



Service Quality in Malaysian Islamic Banks: An Empirical Study

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Abstract. Service quality is an important and effective tool for banks to achieve customer satisfaction and earn their loyalty, especially under intense competition. Indeed, there is a strong competition between Islamic banks in Malaysia whereby each practitioner is working hard to satisfy their customers' needs for service excellence. There are few studies that have included *Shariah* compliance with five other variables namely tangibles, reliability, responsiveness, assurance and empathy known as CARTER model however, majority of these studies have not been conducted for Malaysia. The few studies that were conducted for Malaysia used only descriptive statistics and their sample sizes were small. Hence, this study addresses this gap by conducting the survey in Klang valley region which includes Kuala Lumpur, Gombak and Shah Alam. The method was carried out by conducting a survey of 300 respondents. Data is analyzed using factor analysis and multiple regressions to measure the relationship between the variables. The results indicated that compliance, reliability, and empathy have a positive relationship with customer satisfaction and are significant while assurance, tangibility, and responsiveness are insignificant. Hence, practitioners can emphasize on the three significant factors in improving their service quality. The academicians can benefit by conducting further research into this body of knowledge.

Keywords: Service Quality, Customer Satisfaction, Islamic Banks, *Shariah* Compliance, Empirical Study.

JEL Classification: M5, M21

Introduction

Islamic banks operate according to the principles and teachings of Islam known as *Shariah* (Islamic law). The transactions conducted are fundamentally rooted in the

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principles of total eradication of *riba* (usury) and *gharar* (uncertainty) (Akhtar & Hunjra, 2011). It balances the moral and material needs of a society. Bank Islamic Malaysia Berhad (BIMB) was the first Islamic bank to be established in Malaysia in 1983. In 1993, Bank Negara Malaysia allowed the establishment of “Islamic banking widow” in the conventional banks. This has led to further growth in the Islamic banking industry and there is a growing need to provide the best service to the customers.

There are a few studies that have used the CARTER model in the analysis of service quality (Al-Adwani, 2010; Janahi & Al Mubarak, 2017). However, these studies have not been conducted for Malaysia. Furthermore, the sample size used in these studies is less than 300. These few studies include Osman et al. (2009) that was conducted for Malaysia but is merely descriptive in nature. This study addresses these gaps by conducting the study in the Klang Valley, Malaysia with a sample size of 300 respondents. Data analysis was conducted using Pearson correlation and multiple regressions after ensuring the reliability of the data through factor analysis and Cronbach alpha.

The main aim of this paper is to study the relationship between service quality and customer satisfaction as well as check the effect of different types of service quality on the satisfaction of customers with respect to various dimensions, in Malaysia. In order to achieve that goal, the following questions should be answered: a) what is the relationship between service quality and customer satisfaction in Islamic banking industry in Malaysia? And; b) what are the effects of numerous dimensions of service quality on customer satisfaction?

The paper is organized as follows. After the introduction, section two discusses the literature review. Section three is on hypothesis development. Section four describes the methodology and the relationship between the six variables and customer satisfaction. This is followed by the findings in section five. The discussion and implications of the study are under section six. Finally, section seven concludes.

Literature Review

Service Quality and Customer Satisfaction

In meeting increase in significance of services in industries and organizations, many researchers have been going widely to develop theories and models for the service quality throughout the decades. Several models are used to measure the concept of service quality (Penang & Kheng, 2010) Automated Teller Machines

(ATM. The SERVQUAL developed by Parasuraman, Zeithaml & Berry, (1985) is among the most popular tools used to assess service quality and has five dimensions which include reliability, tangibility, responsiveness, assurance and empathy (Wei, 2013). In addition, some evidence recommends that service quality ought to be performance measured alone. Furthermore, some researchers explain that tangibles, assurance, responsiveness and empathy are concerned with the service process whereas, reliability is mainly concerned with the service income (Levesque, T.J. and McDougall, 1996).

Customer satisfaction is defined as the heart of all marketing activities because the main reason for marketing is to satisfy the customer's needs and wants (Machleit & Mantel, 2001) a field study, includes two samples of shoppers (student and non-student. Moreover, some studies found that increasing the satisfaction of the customers leads to increase in the profitability of the companies in the future (Anderson, Fornell, & Lehmann, 1994). The widely accepted theory which explains the customer satisfaction phenomenon is expectancy-disconfirmation theory. This theory indicates that customers have assumptions about the service and the product before consumption. Many researchers have argued that it is inadequate to assess the satisfaction of the customer by considering only cognitive aspects which evaluate the customer satisfaction by comparing their consumption expectation with perceived performance however many researchers have gone beyond these cognitively toned models (Mano & Oliver, 1993; Oliver & Westbrook, 1993). With regards to the relationship between customer satisfaction and service quality, academics mostly agree that a positive relationship between customer satisfaction and service quality exists.

Customer satisfaction and service quality are highly interrelated. When service quality is high, satisfaction will be greater, and vice versa. Cronin & Taylor, (1992) concluded that it is quite difficult to find consistent standards of service quality in the banking sector, and therefore, the competitive advantage lies in the high level of service quality provided and thus is considered as a powerful weapon for survival and continuity. According to timing, service quality occurs first and subsequently results in customer satisfaction. Berthon, Money, & Caruana (2000) found that quality of service is the primary gateway to customer satisfaction. Indeed, this finding proved the opposite of Cronin & Taylor, (1992a), where they assumed that customer's satisfaction usually emerges before service quality, and service quality is just one of the service factors contributing to customer satisfaction's resolutions.

Determinants of Customer Satisfaction

Satisfaction is a broad and vague concept. It is achieved when someone gets something that they want, need or have demanded (Longman Dictionary). Due to this ambiguity customer satisfaction is treated differently in various fields, both at the level of individuals and institutions, particularly in services and products area and thus it has a quite different approach especially when it comes to products and services. For a long time, the research focused the concept of quality whether in the services or the products, and the level of customer satisfaction and their interaction with services and products provided through factors of influence (Daniel & Berinyuy, 2010). These are indeed factors that influence customer satisfaction, but in fact customers will need different levels of services and different combinations of these variables to meet their needs and satisfy their desires. Matzler & Sauerwein (2002) tried to classify factors affecting customer satisfaction into three main factor components:

Basic factors: These are the minimum requirements of the product or service, they do not necessarily cause satisfaction, but may lead to dissatisfaction if they were absent. Although these factors are essential for any product or service but have little impact on customer satisfaction. In brief, they are *competence and accessibility*.

Performance factors: These are factors if available lead to satisfaction and their absence causes dissatisfaction. They include *reliability and friendliness*.

Excitement factors: These factors raise a customer's satisfaction when fulfilled, and their absence does not lead to dissatisfaction. It is represented by *project management*.

Service Quality Measurement

In attempts to understanding the service quality that satisfies the customer, there are several models that have been suggested to determine the most important determinants of customer satisfaction (Philip & Hazlett, 1997). These models give a great deal of attention to the views of customers and are focused on measuring the gap between customer's expectations and experiences as a determinant of satisfaction. However, the information provided by these basic models did not meet the need properly, until Parasuraman developed his famous model SERVQUAL (Parasuraman et al., 1985). SERVQUAL model is a multi-dimensional search tool designed to capture consumer expectations and service perceptions according to the five dimensions of service quality mentioned earlier .

Customer Satisfaction in Islamic Banking Sector

There are many studies conducted in different countries to measure the level of customer satisfaction towards service quality provided by Islamic banks. Several methods and approaches were assessed. The results found differed according to the methodology and criteria of studies. In the following paragraphs, these studies will be discussed with a view of obtaining an appropriate model to apply it to this study.

Kontot, Hamali, & Abdullah (2016) and Wulandari & Subagio (2015) each conducted a descriptive study to determine the factors influencing the selection of Islamic banks. In addition, (Kontot et al., 2016) conducted a survey in Indonesia through a face-to-face interview to determine factors affecting customer preferences for deposit products in Islamic banks through several variables; products characteristics, company characteristics and consumer characteristics, which influence the customers' choice and satisfaction. The results indicated that *Shariah* compliance plays a key role in influencing the preferences of customers in Islamic banks. Furthermore, the study confirmed that customers do consider the elements of ethics and social responsibility when making investment decisions.

According to Wulandari & Subagio (2015), customers prefer Islamic banks because of their low administrative fees and friendly service, but the customers still consider the profit sharing provided by Bank Muamalat as a kind of interest because of their lack of awareness about *Shariah* compliance principles. However, both study Islamic and conventional banks in the United Arab Emirates (UAE). ANOVA and stepwise regression were used to assess dependent and independent variables such as efficiency in handling transactions on the phone, confidentiality, knowledge, and friendliness of the personnel, quality of advice provided by the personnel, transaction costs and *Shariah* supervisory board. The findings indicated that Islamic banks' customers are satisfied with the *Shariah* advisory board, convenience-related factors such as number of branches and efficiency-related factors like handling issues on the phone. Although the study was of high quality in quantitative terms, it did not focus the Islamic banking sector. In addition, a lot of variables were evaluated therefore, the results, could not provide enough information (Sayani, 2015).

Buchari, Rafiki, & Qassab, (2015) assessed three variables (awareness, service quality, and product quality) and their impact on customer satisfaction. The findings revealed that the indirect effects of service quality and product quality on satisfaction and awareness were positive and significant. Moreover, the customers were

aware of Islamic banking products and services to a certain degree and the reasons for preferring them were profitability and religious principles. The results seem fairly reasonable, but the study did not include *Shariah* compliance in evaluation.

In order to obtain more accurate results, Akhtar & Zaheer (2014) and Munusamy, Chelliah, & Mun (2010) applied the five-dimensional model of SERVQUAL to measure the service quality of Islamic banks. The study of Akhtar & Zaheer (2014) showed that variables tangible, reliability, assurance and empathy positively influence satisfaction while responsiveness has negative impacts on customer satisfaction. Meanwhile, the results of (Munusamy et al., 2010) were somewhat amazing as it found out that assurance has a positive relationship, but it has no significant effect on customer satisfaction. Reliability has a negative relationship, but it has no significant effect on customer satisfaction. Tangibles have a positive relationship and have significant impact on customer satisfaction. Empathy has positive relationship, but it has no significant effect on customer satisfaction. Responsiveness has positive relationship but no significant impact on customer satisfaction. Indeed, the studies have adopted quantitative approach, particularly SERVQUAL model in their analysis, but they do not consider *Shariah compliance* as an independent variable neither take it into account, especially when the subject relates to Islamic banks.

In order to solve the previously mentioned problems, some researchers have attempted to adopt a unified model to assess customers' satisfaction towards services quality provided by Islamic banks. Othman & Owen (2001) developed a model known as CARTER model. These researchers analyzed and assessed actual model of service quality used in banking industry in general, then adopted a new model appropriate for Islamic banks' management. It is merely the same five dimensions that represent SERVQUAL model (Parasuraman et al., 1985), with addition of *Shariah-compliance* dimension. More importantly, this is the first time that the religious dimension has been included as a key variable in assessing customer preferences in the Islamic banking sector (Al-Adwani, 2010). The study surveyed 360 customers of Kuwait Finance House (KFH), to test six dimensions namely; compliance, assurance, reliability, tangibles, empathy, and responsiveness. The results showed that CARTER model is valid and has been arbitrated by KFH's customers and fairly proved its importance as Islamic retail bank (Othman & Owen, 2001). However, this study was limited to only one institution, but the model proved its usefulness and importance, and thereafter, was adopted by numerous researchers in Islamic banking industry across the world.

Osman, et al. (2009) measured customer satisfaction through service quality provided by Islamic banks in Malaysia based on CARTER model. 200 questionnaires were distributed but only 141 were used in the analysis. M. N. Akhtar et al. (2011) also investigated 167 customers of Islamic banks in Pakistan. The findings of both studies support the research done by Othman and Owen (2001) which was based on the fact that the *Shariah compliance* dimension is the most significant criteria. Another study was conducted by Abdul Rehman (2012) for three different countries, namely Pakistan, United Arab Emirates (UAE) and United Kingdom (UK). He analyzed 225 questionnaires (75 for each country). The results showed that the Islamic banking customers in Pakistan and UK rate assurance, reliability and empathy as significant factors for customer satisfaction, while UAE customers look at assurance and tangibles as significant dimensions of satisfaction (Abdul Rehman, 2012). The results reveal that these studies have been able to provide good and useful information in measuring the satisfaction level of customers in Islamic banking industry, nonetheless, the samples on which these studies relied were not sufficient to the extent required.

Moreover, a recent study for Indonesia conducted by Aisyah (2018) investigated 100 respondents to analyze the service quality of Islamic banks and its impact on customers' satisfaction and loyalty by using Path Analysis. The results showed that Islamic banks have not been able to build up a strong relationship with their customers. Indirectly, the service quality did not have any impact on customer loyalty through customer satisfaction. Thus, the service quality of Islamic banks has not supported their strategy yet (Aisyah, 2018). These results make it imperative for Islamic banks to focus on service quality concepts while observing *Shariah compliance* in their unconventional products and services. However, it should be noted that the sample taken for the study was insufficient.

The above studies indicated that several researchers have covered the topic of Islamic banks and their customers. Janahi & Al Mubarak (2017) Assurance, Reliability, Tangibility, Empathy and Responsiveness conducted an empirical study on five key Islamic banks in Bahrain. They designated a fitting sample of 300 customers of these banks with equal number of respondents from each bank to avoid bias and CARTER model was used. Consequently, the results indicated existence of strong positive relationship between the six dimensions of customer service quality in Islamic banks. Likewise, Al-Adwani (2010) conducted a survey based on 700 customers from three Islamic banks that were operating in Kuwait using CARTER Model. The results revealed a fair relationship between customer satisfaction and

some service quality dimensions. Besides this, demographic factors have a significant effect on the perception of service quality in Kuwaiti Islamic banks. These studies have also focused on service quality dimensions related to Islamic banks with the interest of covering a large segment of customers. Nonetheless, demographics factors remain a challenge for researchers.

It is most important to mention that, the measurement of customer satisfaction level towards service quality in the Islamic banking sector is not limited only to individuals but also includes business enterprises such as SMEs etc. In this regard, it is preferable to cite the study conducted by Maswadeh (2015) which took a sample size of 60 SMEs from Jordan. The principal respondents were financial managers and accountants having sound academic background. CARTER model was applied in this study. According to the results, the arithmetic means and significance level of all six dimensions showed that the alternative hypotheses related to this study were accepted, and thus, SMEs as customers were very satisfied with service quality provided by Islamic banks. Eventually, this study is characterized by the fact that, a large number of SMEs were included by using CARTER model. The results were therefore reasonable and objective. However, the demographic factors remain one of the challenges.

After this intensive discussion, it can be concluded that majority of studies that focused on measuring the level of customer satisfaction with service quality of Islamic banking sector were based on CARTER model that was developed by Othman & Owen (2001). The results quoted prove the significance and usefulness of the model. The gaps however can be related to the small sizes of the samples and different demographic factors that may have a considerable influence on the findings. Hence, the current study seeks to avoid these obstacles and challenges in the way that will be explained in greater detail in the research methodology section.

Hypothesis Development

The hypothesis is developed from CARTER model developed by (Othman & Owen, 2001). It is comprised of six (6) dimensions that affect customer satisfaction, namely compliance, assurance, reliability, tangibles, empathy, and responsiveness as illustrated in figure 1 below.

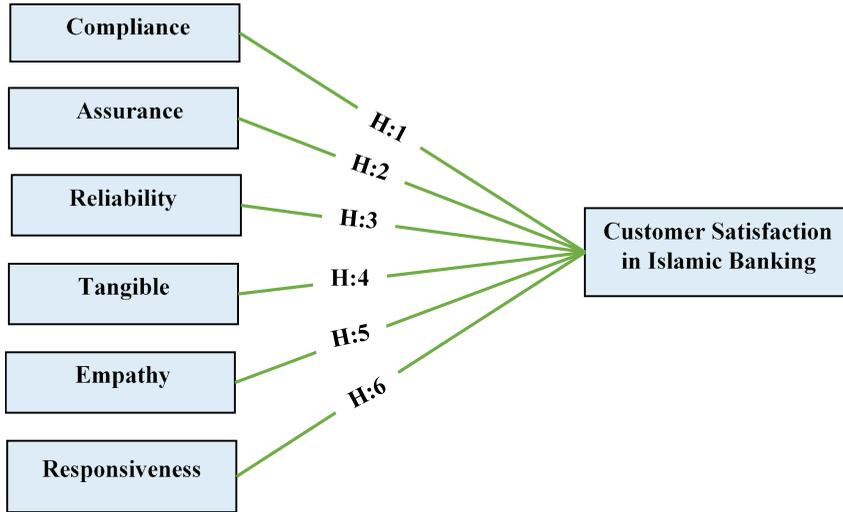


Figure 1. Research Framework.

Compliance

Compliance is abiding to Islamic rules and principles when offering services or products in Islamic banking (Othman & Owen, 2001). This means Islamic banks should avoid the elements of *riba* (usury), *gharar* (uncertainty) and *maysir* (gambling) in all banking transactions. As an alternative, the principle of Profit and Loss Sharing (PLS) should be used as it does not promise return upfront (Amin & Isa, 2008). The main reason for compliance is to ensure that justice and fairness are being practiced between the customers and bank. Hence, the customers would be satisfied if Islamic banks are able to provide good service and fair treatment to the customers. There should also be trust between bank employees and customers (Janahi & Al Mubarak, 2017 Assurance, Reliability, Tangibility, Empathy and Responsiveness; Maswadeh, 2015; Sanjuq, 2014). Therefore, the first hypothesis that will be tested is:

H1: There is a positive relationship between Compliance and Customer Satisfaction in Islamic banks.

Assurance

Assurance is the potential and skills of an employee to develop trust in the mind of a customer about proper security and on time delivery of an assigned task. Bank-

ing services are a good example of assurance (M. Salah Uddin, 2015). According to (Shahin, 2004) assurance would inspire customers and increase their confidence in the organization. Gatari (2016) suggested that secured services can enhance clients' confidence and assurance towards the banks. Hence the second hypothesis is:

H2: There is a positive relationship between Assurance and Customer Satisfaction in Islamic banks.

Reliability

(Shahin, 2004) defines reliability as the ability to perform the promised service dependably and accurately. Providing quality service based on accurate time is an example of excellent service that a bank can provide to the customer (M. Salah Uddin, 2015). According to (Gatari, 2016) the difference between normative expectation from services and actual services is called reliability. In addition, it is emphasized that there is positive relationship between reliability and customer satisfaction. Thus, the third hypothesis is:

H3: There is a positive relationship between Reliability and Customer Satisfaction in Islamic banks.

Tangibility

M. Salah Uddin, (2015) defines *tangibles* as movable and immovable property e.g. interior decoration, inventories, equipment, currencies, buildings, real estate, vehicles, and precious metals. The presence of these assets would affect customers' satisfaction through the service quality of the bank. Shahin (2004) "severity" is being determined from the designers' point of view, not from the customers' side. In this paper, a new approach is proposed to enhance FMEA capabilities through its integration with Kano model. This evolves the current approaches for determination of severity and "risk priority number" (RPN states that tangibles are touchable facilities, appearance of personnel and equipments that influence customers' perceptions. According to (Gatari, 2016) tangibles in banks are physical facilities such as a bank hall, customer seats, waiting rooms, buildings and accessibility. Hence, the fourth hypothesis is:

H4: There is a positive relationship between Tangibles and Customer Satisfaction in Islamic banks.

Empathy

Understanding the feelings of customers and paying attention to satisfy them, is known as empathy (Shahin, 2004). In addition, M. Salah Uddin (2015) suggested that in order to satisfy customers, it is necessary to deal with them in a good manner and with confidence. According to (Gatari, 2016) empathy prevails when bank employees understand, communicate and provide information to the customers.

Hence, the fifth hypothesis is:

H5: There is a positive relationship between Empathy and Customer Satisfaction in Islamic banks.

Responsiveness

Responsiveness is helping customers by providing them with quick services willingly (Shahin, 2004). According to (M. Salah Uddin, 2015) the ability of doing assigned tasks in time manually or electronically is called responsiveness. Atari defines responsiveness as conjoin reaction to meet customers' expectations and needs in time. The aforementioned are essential factors to satisfy customers. Moreover, it is also important for banks to satisfy them by saving their time. Hence, the six hypothesis is:

H6: There is a positive relationship between Responsiveness and Customer Satisfaction in Islamic banks.

Research Methodology

Research Scope and Data Sources

This study investigates the relationship between customer satisfaction and service quality provided by Islamic banks in Malaysia. The measurement is based on CARTER model developed by (Othman & Owen, 2001). This study was carried out by means of a self-administrated questionnaires that was distributed in Klang Valley region which includes Kuala Lumpur (n=93/300), Gombak (n=128/300), and Shah Alam (n=69/300). The questionnaire was designed in three parts; demographic, short questions about banks accounts, and Likert scale of 5 (ranging from strongly disagree to strongly agree) that is used to measure the six variables namely Compliance, Assurance, Reliability, Tangibles, Empathy, and Responsiveness derived from CARTER model developed by (Othman & Owen, 2001). A total number of

300 samples were surveyed, 180 of respondents were targeted through distribution of hard copies and the remaining (120) using the online survey (Google form). Questionnaires were distributed to postgraduate students, employees of various departments, professionals in companies, academics and others. All of them were selected using convenience sampling.

Sampling Method

The primary data was collected using heterogeneous purposive sampling method. This sampling method can also be called judgmental method where customers (respondents) are chosen to answer specific questions in the questionnaires. There are many reasons for selecting this sampling method for our study: 1) Islamic banking mostly refers to Muslims in Malaysia, therefore, Muslims can judge the Islamic products in Islamic banking more than others, thus, most often Muslims were chosen in Kalang Valley in order to respond to the questionnaires for reliable information.

Sampling Size

Sample size is very essential for reliable results. According to Sekaran (2003), population should be presented by sample size in a way where no narrow margin of error can occur. Additionally, according to Joseph et al. (2009), for factor analysis the ratio of sample size to items in questionnaire should be 1 to 5 (5 times more than items in the questionnaire), thus, items in the questionnaire are 25, which means for factor analysis 125 sample size is enough. Whereas regarding multiple regression, Wei (2010), stated that 104 valid responds plus independent variables, which means study needed a sample size of 109 for conducting multiple regression. However, this study collected 300 valid questionnaires which is a sufficient sample size for the above tests.

Findings and Discussion

Profile of Respondents

Table 1.

Profile of Respondents

Demographic	Information	Frequency	Percentage
Gender	Male	157	52.30
	Female	143	47.70
Religion	Muslim	250	83.30
	Non-Muslim	50	16.70
Nationality	Malaysian	220	73.30
	Non-Malaysian	80	26.70
Age	Below 20	6	02.00
	20-35	176	58.70
	36-45	90	30.00
	46-55	28	09.30
Marital Status	Single	209	67.70
	Married	65	21.70
	Divorced	26	08.70
Location	Kuala Lumpur	93	31.00
	Gombak	138	46.30
	Shah Alam	69	23.00
Occupation	Government Sector	73	24.30
	Private Sector	92	30.70
	Academic/Staff	38	12.70
	Student	74	24.70
	Others	23	07.70

	SPM or equivalent	57	19.00
	Diploma	61	20.30
Level of Education	Bachelor's degree	128	42.70
	Master's degree	46	15.30
	Ph.D.	8	02.70
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Monthly Income	Below RM 3000	58	19.30
	RM 3000-5000	85	28.30
	RM 5001-10000	74	24.70
	RM 10001-15000	78	26.00
	RM15001 and above	5	01.700
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Bank Account	Islamic Bank Account	153	51.00
	Conventional bank Account	18	06.00
	Both, Conventional and Islamic accounts	129	43.00
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Type of Account	Current Account	153	51.00
	Saving Account	18	6.00
	Both, Current & Saving Accounts	129	43.00
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Years of Experience	One Year	21	07.00
	1-5 Years	71	23.70
	More than 5 Years	208	69.30
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Reason of Choosing Islamic Bank	Service (Faster/Friendly)	17	05.70
	<i>Shariah</i> Compliance	174	58.00
	High profit on Investment	11	03.70
	Availability of Finance Facilities	47	15.70
	Credit and Provision	14	04.70
	Bank Reputation	37	12.30
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	Total	300	100.00
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As indicated in Table 1 above, males represent the majority of respondents with 52.3 percent and 47.7 percent were females. Majority of the respondents, 83.3 percent were Muslim and remaining 16.7 percent were non-Muslim. 73.3 percent of the respondents were Malaysian whereas 26.7 percent were non-Malaysian. Findings revealed that the majority i.e. 176 of the respondents (58.7 percent) were 20-35 years old. This is followed by 30 percent who are between the ages of 36-45 years, and 9.3 percent between the ages of 46-55 years. In terms of marital status, majority 67.7 percent respondents were single while 21.7 percent were married, and the remaining 8.7 percent were divorced.

Majority of the respondents, 46.3 percent, were from Gombak. This was followed by 31.0 percent from Kuala Lumpur and the remaining 23 percent from Shah Alam. In terms of employment, majority of the respondents (30.7 percent) worked in the private sector, whilst 24.3 percent were from the government sector whereas 24.7 percent were students. Regarding the respondents' academic background, majority of the respondents (42.7 percent) had at least a degree. This was followed by 20.3 percent having Diploma and 19 percent with master's degree qualification. Majority of respondents (28.3 percent) fell between RM 3000-5000 income group. This was followed by 24.7 percent whose incomes were between RM 5001 and 10, 000 and the remaining 19.3 percent were earning less than RM 3000 per month.

Majority of the 153 respondents (51 percent) had an Islamic bank account followed by 129 (43 percent) who had both Islamic and conventional accounts. Only 6 percent had a conventional bank account. In terms of number of respondents (69.3 percent) had more than 5 years experience as bank customers, 23.7 percent between 1 to 5 years and the remaining (7 percent) had less than 1 year of experience. The main reason for choosing the bank was found to be "*Shariah* compliance" i.e. 174 respondents (58 percent) followed by 15.7 percent (47 respondents) "Availability of Finance Facility", whereas 12.3 percent preferred to use it due to "Bank Reputation".

Goodness of Measures

In order to confirm the goodness of measurement of this item, factor analysis and the value of Cronbach's alpha were estimated. Factor analysis demonstrates the validity of the measures while Cronbach α was used to assess reliability by examining the inter-item consistency.

For factor analysis, using the six chosen factors – tangibles, reliability, responsiveness, assurance, empathy and compliance – are “orthogonal” which means it is expected that they are distinct factors. Hence, we implement factor analysis with varimax rotation to test for the uniqueness of the six variables. Consequently, we found that some of the variables had negative items which indicated that these items were errors as well as some of the items had similarity among them. Hence, we removed 2 items out of 35, to achieve validity of data and reliable results.

The results in Table 2 confirm a six-factor solution. Additionally, 66.89 percent of the total variances is used to explain the whole variance. There is insufficient inter-correlation as the KMO measure of sampling adequacy is .825 (a value of greater than 0.6 is a good measure). It is a general rule of thumb that a KMO value of 0.6 is acceptable and a value closer to 1 is better. In our study, Bartlett’s test of sphericity has been applied to check the significance of relationship between the items of construct because if there is no correlation between items of constructs then it is useless to go ahead with factor analysis. The Bartlett’s test of Sphericity was significant ($p < 0.01$) with approximate Chi-Square of 6536.684.

<i>Table 2.</i> KMO and Bartlett’s Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.825
Bartlett’s Test of	Approx. Chi-Square	6536.684
Sphericity	Df	561
	Sig.	0.000

Table 3: present the exploratory factor analysis performed for this study. After satisfying all relevant assumptions six factors were generated, and these factors explained accumulated variance of approximately 66.897 percent with an eigenvalue greater than 1.0 (9.457; 3.269; 3.125; 2.242; 1.879; 1.500; 1.272).

Table 3.

Factor Analysis

Items	Variables						
	C. SAT	COM	TAN	RES	ASS	EMP	REL
I am satisfied with the bank's facilities.	.879						
My bank satisfies my needs and wants	.841						
My bank provides excellent service quality compared to other banks	.809						
The information provided by my bank is accurate	.782						
Overall, my bank provides good value for money based on <i>shariah</i> principles	.668						
My bank provides interest-free loan.		.866					
My bank avoids <i>d Riba</i> (usury) in its transactions		.784					
My bank runs on the principles of <i>Shariah</i>		.760					
My bank offers profit-sharing investment products		.691					
My bank contributes to societal development.		.583					
My bank has branches that are conveniently located for its customer.			.723				

My bank has modern equipment and instrument.			.713				
The bank staff appearance is neat and tidy.			.670				
The bank's physical facilities are visually appealing and glamorous.			.654				
Usually, bank pamphlets and statements are given in clear and complete information.			.652				
The bank provides quick service to their customers.				.809			
My bank always publishes the bank statement at the right time.				.755			
The bankers always reply in any query of the customers.				.713			
My bank employees always are ready to assist customers.				.658			
The bank provides quick service to their customers.				.544			
The staff of my bank eager to instill confidence in customers.					.648		
Customers can put their trust in employees of my bank.					.574		
Bank staff always polite.					.630		

Customers of my bank feel safe in transactions.					.619		
The bank compassionate and reassuring when customers have problems.					.534		
Bank staffs trying to recognize what customers' needs are.						.681	
Bank's operating hours are convenient for all customers.						.669	
The bankers give individual attention to customers.						.585	
Bank services are highly dependable							.520
My bank used to announce the time when services will be performed.							.767
My bank arranges particular care for occasional customers.							.698
The bankers always reply in any query of the customers.							.570
My bank employees always are ready to assist customers.							.522
Eigenvalue	9.457	3.269	3.125	2.242	1.879	1.500	1.272
Percentage of variance	27.82	9.616	9.192	.595	.527	4.411	3.742
Cumulative (%)	27.81	37.43	46.62	3.217	8.744	63.16	66.897

According to Philip & Hazlett (1997) and George & Mallery (2003), the rule of thumb for score that is higher than 0.8 is good. The closer Cronbach's alpha coefficient is to 1.0, the greater is the internal consistency of the items in the scale. The result for Cronbach's alpha reliability test for all questions of independent variables is 0.915 (as shown in table below) which indicates a good consistency level.

Table 4a.

Cronbach's Alpha Coefficients for study Tool Consistency

Domain	No. of Cases	No. of items	Cronbach's Alpha
Total Score	289	35	0.915

Table 4b shows reliability coefficients for the studied variables as well as their means and standard deviations. The reliability of values has been drawn from the value of Cronbach α which are all above 0.7. Nunnally (1979) has suggested that score reliability of .70 or better is acceptable when used in basic social science research. The study results were in the acceptable range. Moreover, the result of multiple regression analysis demonstrated that the variable was also significant. Finally, the standard deviation presented was considered small with values ranging from 0.491 to 0.711.

Table 4b.

Cronbach Alpha, Mean, and Standard Deviation

Variables	Number of Items	Cronbach alpha	Mean	SD
Customer Satisfaction	5	0.899	3.97	0.711
Compliance	5	0.837	3.94	0.708
Assurance	5	0.813	4.14	0.491
Reliability	5	0.809	3.99	0.52
Tangibles	5	0.779	4.05	0.583
Empathy	5	0.772	4.02	0.481
Responsiveness	5	0.799	4.06	0.526

Table 5 illustrates the inter-correlations amongst the main variables as well as with the norm “Customer Satisfaction”. It can be seen that the existing predictive validity, as the inter-correlation of key variables with “Customer Satisfaction” were significant since the p-value is less than the significance level $p < \alpha$, ($0.000 < 0.01$) which is showed by the single asterisks. The *discrimination validity* is also set up to check the variance and correlation between the independent variables; they are neither perfectly correlated nor correlated at all.

Table 5.

Inter-Correlations of key variables

Variables	C. SAT.	COM	ASS	REL	TAN	EMP	RES
Customer Satisfaction	1.000						
Compliance	0.322*	1.000					
Assurance	0.377*	0.399*	1.000				
Reliability	0.399*	0.276*	0.485*	1.000			
Tangibles	0.216*	0.095*	0.336*	0.478*	1.000		
Empathy	0.419*	0.378*	0.543*	0.366*	0.306*	1.000	
Responsiveness	0.288*	0.168*	0.458*	0.438*	0.427*	0.482*	1.000

Correlation Matrix

* Correlation is significant at the 0.01 level, ($p < 0.01$)

Hypotheses Testing

The multiple regression analysis was used to test the previous hypotheses. The results are shown in the Table 6. The standardized β coefficient for variables Compliance was positively related to “Customer Satisfaction” ($\beta=0.135$, $p < 0.05$) and so was “Reliability” ($\beta=0.238$, $p < 0.05$), followed by “Empathy” ($\beta=0.235$, $p < 0.05$). The value of R^2 was 0.268 implying that 26.8 percent of the variation in “Customer Satisfaction” can explained by the three variables; “Compliance”, “Reliability”, and “Empathy” as “Assurance, Tangibles and Responsiveness” were omitted.

Moreover, the F value of 17.872 was significant with 95 percent confidence ($p < 0.05$). “Assurance, Tangibles, and Responsiveness” are insignificant ($p > 0.05$) and

for this reason, we have excluded them from the multiple regression equation when we are looking for the significance level of 0.05. Therefore, H1, H3, and H5 in this study were fully supported while the H2, H4, and H6 were rejected $\alpha=0.05$. The hypotheses rejected were supplementarily examined by scrutinizing their related descriptive statistics. As for H1, H3, and H5, a closer look at their beta values showed that compliance, reliability, and empathy were stronger factors in influencing the customer satisfaction towards service quality in Islamic Banking Sector in Malaysia.

Ultimately, the potential multicollinearity issues were checked, and it showed that the value of Variance Inflation Factor (VIF) was less than 5 (i.e. 1.780 as greater value). Thus, the evaluation shows that there were no multicollinearity problems and the regression assumption still held. Therefore, going ahead with hypotheses testing through multiple regression analysis was extremely recommended.

Table 6.

Multiple Regression Analysis

Variables	Standardized β	p-value	VIF
Compliance	0.135	0.018**	1.280
Assurance	0.077	0.251	1.780
Reliability	0.238	0.000*	1.608
Tangibles	-0.017	0.778	1.422
Empathy	0.235	0.000*	1.666
Responsiveness	0.021	0.741	1.588
F	17.872*		
R^2	0.268		
Adjusted R^2	0.253		

Correlation Matrix:

* Correlation is significant at the 0.01 level ($p < 0.001$)

** Correlation is significant at the 0.05 level ($p < 0.05$)

Further analysis was conducted to find out the reasons for the insignificant result of the three variables namely, Assurance, (H2), Tangibles (H4), and Responsiveness (H6) which may positively impact customer satisfaction hence service

quality in Islamic banking sector in Malaysia. They were however, rejected by multiple regression analysis results. The descriptive statistics (Appendix 1) were examined for the all the five items. It was observed that the majority of the respondents were answering “Agree” while “Strongly Disagree” was rarely chosen by some respondents when it comes to service quality in Islamic banking sector.

Discussion and Implications

The results of the tested hypotheses confirmed that the three variables reliability, empathy and compliance are the main factors that influence the choice of customers in context of service quality in Islamic banks. These factors have a positive relationship with and significant effect on customer satisfaction. The results revealed that customers of Islamic banks are more concerned about the reliability factors such as the provision of information about the services that are needed. They are also concerned about the ability of the bank to provide a channel of inquiry to them. This result was similar to the study of Amin & Isa (2008). All these services if available will provide a positive image of the bank to deliver a reliable service.

Empathy is the concern of customers’ feelings which relates to their satisfaction level with the bank. Although technology can provide several tools to enhance the bank’s services such as ATM and internet banking, it is important that these services are introduced in a user-friendly manner so that customers are able to understand. The results have further revealed that the respondents place emphasis on the ability of the bank to pay attention to their needs and to communicate with them. Furthermore, as Islamic banks, they should be more sensitive towards customers’ feelings and improve empathetic skills among their employees since personal contacts are important in direct transactions.

As for compliance, the results revealed that the respondents are attracted to bank’s ability to provide services that are in compliance with the *Shariah* such as interest free financing that is free from *riba* (usury). They are also attracted to bank’s ability to introduce products that are fairer and just based on profit and loss sharing concept. In addition, the respondents revealed that banks should also provide services that contribute to the development of the society.

The regression results also indicated that both tangibles and responsiveness impact customer satisfaction but this impact is insignificant. This indicated that customers are less attracted to the physical aspects of the banks compared to its ability to provide reliable service. This could be because of good academic back-

ground of the respondents whereby they are more concerned about the ability of the bank to deliver excellent service.

Secondly, the respondents expect banks to provide more efficient service by electronic means for example via ATM, E-Wallet, and interbank transfer which enables them to do many types of financial transactions from their home or offices, such as balance inquiry, payment of bills and inter-bank transfers. These products are designed to be accurate, save time, be efficient and work at extended hours. These features may explain the reason for the tangibles dimension to have negative relationship with customer satisfaction and be insignificant statistically.

Thirdly, the findings also indicated that assurance has a positive relationship with customer satisfaction but its effect is insignificant. Assurance means to instill trust and confidence in customers about provision of quality service. The findings support study by Munusamy et al. (2010) which argues that the customers may feel that the banks have offered them enough safety and sureness in their service. Nonetheless, Islamic banks should continue improving the assurance level in their service to attract customers.

Fourthly, customers of Islamic banks are always looking for compliance as a fundamental and important dimension. Once they are included in service or adopted by the institution, they feel safe and indifferent to other relevant dimensions. The elevated level of control from the government authorities responsible for monitoring financial institutions is also important in this regard. All these make responsiveness important but it does not necessarily have significant effects on customer satisfaction.

Overall, the results of this study have indicated that the use of CARTER model in this case is relevant since there is positive relationship between service quality and satisfaction with all the variables except tangibles which has a negative relationship. It is also interesting to note that out of the six variables, only compliance, reliability, and empathy were found to be significant. The other three variables such as assurance, tangibles, and responsiveness have insignificant effects on customer satisfaction.

Conclusion

Bank Negara Malaysia (BNM) in its strategic paper noted that the market share of Islamic banks in Malaysia quadrupled from 7.1 percent in 2010 to 28 percent in 2016 (Malaysian Reserve, 2018). Against the above backdrop there is indeed a tre-

mendous growth of Islamic banking and finance in Malaysia. Hence, the results of this empirical would be beneficial to provide a direction to the industry in Malaysia to move forward.

In summary the results of this study have proven that there is a positive relationship between service quality and customer satisfaction in five of the six variables studied although only three have been proven to be significant namely reliability, empathy and compliance. The practitioners can make use of these three variables to strengthen their marketing strategy by ensuring that the needs and wants of the customers are met. Malaysia has a large population of Muslims yet Islamic banks have been able to attract non-Muslim customers as well. More specifically, both the Muslim and non-Muslim customers value the same traits when selecting their banks (Sudin, Norafifah & Sandra, 1994). Academicians would also benefit from this new body of knowledge and may conduct further research to analyze how the demographic factors such as religion (Muslim and Non-Muslim) would perceive the importance of service quality in Malaysia.

Limitations of the Study

The study was conducted within the region of Klang Valley in Kuala Lumpur and on Islamic banks' customers only (Muslims and non-Muslims), excluding conventional banks and other financial and service institutions. Therefore, the results of the study could be generalized to the customers of Islamic banks in the study area, considering the limited sample. However, if a study is conducted in other regions of Malaysia, overseas, or on customers of financial and service institutions other than Islamic banks, the results may relatively be different.

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APPENDIX 1

Descriptive Analysis (Assurance)

Item/ Statistics	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
My bank is always compassionate when customers have problems.	0.0	1.7	16.0	52.0	30.3	4.11	0.721
Customers of my bank feel safe performing their transactions.	0.0	1.7	12.3	54.7	31.3	4.16	0.693
Customers can put their trust in employees of my bank.	0.0	1.3	9.3	63.7	25.7	4.14	0.621
My bank provide service in a professional manner	0.0	0.7	8.3	62.7	28.3	4.19	0.600
The staffs of my bank are always eager to instill confidence in their customers.	0.0	1.0	9.3	65.3	24.3	4.13	0.601

Descriptive Analysis (Tangibility)

Item/ Statistics	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
The bank's physical facilities are appealing to customers.	0.3	4.0	17.7	58.0	20.0	3.93	0.751
My bank has modern equipment and instrument.	0.7	1.0	11.0	58.3	29.0	4.14	0.694
The bank staff appearance is neat and tidy.	1.3	17.0	41.7	40.0	4.2	4.2	0.764
My bank has branches that are conveniently located for its customer.	0.7	5.0	15.7	45.3	33.3	4.06	0.866
The information in my bank's pamphlets is clear and complete	0.3	5.0	27.0	35.7	32.0	3.94	0.905

Descriptive Analysis (Responsiveness)

Item/ Statistics	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
Bank should provide quick service to their customers.	0.0	0.7	8.3	31.7	59.3	4.5	0.677
My bank employees are always ready to assist customers.	0.0	2.0	14.7	56.0	27.3	4.09	0.703
The bankers always reply to any query from its customers.	0.0	0.7	14.0	64.7	20.7	4.05	0.61
My bank arranges particular care for occasional customers.	0.3	2.7	27.0	50.7	19.3	3.86	0.763
My bank always publishes the bank statement at the right time.	0.0	1.7	35.0	43.0	20.3	3.82	0.768