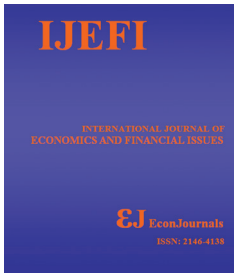

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2016, 6(S7) 249-258.

Special Issue for "International Soft Science Conference (ISSC 2016), 11-13 April 2016, Universiti Utara Malaysia, Malaysia"

Developing Service Quality Index for Zakat Institutions

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ABSTRACT

The aim of this paper is to examine service quality (SERVQUAL) of zakat institutions in Malaysia using an enhanced model appropriate for zakat institution. We use a new and enhanced model (combination of SERVQUAL and CARTER) to examine the extent of SERVQUAL of zakat institutions from the perspective of zakat stakeholders. Data were collected from 799 respondents including both zakat payers and zakat recipients. The paper utilizes the structural equation modeling in examining the extent of SERVQUAL given by zakat institution and further develops SERVQUAL Index (SQI) for both zakat payers (SQI_{ZP}) and zakat recipients (SQI_{ZR}) using a Customer Satisfaction Index. The results reveal that responsiveness and compliance was found to be the strongest indicator to influence satisfaction of the zakat payers while reliability was found to be the strongest indicator to influence satisfaction of the zakat recipients. The SQI_{ZP} and SQI_{ZR} of Malaysian zakat institutions are 76.3 and 76.4 respectively. This study is one of the first to examine the SERVQUAL of zakat institutions using an extended SERVQUAL and CARTER models with both zakat payers and zakat recipients as respondents. The model is not only relevant and applicable to Malaysia but also to other Muslim countries.

Keywords: Service Quality, Structural Equation Modeling, *Zakat* Institution, Service Quality Index
JEL Classification: D63

1. INTRODUCTION

In Malaysia, the State Islamic Religious Councils are responsible in collecting and distributing the zakat funds. The issue arises since there is no provision provided that zakat must be paid to the authority where the zakat payers earn their income. Likewise, there is also no provision that prevent zakat payers from paying it directly to the *asnaf*. These phenomena may create inequality of socioeconomic development between one state to another. One cause that may contribute to these phenomena is bad service quality (SERVQUAL) of the zakat institution. The institutions are said to practice favoritism and unfair distribution of zakat funds. Dissatisfaction of the stakeholders may lead to problems such as leakages[1] and unreachable of zakat fund to its rightful recipients.

To the researchers' knowledge, although studies on SERVQUAL have been carried out widely, there are very few studies conducted on zakat SERVQUAL. Hence this study tries to fill in the gap by examining the perception of the main zakat stakeholders, namely zakat payers and zakat recipients towards the services given by the institutions.

In zakat institutions, SERVQUAL is very important because it portrays the image of Islam. With regards to zakat institutions, SERVQUAL involves how zakat institution deals with zakat payers as well as zakat recipients in playing its role as an institution that manages zakat fund. Other than that, a quality service also encourages customer to maintain the loyalty and confidence of zakat payers and attracts more zakat payers to contribute in zakat institutions. This is evidenced by Firdaus et al. (2012) that satisfaction factor is the main reason a Muslim pays their zakat through zakat institutions. Hence, this study aims to examine the

1 Leakage is the opposite of injection in macroeconomics. Nik Hassan (1991) named it as "independent payment" and argued that the practice reflects the fact that people are dissatisfied with the formal institution in managing zakat fund.

extent of SERVQUAL of zakat institutions in Malaysia and further develop SERVQUAL Index (SQI) for both zakat payers (SQI_{ZP}) and zakat recipients (SQI_{ZR}). The paper is organized as follows: Next section reviews literature related to SERVQUAL. Section 3 discusses methodology used in this study, followed by the results and findings in Section 4. Next, Section 5 concludes the study.

2. REVIEW OF LITERATURE

SERVQUAL is a multi-dimensional and abstract concept. It is associated with some unique features, for example, inseparability of production and consumption, intangibility, and heterogeneity. In the absence of objective measures, the measurement of quality is a very complex issue and firms often need to rely on customers' perception of SERVQUAL (Parasuraman et al., 1985). Gronroos (1984) defined SERVQUAL as the perceived quality of a given service will be the outcome of an evaluation process, where the consumer compares his expectations with the service he perceives he has received, whereby he puts the perceived service against the expected service. The result of this process will be the perceived quality of the service.

Among the numerous approaches that measure SERVQUAL, the two most popular would be the SERVQUAL model (Parasuraman et al., 1985; 1988; 1990; 1991; 1994) and the technical or functional quality framework by Gronroos (1983; 1990). These two models have been used in wide range of service industries, including banking, airline and healthcare industries. To date, the SERVQUAL dimensions are the most popular and accepted SERVQUAL dimensions (Markovic and Raspor, 2010; Landrum et al., 2009; Kiran and Diljit, 2011; Hassanzadeh et al., 2010; Nejati and Nejati, 2008; Nagata et al., 2004; Manjunatha and Shivalingalah, 2004; Nitecki and Hernon, 2000; Tan and Foo, 1999).

Parasuraman et al. (1988) developed SERVQUAL, a multiple item scale, for measuring SERVQUAL and argued that SERVQUAL as perceived by customers is originated from a comparison of customers' expectations and their perceptions of the performance delivered by the firm. It is identified that SERVQUAL encompasses five dimensions, namely reliability, responsiveness, assurance, empathy, and tangibles. SERVQUAL is a second-order construct that measures the gap between customer expectations and customer perception of delivery in the five dimensions. SERVQUAL has become a mainstream instrument to quantify SERVQUAL because of its pertinence of techniques in measuring and managing SERVQUAL. The SERVQUAL instrument has also been used in cross-cultural and cross-industry studies, with generally satisfactory results. Lam (1997) used the SERVQUAL instrument in evaluating SERVQUAL encounters in Hong Kong Hospitals and found it to be essentially unidimensional, but also reliable. A modified version of SERVQUAL was recently used to determine quality of service in marketing research agencies in the UK. It is concluded that notwithstanding the criticisms of the scale, the instrument was successfully applied and may have practical applications (Donnelly et al., 2000). The evidence suggests that the SERVQUAL instrument is a practical way of measuring the quality of service encounters.

In addition, Othman and Owen (2001) introduced CARTER instrument which includes compliance, assurance, reliability, tangibles, empathy, and responsiveness to measure SERVQUAL in the banking industry with specific focus on Islamic banking. They developed this model to incorporate Islamic dimension to the existing SERVQUAL and consequently, introduced a dimension known as "Compliance with Islamic Law." This dimension includes attributes such as Islamic law and principles, provision of free interest loans and provision of Islamic products and services among others. They applied their model to a case study and found a positive link between quality, satisfaction and service encounter. Their findings proved that CARTER instrument is valid in measuring SERVQUAL. Haron et al. (2004) adapted CARTER instrument in a Malaysian setting and found similar findings to Othman and Owen (2001). However, the setting used to examine the applicability of CARTER instrument is limited to Islamic banking industry.

With regards to zakat institution, Kamil (2005) asserted that perceived SERVQUAL is one of the intrinsic motivational factors of individual Muslim to pay zakat, particularly zakat on income. For that reason, Ghani et al. (2012) proposed SERVQUAL dimensions for zakat institutions along with financial performance measurement and employees' satisfaction index as a composite performance measurement for zakat institution using a series of focus group interviews. Furthermore, Ghani et al. (2012) suggested that the original model of SERVQUAL is applicable to measure the SERVQUAL performance of Islamic non-profit organization. However, the measurements have not been tested by the researchers. In addition, Ghani et al. (2012), shows that there is no appropriate instrument to measure the SERVQUAL and customer satisfaction in a non-profit organization. As CARTER model is the only model that measures the SERVQUAL in a profit oriented Islamic organization, it is proposed that the model should be modified to suit the non-profit Islamic organization. It is also suggested that both SERVQUAL and CARTER model to be combined in order to measure the SERVQUAL in non-profit oriented organization. However, the proposals by Ghani et al. (2012) have not been tested empirically in the non-profit oriented organization like zakat institutions. Therefore, this study will assess customer satisfaction from the perspective of payers and recipients as well as its relationship with the SERVQUAL in zakat institutions using the combination of SERVQUAL and CARTER model, as proposed by Ghani et al. (2012). Moreover, this research tries to develop appropriate instruments of SERVQUAL and validate the instruments in order to develop SQI for zakat institution. It is important in order to ensure the problem of leakages[2] in zakat does not exist.

3. RESEARCH METHODOLOGY

As an institution that manages zakat fund, zakat institutions play important role in providing a good service to their stakeholders. Hence, it is really important to investigate how the stakeholders

2 Leakage is the opposite of injection in macroeconomics. Hassan (1991) named it as "independent payment" and argued that the practice reflects the fact that people are dissatisfied with the formal institution in managing zakat fund.

in zakat institutions, namely zakat payers and zakat recipients, perceive SERVQUAL of the zakat institutions itself. Furthermore, the measurement of the effectiveness of zakat institutions in playing their role in collecting and distributing zakat funds is also important to be highlighted. The effectiveness is measured through the assessment of the quality of the service provided by the zakat institutions.

In doing so, service attributes to performance of zakat institutions were defined within the service dimensions of reliability, tangibles, empathy, responsiveness and compliance which were adopted from Ghani et al. (2012). Table 1 shows the measurement items in their respective dimensions that mirrored the service attributes to performance of zakat institutions. The questionnaires used to measure the dimensions are available upon request.

This study mainly used the quantitative research design or scientific research approach (Meimand et al., 2002). The quantitative analysis refers to data collection through the field study and is represented by numbers that can be analyzed with widely available descriptive and inferential statistics (Bordens and Abbott, 2008). A quantitative research is chosen in this study in order to test the research hypothesis. The data in this study is collected through a survey method and grouped into the scientific research (Meimand et al., 2002). The quantitative research involves a large number of respondents, typically 100 or more and yielded results that were representatives of the total population (McCullough and Tabak, 2010). This study used proportionate stratified random sampling. Stratified random sampling was used when samples were taken from identifiable groups (strata), subgroups, etc. The subgroups identified in this study are zakat payers and zakat recipients. The list of zakat payer and recipient were obtained from Pejabat Zakat Negeri Kedah, Pejabat Zakat Negeri Selangor, Pejabat Zakat Negeri Kelantan dan Pejabat Zakat Negeri Melaka.

Factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. This could be done by defining common underlying dimensions which is also known as factors (Hair et al., 2007). Hair et al. (2007) described factor analysis as a method used to reduce a large number of variables by combining the related variables together in a factor. It is a rule of thumb that factor loadings >0.30 (absolute value) are considered significant. Loading 0.40 are considered more important, and if the loadings are 0.5 or greater, they are considered very significant (Hair et al., 2007). For the purposes of this study, the cut-off point for significant factor loading that was chosen is 0.0 as recommended by Hair et al. (2007).

The results of exploratory factor analysis (EFA) showed that there was an inter-correlation between variables, so we expected them to correlate with each other as they measured the same thing. Inter-correlation arises when variables are highly correlated and singularity variables perfectly correlated. To eliminate this problem, we looked through the anti-image matrices and deleted some variables below KMO values. Basically, the value of KMO should be >0.5 if the sampling is adequate. According to Kaiser (1974) values >0.5 as acceptable, value below this should lead to collect more data or rethink which variables to include. More specifically, values between 0.5 and 0.7 are good, meanwhile, values between 0.8 and 0.9 are great and value above 0.9 are super (Hutcheson and Sofroniou, 1999).

Analytical approach is a analysis steps such as coding the data from the respondent, data screening, transforming and modeling data with

Table 1: Variables used to measure the five dimensions

Dimension	Measurement items/service attributes
Reliability	Performance of service in a dependable and accurate manner, staff's knowledgeable, Meet deadline in providing services, staff's show sincere interest to assist customers, staff's provide service right the first time, staff's give proper advice, Integrated value-added service that is according to Islam, Staff's ability to provide courteous and knowledgeable service, knowledgeable and experience management team, Friendliness of zakat personnel, wide and easy access to network
Tangibles	Availability and appearance of facilities and personnel, Interior comfort of the organisation, Physical facilities of the organisation, External appearance such as parking space, Location convenience such as accessibility via public transport, Counter partitions/special room for customer with 'issues', Materials associated with the service such as brochure or magazines, Operation hours, Number of counters during peak hours, Relevant forms associated with the service, Facilities for disabled people.
Empathy	Willingness of staff to understand the needs of customers, employees understand customers' needs, employees give personnel attention, employees have a sense of humour, employees take care of customers' specific needs, confidentiality of customers' information. confidentiality of customers' morale issues, value-added services in terms of financial/personal counseling, zero service charge, availability of user-friendly forms, value-added services such as photocopy service and filling forms for customers
Responsiveness	Willingness of staff to assist customers and provide prompt service. Employees' knowledgeable about zakat, employees always willing to assist customers, ability to fulfill individual needs. courteous counter service staff, fast and efficient counter service, number of branches available, prompt service, one stop centre that is everything under one roof, number of staff/ counters available, staff never too busy to respond to customers' needs
Compliance	Not involve in any interest paid/taken activities, investment only in Islamic compliance financial institution, financial transactions only with Islamic compliance financial institution, in-house religious advisors dispose non-shariah compliant earnings, fulfill its social role as well as promote Islamic finance, no contradictory to Islamic teaching; incorporate Islamic business ethical principles

Source: Adopted from Ghani et al. (2012)

the goal the highlighting useful information, suggesting conclusions and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science and social science domains (Churchill and Lacobucci, 2004; Sekaran, 2000). For this study, the following analyses were conducted: Descriptive statistics, data screening, validation analyses, EFA, confirmatory factor analysis (CFA) and structural equation modeling (SEM). Data screening is conducted to inspect and clean the from the otliers, Cronbach alpha and composite reliability, univariate and multivariate normality, multicolinearity linearity and homocedasticty. Validation of data was conducted with EFA and CFA. EFA was conducted on the pilot data because the instrument was modified by (Cullen et al., 1995; Yau et al., 2000; Thuy and Quang, 2005).

After the data were screened and validated, they were analyzed using SEM in AMOS. According to Hair et al. (2007) SEM is defined as multivariate technique combining aspects of factor analysis and multiple regressions that enables the researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs (variates) as well as between several latent constructs.

3.1. EFA

EFA is widely used and broadly applied statistical approach in information system, social science, education and psychology. EFA explores the data and provides the researcher with the information about how many factor are needed to best represent the data (Hair et al., 2006). The distinctive feature of EFA is that the factors are derived from statistical results, not from the theory, so they can only be named after the factor analysis is performed. EFA can be conducted without knowing how many factors really exist or which variables belong with which constructs.

3.2. SEM

SEM is a statistical technique for testing and estimating causal relations using a combination of statistical data and qualitative causal assumptions. SEM is defines as a family of statistical models that is able to explain the relationship among multiple variables (Hair, 2007). The characteristic of SEM is expressed in the terms of the structure of interrelationship articulated in a series of equations. These equations combine all of the relationships among constructs, which refer to dependent and independent variables involved in the analysis. According to Hair (2007) SEM is divided into three characteristics, namely (i) Estimation of multiple and interrelated dependent relationships; (ii) an ability to represent unobserved concepts in these relationship and account for measure error in the estimation process; (iii) defining a model to explain the entire set of relationships.

Cooper and Schindler (2006) recommended that SEM is a powerful alternative to other multivariate techniques which are limited to represent only a single relationship between the dependent and independent variables. The major advantages of SEM are that (i) Multiple and interrelated dependent relationship san be estimated and simultaneously; (ii) it can represent unobserved concepts or latent variable, in these relationship and account for measure error in the extermination process.

3.3. SEM Procedures

SEM programs represent a measurement model using a path diagram in order to translate a measurement theory into that can be testing by using standard CFA procedures. SEM programs make use of these thing that path diagrams to show how constructs are relates to the measured variables. Good measurement practice suggests that a measurement model should be congeneric, meaning that each measured variables should be loaded on with only one construct.

To test the research hypotheses, this study used causal relationship instead of just correlational relationship as conducted in many previous researches. A causal relationship refers to one variable directly or indirectly influencing another, i.e., changes in the value of one variable directly or indirectly causes changes in the value of second (Borden and Abbott, 2008). Hair (2007) proposed that a dependence relationship is actually based on causation. A causal relationship involves a hypothesized cause and effect relationship. A correlational refers to changes in one variable accompanied by specific changes in other. SEM is used to interpret causal relationship of research variables within research framework of study.

CFA is multivariate tool that computes a predicted covariance matrix using the equation that represents the theory tested. The predicted covariance matrix is then compared to the actual covariance matrix computed from the raw data. Models fit well as these matrices become more similar. Multiple fit statistics should be reported to help understanding how well a model truly fits. They include the goodness-of-fit index (GFI) statistic and degrees of freedom, one absolute fit index (such as GFI or standardized root mean square residual [SRMR]) and one incremental fit index (such as the Tucker-Lewis Index [TLI] or comparative fit index [CFI]). One of these indices should be a badness-of-fit indicator such as SRMR or root mean square error of approximation (RMSEA). No absolute value for the various fit indices suggests a good fit, only guidelines are available for this task. The value associated with acceptable models varies from situation to situation and depend considerably on the sampling size number of measured variables and the communalities of the factors.

3.4. Customer Satisfaction Index (CSI)

Index is referred to as a scale that reflects a parameter of values ranging from objective to subjective measures relative to a based number. Subjective measures such customer satisfaction, SERVQUAL and customer experiences were difficult to quantify. Therefore creating an index based on subjective measures was complicated. Furthermore, construction of an index based on SEM as the underlying statistical framework further complicated the matter. Texts available in the literature that performed such empirical research were limited and scarce. Nevertheless, following Wei (2009) and Eboli and Mazzulla (2009), the CSI for zakat institutions is calculated by means of satisfaction rates expressed by users, weighted on the basis of the importance rates, according to the following formula:

$$CSI = \sum_{k=1}^{N} [S_k \bullet W_k]$$

Where,

S_k: The mean of satisfaction rates expressed by users on the SERVQUAL k attributes.

W_k: A weight of the k attribute, calculated on the basis of the importance rates expressed by users. Specifically, is the ratio between the mean of the importance rates expressed by users on the k attribute and the sum of the average importance rates of all the SERVQUAL attributes:

$$W_k = \frac{I_k}{\sum_{k=1}^{N} I_k}$$

CSI represents a good measure of overall satisfaction because it summarizes the judgments expressed by users about various service attributes in a single score. The more accurate the selection of the attributes, the more accurate the measure of the overall satisfaction. For this reason, the selected attributes should describe the service aspects exhaustively. In this research, we calculate the CSI for zakat payers and zakat recipients separately since the attributes used are different. The CSI represents the SQI given by zakat institutions. Hence, there are two indices calculated in this study, namely SQI_{ZP} and SQI_{ZR}.

4. RESULTS AND FINDINGS

The study aims to study the customers satisfaction from the perspective of zakat payers and zakat recipients a well as its relationship with SERVQUAL of zakat institutions by employing the combination of SERVQUAL and CARTER instruments.

4.1. Results 1 (Zakat Payers as Respondents)

Table 2 shows the descriptive statistics of zakat payers as the respondents in this study. From the total 396 zakat payers, most respondents were aged between 35 and 50 (35.9%). Importantly 198 of the respondents (44%) pay zakat at zakat counters which shows that most of them have the experience dealing with zakat office.

Figure 1 shows the results based on the SEM for zakat payers. The SEM was performed by AMOS 5.0 in order to test the hypothesis of causal relationship between constructs. Based on the CFA, the Chi-square freedom ratio (χ^2/df) = 3.045, which is less than the standard value of 3 has been identified. The RMSEA value = 0.071, and GFI = 0.880, adjusted GFI (AGFI) = 0.846, normed fit index (NFI) = 0.865, and CFI = 0.905 meet the standard of more than 0.90.

Based on the evaluation of the structural model, the model is not achieved the threshold value. In order to improve the model's fitness to data, it was necessary to re-specify the model. Re-specification of the model could be carried out by utilizing the information in the modification index. Re-specification of the initially estimated model could be performed many times in order to obtain the best model representing the data. Re-specification began with the release of between-indicator covariance offered in the AMOS program. Re-specified model demonstrated a statistically significant improvement in the goodness-of-fit (GOF) as shown in Figure 1. Comparison between-model GOF values can be seen in Table 3.

Table 2: Descriptive statistic of the respondents (zakat payers)

Variables	Total (%)
Age	
18-34	206 (52.0)
35-50	142 (35.9)
51-65	45 (11.4)
66-83	3 (0.8)
Total	396 (100)
Gender	
Male	211 (53.3)
Female	185 (46.7)
Total	396 (100)
Marital status	
Single	100 (25.3)
Married	284 (71.7)
Widow/widower	12 (3.0)
Total	396 (100)
Zakat payment method	
Deduction	163 (36.2)
Online	24 (5.3)
Zakat counters	198 (44.0)
Direct to *asnaf*	64 (14.4)
Total	450 (100)
Types of zakat paid	
Zakat on income	321 (59.7)
Zakat on business	53 (9.9)
Zakat on saving	86 (16.0)
Zakat on shares	8 (1.5)
Zakat on EPF	26 (4.8)
Zakat on gold	19 (3.5)
Zakat on silver	5 (0.9)
Zakat on agriculture	15 (2.8)
Zakat on livestock	5 (0.9)
Total	538 (100)

Table 3: Fit indices for zakat payer

Measures	Fit indices (before modification index)	Fit indices (after modification index)	Threshold values
Absolute fit level			
RMSEA	0.071	0.064	<0.08
GFI	0.880	0.902	0.90 and<1
AGFI	0.846	0.871	0.90 and<1
P value	0.000	0.000	P value>0.05
Incremental fit level			
CFI	0.905	0.924	0.90 and<1
TLI	0.888	0.909	0.90 and<1
NFI	0.865	0.885	0.90 and<1
Parsimonious fit level			
PGFI	0.682	0.683	0.90 and<1
C_{min}/df	3.045	2.670	Less than<3.0 Bigger better

RMSEA: Root mean square error of approximation, GFI: Goodness-of-fit index, AGFI: Adjusted goodness-of-fit index, TLI: Tucker-Lewis Index, CFI: Comparative fit index, NFI: Normed fit index, PGFI: Parsimony goodness-of-fit index

Figure 1: Structural equation modeling results of zakat payers as respondents

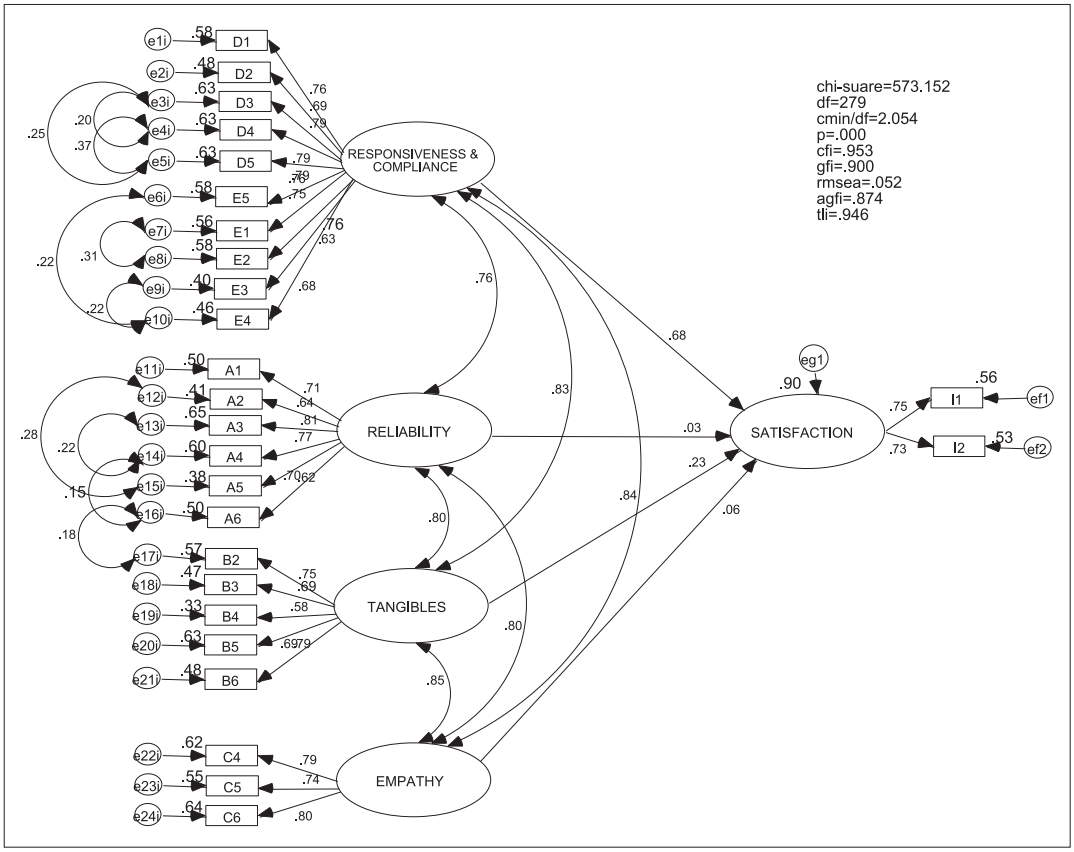


Table 3 exhibits the GFI of the final hypothesis model were consistent with C_{min}/df = 2.670, RMSEA = 0.064, CFI = 0.924, AGFI = 0.871, CFI = 0.924, TLI = 0.909, NFI = 0.885 and P = 0.00. The summary of statistical result of the hypothesis model (GFIs) is exhibited in Table 3. The overall measures indicate that the model had achieved good fit indexes but some measures were below the threshold values.

The adaptive indicators of the previous model show the excellent overall adaptive degree of the entrepreneurial intention model configured in the present study and observed data. Therefore, hypothesis is supported, indicating that the theoretical model can fully explain the observed data. After checking the adaptive degree of the model, the path relation of the intention model and participation factor estimate are analyzed, as shown in Figure 1. In the significant test of the estimated parameters of the path, the impact of responsiveness and compliance, reliability, tangibles and empathy on satisfaction increased to a significant level.

In addition, the effect of responsiveness and compliance on satisfaction λ is 0.68, while the effect of reliability and tangibles on satisfaction is 0.03 and 0.23 respectively. Meanwhile the effect of empathy on satisfaction λ is 0.06. The explained variability of latent variables (i.e., responsiveness and compliance, reliability, tangibles and empathy) to satisfaction (R^2) is 0.90.

The model path shows that positive perception have significant and positive impacts on responsiveness and compliance, with D1 (Responses given by employees of the Zakat Office is accurate and immediately) factor of loading 0.763, and D2 (Staff is willing to accept their views or criticisms from customers) with factor of loading 0.69, D3 (Staff is skilled and efficient in carrying out its duties) factor of loading 0.791, D4 (Staff strive to facilitate customer) factor of loading 0.791, D5 (Staff always provide assistance to customers when needed) factor of loading 0.791, E1 (Staff strive to resolve matters within promised) factor of loading 0.748, E2 (Zakat Office comply with the specified client's Charter) factor of loading 0.760, E3 (*Amil* was appointed to discharge its duties effectively) factor of loading 0.633.

At the same time, the model path also shows that positive perception has significant and positive impacts on Reliability. Construct A1(staff have extensive knowledge about zakat) to show significant with factor of loading 0.708, A2 (Zakat Office provides facilities to pay zakat online) with factor of loading 0.642, A3 (staff provide accurate and clear) factor of loading 0.806, A4 (The staff is always willing to provide services needed) with factor of loading 0.773, A5 (Zakat Office arranges programme and activities to enhance the awareness of paying zakat) 0.617 and A6 (staff always well-dressed and charming personality) on reliability with factor of loading 0.705.

Perception on tangibles also show that positive impacts and significant in this cases. The variables represent perception on tangibles showed 0.69 factor of loading B3 (Total counter is provided with sufficient), B4 (Payers need to complete various forms to pay zakat) with factor of loading 0.575, B5 (Zakat Office provides enough information about the zakat payment) 0.791 and

B6 (Zakat Office within easy reach) also positive impact with factor of loading 0.695.

Meanwhile the construct empathy perception on zakat office service also showed positive and significant impacts. The study find out the variable C4 (The duration of the deal at the counter is appropriate) to showed positive impact with factor of loading 0.791, C5 (Staff use polite language and respect customers) 0.739 factor of loading and C6 (Zakat Office staff always give full attention to the client when dealing) also positive impact on empathy with factor of loading 0.80.

Overall, the latent variables (responsiveness and compliance, reliability, tangibles and empathy) show positive impact with satisfaction. The study also found the impact satisfaction through I1 (respondents satisfied with facilities provided in the Zakat Office) with factor of loading 0.751 and I2 (respondents satisfied with compliance in the Zakat Office) with factor of loading with 0.73.

4.2. Results 2 (Zakat Recipients as Respondents)

Table 4 shows the descriptive statistics of zakat recipients as the second type of respondents in this study. From the total 403 zakat recipients, it was found that most respondents were also aged between 35 and 50 (37.22%). Most of them have received zakat funds for around 2-5 years (51.9%) while a few (5.4%) have received zakat funds for more than 6 years. 57.3% of the respondents received zakat by having it at the respective zakat office and mostly (67.5%) received it in cash.

Table 5 shows the CFA for zakat recipients. Based on the CFA, the Chi-square freedom ratio (χ^2/df) = 2.641, which is less than the standard value of 3 has been identified. The RMSEA value = 0.064, and GFI = 0.862, AGFI = 0.833, NFI = 0.885, and CFI = 0.925 meet the standard of more than 0.90.

Based on the evaluation of the structural model, the model is not achieved the threshold value. In order to improve the model's fitness to data, it was necessary to re-specify the model. Re-specification of the model could be carried out by utilizing the information in the modification index. Re-specification of the initially estimated model could be performed many times in order to obtain the best model representing the data. Re-specification began with the release of between-indicator covariance offered in the AMOS program. Re-specified model demonstrated a statistically significant improvement in the GOF as shown in Figure 2. Comparison of between-model GOF values can be seen in Table 5.

Table 5 exhibits the GFI of the final hypothesis model were consistent with C_{min}/df2 = 2.054, RMSEA = 0.052, CFI= 0.953, AGFI = 0.874, CFI = 0.90, TLI = 0.946, NFI = 0.913 and P = 0.00. The summary of statistical result of the hypothesis model (GFIs) is exhibited in Table 5. The overall measures indicate that the model had achieved good fit indexes. Some measures were below the threshold values.

Figure 2 shows that the impact of responsiveness and empathy on satisfaction λ is 0.09 while the reliability and tangibles effect on satisfaction λ is 0.658 and 0.246 respectively. Meanwhile the impact compliance on satisfaction λ was 0.124. The explained variability of latent variables (i.e., responsiveness and compliance, reliability, tangibles and empathy) to satisfaction (R^2) is 0.95.

Table 4: Descriptive statistic of the respondents (zakat recipients)

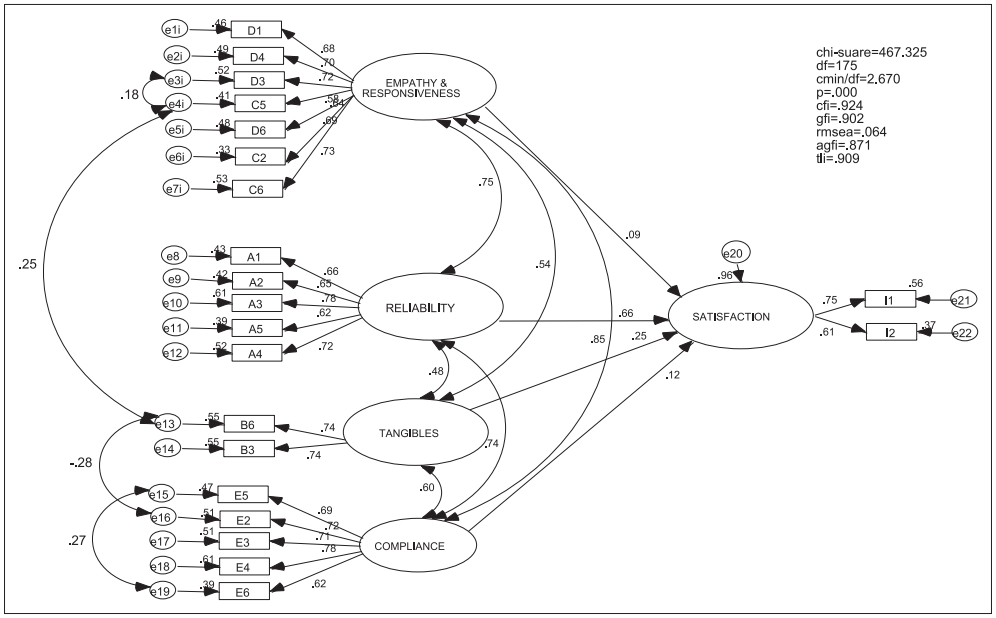
Variables	Total (%)
Age	
18-34	123 (30.52)
35-50	150 (37.22)
51-65	110 (27.3)
66-83	20 (4.96)
Total	403 (100)
Gender	
Male	180 (44.7)
Female	223 (55.3)
Total	403 (100)
Marital status	
Single	95 (23.6)
Married	226 (56.1)
Widow/widower	82 (20.3)
Total	403 (100)
Period receiving zakat	
0-1 year	172 (42.7)
2-5 years	209 (51.9)
6-10 years	19 (4.7)
More than 10 years	3 (0.7)
Total	403 (100)
Place receiving zakat fund	
Zakat Office	237 (58.8)
House/mosque	166 (41.2)
Total	403 (100)
Type of zakat fund received	
Cash	272 (67.5)
In-kind	99 (24.6)
Other	32 (7.9)
Total	403 (100)

Table 5: Fit indices for recipient zakat

Measures	Fit indices (before modification index)	Fit indices (after modification index)	Threshold values
Absolute fit level			
RMSEA	0.064	0.052	<0.08
GFI	0.862	0.90	0.90 and<1
AGFI	0.833	0.874	0.90 and<1
P	0.000	0.000	P value>0.05
Incremental fit level			
CFI	0.925	0.953	0.90 and<1
TLI	0.915	0.946	0.90 and<1
NFI	0.885	0.913	0.90 and<1
Parsimonious fit level			
PGFI	0.710	0.715	0.90 and<1
CMIN/df	2.641	2.054	Less than<3.0 Bigger better

RMSEA: Root mean square error of approximation, GFI: Goodness-of-fit index, AGFI: Adjusted goodness-of-fit index, TLI: Tucker-Lewis Index, CFI: Comparative fit index, NFI: Normed fit index, PGFI: Parsimony goodness-of-fit index

Figure 2: Structural equation modeling results of zakat recipients as respondents



The model path shows that positive perception have significant and positive impacts on responsiveness and empathy, with the constructs C2 (staff effectively to motivate recipients zakat) with factor of loading 0.576, C5 (staff use polite language and respect customers) 0.726, C6 (staff always give full attention to the client when dealing) factor of loading 0.640, D1 (feedback by staff is accurate and immediately) with factor of loading 0.680, D3 (staff is skilled and efficient) with factor of loading 0.721, D4 (staff strive to facilitate customer) 0.702, and D6 (any problems encountered by customers are resolved quickly and accurately) with factor of loading 0.693.

Meanwhile, the model path also shows that positive perception has significant and positive impacts on reliability. Construct A1 (Facilities available for senior citizens and disabled persons) to show significant with factor of loading 0.657, A2 (Period of operation of zakat office is satisfactory) with factor of loading 0.646, A3 (staff provide accurate and clear) factor of loading 0.78, A4 (Zakat application process is not difficult) with factor of loading 0.721, A5 (Zakat Office arranges programmes and activities to enhance the awareness of paying zakat) with factor of loading 0.617.

Perception on tangibles also show that positive impacts and significant in this cases. The variables represent perception on tangibles showed 0.739 factor of loading B3 (Staff is willing to provide information over the phone), and B6 (staff always give full attention to the client when dealing) also positive impact with factor of loading 0.74.

Compliance perception on zakat office service also showed positive and significant impacts among zakat recipient. The study find out the variable E2 to showed positive impact with factor of loading 0.717, E3 (*Amil* was appointed its duties effectively) 0.714 factor of loading and E4 (distribution of zakat was done fairly) also positive impact on empathy with factor of loading 0.783. At the same time, the study also find out the staff implement the ethic Islam (E5) to showed positive impact with factor of loading 0.689. And lastly, the respondent satisfied the programmes and activities undertaken according to Islamic requirements (E6) with factor of loading 0.622.

Overall, the latent variable (responsiveness and empathy, reliability, tangibles and compliance) showed positive impact with satisfaction among zakat recipient. The study also finds out the impact satisfaction through I1 (respondents satisfied with facilities provided in the Zakat Office) with factor of loading 0.75 and I2 (respondents satisfied with tangible in the Zakat Office) with factor of loading with 0.61.

Based on the formula of CSI discussed in research methodology, the SQI_{ZP} based on the dataset is 76.3 while the SQI_{ZR} is 76.4 which imply that zakat payers and zakat recipients are generally pleased with the quality of services rendered by zakat institutions in Malaysia. This new national indicator shall provide a comparative baseline for determining whether the stakeholders are more or less pleased with the quality of services provided by zakat institutions over time.

5. CONCLUSION

Zakat institutions are responsible in providing services pertaining to zakat fund management. As an organization that manages public funds, credibility of zakat institutions is also subject to the perceptions of their customers towards services provided. This study has revealed that SERVQUAL factors introduced in this study significantly exert an effect on customer satisfaction. We introduced an enhanced model of SERVQUAL combining the SERVQUAL and CARTER models to examine the SERVQUAL of zakat institutions in Malaysia.

The study reveals that the new enhanced model is appropriate for measuring the SERVQUAL of zakat institutions in Malaysia. It was

found that there exists positive and significant relationship between zakat stakeholders' satisfaction and constructs of perceived SERVQUAL represented by the five dimensions. Responsiveness and compliance was found to be the strongest indicator to influence satisfaction of the zakat payers while reliability was found to be the strongest indicator to influence satisfaction of the zakat recipients. The results revealed that different type of zakat stakeholders perceived differently on the important dimensions of SERVQUAL of zakat institutions. The results of this study will be useful for zakat authority that responsible in ensuring service delivery by the institutions. The model used in this study may also be relevant and applicable to other Muslim countries in examining the extent of SERVQUAL of zakat institutions.

The index developed implies that zakat payers and zakat recipients are generally pleased with the quality of services rendered by zakat institutions in Malaysia. This new national indicator shall provide a comparative baseline for determining whether the stakeholders are more or less pleased with the quality of services provided by zakat institutions over time.

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