $\alpha = 0.880$ )		( $\alpha = 0.875$ )
Assurance	5	4as+1re*	1re	1re	1as+1re
Cronbach $\alpha$		( $\alpha = 0.90$ )	( $\alpha = n/a$ )	( $\alpha = n/a$ )	( $\alpha = 0.638$ )
Tangible	4	4ta	4ta	4ta	4ta
Cronbach $\alpha$		( $\alpha = 0.877$ )	( $\alpha = 0.870$ )	( $\alpha = 0.864$ )	( $\alpha = 0.87$ )
Empathy	4	4emp	4emp+3as	4 emp +1res + 1as	4emp+1as
Cronbach $\alpha$		( $\alpha = 0.912$ )	( $\alpha = 0.919$ )	( $\alpha = 0.912$ )	( $\alpha = 0.91$ )
Responsiveness	5	4res	4res	3res	4res
Cronbach $\alpha$		( $\alpha = 0.890$ )	( $\alpha = 0.851$ )	( $\alpha = 0.887$ )	( $\alpha = 0.871$ )

Note: ALL refers to the full sample. ICCU refers to Islamic credit cards users. CCCU refers to conventional credit card users. I/CCCU refers to respondents that use both Islamic and conventional credit cards.  $\Sigma$ VE = Total of variance explained; KMO = Kaiser-Meyer-Olkin; n/a = not available, because the items are either re-specified to other dimension or deleted; re = reliability; as = Assurance; t a = Tangible; emp = Empathy; and res = Responsiveness. \* 4as +1re refers to 4 items from assurance dimension and 1 item from reliability dimension are formed in assurance dimension resulted from the factor analysis. The same goes to other results in the table.

The reliability results for all four groups reveal that all Cronbach alphas are higher than 0.80 except for the assurance dimension for the ICCU, I/CCCU and ALL groups. The Cronbach alpha for the assurance dimension is reliable at 0.90 for the CCCU group. However, the Cronbach alpha for the ALL group is weak at 0.638. The assurance dimension for the ICCU and I/CCCU groups do not converge at all. Therefore, all dimensions except the assurance dimension have high internal consistency. The result is similar to Han and Baek (2004), Kumar et al. (2009) and Arasli et al. (2005c) who eliminated the assurance dimension because the original items in the assurance dimension do not converge.

Based upon the results in Table 6, the formation of items into the respective dimensions of FSQ for the four groups are mostly grouped in the correct dimensions as in Servqual model. For instance, in the case of the reliability dimension, four out of five original items are grouped in the four groups (Table 6, row of Reliability dimension). This implies that the ability of the credit card issuer to perform the promised service dependably and accurately; or consistency of performance (Lassar et al. 2000) can affect the satisfaction of the credit card users with FSQ. It is interesting to note that in the case of the ICCU and I/CCCU groups, items from the assurance dimension converge into the reliability dimension.

In the case of the assurance dimension, four out of five original items are correctly grouped in relation to the CCCU group. In the case of the three remaining groups, no original items are grouped for the respective assurance dimension. This implies that convergence problems arise regarding the knowledge and courtesy of employees and their ability to inspire trust and confidence items among the ICCU and I/CCCU groups. In addition, one item from the reliability dimension converges into the assurance dimension for the CCCU and ALL groups.

In contrast, the tangible dimension has all four original items or all four credit card user groups implying that all the items representing the appearance of physical facilities, equipment and personnel form the tangible dimension successfully. Similarly, for the empathy dimension, all four groups have all four of the original items, as well

as additional items from other dimensions. This implies that the level of caring and individualized attention the credit card issuer provides to its customers is important for FSQ satisfaction. Three items from the assurance dimension converge into the empathy dimension for the ICCU group; 1 item from the assurance and responsiveness dimensions converge into the empathy dimension for the I/CCCU group; and 1 item from the assurance dimension for the ALL group.

Lastly, the responsiveness dimension has mixed results with a low of only three out of five original items and a high of four out of five original items, which implies that the willingness to help customers and provide prompt services are also important in determining customer FSQ satisfaction. None of the other items from other dimensions converge into the responsiveness dimension. In comparison, the items that converge into the dimensions for all groups are similar for the tangible dimension, converged correctly for the responsiveness dimension with some items being dropped out, while some items from the assurance dimension converged into different dimensions. In addition, the Servqual dimensions can be successfully replicated for the CCCU group, but not for the ICCU and I/CCCU groups.

Next, the directions of the relationships of the dimensions with customer FSQ satisfaction are identified using regression analysis and the results are reported in Table 7. The results show that the regression coefficients of all dimensions for all groups are significantly positive, which is consistent with the theoretical arguments and empirical evidence. Therefore, all five hypotheses (H1-H5) developed in the present study are accepted. The reliability dimension is positive, which is consistent with the findings of Parasuraman et al. (1988) in the US; Levesque and McDougall (1996) in Canada; Han and Baek (2004) in Korea; Arasli et al. (2005b, 2005c) in Turkey and Greece; Muslim and Zaidi (2008) in Malaysia; and Ladhari (2009) in Canada. The consistency of the reliability dimension affecting customer FSQ satisfaction across countries reveals that the accuracy and consistency of performance are vital for banks and credit card issuers in the context of the present study, including for Islamic credit card issuers.

TABLE 7. Regression analysis comparison between the CCCU, ICCU, I/CCCU and ALL groups

	CCCU n = 189	ICCU n = 217	I/CCCU n = 149	ALL n = 555
Regression R <sup>2</sup>	0.655	0.632	0.692	0.951
Regression $\alpha$	3.852	3.774	3.667	3.771
$\beta$ Reliability	0.219*	0.475*	0.517*	0.400*
$\beta$ Assurance	0.430*	N/A	N/A	0.228*
$\beta$ Tangible	0.191*	0.318*	0.347*	0.289*
$\beta$ Empathy	0.283*	0.339*	0.336*	0.347*
$\beta$ Responsiveness	0.311*	0.257*	0.155*	0.241*

Note: ALL refers to the full sample. ICCU refers to Islamic credit cards users. CCCU refers to conventional credit card users. I/CCCU refers to respondents that use both Islamic and conventional credit cards. Asterisk \* indicates significance at the 5% level.

The results for the assurance dimension reveal some interesting findings that support extant literature. The present study reveals that the assurance dimension positively and significantly affects FSQ satisfaction for CCCU and ALL groups, but not for the ICCU and I/CCCU groups since the items from the assurance dimension fail to converge into their own dimension during the factor analysis. The positive results for the CCCU and ALL groups support the findings of previous studies, including Arasli et al. (2005b, 2005c) in Turkey and Greece; Muslim and Zaidi (2008) in Malaysia; and Ladhari (2009) in Canada. However, Muslim and Zaidi (2008) find that the assurance dimension positively and significantly affects customer FSQ satisfaction in the case of Islamic banking. This implies that the assurance dimension has convergent issues in ICC contextual setting but in the Islamic banking context. Therefore, H2 is accepted for the CCCU and ALL groups, but rejected for the ICCU and I/CCCU groups.

Tangible dimension coefficients are positive and significantly affect FSQ satisfaction for all groups. This is consistent with the findings of Angur et al. (1999) in India; Han and Baek (2004) in Korea; and Muslim and Zaidi (2008) in Malaysia. Therefore, the tangible dimension plays an important role in FSQ satisfaction within the credit card industry generally. Hence, H3 is accepted for all groups of credit card users.

In the case of the empathy dimension, all groups record significant and positive coefficients ranging from 0.191 to 0.347. This is consistent with the findings of previous studies, including Levesque and McDougall (1996) in Canada; Angur et al. (1999) in India using Servqual, but negatively significant in the case of Servperf; Lassar et al. (2000) in the US and South America; Han and Baek (2004) in Korea; Arasli et al. (2005b, 2005c) in Turkey and Greece; Muslim and Zaidi (2008) in Malaysia; and Ladhari (2009) in Canada. The findings of the present corroborate previous findings that customers require individualised attention from the staff of the banks. Therefore, H4 is accepted for all groups of credit card users.

Similarly, the responsiveness dimension also records positive and significant coefficients for all groups of credit card users. This corroborates the previous findings of Angur et al. (1999) in India; Han and Baek (2004) in Korea; Muslim and Zaidi (2008) in Malaysia; and Ladhari

et al. (2009) in Canada. Therefore, H5 is accepted across all groups of credit card users.

In addition, a variation exists in relation to the strengths of the dimensions for the different credit card users that affect credit card satisfaction. Table 8 shows the ranking of the importance based upon the degree of regression weights of individual dimensions.

The results from Table 8 show that for the CCCU group, the assurance dimension has the largest impact on FSQ satisfaction with a coefficient of 0.43, followed by the responsiveness dimension (0.311); the empathy dimension (0.283); the reliability dimension (0.219); and the tangible dimension (0.191). In the case of the ICCU group, the reliability dimension has the largest coefficient (0.475), followed by the empathy dimension (0.257); the tangible dimension (0.318); and the responsiveness dimension (0.257). Almost identical, the I/CCCU group has the largest coefficient for the reliability dimension (0.517), followed by the tangible dimension (0.347); the empathy dimension (0.336); and the responsiveness dimension (0.155). However, for the ALL group, the reliability dimension has the largest coefficient (0.40); followed by the empathy dimension (0.347); the tangible dimension (0.289); the responsiveness dimension (0.241); and the assurance dimension (0.289). The findings imply that different groups of credit card users have different service quality priorities that affect their satisfaction.

## DISCUSSION

The study finds that all FSQ dimensions are positively significant in influencing the consumer satisfaction, except for the assurance dimension in the case of Islamic credit card users and users of both types of credit cards. Since the present study uses Servperf instead of Servqual, the empirical evidence from this study reveals that Servperf can be successfully replicated in the context of Islamic credit cards. However, differences exist between the items formed in the individual FSQ dimensions for three groups: CCC, ICC and I/CCCU. Specifically, the assurance dimension does not converge for the ICCU and I/CCCU groups. This has further created more questions concerning why most

TABLE 8. Ranking of importance of FSQ dimensions based upon regression weights affecting satisfaction

Dimensions	CCCU n = 189	ICCU n = 217	I/CCCU n = 149	ALL n = 555
β Reliability	4 (0.219*)	1 (0.475*)	1 (0.517*)	1 (0.400*)
β Assurance	1 (0.430*)	N/A	N/A	5 (0.228*)
β Tangible	5 (0.191*)	3 (0.318*)	2 (0.347*)	3 (0.289*)
β Empathy	3 (0.283*)	2 (0.339*)	3 (0.336*)	2 (0.347*)
β Responsiveness	2 (0.311*)	4 (0.257*)	4 (0.155*)	4 (0.241*)

Note: ALL refers to the full sample. ICCU refers to Islamic credit cards users. CCCU refers to conventional credit card users. I/CCCU refers to respondents that use both Islamic and conventional credit cards. Asterisk \* indicates significance at the 5% level.



of the items of the original assurance dimension merge into the reliability dimension instead of the assurance dimension. However, the same problem is not detected in the case of the CCCU group. This finding is also consistent with that of Muslim and Zaidi (2008) who manage to get the assurance dimension to form a dimension for Islamic banking users, but not the case of the ICCU group. This finding implies that even though certain dimensions are significant in studies examining banks, those dimensions are not necessarily significant for the products and services offered by banks.

Additionally, different groups of credit card users put different weights on dimensions that affect their satisfaction. For instance, the assurance dimension has the largest impact on CCCU group, while the reliability dimension has the largest impact for the remaining groups (i.e., ICCU, I/CCCU and ALL). The implication for the banking industry is that marketing strategies targeting different groups of credit card users are required to obtain FSQ satisfaction.

### CONCLUSION

Customer satisfaction is an important area of research area in the understanding of consumer post purchase behaviours, especially in the context of the banking and credit-card service industries. The Servqual model developed by Parasuraman (1988) aims to evaluate service quality and customer satisfaction and has been widely used in different contexts. The model, however, has a methodological problem requiring customers' expectations to be eliminated from the customers' perception of the service providers' performance. In contrast, Servperf, developed by Cronin and Taylor (Cronin & Taylor 1992) eliminates the need for customer expectation and, in return, taking only customers' perception of the company performance. Servperf has been proven to produce more reliable results than Servqual by Cronin and Taylor (1992), Abdullah et al. (2004), Angur et al. (1999), Osman et al. (2009), and Othman and Owen (2001).

After employing the Servperf, the present study finds that the model encounters a problem when utilised to examine ICCU. The assurance dimension does not form as significantly among ICCU as it does among CCCU. The finding implies that, in the context of ICCU, some modifications or additions to the dimensions could rectify the problems. The present study also suggests that future studies should investigate the impact of religious factors or religiosity in order to explain the differences between the ICCU and CCCU groups. The possibility exists that the differences are due to religious factors. Nevertheless, the model is still relevant if some minor adjustments are made based upon the context and industry.

The present study contributes to the existing body of knowledge by providing evidence that most FSQ dimensions affect satisfaction positively in the context of the ICCU group, except for the assurance dimension.

However, for future research, the inclusion of Technical Service Quality (TSQ) and Religious and Ethical Service Quality (RESQ) can fill gaps in the knowledge concerning the satisfaction of the ICCU group by providing answers on why differences exist between the CCCU and ICCU groups in relation to technical quality and non-service quality, such as *Shari'ah* compliance and ethical dimensions.

### ENDNOTES

1. The terminology *Wadiah*, short for *Al-Wadiah Yad Dhamanah*, refers to savings with guarantee.
2. Contract of guarantee.
3. Contracts that are based upon fees.
4. Buying a commodity with deferred payment and selling it to a person other than the buyer for a lower price with immediate payment.

### REFERENCES

- Abdul-Muhmin, A.G. 2008. Consumer attitudes towards debt in an Islamic country: Managing a conflict between religious tradition and modernity? *International Journal of Consumer Studies* 32: 194-203.
- Abdul-Muhmin, A.G. & Umar, Y.A. 2007. Credit card ownership and usage behaviour in Saudi Arabia: The impact of demographics and attitudes toward debt. *Journal of Financial Services Marketing* 12: 219-234.
- Abdullah, A.-L., Hamzah, A.H., Suandi, T., Noah, S.M., Mastor, K.A., Kassan, H., Juhari, R., Mahmood, A. & Manap, J.H. 2004. The Islamic religiosity and religious personality index: Toward understanding how Islamic religiosity among young Malaysian Muslims contributes to nation building. In *Islam: Past, Present and Future*, edited by A.S. Long, J. Awang & K. Salleh, 429-432. Bangi: Department of Theology and Philosophy, Faculty of Islamic Studies, Universiti Kebangsaan Malaysia
- Aldlaigan, A.H. & Buttle, F.A. 2002. SYSTRA-SQ: A new measure of bank service quality. *International Journal of Service Industry Management* 13: 362-381.
- Amin, H. 2007. An analysis of mobile credit card usage intentions. *Information Management & Computer Security* 15: 260-269.
- Amin, H. 2008. Factors affecting the intentions of customers in Malaysia to use mobile phone credit cards. *Management Research* 31: 493-503.
- Amin, H. 2012. Patronage factors of Malaysian local customers toward Islamic credit cards. *Management Research Review* 35(6): 512-530.
- Angur, M.G., Natarajan, R. & Jr, J.S.J. 1999. Service quality in the banking industry: An assessment in a developing economy. *International Journal of Bank Marketing* 17: 116-125.
- Arasli, H., Katircioglu, S.T. & Mehtap-Smadi, S. 2005a. A comparison of service quality in banking industry: Some evidence from Turkish and Greek speaking areas in Cyprus. *International Journal of Bank Marketing* 23(7): 508-526.
- Arasli, H., Katircioglu, S.T. & Mehtap-Smadi, S. 2005b. A comparison of service quality in the banking industry: Some evidence from Turkish and Greek speaking areas in Cyprus. *The International Journal of Bank Marketing* 23(7): 508-526.

- Arasli, H., Mehtap-Smadi, S. & Katircioglu, S.T. 2005c. Customer service quality in the Greek Cypriot banking industry. *Managing Service Quality* 15: 41-56.
- Armstrong, R.W. & Seng, T.B. 2000. Corporate-customer satisfaction in the banking industry of Singapore. *International Journal of Bank Marketing* 18: 97-111.
- Avkiran, N.K. 1994. Developing an instrument to measure customer service quality in branch banking. *International Journal of Bank Marketing* 12: 10-18.
- Bahia, K. & Nantes, J. 2000. A reliable and valid measurement scale for the perceived service quality of banks. *International Journal of Bank Marketing* 18(2): 84-91.
- Baumann, C., Burton, S., Elliott, G. & Kehr, H.M. 2007. Prediction of attitude and behavioural intentions in retail banking. *International Journal of Bank Marketing* 25(2): 102-116.
- Blanchard, R. & Galloway, R. 1994. Quality in retail banking. *International Journal of Service Industry Management* 54: 5-23.
- Calder, B.J., Philips, L.W. & Tybout, A.M. 1981. Designing research for application. *Journal of Consumer Research* 8: 197-217.
- Cleveland, M., Papadopoulos, N. & Laroche, M., 2011. Identity, demographics, and consumer behaviors: International market segmentation across product categories. *International Marketing Review* 28: 244-266.
- Cronin, J.J.J. & Taylor, S.A. 1992. Measuring service quality: A re-examination and extension. *Journal of Marketing* 56: 68-81.
- Cronin, J.J.J. & Taylor, S.A. 1994. SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *The Journal of Marketing* 58: 125-131.
- Cui, C.C., Lewis, B.R. & Park, W. 2003. Service quality measurement in banking sector in Korea. *International Journal of Bank Marketing* 21: 191-201.
- Foscht, T., Schloffer, J., Iii, C.M. & Chia, S.L. 2009. Assessing the outcomes of Generation-Y customers' loyalty. *International Journal of Bank Marketing* 27: 218-241.
- Furrer, O. & Sudharshan, D. 2001. Internet marketing research: Opportunities and problems. *Qualitative Market Research: An International Journal* 4(4): 123-129.
- Giese, J.L. & Cote, J.A. 2000. Defining consumer satisfaction. *Academy of Marketing Science Review* 1: 1-26.
- Gounaris, S. 2005. Measuring service quality in b2b services: An evaluation of the SERVQUAL scale vis-a-vis the INDSERV scale. *Journal of Services Marketing* 19(6): 421-435.
- Gro`Nroos, C. 1982. *Strategic Management and Marketing in Service Sector*. Cambridge, MA: Marketing Science Institute.
- Gro`Nroos, C. 1984. A service quality model and Its marketing implications. *European Journal of Marketing* 18: 36-44.
- Gro`Nroos, C. 1990. *Service Management and Marketing*. Lexington, MA: Lexington Books.
- Guo, X., Duff, A. & Hair, M. 2008. Service quality measurement in the Chinese corporate banking market. *International Journal of Bank Marketing* 26(5): 305-327.
- Hair, J.F., Anderson, R.E., Tatham, R.L. & Black, W.C. 2006. *Multivariate Data Analysis*. NJ: Prentice Hall.
- Haji Shahwan, S. & Mohd Dali, N.R.S. 2007. Islamic credit card industry in Malaysia: Customers' perceptions and awareness. *3<sup>rd</sup> Uniten International Business Management Conference 2007, Human Capital Optimization; Strategies, Challenges and Sustainability*, 16-18 December. Malacca, Malaysia.
- Han, S.-L. & Baek, S. 2004. Antecedents and consequences of service quality in online banking: An application of the SERVQUAL instrument. *Advances in Consumer Research* 31: 208-214.
- Haque, A. 2010. Islamic banking in Malaysia: A study of attitudinal differences of Malaysian customers. *European Journal of Economics, Finance and Administrative Sciences* 18: 7-18.
- Hill, N. 1996. *Handbook of Customer Satisfaction Measurement*. Hampshire: Gower Publishing Limited.
- John G. Lynch, J. 1982. On the external validity of experiments in consumer research. *Journal of Consumer Research* 9: 225-239.
- Johnston, R. 1997. Identifying the critical determinants of service quality in retail banking: Importance and effect. *International Journal of Bank Marketing* 15: 111-116.
- Kang, G.-D. & James, J. 2004. Service quality dimensions: An examination of Gronroos's service quality model. *Managing Service Quality* 14(4): 266-277.
- Kanning, U.P. & Bergmann, N. 2009. Predictors of customer satisfaction: Testing the classical paradigms. *Managing Service Quality* 19(4): 377-390.
- Khattak, N.A. & Rehman, K.-U. 2010. Customer satisfaction and awareness of Islamic banking system in Pakistan. *African Journal of Business Management* 4(5): 662-671.
- Kumar, M., Kee, F.T. & Manshor, A.T. 2009. Determining the relative importance of critical factors in delivering service quality of banks: An application of dominance analysis in SERVQUAL model. *Managing Service Quality* 19: 211-228.
- Ladhari, R. 2009. Assessment of the psychometric properties of SERVQUAL in the Canadian banking industry. *Journal of Financial Services Marketing* 14(1): 70-82.
- Lassar, W.M., Manolis, C. & Windsor, R.D. 2000. Service quality perspectives and satisfaction in private banking. *Journal of Services Marketing* 14: 244-271.
- Levesque, T. & Mcdougall, G.H.G. 1996. Determinants of customer satisfaction in retail banking. *International Journal of Bank Marketing* 14: 12-20.
- Malhotra, N.K., Ulgado, F.M., Agarwal, J.G. & Wu, L. 2005. Dimensions of service quality in developed and developing economies: Multi-country cross cultural comparisons. *International Marketing Review* 22(3): 256-278.
- Masood, O., Chichti, J.E., Mansour, W. & Iqbal, M. 2009. "Islamic bank of Britain" case study analysis. *International Journal of Monetary Economics and Finance* 2: 206-220.
- Mcdougall, G.H.G. & Levesque, T.J. 1994. Benefit segmentation using service quality dimensions: An investigation in retail banking. *International Journal of Bank Marketing* 12: 15-23.
- Mentzer, J.T., Flint, D.J. & Kent, J.L. 1999. Developing a logistic service quality scale. *Journal of Business Logistics* 20: 9-32.
- Mohammed, H. & Shirley, L. 2009. Customer perception on service quality in retail banking in Middle East: The case of Qatar. *International Journal of Islamic and Middle Eastern Finance and Management* 2(4): 338-350.
- Mohd Dali, N.R.S., Abdul Hamid, H., Shahimi, S. & Wahid, H. 2008. Factors influencing the Islamic credit cards holders satisfaction. *The Business Review, Cambridge* 11(2): 298-304.

- Mohd Dali, N.R.S., Yousafzai, S., Abdul Hamid, H. & Jalil, A. 2013. Replicating Servqual in Malaysian credit card industry: A multigroup analysis. *5th Islamic Economics System Conference 2013*. Berjaya Times Square Hotel Kuala Lumpur: Universiti Sains Islam Malaysia.
- Muhammad, M.Z., Amboala, T., Ghazali, M.F. & Hassan, Z. 2011. Comprehensive approach for Sharia compliance e-commerce transaction. *Journal of Internet Banking and Commerce* 16: 1-13.
- Mukherjee, A. & Nath, P. 2005. An empirical assessment of comparative approaches to service quality measurement. *Journal of Service Marketing* 19: 174-184.
- Muslim, A. & Zaidi, I. 2008. An examination of the relationship between service quality perception and customer satisfaction. *International Journal of Islamic and Middle Eastern Finance and Management* 1(3): 191-209.
- Naser, K., Jamal, A. & Al-Khatib, K. 1999. Islamic banking: A study of customer satisfaction and preferences in Jordan. *The International Journal of Bank Marketing* 17(3): 135-151.
- Newman, K. & Cowling, A. 1996. Service quality in retail banking: The experience of two British clearing banks. *International Journal of Bank Marketing* 14(6): 3-11.
- Noor, A.M. & Azli, R.M. 2009. A review of SharENah compliant instruments for Islamic credit cards as adopted by Malaysian Financial Institutions. *International Journal of Monetary Economics and Finance* 2: 221-238.
- Obaidullah, M. 2005. *Islamic Financial Service*. Jeddah: Islamic Economics Research Centre.
- Osman, I., Ali, H., Zainuddin, A., Wan Rashid, W.E. & Jusoff, K. 2009. Customers satisfaction in Malaysian Islamic banking. *International Journal of Economics and Finance* 1: 197-202.
- Othman, A. & Owen, L. 2001. Adopting and measuring customer service quality (SQ) in Islamic banks: A case study in Kuwait Finance House. *International Journal of Islamic Financial Services* 3(1).
- Othman, A. & Owen, L. 2002. The multi dimensionality of carter model to measure customer service quality (SQ) in Islamic banking industry: A study in Kuwait Finance House. *International Journal of Islamic Financial Services* 3(4): 124-143.
- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1988. SERVQUAL: A multiple-item scale for measuring customer perceptions of service quality. *Journal of Retailing* 64(1): 14-40.
- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1991. Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing* 67(4): 420-450.
- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1994. Reassessment of expectations as comparison standard in measuring service quality: Implication for further research. *Journal of Marketing* 58: 111-124.
- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1985. A conceptual model of service quality and its implications for future research. *Journal of Marketing* 49: 41-50.
- Petridou, E., Spathis, C., Glaveli, N. & Liassides, C. 2007. Bank service quality: Empirical evidence from Greek and Bulgarian retail customers. *International Journal of Quality & Reliability Management* 24(6): 568-585.
- Sadek, D.M., Zainal, N.S., Mohd Taher, M.S.I., Yahya, A.F., Shaharudin, M.R., Noordin, N., Zakaria, Z. & Jusoff, K. 2010. Service quality perceptions between cooperative and Islamic Banks of Britain. *American Journal of Economics and Business Administration* 2: 1-5.
- Shook, D.N. & Hassan, S.S. 1988. Marketing management in an Islamic Banking environment: In search of an innovative marketing concept. *The International Journal of Bank Marketing* 6(1): 21-30.
- Stafford, M.R. 1996. Demographic discriminators of service quality in the banking industry. *The Journal of Services Marketing* 10: 6-22.
- Sureshchandar, G.S., Rajendran, C. & Anantharaman, R.N. 2002. Determinants of customer perceived service quality: A confirmatory factor analysis approach. *Journal of Services Marketing* 16: 9-34.
- Wong, D.H., Rexha, N. & Phau, I. 2008. Re-examining traditional service quality in an e-banking era. *International Journal of Bank Marketing* 26(7): 526-545.
- Yavas, U. & Benkeinstein, M. 2007. Service quality assessment: A comparison of Turkish and German bank customers. *Cross Cultural Management: An International Journal* 14(2): 161-168.
- Zainul, N., Osman, F. & Mazlan, S.H. 2004. E-Commerce from an Islamic perspective. *Electronic Commerce Research and Applications* 3: 280-293.
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## APPENDIX

## List of Customer Satisfaction Research Findings in Banking Industry

No	Authors/Country/ (Year Conducted)	Sample	Context	Analysis	Findings and Gaps
1.	(Parasuraman et al. 1988)/USA	200	Conventional Bank	Focus group, Factor Analysis - Oblique Rotation, Regression	The authors have developed Servqual to measure service quality based on the gap theory of disconfirmation using reliability, assurance, tangible, empathy and responsiveness dimensions. There is only one dimension that is significant to the overall quality of the bank: reliability ( $\beta = 0.39$ , $p = 0.00$ ).
2.	(Cronin and Taylor 1992)/USA	188	Conventional Bank	Factor Analysis, CFA, Correlation.	The authors claim that Servperf is a superior measure of service quality construct in comparison with Servqual.
3.	(Blanchard and Galloway 1994)/UK	439 and 39 staff	Conventional Bank	Descriptive	The failure of the Servqual model to provide any particularly useful insights into how service might be improved.
4.	(Avkiran 1994)/Australia	795	Conventional Bank	Factor analysis and Man Whitney Test	Creation of BANKSERV, a 17-item inventory with four dimensions emerged in the study, which are staff conduct, credibility, communication and access to teller services.
5.	(McDougall and Levesque 1994)/Canada	325	Conventional Bank	Cluster analysis – post hoc segmentation	The dimensions measured are outcome, process, tangibles, competitive rate and convenience.
6.	(Newman and Cowling 1996)/UK/1993-1995	30 (A) 12 (B) 85850	Conventional Bank	Case Study- Semi-structured interviews and content analysis	A comparative study of two different banks, which used two different quality approaches. Bank A used Servqual while Bank B used TQM. A longitudinal study of a national market survey conducted for Bank A was also reported. The findings indicate that during the 3-year study the performance of Bank A was better as compared to its other 7 competitors.
7.	(Levesque and McDougall 1996)/Canada	325	Conventional Bank	Factor Analysis and regression	The authors empirically tested the determinants of customer satisfaction in a retail bank, which include relational performance, core performance, features performance, competitive rates, skilled employees, problem encountered, satisfaction with problem recovery, and hold mortgage and loan.
8.	(Stafford 1996)/USA	243	Conventional Bank	Exploratory Factor Analysis and Discriminant analysis	The authors identify 7 key elements of bank quality: bank atmosphere; relationship; rates and charges; available and convenient services; ATM; reliability and honesty; and tellers.
9.	(Johnston 1997)/UK	323	Conventional Bank	Frequency and Spearman Correlation	Determinants of service quality are divided into 18 service quality attributes: access, aesthetics, attentiveness, availability, care, cleanliness, comfort, commitment, communication, competence, courtesy, flexibility, friendliness, functionality, integrity, reliability, responsiveness and security.
10.	(Angur et al. 1999)/India	143	Conventional Bank	CFA	Servqual scale provides greater diagnostic information than the Servperf scale. However, the five-factor conceptualization of Servqual does not seem to be very applicable, and no significant difference is found in the predictive ability of the two measures. Furthermore, although Servqual and Servperf have identical convergent validity, Servperf appears to have higher discriminant validity than Servqual.

No	Authors/Country/ (Year Conducted)	Sample	Context	Analysis	Findings and Gaps
11.	(Naser et al. 1999)/ Jordan	206	Islamic Bank	Descriptive and Anova	A large majority of the respondents are satisfied with the Islamic bank's name and image; and with the bank's ability to provide confidentiality.
12.	(Bahia and Nantes 2000)/ Canada	106	Conventional Bank	Factor analysis	Developed a model, which includes the 7Ps named Banking service quality (BSQ), and compared it with Servqual.
13.	(Lassar et al. 2000)/ USA and South America	65	Conventional Bank	Factor analysis, Correlation, regression	The Technical/Functional Quality-based model compared with the Servqual model is better suited to predict customer satisfaction.
14.	(Othman and Owen 2001)/Kuwait/2000	306	Islamic Bank	Factor Analysis,	Developed the Carter model, which includes compliance with Islamic Law as addition to Servqual. The findings from the study reveal that religiosity is significant for Islamic banks.
15.	(Aldlaigan and Buttle 2002)/UK	975	Conventional Bank	Factor analysis and Anova	The authors propose a new scale for banking service quality measurement named SYSTRA-SQ. The factors are service system quality, behavioural service quality, machine service quality and service transactional accuracy.
16.	(Sureshchandar et al. 2002)/India	277	Conventional Bank	CFA	There are five dimensions found in the study: core service; human elements of service; systemisation of service delivery; tangible; and social responsibility.
17.	(Cui et al. 2003)/ Korea	153	Conventional Bank	Confirmatory Factor Analysis and EFA	The Servqual scales lacked validity with the sample. Both Servqual and Servperf are multidimensional.
18.	(Han and Baek 2004)/ Korea	740	Conventional Bank	EFA, SEM	The Servqual dimensions model are tested using SEM and are found to be reliable and valid with the second order model.
19.	(Malhotra et al. 2005)/ USA, Philippines and India	1069	Conventional Bank	Scheffe's multiple comparison test	The findings reveal that differences exist between developed and developing countries, probably due to culture.
20.	(Gounaris 2005)/ Greece	257	Conventional Bank	CFA, SEM	The authors find that Servqual suffers from methodological problems for B2B business context and the proposed INDSERV, which is comprised of four dimensions: potential quality, hard quality, soft quality and output quality.
21.	(Mukherjee and Nath 2005)/India	410	Conventional Bank	Factor analysis- Promax Rotation	The authors compare Gap, TOPSIS and Loss Function models and find that the three models reveal the same result. Therefore, the 3 techniques can be used as complements to achieve better results.
22.	(Arasli et al. 2005c)/ Cyprus	260	Conventional Bank	Factor Analysis and regression	The assurance dimension is eliminated from the factor analysis procedure and responsiveness and empathy dimensions are collapsed into one dimension. The reliability dimension has the highest impact on customer satisfaction.
23.	(Arasli et al. 2005b)/ Turkey	268	Conventional Bank	Regression	The replication of Servqual for two groups of bank customers reveals that the responsiveness dimension is not captured in the factor analysis. In addition, a significant difference exists between the Greek and Turkish speaking customers on their perception of the service quality dimensions.

No	Authors/Country/ (Year Conducted)	Sample	Context	Analysis	Findings and Gaps
24.	(Petridou et al. 2007)/ Greece and Bulgaria	223	Conventional Bank	T-test, CFA	Analyses customers from two Balkan countries (i.e., Greece and Bulgaria) using Banking service quality as developed by Bahia and Nantel (2000). The study uses Factor analysis and T-test to determine whether any significant differences exist between customers in different countries (Petridou et al., 2007). Bank customers in Greece perceive that they receive higher service quality compared to the service quality perception of bank customers in Bulgaria. In addition, two variables are added to Servqual model of Parasuraman et al. (1988): service portfolio and price (Petridou et al., 2007).
25.	(Yavas and Benkeinstein 2007)/ Turkey and Germany	156 T, 226 G	Conventional Bank	Factor Analysis, Factor Congruency Technique	The authors find that 3 factors are congruent between the cultures of the two countries, which implies that multinational banks can standardise their operations in these two countries.
26.	(Baumann et al. 2007)/ Australia/2002	1874	Conventional Bank	Factor analysis, regression	The authors attempt to link service quality, satisfaction and loyalty in the retail-banking context. The study adds to the discussion of the relationship between perceived satisfaction, service quality and a customer's intentions to recommend a bank and/or remain a customer. The results also contribute to the development of more parsimonious models, suggesting that affective attitude, overall satisfaction, empathy and responsiveness together explain a large percentage of the variation in customers' intentions.
27.	(Muslim and Zaidi 2008)	440	Islamic Bank	CFA and SEM	The authors use the Carter model and find that service quality has a positive effect on customer satisfaction. All six dimensions are significant and Shari'ah compliance is identified to positively affect service quality. They also used Servperf instead of Servqual in their methodology.
28.	(Guo et al. 2008)/ China	18 + 259	Conventional Bank	Factor Analysis, in-depth interview	Factor analysis determines that service quality in Chinese corporate banking is measured by a nested model, consisting of two higher-order constructs (i.e. functional quality and technical quality); and four lower-order dimensions (i.e. reliability, human capital, technology and communication).
29.	(Wong et al. 2008)/ Australia	706	Conventional Bank	CFA, Quadrant	The traditional Servqual model is re-examined in the context of e-banking service. The study determines that banks are performing relatively well in terms of their appearances (tangibles), and in building trust and confidence with their customers (assurance), while relatively poorer in terms of performance in providing prompt service (responsiveness), individualized attention (empathy), and dependability and accuracy (reliability).
30.	(Ladhari 2009)/ Canada	193	Conventional Bank	CFA, Correlation, Regression	The results support the dimensionality of Servqual, its reliability, convergent reliability, discriminant validity and predictive validity of the scale. The results also show that responsiveness and empathy are the most important dimensions of overall service quality in the Canadian banking context.
31.	(Kumar et al. 2009)/ Malaysia	308	Conventional Bank	Exploratory Factor Analysis and Dominance analysis	The authors add another dimension of convenience to the existing Servqual model, but only 4 dimensions emerged in the factor analysis: tangible, reliability, competence and convenience.

No	Authors/Country/ (Year Conducted)	Sample	Context	Analysis	Findings and Gaps
32.	(Kanning and Bergmann 2009)/ Germany	351	Conventional Bank	Regression analysis	The authors find that Locke's model of product importance does not perform better than the disconfirmation PE model; absolute P-(E-P) performs better than relative P-E; and performance alone is the best predictor of customer satisfaction excluding expectation and importance.
33.	(Osman et al. 2009)/ Malaysia	141	Islamic Bank	Mean and Kruskal Wallis Test	The authors replicate the Carter model and perform a comparison between Muslim and non-Muslim customers. They find that the Carter model is reliable since all the dimensions have mean values above 4.
34.	(Sadek et al. 2010)/ UK	Small number of respondents	Islamic Bank	Percentage, frequency and mean	The authors have compare the customer satisfaction of two banks (Islamic Bank of Britain and Co-operative Bank) using the Carter model. The study finds that the IBB customers rank compliance with Shari'ah as the highest rank, while the Co-operative Bank customers rank ethics as the highest rank.
35.	(Haque 2010)/ Malaysia	473	Islamic Bank	Anova	The authors conduct a survey in Malaysia measuring the banking customers' attitudes towards IB. There is a difference in terms of what influenced their positive attitude: ethnic Malays are influenced by religion, while ethnic Chinese are influenced by added value services.
36.	(Khattak and Rehman 2010)/Pakistan	156	Islamic Bank	Mean and Kruskal-Wallis One Way Anova	Their findings show that the demographic factors such as gender, age, religion, occupation, academic qualification and income are significantly different according to the dependent variables. The implication from the findings reveals that customer demographic factors could affect the level of satisfaction.
37.	(Mohammed and Shirley 2009)/Qatar	120	Conventional Bank	Mean	The study replicates Servqual, but eliminates two dimensions of Servqual: responsiveness and assurance. The dimension of 'competence' is proposed. Tangible is found to be of the highest importance for Qatari banking consumers.
38.	(Foscht et al. 2009)/ Austria	242	Conventional Bank	Factor analysis and SEM	The results indicate that differences exist between the different subgroups of the determinants of customer satisfaction.
39.	(Armstrong and Seng 2000)/Singapore	206	Conventional Bank	SEM	The study examines customer satisfaction at the business-to-business level of banking industry in Singapore. The study proposes a comprehensive model of satisfaction at the business-to-business level incorporating guanxi (Chinese business relationships); relationship marketing; and the disconfirmation paradigm.

