Service Quality Dimensions of Islamic Banks: A Scale Development Approach

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Abstract- The purpose of this paper is to identify the key dimensions of service quality of an Islamic bank. A modified SERVQUAL scale based on five dimensional approach is administered to determine the perception of Islamic banks customers towards service quality. The basic purpose of the study is to develop a scale for this purpose. A mail survey with the help of online questionnaire is carried out. Non probability sampling especially snowball and judgmental sampling techniques for sample size 185 has been used. The responses were collected from the 7 Islamic banks located in the Gulf countries mainly the U.A.E. and the K.S.A. Data analysis is done in the form principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA) to validate the scale. Independent sample T test and One Way ANOVA are used to validate the hypotheses.

SERVICEQUALITYDIMENSIONSOFISLAMICBANKSASCALEDEVELOPMENTAPPROACH

Strictly as per the compliance and regulations of:

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Abstract- The purpose of this paper is to identify the key dimensions of service quality of an Islamic bank. A modified SERVQUAL scale based on five dimensional approach is administered to determine the perception of Islamic banks customers towards service quality. The basic purpose of the study is to develop a scale for this purpose. A mail survey with the help of online questionnaire is carried out. Non probability sampling especially snowball and judgmental sampling techniques for sample size 185 has been used. The responses were collected from the 7 Islamic banks located in the Gulf countries mainly the U.A.E. and the K.S.A. Data analysis is done in the form principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA) to validate the scale. Independent sample T test and One Way ANOVA are used to validate the hypotheses.

Results from structural equation modeling (SEM) of relationship between multidimensional service quality scale and one-dimensional customer satisfaction are validated. By the ANOVA results, the differences in the service quality dimensions of the banks with respect to demographic variables, has also been ascertained.

Keywords: islamic banks, customer satisfaction, SERVQUAL. CFA, SEM.

I. Introduction

a) Service Quality

Key to success and survival of any business is the deliverance of quality services to customers and Islamic banks are not exception to this. The banking industry is facing very intense competition due to technological advancement and improved communication systems. Financial services provided by banks are generally undifferentiated products. The banks can distinguish themselves on the basis of improved service quality which is critical for expansion of market share (Shafie, Azmi & Haron, 2004). However, it is difficult to define and measure quality in services because of the intangible nature of services offered. However, a series of researches have been conducted to determine what service quality actually means, what the dimensions of service qualities are and how a bank can have an edge over its competitors in this intensely competitive market. Customer satisfaction, loyalty, recommendation to others, etc. can be achieved through improved service quality.

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b) Service Quality Dimensions

The meaning of quality may differ from person to person but generally it is the thing that meets the customer's expectations that is helpful in gaining and retaining customers (Ijaz & Ali, 2013). There has been a debate in literature about how to best describe service quality concept. Parasuraman et al. (1985) presented a service quality model based on GAP analysis. The GAPS are due to differences between – consumers'' expectation and management perception, management's perception of consumers' expectation and service quality specification, service quality specifications and service actually delivered, service delivery to consumers and communication to consumers about the service delivery and consumers' expectation and perceived service. Thus, service quality is a function of perception and expectations. It is important to find out the gap between the customer expectations of quality services and customers perceptions of organization's performance. This gap may be regarded as the service quality gap (Tahir & Bakar, 2007). Further, finding out the gaps between service quality standards and service quality performance is also critical. SERVQUAL was developed to measure the customers' perceptions of service quality. SERVQUAL has five dimensions – reliability, responsiveness, tangibility, assurance and empathy (Parasuraman et al., 1988, 1991). Othman and Owen (2001) developed an instrument called CARTER based on 35 items having six dimensions. This was the first time a new dimension was added to SERVQUAL five dimensions called "compliance with Islamic principles" that defines the bank's ability to operate in compliance with the principles of Islamic banking and economy (Abedniya and Zaeim, 2011). Gronroos (1982) suggested three dimensions of service quality – technical quality, functional quality and corporate image. Lehthinan and lehthinen (1982) identified three dimensions of service quality as physical quality, corporate quality and interactive quality. Cronin and Taylor (1992) developed SERVPERF to compare with SERQUAL. Avkiran (1994) proposed four factors scale that consists of seventeen items to measure service quality.

Many authors have discussed that service quality dimensions may vary in different sectors, countries as well as cultures (Chaker and Jabnoun, 2010). The service quality dimensions of reliability, access and understanding the customers are ass-

ociated with the features of economic development that are usually found in developed countries. Also, the service quality dimensions seemed to have correlation with Hofstede's cultural dimensions such as power and individualism/collectivism (Malhotra et al., 1994).

c) Islamic Banking

Islamic Banking may be regarded as a non-interest based financial institution following guided by Islamic Laws in its operations (Haque, Usman and Ismail, 2009). Islamic Banking can be distinguished (Ebrahimi and Moghadam, 2012) from Non-Islamic Banking on three important grounds

- No earning of extra interest (Riba)
- Interest rates should be calculated on the basis of Islamic principle
- Banking facilities should be controlled to be spent based on Islamic principles.

The Islamic banking industry is considered as one of the fastest growing sectors in the world of finance and received recognition by both Muslims and non-Muslims alike (Bhatti, Zafarullah, Awan and Bukhari, 2011). Islamic banking is not merely of interest to Muslim customers, but non-Muslim customers see benefits from such a system (Amin and Isa, 2008). Many Islamic financial institutions in different countries do not have Muslims majorities and conventional banks are providing banking facilities to attract Muslim customers. Citibank, HSBC, OCBC and Standard Chartered are examples (Taap, Chong, Kumar and Fong, 2011).

Islamic banking products are similar to the products of Conventional banking (credit cards, investments, cheque collection, etc.), the difference is Islamic banking follows Islamic Law (Shariah) for their operations in which interest is strictly prohibited (Dusuki and Abdullah, 2007).

According to Asian Banker (2005), Islamic Banking has been established in more than 100 countries with an estimated asset of $300 billion. Ernst and Young tracked industry performance across core Islamic finance markets with a combined GDP of $5 trillion in 2011. Islamic banking assets are forecast to grow beyond the milestone of $2 trillion by 2014. Further, 10 of the world's 25 Rapid Growth Markets (RGMs) have large Muslim populations and this way, offers a large growth opportunities for Islamic banking industry.

d) Islamic Banking Service Quality and Customer Satisfaction

Islamic banks have started their operations in 21st century and they are competing with well established conventional banks. They are competing in the same market in terms of products and services offerings (Naser and Moutinho, 1997). It is a challenge for Islamic banks to gain new customers and to retain the old ones. Thus, Islamic banks are not only competing with each others, but also with the conventional banks which are well established in terms of customers and market share (Ahmad, Rehman, Saif and Safwan, 2010). Banks have realized the importance of service quality for successful survival in this competitive environment (Wang et al., 2003). Service quality is an important determinant in measuring the success of an organization. Customer satisfaction lies in how well a service meets or exceeds their expectations and accordingly customers judge the performance of the organization (Parasuraman et al., 1990). This creates a challenge for marketers to measure service quality from customers' point of view (Abedniya and Zaeim, 2011). Islamic banking showed an extra ordinary performance and studies in the world showed positive perspective of service quality satisfaction by customers (Ijaz and Ali, 2013). Banks should develop customer service standards to maintain profitable relations (Metawa and Almossawi, 1998). Trust and commitment are crucial factors for customer satisfaction (Nelson, 2006) which determines the likelihood of repurchase intentions (Taap, Chong, Kumar and Fong, 2011). The banks all over the world are realizing the importance of quality of services and trying to improve their service quality to attract more customers.

II. Literature Review

Services are intangible in nature. Therefore, it is difficult to define and measure quality in services because of the intangible nature of services offered. However, a series of researches have been conducted to determine what service quality actually means, what the dimensions of service qualities are and how a bank can have an edge over its competitors in this intensely competitive market.

a) Service Quality Models

Parasuraman et al. (1985) presented service quality GAP model and described service quality as a function of perception and expectation. The existence of gap is the result of difference between perception and expectation. Thus, key to managing perceived service quality is to minimize this gap.

$$SQ = \sum_{j=1}^{k} \left(P_{ij} - E_{ij} \right)$$

Where:

SQ = Over all service quality;
K = Number of attributes;
P_{ij} = Performance perception; and
E_{ij} = Service quality expectation

This GAP analysis was refined into a scale called SERVQUAL to measure service quality perceptions of customers (Parasuraman et al., 1988) and the original ten dimensions were merged into five

dimensions of reliability, responsiveness, tangibles, assurance and empathy. The instrument was again refined in 1991(Shafie, Azmi & Haron, 2004). SERVQUAL has been widely used by researchers and managers in assessing the customer perception of service quality in different industries (Sangeetha and Mahalingam, 2011). However, dimensions of the instrument for service quality depend upon the type of industry under study (Babakus and Boller, 1992). Further, culture is also an important factor in determining the dimensions of service quality (Gayatri, Hume and Mort, 2011). Therefore, it is important to develop measures of service quality with respect to the country and culture under study (Jabnoun and Khalifa, 2005) and accordingly, there is a need to modify or add dimensions to existing model, SERVQUAL, to bring out valid findings from research. Othman and Owen (2001) suggested an additional sixth dimension to the existing five dimensions of SERVQUAL as "Compliance" and proposed a new model called CARTER based on 35 items (Shafie, Azmi & Haron, 2004). They considered it necessary because they believed that Islamic banking operates on the basis of different principles and culture. Therefore, they added "compliance to Islamic Law" as sixth dimensions along with items such as – Islamic laws and principles based operations, no involvement of interest, Islamic products and services and provision of profit sharing products. In an application of CARTER model on Kuwait Finance House to measure the service quality in Islamic banking industry, Othman and Owen (2001) found positive link between quality, satisfaction and service encounter. Abedniya and Zaeim (2011) used CARTER model and disconfirmation model for measuring the level of customers' perceived service quality. Shafie, Azmi & Haron (2004) applied CARTER dimensions to study the perception of retail customers of Malaysian Islamic banks and found that level of satisfaction is significant. The CARTER was based on 35 items and evaluated on six dimensions of compliance, assurance, reliability, tangible, empathy and responsive-ness. Results prove the reliability of these instruments.

In a study in Malaysian Islamic Bank, Amin and Isa (2008) examined relationship between service quality perception and customer's satisfaction by adopting and modifying SERVQUAL and CARTER scales. In an another study on Customized measure of service quality in the UAE, Jabnoun and Khalifa (2005) designed a 30 items questionnaire based on five dimensions of SERVQUAL and two additional dimensions of values and image. Likewise, there has been a continued research by different authors using and modifying SERVQUAL as per the need of the country and culture under study - Al-Tamimi and Al-Amiri, 2003; Jabnoun and Khalifa, 2005; Tahir and Abu Bakar, 2007; Amin and Isa, 2008; Ahmad, Rehman, Saif and Safwan, 2010; Ahmad, Bashir and Nawaz, 2010; Chaudhary and Asif, 2011; Taap, Chong, Kumar and Fong, 2011; Siddiqi, 2011; Ebrahimi and Moghadam, 2012; Ijaz and Ali, 2013.

Despite its wide application, SERVQUAL approach is criticized by some authors on conceptual as well as on operational grounds (Cronin and Taylor, 1992; Babakus and Boller 1992; Brown et al., 1993; Gilmore and Carson, 1993; Teas, 1993 and 1994). Cronin and Taylor (1992) suggested a performance based instrument called "SERVPERF" as they believed that performance based instrument is better than any other service quality measures. However, 22 items from SERVQUAL model were considered valid and were used in the SERVPERF model (Gayatri, Hume and Mort, 2011).

In a new approach, Al-Mutawa and Ibrahim (2013) attempted to match front-desk employees' personality traits with the customers' assessment of Islamic Bank's service quality in the UAE using Mini-Markers instrument and SERVPERF instrument and regression analysis was used to determine the relationship between them. In an earlier study by Bhatti, Zafarullah, Awan and Bukhari (2011) examined key determinants using internal organizational service quality orientation factors (abbreviated as ISQF) from employees' perspective. The paper studied relationship between ISQFs (employees' service performance, service concept, employees' service competence, employees' training and employees' customer service orientation) which are critical to improve service quality performance.

Few other service quality models that have been used by researchers include Logit model (Haque, Osman and Ismail, 2009). Logit model is a mathematical model which guarantees that probabilities calculated from Logit model lie within the logical bounds of 0 and 1. They found a positive relationship of quality of service, availability of service, religious perspective and confidence in bank with perception of customers about Islamic banks. Misbach, Saruchman, Hadiwidjojo and Armanu (2013) applied Structural Equation Model (SEM) to analyze Islamic bank service quality, trust and satisfaction. Butt and Aftab (2013) used SEM procedure to test the relationships among e-service quality, e-satisfaction, e-trust and e-loyalty.

Table 2.1 : Quality Dimensions in Islamic Bank Sector and Key Findings

S.No.	Author(s)	Year	Findings	Key variable used
1.	Ijaz and Ali	2013	*Islamic banks managers showed greater satisfaction than customers*	*SERVQUAL instrument of service quality containing five dimensions of service quality.*
2.	Al-Mutawa abd Ibrahim	2013	*Personality traits do not have interdependent effect on customers' service quality perception*	*Mini-Markers instruments to asses personality traits and SERVPERF instrument for service quality*
3.	Butt and Aftab	2013	*Attitude towards Halal banking has positive influences on e-service quality*	*Structural equation modeling procedure*
4.	Abedniya and Zaeim	2011	*Level of customers' perceived service quality*	*CARTER instrument and disconfirmation model for measuring perceived service quality and gap between the customer expectation and customer perception of service quality dimension*
5.	Omar Siddiqui	2011	*Positive correlation between service quality attributes and customer satisfaction*	*A research model was developed to know the interrelationship service quality and customer loyalty*
6.	Ahmad, Rehman, Saif and Safwan	2010	*Service quality Perception of Islamic banks customers is higher than the Conventional banks*	*Descriptive statistics for demographic characteristics and T-test to examine the difference in perception*
7.	Haque, Osman and Ismail	2009	*Confirm positive relationship of quality of service, availability of service, religious perspective and confidence in bank with perception of customers about Islamic banks*	*A Logit model was used for hypotheses testing*
8.	Tahir and Bakar	2007	*Service quality provided by banks was below customers' expectations*	*SERVQUAL model on 22 attributes with five dimensions of Tangibility, Reliability, Responsiveness, Assurance and Empathy.*
9.	Malhotra et al.	2005	*Customer perception of service quality in developing countries were different from perception customers in developed countries*	*Used 10 dimensions to measure quality of service*
10.	Shafie, Azmi and Haron	2004	*Significant validity of 35 attributes of CARTER and six dimensions, compliance being most important dimension*	*CARTER model with 35 items having six dimensions of Compliance, Assurance, Reliability, Tangibles, Empathy and Responsiveness.*
11.	Al-Tamimi and Al-Amiri	2003	*Positive significant relationship between service quality and SERVQUAL dimensions, but difference in level of service quality in UAE Islamic banks*	*Linear regression results to indicate relationship between overall service quality and the SERVQUAL dimensions in the UAE Islamic banks. ANOVA results to indicate differences in level of service quality*
12.	Othman and Owen	2001	*CARTER model is multidimensional and provides different implications for managers and researchers*	*CARTER model with 34 items was used. A dimension was added to SERVQUAL as Compliance with Islamic Law dimension*
13.	Avkiran	1994	*Helps in diagnose problems in delivery of quality services and taking decisions*	*Seventeen items to measure service quality based on four dimensions (Staff conduct, Credibility, Communication and Assess to teller services.*

Table 2.2 : Islamic Banks Service Quality Dimensions and Customer Satisfaction – Review of major Muslim Countries.

S.No.	Year	Author and Country	Findings
1.	2013	Misbach, Saruchman, Hadiwidjojo and Armanu (Indonesia)	Significant influence of Islamic bank service quality on customer satisfaction, responsiveness is the strongest factor and compliance is the weakest
2.	2013	Ijaz and Ali (Pakistan)	Managers showed greater satisfaction than customers for service quality of Islamic banks
3.	2013	Butt and Aftab (Malaysia)	Attitude towards Halal banking positively influences perceived e-service quality
4.	2013	Al-Mutawa and Ibrahim (UAE)	Positive results for linkages between employees' traits and service quality perceptions
5.	2012	Ebrahimi and Moghadam (Iran)	Assurance and responsiveness are most important factors and Islamic banking is least important
6.	2011	Siddiqi (Bangladesh)	SERVQUAL is suitable for measuring service quality in Bangladesh
7.	2011	Taap, Chong, Kumar and Fong (Malaysia)	Difference between Isalmic banks and conventional banks lie in terms of degree but not in terms of pattern
8.	2010	Chaker and Jabnoun (Qatar)	Lack of empowerment, centralization and lack of transformational leadership were found significant barriers to service quality in Islamic banks in Qatar
9.	2010	Ahmad, Bashir and Nawaz (Pakistan)	Weak positive correlation between service quality and performance of Islamic banks
10.	2008	Amin and Isa (Malaysia)	Significant relationship between service quality and customer satisfaction

III. Research Objective

To identify the key dimensions of service quality scale for Islamic banks and its variations with the demographic variables of the respondents.

IV. Methodology

The research design used in this study is Descriptive in nature. Snowball and Judgmental sampling techniques has been used as sampling techniques. There was an online Questionnaire based on modified SERVQUAL has been used for collecting the data. The five points of the scale represent the following five categories of response: (5) strongly agree, (4) Agree, (3) neither agree Nor Disagree (2) disagree, and (1) strongly disagree.

The questionnaire consisted of two parts. The first part included 22 items categorized in five dimensions of the service quality. The second part consists of the 4 items of customer satisfaction.

a) Exploratory Factor Analysis

Exploratory factor analysis (EFA) was performed using SPSS 16. The analysis was conducted using principal component analysis with varimax rotation and Kaiser normalisation as an extraction method. The five factors identified were chosen in terms of eigenvalues larger than 1.0.

The Kaiser-Mayer-Olkin (KMO) test was used to measure the sampling adequacy for principal component analysis. The value of KMO is .679, which is considered good. In order to measure sphericity in the study, a Bartlett's test was applied, which showed that the sample was significant at 0.000, which is also acceptable and indicating absolute significant.

A reliability test was also applied in this study, as this tests the consistency and the positive correlation between the model's variables. Reliability was measured by Cronbach's Alpha. The closer the Cronbach's Alpha result is to one, the higher the reliability of the study. In this study, the Cronbach's Alpha result was 0.875, which indicates a high degree of reliability. The identified factors represented 66.92% of the variance of the variables.

Table 3.1 : Islamic banks service quality dimension Statements

Dimensions	No. of items
Tangibility	1-4
Reliability	5-9
Responsiveness	10-13
Assurance	14-17
Empathy	18-22
Customer satisfaction	23-26

Table 3.2 : Results of factor Analysis

Item no.	Factor Loading	Factor extraction	Cronbach's alpha	Mean Value
Tangibility 1	0.806605			3.6706
Tangibility 2	0.648282			3.5059
Tangibility 3	0.69773	21.08665	.515	3.8706
Tangibility 4	0.823918			3.8471
Reliability1	0.885335			3.8353
Reliability2	0.742648			4.0118
Reliability3	0.782888		.722	3.1176
Reliability4	0.713545	15.81549		3.9176
Reliability5	0.657836			4.3647
Responsiveness1	0.645635			3.5176
Res11	0.770433		.605	3.5176
RES12	0.679438	8.598285		3.9294
RES13	0.553201			3.8235
A14	0.478			3.9412
A15	0.559525	7.80762	.660	4.2824
A16	0.484582			3.8471
A17	0.439919			3.8471
E18	0.634971			3.9059
E19	0.583003		.677	3.6118
E20	0.612363	7.062446		3.9412
E21	0.873837			3.9059
E22	0.414168			3.9294
SAT23	0.6804	6.591995		4.2353
SAT24	0.458958		.869	4.3176
SAT25	0.775875			4.2235
SAT26	0.723989			4.2235

V. Measurement Model

Confirmatory factor analysis was estimated on 22 items measuring six constructs. In addition, it was also checked the measurement properties of the variables by comparing the baseline model with alternate models. Suggested six-factor model resulted in a significant chi-square statistic and goodness-of-fit indices suggesting that the model fits the observed co-variances well ($\chi2$=815.1, p<0.01, df=283, $\chi2$/df=1.87 (<3), CFI=0.954; GFI=0.597; AGFI=.501; RMR=0.110; RMSEA=0.01). In addition, all items loaded significantly on their respective constructs (with the lowest t-value being 3.58), providing support for the convergent validity of measurement items. Finally, discriminant validity was obtained for all constructs since the variance extracted for each construct was greater than its squared correlations with other constructs (Fornell & Larcker, 1981). With overall model accepted, each of the dimensions was evaluated separately for construct reliability (CR) and variance extracted, the values are shown in table 2. It shows that the CR ranges from 0.765 to 0.897, the construct's average variance extracted (AVE) ranges from 0.521 to 0.679, and the construct's AVE of each latent variable is over 0.5, which represents sufficient convergent validity (Hair *et al.*, 1998).

Table 5.1 : Results of CR, AVE and Cronbach's Alpha

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Explained
Tangibility	.826	.893	.567
Reliability	.844	.865	.679
Responsiveness	.927	.897	.534
Assurance	.866	.765	.656
Empathy	.896	.786	.521
Satisfaction	.786	.834	.556
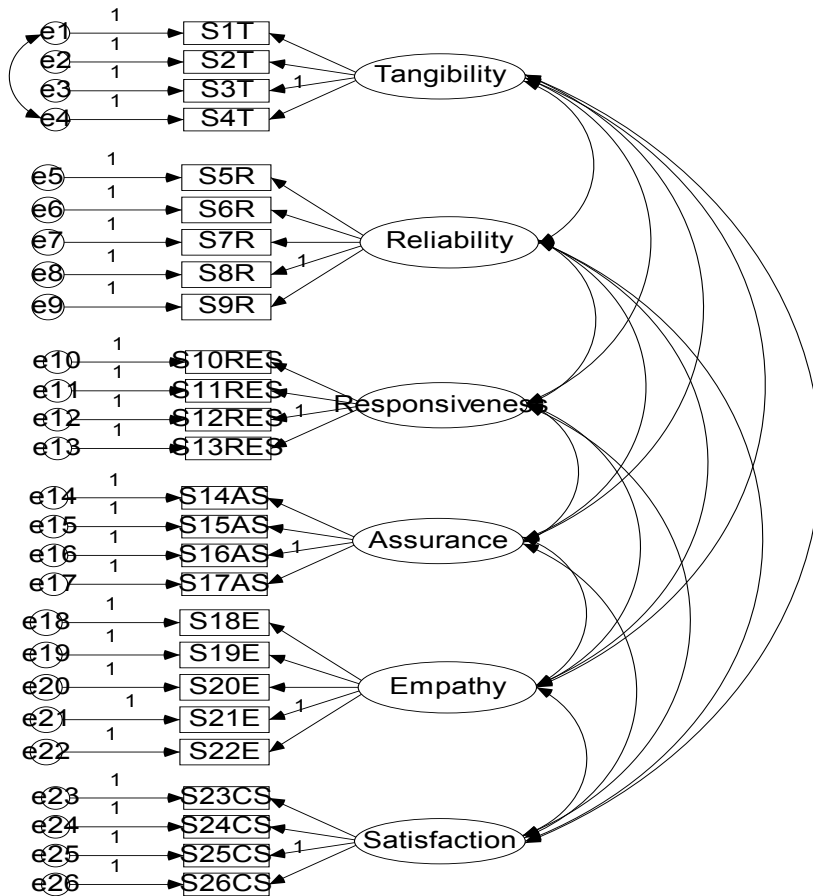
Figure 1 : Proposed Model

Table 5.2 : Model Fit Indices

Fit Indices	Measurement Model	Structural Model
CMIN/DF	2.880	2.997
RMR	.110	.112
GFI	.597	.468
AGFI	.501	.434
CFI	.554	.589
RMSEA	.015	.019
Chi-square(DOF), p-value	815.1, 283 & .001	387.399, 16, .000

VI. SERVICE QUALITY DIMENSIONS WITH DEMOGRAPHIC VARIABLES

Demographic Variables\Service Quality D.	TAN.	REL.	EMPATHY	RESP.	ASSUAR.	CUSTOMER SATISFACTION
AGE	Insignificant	Significant	Insignificant	Insignificant	Insignificant	Insignificant
GENDER	Insignificant	Insignificant	Significant	Insignificant	Insignificant	Insignificant
COUNTRY	Insignificant	Insignificant	Significant	Insignificant	Significant	Insignificant
PROFESSION	Insignificant	Insignificant	Insignificant	Insignificant	Significant	Significant
EDUCATIONAL QUALIFICATION	Insignificant	Significant	Significant	Insignificant	Insignificant	Insignificant

VII. RESULTS AND DISCUSSION

From the data analysis it has been found that Tangibility along with different demographic variables such as Age, Gender, Country, Profession and Educational Qualification has insignificant difference. Reliability along with demographic variables such as Age and the Educational Qualification has significant

difference while along with Gender, Country and Profession it has insignificant difference.

Empathy along with age and profession has insignificant difference while gender, country and educational qualification has significant difference. Responsiveness with demographic variables such as Age, Gender, Country, Profession and Educational Qualification has insignificant difference. Assurance along with Country and Profession has significant difference while along with Age, Gender and Educational Qualification has insignificant difference.

Customer satisfaction along with Profession has significant difference while along with Age, Gender, Country and educational Qualification it has insignificant difference.

VIII. CONCLUSIONS

Now a days with the changing world scenario in the aftermath of global financial crisis, remain profitable is a key challenge for the financial institutions. They are exploring ways to keep their customers satisfied with the quality of service they provide. They are developing frameworks to determine the drivers of service quality and their impact on overall customer satisfaction. Islamic banking industry pays more attention on the dimensions of service quality to remain more competitive with their conventional counterparts. This study applied five dimensional model of SERVQUAL for measuring the service quality of Islamic banks. Tangible elements of Islamic banks have a direct impact on satisfaction. So it needs to be improved further to achieve high satisfaction level.

In financial transactions, reliability of the service providers is a vital factor of service quality. This study also approved this hypothesis that reliability influenced satisfaction. Banking institutions need to devised strategies to strengthen this dimension of service quality. In Islamic banks, transaction is reliable if it compliance the basic principle of transparency, justice and free from interest. An interesting finding is the negative influence of responsiveness on customer satisfaction, which demands for the redesign of the existing communication network of the banks. Assurance influences the customer satisfaction of the banks along with the empathy as the one of the construct of service quality.

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