

# SERVICE QUALITY AND CUSTOMER SATISFACTION: HALAL CERTIFICATE APPLICATION IN MALAYSIA

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**Abstract:** In order to achieve a global scale of economic growth, products or services must comply with standards and requirements that will enable them to be recognised as *halal* and safe for consumption. As a *halal* certificate provider, the Islamic Development Department of Malaysia (JAKIM) at the national level, or *Jabatan Hal Ehwal Agama Islam Kelantan* (JHEAIK) at the state level, is responsible for granting and certifying *halal* certification for applicants within a specified period. Serving and dealing with applicants or customers require some skills and knowledge because it is a part of their role in the service sector. Thus, this paper intends to study customer satisfaction during *halal* certificate application, and the respondents came from various backgrounds of businesses. Data were gathered from 77 respondents who attended a course organised by JHEAIK and were analysed using SmartPLS 3.2.1 software. The result suggests that tangibles and reliability determine customer satisfaction during *halal* certificate application, while responsiveness was not a factor in determining satisfaction among customers.

**Keywords:** Customer Satisfaction, Malaysia, Reliability, Responsiveness, Tangibles

## 1. Introduction

There is an emerging global trend in consumerism towards *halal* products and services. Consumers from all walks of life, whether Muslims or non-Muslims have opened their minds to *halal* products and services due to increasing public awareness. In order to achieve a global scale of economic growth, products or services need to comply with *halal* standards and requirements. The initiative to recognise *halal*-compliant businesses is being done seriously and firmly by the Malaysian government as it is critical and crucial to put Malaysia as a leading and prominent *halal* hub in the Asian region. To ensure the target is on the right path, the Malaysian government has set up a comprehensive ecosystem in the *halal* industry. Two bodies are authorised as *halal* certificate providers, namely, the Islamic Development Department of Malaysia (JAKIM) at the national level and the State Islamic Religious Department (JAIN) at the state level. JAKIM and JAIN are acknowledged for certifying the *halal* logo on every product packaging and stores to gain the trust of the public and the authorities in importing countries.

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JAKIM and JAIN have set specific standards and requirements before awarding a *halal* certification to the applicants. Undeniably, the process of applying for a *halal* certificate may take some time. However, it can be executed promptly if the applicant's documentation is ready beforehand. JAKIM and JAIN have also assured that an application will be processed promptly if the applicant is qualified (Majid, Abidin, Majid & Chik, 2015). Other issues raised by applicants are the cumbersome procedures for registration (Krishnan, Omar, Zahran, Syazwan & Alyaa, 2017) and the high cost for the *halal* application (Hamid, Shahwahid, Othman & Saidpudin, 2017). Hence, this paper intends to study customer satisfaction during *halal* certificate application and the respondents came from various backgrounds of businesses. Therefore, this study was conducted to analyse the three dimensions of service quality, namely reliability, responsiveness and tangibles provided by *Jabatan Hal Ehwal Agama Islam Kelantan (JHEAIK)*, which is one of the State Islamic Religious Department (JAIN) in Malaysia.

## **2. Literature Review**

### **2.1. Customer Satisfaction**

Customer satisfaction is one of the essential keys most widely used in business and commerce industry. Satisfaction could be represented as a function of the personal needs of the users, previous knowledge, and past experiences. According to Gerpott, Rams and Schindler (2001), customer satisfaction is based on a customer's experience on the extent to which a provider's services fulfil customer's expectation. Many of us believe that service quality has a more significant impact on customer satisfaction.

### **2.2. Service Quality**

Parasuraman et al. (1988) define service quality as a "function of the difference between service expected and customer's perceptions of the actual service delivered." Therefore, many researchers put their focus on evaluating the service quality of various sectors, such as public transport, government agencies and the private sector. For instance, Wang, Zhang, Zhu and Wang (2020) revealed that service quality offered by service providers has a positive effect on reuse intention by enhancing customer satisfaction.

Service quality is familiar with Parasuraman, Zeithmal and Berry (1985). They suggested SERVQUAL (SQ) instrument, which is a list of ten determinants characterising customer satisfaction on service quality. Later, they have reduced the ten dimensions to five in subsequent studies, namely reliability, responsiveness, assurance, tangibles and empathy (Parasuraman et al., 1988). To be specific, this paper studied about service quality and customer satisfaction in *halal* certificate application among the industries in Kelantan, Malaysia.

### **2.3. Dimension of Service Quality**

This present study focuses on customer satisfaction towards the actual service delivered by JAHIEK as a *halal* certification provider in Kelantan. In particular, this study considers three dimensions of service quality, namely reliability, responsiveness and tangibles.

#### **2.3.1. Tangibles**

The first dimension of service quality is tangibles. According to Parasuraman et al. (1985), tangibles encompass the physical form of the service facility, the tools, the service personnel, and the communication materials. In the context of a certification body, the scope of tangibles may also include other factors such as the time frame for awarding the certificate and periodical inspections (Badrudin et al., 2012) as well as a complete and detailed information about the registration and certification process (Sutawijaya, Mochtar & Nawangsari, 2018). Even though some of the previous researches revealed that customers considered tangibles as the least important of SEVQUAL dimension, latest

studies showed otherwise. For instance, Meesala and Paul (2018) Kitapci, Akdogan and Dortyol (2014) and Masrurul (2019) in their studies show the importance of tangible dimension and the significant relationship between tangibles and customer satisfaction.

### **2.3.2. Reliability**

Reliability relates to companies performing the promised services in an accurate manner. For example, the companies provide up-to-date information to ensure that their customers get the latest information. Badrudin et al. (2012) stated that the bodies of *halal* certification provide precise information regarding the process in applying *halal* certificate and Parasuraman et al. (1985) and Hashim et al. (2011) said the reliability dimension is the most crucial factor toward service quality. A customer has high expectations on the promptness of services and accuracy of services, and the study showed that customers have the highest satisfaction for both services at the cash counter in the retail sector (Naik, Gantasala & Venugopal, 2010). Other studies revealed that customer satisfaction on the reliability of self-service of technology in retail banking (ATM Machine) which consist of consistency, dependability and timeliness, are essential dimensions toward customer satisfaction (Iberahim et al., 2016). Based on a study conducted among commercial banks in the Philippines shows that reliability is the most important dimension compared to responsiveness, assurance, tangibles and empathy (Zalatar, 2012).

### **2.3.3. Responsiveness**

The responsiveness dimension is essential for business providers, JAKIM, JAIN, the public, as well as enforcement agencies in their endeavour to inspire more nourishment business providers to apply and be involved in the *halal* industry (Razali, Abidin, Othman & Mohamad, 2017). Responsiveness generally alludes to the readiness of the business providers to support consumers and offer prompt services to them. Parasuraman et al. (1985) relate responsiveness to the practicality of service delivery. Responsiveness also concerns the promptness of service providers in managing consumer demands, questions, and feedbacks (Siddiqi, 2011). Badrudin et al. (2012) argue that this could be done by promoting *halal* certification and encourage those without it to get it. Orel and Kara (2014) find that responsiveness as the most dominant dimension in service quality while Haming, Murdifin, Syaiful, and Putra (2019) found that it is a second priority. Thus, service quality might be enhanced if service providers are to handle customer problems properly and give the responses needed quickly. Besides that, previous studies have also demonstrated that business providers might improve their service quality, particularly in their responsiveness to upgrade consumer satisfaction (Omar, Ariffin & Ahmad, 2016).

## **2.4. Conceptual Framework Development**

Previous studies proposed a significant relationship between service quality and customer satisfaction (Meesala & Paul, 2018; Kitapci et al., 2014; Omar et al., 2016; Cheumar, Shafie@Hassan, Mohamed Fisol, Ahmed, & Arifin, 2019; Masrurul, 2019). Recently, in a study conducted by Masrurul (2019), it was agreed that there is a good relationship between tangibles and customer satisfaction in Bangladesh tourism industry. There were 100 respondents involved in this research. Besides, Cheumar et al. (2019) claimed that tangibles moderately affect customer satisfaction among private universities in Northern Malaysia. In contrast, Meesala and Paul (2018) added that tangibles have no impact on patient satisfaction in hospitals. The research was conducted in 40 different private hospitals in Hyderabad, India. Thus, the authors propose that:

*H1: Tangibles are positively significant with customer satisfaction.*

Meesala and Paul (2018) also added that reliability has an impact on patient satisfaction. This is in line with Masrurul (2019), who stated that reliability is one of the factors contributing to customer satisfaction and will lead to customer loyalty and, finally, helps to achieve profit. However, few

researchers found that reliability was not significant with customer satisfaction (Cheumar et al., 2019; Kitapci et al., 2014; Omar et al., 2016). Accordingly, the authors propose that:

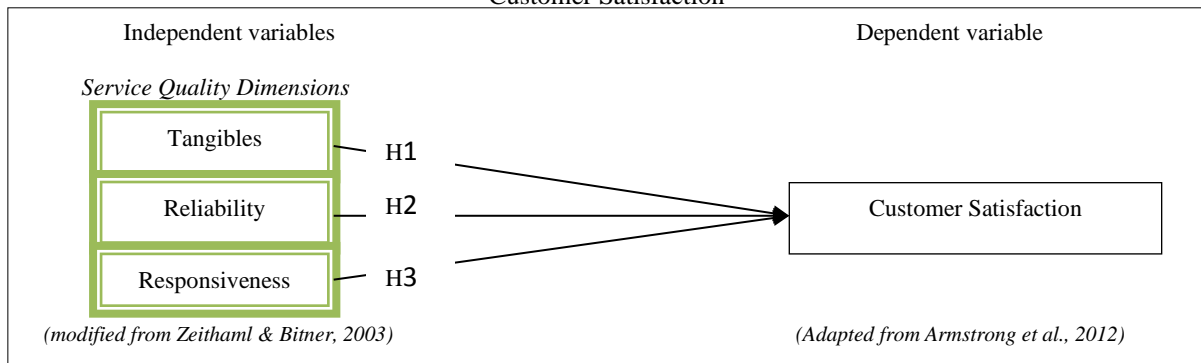
*H2: Reliability is positively significant with customer satisfaction.*

Many researchers agreed that responsiveness and customer satisfaction have good relationships. For instance, Demong, Othman, Haji Yunus, and Wan Amran (2018) stated that responsiveness demonstrated the highest positive correlation with customer satisfaction. Other researchers also stated similar findings (Setyawan, Supriyanto, Tunjungsari, Hanifaty, & Lestari, 2019; Redhana, Sudria, Suardana, Suja, & Haryani, 2019; Rahayu and Yahya, 2019; Masrurul, 2019, Meesala & Paul, 2018; Cheumar et al., 2019; Kitapci et al., 2014). Only a few researchers found contrasting results (Omar et al., 2016; Afroz, 2019). Accordingly, the authors propose that:

*H3: Responsiveness is positively significant with customer satisfaction.*

The proposed conceptual framework was modified from Zeithaml and Bitner (2003). In their original framework, they illustrated five (5) dimensions of service quality, which are responsiveness, reliability, tangibles, assurance, and empathy. However, since this paper only focused on three (3) dimensions, the framework of this study is shown in Figure 1.

**Figure 1:** A Conceptual Framework with Hypotheses Development between Service Quality Dimensions and Customer Satisfaction



### 3. Research Methodology

#### 3.1. Population and Sample

The units of analysis in this study came from various backgrounds such as the hotel industry, food industry, and cosmetic industry. The respondents were owners or representatives of the firms which directly deal with the *halal* certificate application process. The target population of this study includes all *halal* certificate applicants who attended a course organised by *Jabatan Hal Ehwal Agama Islam Kelantan* (JHEAIK). On January 2019, JHEAIK organised a course which was attended by *halal* certificate applicants from all over Kelantan. The estimated total number of them was 100 people. Since the total participants of this course was 100, therefore all of them were selected as the respondents. The questionnaires were distributed during course registration with assistance from JHEAIK staff. The respondents were required to return it after the course ended. Thus, since the population of this study was 100, the minimum required sample size was 79 (5% error) (Saunders *et al.*, 2003). The Structural Equation Modelling Partial Least Squares algorithm (SEM-PLS) analysis method using the SmartPLS 3.2.1 was employed to examine the relationship between service quality and customer satisfaction.

## 4. Result

### 4.1. Measurement Model Evaluation

The measurement model evaluation consists of internal consistency reliability, convergent validity, and discriminant validity.

#### 4.1.1. Internal Consistency Reliability

The first criterion in the measurement model is internal consistency reliability. Specifically, the composite reliability values should be higher than 0.70 (Hair, Hult, Ringle & Sarstedt, 2014).

**Table 1: Internal Consistency Reliability**

Construct	Item	Loading range	Composite Reliability	Cronbach's Alpha ( $\alpha$ )
Tangibles	8 items	0.671 – 0.948	0.942	0.927
Reliability	11 items	0.618 – 0.810	0.924	0.911
Responsiveness	9 items	0.757 – 0.857	0.948	0.939
Customer Satisfaction	6 items	0.836 – 0.922	0.955	0.943

Table 1 shows the composite reliability value for tangibles was 0.942, reliability was 0.924, responsiveness was 0.948, and customer satisfaction was 0.955. All of the constructs had strong composite reliability, where values between 0.70 and 0.90 are considered strong and satisfactory (Nunnally & Bernstein, 1994).

Meanwhile, the Cronbach's alpha values for the constructs were strong with the tangibles were reported as 0.927, reliability as 0.911, responsiveness as 0.939, and customer satisfaction as 0.943. Therefore, this indicates that all the constructs had composite reliability greater than 0.70, and the Cronbach's alpha values were above 0.60, suggesting acceptable reliability.

#### 4.1.2. Convergent Validity

Convergent validity of the measurement model is usually ascertained by examining the loadings, average variance extracted (AVE), and also the composite reliability (Gholami et al., 2013). As suggested by Hair et al. (2010), the authors used the factor loading value of more than 0.50 (Hair et al., 2010). The loadings were all higher than 0.5 except for BTangible8 (0.266) and BReliability5 (0.247), which need to be deleted. Besides the loading values, other considerations in determining the convergence validity is the composite reliability and AVE. After deleting items of BTangible8 and BReliability5, the new loading values are shown in Table 2. The loadings for all items exceeded the recommended value of 0.5 (Hair et al., 2010). The composite reliability values were ranged from 0.924 to 0.955, which exceeded the recommended value of 0.7 (Hair et al., 2010). The AVE of the construct should be greater than 0.50 because it is believed to explain more than half of the variance. Meanwhile, the AVE values of less than 0.50 implied that there are more remaining errors in the items that are not yet explained by the construct. Therefore, all the AVE values at the construct level that are shown in Table 2 indicate the convergent validity of the measurement model. The AVE was in the range of 0.527 and 0.779.

**Table 2: Convergent Validity of Measurement Model (after deletion items)**

Construct	Loading Range	CR	AVE (>0.50)	Cronbach Alpha ( $\alpha$ )
Tangibles	0.671 - 0.948	0.942	0.673	0.927
Reliability	0.618 - 0.810	0.924	0.527	0.911
Responsiveness	0.757 – 0.857	0.948	0.671	0.939
Customer Satisfaction	0.836 – 0.922	0.955	0.779	0.943

### 4.1.3. Discriminant Validity

The standard methods to assess discriminant validity are cross-loading and Fornell-Larcker (1981) criterion of comparing the correlations between constructs and the square root of the AVE for that construct. Table 3 shows the results of loadings and cross-loading of constructs.

**Table 3:** Loadings and Cross-Loading of Each Item

	Tangibles	Reliability	Responsiveness	Customer Satisfaction
BTangible1	0.719	0.441	0.417	0.528
BTangible2	0.816	0.518	0.68	0.697
BTangible3	0.948	0.620	0.699	0.691
BTangible4	0.901	0.542	0.620	0.576
BTangible5	0.907	0.611	0.672	0.586
BTangible6	0.675	0.634	0.594	0.492
BTangible7	0.827	0.690	0.691	0.602
BTangible9	0.671	0.546	0.484	0.477
BReliability1	0.480	0.678	0.368	0.538
BReliability2	0.441	0.641	0.287	0.405
BReliability3	0.529	0.810	0.448	0.588
BReliability4	0.467	0.724	0.423	0.366
BReliability6	0.484	0.762	0.519	0.471
BReliability7	0.473	0.758	0.585	0.434
BReliability8	0.616	0.792	0.616	0.609
BReliability9	0.318	0.622	0.357	0.291
BReliability10	0.284	0.618	0.384	0.255
BReliability11	0.612	0.781	0.671	0.626
BReliability12	0.640	0.762	0.706	0.647
BResponsiveness1	0.680	0.516	0.801	0.606
BResponsiveness2	0.704	0.592	0.850	0.601
BResponsiveness3	0.546	0.658	0.757	0.467
BResponsiveness4	0.667	0.644	0.843	0.607
BResponsiveness5	0.549	0.522	0.765	0.538
BResponsiveness6	0.596	0.534	0.842	0.595
BResponsiveness7	0.563	0.544	0.809	0.500
BResponsiveness8	0.564	0.556	0.857	0.429
BResponsiveness9	0.604	0.569	0.840	0.504
BCS1	0.649	0.560	0.559	0.836
BCS2	0.682	0.632	0.633	0.901
BCS3	0.664	0.634	0.610	0.905
BCS4	0.647	0.660	0.625	0.922
BCS5	0.562	0.601	0.534	0.854
BCS6	0.583	0.581	0.562	0.877

Based on this method, discriminant validity is determined when the loading of an item on a construct is higher than all of its cross-loading with other constructs. The result shows that the first construct, which is tangibles, consists of eight (8) items, and they were found to have significant loadings in this construct.

For reliability, eleven (11) items were found to have significant loadings while for responsiveness, which comprises of nine (9) items, was found to have significant loadings. Also, customer satisfaction consists of six (6) items that were found to have significant loadings.

The next method is the Fornell-Larcker criterion that compares the square root of the AVE values with the latent variable correlations. This method requires that the square root of each construct of AVE should be greater than its highest correlation with any other construct.

**Table 4:** Fornell-Larcker Criterion

Constructs	1	2	3	4
1.Customer Satisfaction	<b>0.883</b>			
2. Reliability	0.694	<b>0.726</b>		
3. Responsiveness	0.667	0.696	<b>0.819</b>	
4. Tangibles	0.717	0.699	0.749	<b>0.820</b>

Note: Diagonals (in bold) represent the average variance extracted while the other entries represent the squared correlation.

Table 4 shows the square root of the AVE on the diagonal and the correlations between variables in the lower left triangle. Overall, the square roots of the AVEs for customer satisfaction construct (0.883), reliability (0.726), responsiveness (0.819), and tangibles (0.820). Thus, this research paper fulfils those criteria on both the cross-loadings method and the Fornell-Larcker criterion. In summary, both convergent and discriminant validity of the measures in this research were established.

#### 4.2. Structural Model Evaluation

The structural model involves the collinearity assessment, path coefficient, coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and blindfolding (Hair, 2014).

##### 4.2.1. Assessment of Collinearity among the Constructs

Table 5 shows the Variance Inflation Factor (VIF) values of the analyses. It can be seen that all the VIF outputs are clearly below the threshold of 5. Therefore, collinearity among the constructs is not an issue in the structural model.

**Table 5:** Collinearity Assessment of the Constructs

Construct	VIF
Tangibles	2.645
Reliability	2.254
Responsiveness	2.625

##### 4.2.2. Assessment of Path Coefficients

As seen in Table 6, it is confirmed that two path relationships are significant. The exogenous constructs, such as the tangibles and reliability significantly contribute in explaining the variation in the endogenous latent variable, namely, customer satisfaction with the  $\beta$  value 0.366 (37%) and 0.319 (32%), respectively. Meanwhile, the relationship between responsiveness and customer satisfaction is not significant with the  $\beta$  value 0.170 (17%). The t-values of the parameter indicate the strength of the relationship represented by the parameter where the higher the t-value, the stronger the relationship.

**Table 6:** Significant Testing Results of the Structural Model Path Coefficients

Structural Path	Path coefficient ( $\beta$ )	t- value	P value
Tangibles → Customer Satisfaction	0.366	2.287	0.022**
Reliability → Customer Satisfaction	0.319	2.560	0.011**
Responsiveness → Customer Satisfaction	0.170	1.216	0.224

#### 4.2.3. Assessment of Coefficient of Determination ( $R^2$ )

The  $R^2$  value refers to a measure of the model predictive accuracy and is calculated as the squared correlation between a specific endogenous construct's actual and predicted values. The threshold values that were suggested by Chin (1998) to measure  $R^2$  value are 0.67 (substantial), 0.33 (moderate), and 0.19 (weak). Table 7 shows the model explaining the 'moderate' portion, as suggested by Chin (1998). For the research model, the  $R^2$  values for the endogenous variable indicate that the proposed theoretical model explains 59.7% or 0.597 of the variance in customer satisfaction, which is a very satisfactory level for model predictability.

**Table 7:** Determination Coefficient ( $R^2$ )

Endogenous variable	$R^2$ value	Threshold
Customer Satisfaction	0.597	$\geq 0.33$ (moderate)

#### 4.2.4. Assessment of Effect Size ( $f^2$ )

By following the guidelines from Cohen (1988), to measure the relative effect size of exogenous construct on the endogenous construct, the  $f^2$  values of 0.02 may be considered as a small effect, 0.15 is considered as a medium effect and above 0.35 as a large effect. The result is presented in Table 8.

Therefore, the exogenous constructs, namely tangibles, reliability and responsiveness in explaining the predictive value on the endogenous latent variable, namely, customer satisfaction has an  $f^2$  effect size of 0.0397. Thus, 0.0397 indicates that all those constructs had a small effect size in producing the  $R^2$  for customer satisfaction.

**Table 8:** Effect Size ( $f^2$ ) of the Latent Variable

Structural Path	$R^2_{included}$	$R^2_{excluded}$	Effect size( $f^2$ )	Rating
Construct $\rightarrow$ Customer Satisfaction	0.597	0.581	0.0397	Small

Note: The values of  $f^2$ ; 0.02=small, 0.15=medium, 0.35=large

#### 4.2.5. Assessment of Predictive Relevance ( $Q^2$ ) and Blindfolding

In the structural model, the  $Q^2$  value that is larger than zero for a certain reflective endogenous latent variable indicates the path model's predictive relevance for this particular construct. As shown in Table 9, all  $Q^2$  values are considerably above zero, thus, providing support for the model's predictive relevance regarding the reflective endogenous latent variables.

**Table 9:** Predictive Relevance ( $Q^2$ ) of Endogenous (Omission distance=7)

Relationship	$Q^2 > 0$
Tangibles $\rightarrow$ Customer Satisfaction	0.563
Reliability $\rightarrow$ Customer Satisfaction	0.427
Responsiveness $\rightarrow$ Customer Satisfaction	0.562

#### 4.2.6. Overall Results of Structural Model Analysis

The results of the hypotheses testing are summarised in Table 10. Overall, two hypotheses were accepted and significant at  $p < 0.01$ . It can be concluded that both tangibles and reliability have strong direct relationships with customer satisfaction (H1;  $\beta = 0.366$ ,  $t = 5.135^{**}$ ) and (H2;  $\beta = 0.420$ ,  $t = 7.416^{**}$ ). In conclusion, two hypotheses were accepted in this research.



**Table 10:** Results of the Structural Model Analysis (Hypotheses Testing)

Hypotheses	Relationship	Standard Beta	Standard Error	t-value	f <sup>2</sup>	Q <sup>2</sup> >0	Decision
H1	Tangibles → Customer Satisfaction	0.366	0.160	2.287**	0.126	0.563	Supported
H2	Reliability → Customer Satisfaction	0.319	0.125	2.560**	0.112	0.427	Supported
H3	Responsiveness → Customer Satisfaction	0.170	0.140	1.216	0.027	0.562	Not Supported

\* 1.645 - 2.32

\*\* 2.33 and above

\*\*p&lt;0.01

## 5. Discussion and Conclusion

The aim of this study is to know the relationship of service quality towards customer satisfaction. From the analysis, the authors found that both tangibles and reliability have positive significant impact with customer satisfaction. The result is in line with a study conducted by Masrurul (2019) in Bangladesh tourism industry. The finding shows that the institution (JHEAIK) should improve the responsiveness dimension for service quality. The clients will be satisfied if they get a quick response from JHEAIK.

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