



## Testing And Validating Measurements For Halal Requirement Practices Among Food Industries In Malaysia

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Received 09 April, 2016; Accepted 25 April, 2016 © The author(s) 2015. Published with open access at [www.questjournals.org](http://www.questjournals.org)

**ABSTRACT:**-The aimed of this study is to develop a validated and reliable questionnaire to measure halal requirement practices among food manufacturers in order to fulfill halal requirements. The study was conducted in Malaysia and the response rate for the Internal Halal Committee is 75%. Each item was developed based on act, standards and guidelines used by competent authority in halal certification. Then, it was measured using a 5 point Likert Scale. All the questionnaire items were elaborated and reviewed. Content and construct validity, item analysis, test-retest, and internal consistency were developed which was grouped into 4 dimensions; halal and *thoyyib*, internal process, halal assurance and staff management. The data were tested using the Statistical Package For Social Science (SPSS) software version 21.0 and Smart Partial Least Square (PLS) version 2.0. The developed instrument was validated and determined using exploratory factor analysis (EFA) for gaining the dimension and indicator reduction. Then it was followed by PLS for confirmatory factor analysis (CFA) and reliability test. The EFA result through SPSS analysis showed that the items were acceptable and consist of 4 factors. Meanwhile, the confirmatory results through Smart PLS also showed that the factor loadings for reflective measurement scale are good through 4 dimensions namely as Halal Requirement Practices Questionnaire (HRPQ).

**Key Words:**-halal, validity, reliability, halal requirement practices.

### I. INTRODUCTION

Halal has become an important food around the world and it covers not only religious matter but more than that where many countries emphasizes goods or services related to the food chain is halal, quality and free from doubtful (*syubhah*). “The Global Halal products market is estimated at USD 2.3 trillion, not including banking. Research by The World Halal Forum secretariat found 67 percent, or USD 1.4 trillion, of this market is comprised of food and beverage. Pharmaceuticals make up 22 percent or USD 506 billion, with cosmetics and personal care totaling USD 230 billion. If we include the services sector for Halal, and we should give the serious consideration, the potential size of the total market is astronomical...” (Malaysian Prime Minister, World Halal Forum 2010). In fact, in Malaysia “since the year 2010, that sector attracted the investments which worth RM8.52 billion in the United States, Italy, Taiwan and Singapore. Now, there are many of Japanese companies aware of the great opportunities in Malaysia..” (Malaysian Prime Minister, *Berita Harian*, 2015).

Thus, the Malaysian government has formulated policies in the ninth Malaysia Plan (9MP; 2006-2010) and Industrial Market Plan III (IMP3/2006-2020) to set the standards related to halal and become as a hub production and halal product certification internationally recognized (MITI, Food Industrial Master Plan III /2006-2020). All these standards can be applied throughout the country and the world. Halal certification can be translated by a recommendation, a letter or certificate. That is a part of a document or official certificate issued by an authority in the country or agency in Islam that confirms a product based on the standards and guidelines of halal haram in Islam (Abdullah and Yusof, 2012).

Based on this scenario, it is becoming a necessity to develop the measurement as a guide to the industry to meet the halal needs. Until now the industry fully refers to the act, standards, guidelines and regulations without the existence of an instrument of support in the assessment of halal practices internally. The previous

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studies that related to halal are more focused on the views of the users of the halal status or performance of the organization. Review by Razali *et al.* (2013) has focused on halal practices in the hotel and the study found that different from how measurement halal practices used for the category for which products and beverages where scope for halal is wider such as packaging, labeling, processing, etc. Moreover, Manual Procedure of Halal Certification Malaysia (Third Revision) 2014 as main reference began to be fully practiced by industry starting 1 January 2015 (Department of Islamic Development Malaysia, 2014) ) While Halal Assurance Management System fully practiced by industry early 2014 (Department of Islamic Development Malaysia, 2013).

The development of the instrument needs to be detailed and structured. It involves several main stages which are content validity were assisted by experts in related fields, the development of the related criterion and construct validity followed by reliability test.

## **II. LITERATURE REVIEW**

### **Malaysian Halal Recognition Development**

JAKIM's involvement in particular in providing halal certification in Malaysia status of food products and applied products of Islam began in 1974 when Research Center, Islamic Affairs Section, Department of the Prime Minister gave a letter to halal products that meet the Islamic requirements. While giving the halal certification in the form of certificates began to be issued in 1994 and the use of the Jakim halal logo began on 30 September 1998.

In the initial stages, the halal assessment performed by the company appointed by the Government. However, on 1 September 2002, Government has taken over completely and all halal management functions are carried out by the Islamic Food and Consumer Section, Jakim. The rapid development of the halal food industry and the needs of the Muslim halal food that focuses on the legislation has resulted in the Halal Hub Division specifically established in 2005. This division is responsible for ensuring that management Jakim halal certificate comply with laws and regulations.

On 2 April 2008, the Government decided to privatize the halal management in an integrated and made by the *Halal Industry Development Corporation* (HDC) and use the Malaysian Halal logo that introduced in 2003. However, the meeting of the Cabinet on July 8, 2009 has decided that the management of the Malaysian Halal certification in Malaysia and abroad adjusted by Jakim. The objective of the Halal Hub Division is reviewing, confirming and regulating all food products and applied products of Islam to be sacred and guaranteed halal efficiently and effectively.

In the early stages of the implementation of halal certification in Malaysia, production certificate logo and production methods differ between states (Coordination Workshop Report on Halal Certification Implementation Issues between Jakim and MAIN 2010) It also includes the structuring of the organization in which most of the states, halal certification is placed under the Department of Research and it differs with Jakim, which has created a special section related to halal called Hub Halal Division. As an example, for Sabah's special committee set up in support of halal management state called *Jawatankuasa Bahan Makanan dan Gunaan Islam* (MGI) consisting of various government agencies and statutory agency. In some states like Johor, Selangor, Perlis, Kedah, Melaka, it was placed specific under the Research Section of the Department of Islamic State Affairs. However, it has changed little by little standardization effort certification by the Islamic Development Department of Malaysia (JAKIM) and the State Islamic Religious Department (JAIN) in 2010. The standardization has been successful in coordinating the use of certificates, logo, standards and procedures for halal certifications (Yusof, 2012).

Now, recognition of Malaysia's halal certification confirmation has put Malaysia on the world stage. This is acknowledged by other countries such as South Korea, which recognizes Malaysia not only famous with the credibility in the eyes of the world in certification of halal but also its strategic position in the international market (Raduian, 2013; Kartikawati, 2013). Then it proceeded to make Malaysia as a world reference model. In addition, users globally very sensitive to the status of a product produced by the industry. Any negligence in the management of the food chain can affect whether to the consumers, industry or government especially when it involves legislation. Thus, halal needs are always tuned from time to time so that the confidences of the people involved are not affected. According to Sadek (2006) gaining logo and halal certification can provide consumers' confidence and prevents any confusion related to the halal status of a product.

### **Malaysia Halal Certification Requirements**

Malaysia is one of the countries where verification of certification implemented by the government compared with other countries that are mostly voluntary or semi-governmental (Othman, Shaarani and Bahron, 2016). Therefore, in order to increase the credibility of Malaysia's halal certification, networking has been built and the main focus is not only with the cooperation of certification but holistically. This is because each agency has its own role in the sustainable development of the halal industry in Malaysia. In this case also, acts, standards, guidelines and regulations of halal are used simultaneously.

In the implementation of halal certification in Malaysia, the Department of Islamic Development Malaysia (JAKIM) and the Islamic Religious Council of the States (MAIN) appointed by the government through Trade Description Act 1983 play important roles as '*competent authority*' related to halal certification.

There are many categories as listed in Manual Procedure of Halal Certification Malaysia (Third Revision) 2014 which was launched on 15 December 2014 and began to be fully practiced starting 1 January 2015. There also has certain category in verification halal certification such as product (food, drink, additional food), food premises and hotel, consumer goods, cosmetics and personal care product, abattoir, pharmaceuticals and logistics. However, related to this study only some halal requirements used in food manufacturing which are; MS1500:2009: Halal Food-Production, Preparation, Handling and Storage – General Guidelines (Second Revision), Manual Procedure of Halal Certification Malaysia (Third Revision) 2014, Guidelines For Halal Assurance Management System of Malaysia Halal Certification 2012, Food Act 1983 and its regulations, Results of the National Council for Fatwa Committee of Religious Affairs Islam or fatwa proclaimed by country. While for surveillance, Trade Description Act 2011 and other related acts by agencies are also used in determining halal.

While performing the halal requirements, the organization should appoint halal internal committee member which is responsible for halal compliance, particularly for multinational category and small medium companies (SME).

### **Category of Manufactures**

In halal certification in Malaysia, industry has been divided into several major categories based on the characteristics outlined the Micro Industry, Small Industry, Small Medium Industry and Multinational Industry.

### **Realated Study on Halal Requirements Pracices Measurement**

Several studies have been conducted by researchers about halal requirement practices measurement to be met, especially in ensuring that a food product is really halal. Mohamad Nasran and Norhalina (2009) have made studies on key aspects of the audit were to be halal by Malaysian Islamic Development Department based on a study of the concept of halal and audit procedures and practices used by the examiners. The study found that element or aspect of a measure in compliance with halal is divided into two aspects of sharia audit includes; profile of the applicant, the review of documentation, ingredients, labor, processing, storage, packaging and labeling, equipment, transportation, distribution of products and the technical aspect of auditing includes; documentation review, ingredients, labor, processing, storage, packaging and labeling, transportation, equipment, waste management and waste treatment systems, buildings and entire premises.

Studies show elements or aspects of the research is based on the MS1500: 2004 (old version) and Halal Certification Procedures Manual (2005 version). While the subject of the study involved only halal certification body without other parties such as industry, customers, etc.

The study, using qualitative methods were also carried out by Lokman (2012), which makes an assessment of the implementation of Malaysia's halal certification. The study also highlighted the concept of halal and the halal certification implementation by Malaysian Islamic Development Department based on MS1500: 2009 (Second Revision), the Malaysian Halal Certification Procedures Manual (2005 version) and the Trade Descriptions Act 1975 (has been canceled by the existence of the Trade Descriptions Act 2011). The study also focused on the Malaysian Islamic Development Department as the subject of the study. The study recommends the company shall be fully committed by implementing the halal assurance system so that it complies with halal procedures and does not only depend solely Jakim monitoring.

While empirical studies have been carried out by Mohd. Rizal et.al (2013) in studies of halal requirements at the premises of the hotel has seen halal requirements consist of documentation, staff policy, the features staff, premises, locations, and control over its raw materials, facilities, equipment, and pest and waste

management. Even so, the study found that there are activities or processes that is quite different from the food industry or the production not to mention the existence of latest procedures and guidelines by the authority.

In addition to the study Mohd. Rizal *et. al* (2013) halal management has once again from a different point of view with emphasis given to the study of human capital which consists of management responsibility, staff characteristics and policy.

Sazelin and Safiah (2015) also has been focusing on the deeper research with the application of the concept of 'halalan thoyyiban' reference to determine the halal requirement. The findings by a question and answer structured (semi-structured interview) shows that Jakim has applied the concept of 'halalan thoyyiban' in halal certification by the elements; the definition of halal, halal explanation of the sources, evaluation documents, inspection of the premises, sampling and laboratory analysis, determination of animal slaughter and Muslim involvement in processing. However, like other researchers also used a number of key reference is the old version, such as Malaysia Halal Certification Procedures Manual, 2005 and Food Regulations 1985 (2007). The study is also limited to the *sharia* and technical officers of halal certification bodies only.

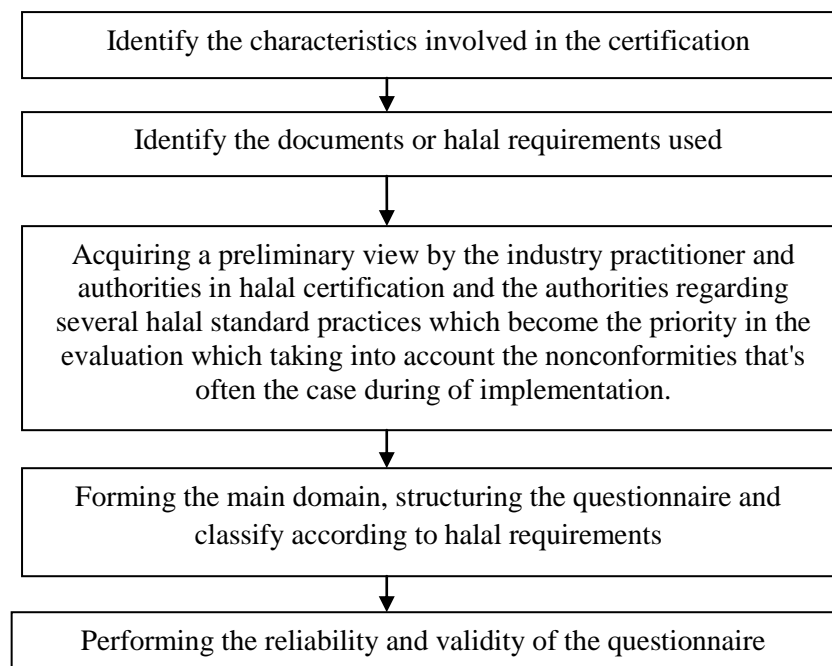
The study, using the new guidelines or procedures were carried out by Muhammad Haziq, Zelin and Safiah (2015) through the implementation of halal assurance system in the company. In the study, the research has overlooked some key components that form the core of halal assurance internally by the industry include control points, development and product verification, control and product recall procedures, corrective actions, documents and records, verification process, tracking (traceability) and a halal database. The study should explore the concept of halal assurance itself to meet the guidelines proposed by the authority.

Looking at this situation, it is desirable that there should be an instrument which really can measure internally by the industry in ensuring halal needs can be met in accordance with the guidelines set by the authority.

### III. METHODOLOGY

#### The development of questionnaire

Based on the review of the literature, there are many steps taken to develop a questionnaire precisely. (Uggioni and Salay, 2013). Use 6 steps, including preliminary writing, content validity, pilot test, item analysis, discriminative validity and reliability. For this research, initiatives are done by following the basic framework as shown in figure 1



**Figure 1: Basic Framework to develop the questionnaire**

**Step 1:** Identify the characteristics of respondent. Since the certification covers various categories of application, a preliminary investigation should be done by identifying the characteristics involved in the certification industry. The main focus of this study is an industry for the production of food products, beverages and additional food.

**Step 2:** Identify relevant documents. In order to ensure that the development of instrument can fulfil the requirements of the standard halal certificates then act, standards, guidelines and circulars related to halal certification adopted by the 'competent authority' in halal certification has been used as the main parameter. It is supported by Aramyian *et al.*(2007) that for the assessment of the quality of the food standards applied to the relevant agencies is the main reference in making a valuation.

**Step 3:** Expertise Recognition. Get the early outlook with experts in the relevant field of halal requirements. This halal requirement not only focused on the aspects of halal but more than that, which also involves the safety, quality and hygiene in line with the concept of Halalan Toyyiban. In addition, the requirements applied also involve relevant agencies. The group of experts directly involved in the development of halal standards and industry practitioners. There are Standards and Industrial Research Institute of Malaysia (SIRIM), food nutrition and technologist experts, halal experts from Halal Hub Division, Department of Islamic Development Malaysia (JAKIM), Academician (2 with PhDs), Assistant Controllers who involve in Trade Description Act 2011 and industry players (halal operation manager and Syariah advisor) face to face and through email.

**Step 4:** Content Validity. The next step is according to the criteria proposed simultaneously with the research objectives and the concept related to the instruments. In this case also, the previous research findings on halal will include. At the same time, aspects that are used by halal certification agency in Malaysia (Mohammad Nasran and Norhalina, 2009) including act, standards, procedures, especially the latest Manual Procedure of Halal Certification Malaysia (Third Revision) 2014 and Guidelines for Halal Assurance System of Management Halal Certification Malaysia in 2012 became a key of reference according with the concept of *Halalan*

**Thoyyiban.**

Then the questions are formed by using Likert scale 5 points (1- Strongly Disagree, 2- Disagree, 3- Neither agree nor disagree, 4- Agree, 5- Strongly Disagree). To facilitate the understanding of the industry, which consists of various educational backgrounds, questions are formed using dual languages Malay and English. Respondents are required to mark a circle on the answer selected. The 46 data sets were tested using SPSS. After completion of the formation of these questions, it was handed over to experts for verification and improvements have been made based on comments given. Then it followed by real data. Table 1 shows the construct and indicators halal requirement for food industries;

**Table 1: Construct and Indicator Halal Requirement Practices**

Construct	Indicators
Halal Requirement Practices	Internal Halal Process (7 items) <ul style="list-style-type: none"> <li>• Documentation and Record</li> </ul> <i>Q6: All finish products completed with specification Halal and Thoyyib (31 items)</i> <ul style="list-style-type: none"> <li>• Halal, hygiene and food safety</li> <li>• Equipment and utensils</li> <li>• Labeling and packaging</li> <li>• Storage</li> <li>• Processing</li> <li>• Transportation</li> <li>• Waste management</li> </ul> <i>Q10: Pest control is conducted properly.</i>
	Halal Assurance (7 items) <ul style="list-style-type: none"> <li>• Halal Assurance Control</li> <li>• Verification</li> </ul>



- Product Recall
- Laboratory Analysis
- Control Point

*Q41: Any non-conformance that that occurs during the processing of food requires corrective and preventive actions to meet halal assurance.*

Staff (4 items)

- Staff Policy
- Staff Responsibility

*Q48: The staffs have attended courses related to halal food handling*

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**Step 5:** Pilot Test. A total of 46 internal halal committee members from 13 companies involved in the pilot test consisting of small medium size enterprises and multinational around Sabah (East Malaysia) by convenient sampling. The purpose of the pilot test was conducted to assess the respondent understanding of the clarity and comprehensiveness of written items in addition to spend time in the execution of a given instrument (Uggioni and Salay, 2013) before collecting the real data. The initial description clarified of the research objectives for respondents that really ready and cooperated to complete the research according to their views on the halal standards practiced by organizations based on the options that already given. The internal consistency reliability of the questionnaire was assessed by Alpha's Cronbach. A value 0.7 for this coefficient is considered adequate Nunally (1978). It shows that Cronbach's Alpha score is 0.924 which has exceeded that lower limit on reliability 0.7.

**Step 6:** Data preparation phase. Before data analysis, the collected data from the returned questionnaire responses were translated into a form that is appropriate for analysis. Responses from the questionnaire were checked for incompleteness and inconsistencies. Before entering the data into an SPSS data file, tasks such as organizing the data file, assigning meaningful values and forming categorizations to the responses were done. After all the data have been entered, the content of the data file is examined for accuracy, completeness and consistency, especially on the aspects of missing and invalid data.

**Step 7:** Goodness of the Measure. In this phase, aspect of goodness of data in terms of reliability and validity of the variables is the main objective. According to Cooper and Schindler (2001). reliability has to do with the accuracy and precision of a measurement procedure, while validity refers to the extent to which a test measure what we actually wish to measure. Therefore, it is important to provide evidence of validity and show that the measure is reliable in a scientific study.

#### **IV. ESTABLISHING VALIDITY**

The Exploratory Factor analysis (EFA) is a statistical data reduction technique used to explain variability among observed constructs, which are part of the factor analysis technique introduced by Thurstone (1931) The analysis seeks to uncover the underlying factors that explain the dimensionality for each construct in the research. The analysis assumes that all the rating data on different attributes can be reduced down to a few important dimensions or components. The reduction is possible because the attributes are related. This statistical technique will deconstruct the raw score into various components, and reconstruct the score into the underlying factor score. The degree of correlation between the initial raw score and the final factor score is known as factor loading. Besides, to validate the underlying factor, a confirmatory factor analysis was conducted as suggested by Costello and Osborne (2005); Brown, (2006) they note that in order to make substantive conclusion from EFA findings, the CFA has to be conducted to allow further analysis of the findings especially to test the hypotheses of the study.

EFA is conducted using SPSS to examine the factor structures as a preliminary step in understanding the clustering of the items. In other words, it is used to determine whether items that together measure a construct, load highly with the same factor. Only valid items will be used for subsequent analysis. This was done using the Principal Component Analysis with Promax rotation. However to determine whether the data is suitable for factor analysis, the following condition to measure of sampling adequacy must be satisfied; i) Kaiser-Meyer Olkin  $> 0.6$ , ii) Bartlett's Test of Sphericity, sig val,  $p < 0.05$ .

The next course of action is to examine the factor loadings of each item. If all items converge into the same factor, it is assumed the factor to be constructed. According to Hair *et al.*, (2006) the value of the factor loading should be greater than 0.05. If it is lower than this standard value or the item cross load into other factors, then it may have to be dropped from further analysis. Subsequent to the EFA, CFA using an alternative method PLS is conducted to further validate this instrument and make it more concrete.

## V. ESTABLISHING RELIABILITY OF THE SCALE

Reliability is another important aspect in accessing the quality of measurement instruments. Reliability refers to an estimation of the degree to which a measurement is free from errors. According to Sekaran (2003), the reliability of a measure indicates the extent to which it is without bias (error free) and hence ensures consistent measurement across time and across various items in the instruments. In other words, it is an indication of the consistency and stability with which the instrument measures the concept and helps to assess the 'goodness' of a measure. Stability of measures can be achieved from test-retest reliability and parallel form reliability. In this context, the same measure is considered stable if the scores obtained from the same set of respondents at different times or from different set of forms with changes in terms of wording and sequence of the question. On the other hand, consistency of measure can be determined from inter-item consistency reliability and split half reliability.

Therefore, the reliability test is conducted to ensure that there is an acceptable internal consistency among the items that represent a particular factor and Cronbach's Alpha is one of the most commonly used as reliability coefficients.

## VI. RESULTS AND DISCUSSION

### Validity and Reliability Test result

In this study, the two approaches used, starting with the Exploratory Factor Analysis (EFA) and Confirmatory Factor followed by dialysis (CFA). This view makes EFA is expected to construct an additional tool in the early stages of this research is still new in the field of halal. While CFA is also expected to form a construct that is capable of supporting the theory or practice of halal used by the constructs or factors established whether or not these factors are correlated, and which items / load onto and measures which reflect factors. It is supported by Benson and Bandalos (1992) using CFA as a second approach (second order) to reaffirm certain variables in which it can show the results obtained stronger.

### Exploratory Factor Analysis Result

Exploratory Factor Analysis (EFA) was conducted using SPSS version 21 by passing through several stages. The first stage referred to the overall fit based on scree test and latent root criterion. The study found criteria for Scree Test is 4, which shows all variables divided into four main factors. Therefore, it is appropriate that all the factors for further analysis. There needs to be seen to the measure of sampling adequacy - MSA), load factor (factor loading) and the communalities. Found that all the above factors above the appropriate level of 0.5 Hair *et al.* (2006).

EFA method was used for the analysis of 3 runs of 49 items formed. At the end or 3<sup>rd</sup> running, the appropriateness of the data for further analysis was determined through KMO and Bartlett's Test. The result, as shown in Table 1 indicates that the data is still suitable for factor analysis since the value of KMO is greater than 0.6 and Bartlett's Test is significant ( $p < .000$ ).

**Table 1: KMO and Bartlett's test for HRP**

<b>Dimension</b>	<b>KMO</b>	<b>Bartlett's</b>	<b>Suitability</b>
Halal Requirement Practice	.876	.000	Suitable

The principal components analysis with the Promax rotation method was run without 17 dropped items caused by cross loading and five 4 items due to not reaching the loading of more than 0.5. The analysis has performed extracted four factors which are F1, F2, F3 and F4 and accounted 55.23% of the total variance explained. The total variance explained in the final result increased by 5.92% compared the first analysis. All these factors were found to have a high correlation with each other to show the validity of the relationship (criterion-related validity) group existed between all the factors.

To ensure that the study takes into account the findings of previous studies, practices used by halal certification bodies and the suitability of purpose item that is formed by the domain then an alternative method of Partial Least Square used for Confirmatory Factor Analysis. While finding from the result through EFA

analysis, show the inter item-item consistency reliability of all measures in this study with alpha value is 0.92. Therefore, all the items are reliable and can be further studied.

### **Confirmatory Factor Analysis**

To test the construct validity through the CFA, outer constructs models assessed on the basis of reliability, convergent validity and discriminant validity. Construct reliability measure the level of an item that is free of random error, so as to provide consistent results. As shown in the table below the construct has a composite reliability above the cutoff 0.70 as recommended by Chin (1998). Convergent validity measure the consistency of multiple indicators, as shown in the table that estimated standard loading all significant at 0.01 the which simply means having a good convergent validity. To assess discriminant validity, that is, how far the construct differed from each other are used criteria developed by Fornell Larcker (1981). If the root average expected variance (AVE) each construct is greater than the correlation between the construct, then said to have a good discriminant validity.

The first step is to determine the indicator forms, whether formative or reflective. Here Halal Requirements Practices considered reflective as it is correlated and interchangeable. Therefore the data were analysed by using first order and followed by second order.

Convergent validity of the measurement model with a reflexive indicator is assessed based on the correlation between the item score / indicator with construct score. Size reflexive said to be high if the correlation of 0.70 with the construct to be measured. Based on the result in Table 2, the loading factors are in the range 0.6 to 0.9. However, according to Chin (1998). for the initial assessment phase of development of a scale measuring the loading of 0.5 until 0.6 is considered adequate

**Table 2: Loading Factor (First Order)**

Items	Halal Assurance	Halal Thoyyib	Internal Process	Staff
AP_B3.39	<b>0.7616</b>	0.4535	0.4029	0.2223
AP_B3.40	<b>0.8163</b>	0.5684	0.3368	0.2114
AP_B3.41	<b>0.8689</b>	0.5326	0.3212	0.3432
AP_B3.42	<b>0.833</b>	0.5041	0.3368	0.3429
AP_B3.43	<b>0.6672</b>	0.3347	0.2807	0.2271
AP_B3.10	0.4419	<b>0.6912</b>	0.5019	0.5016
AP_B3.11	0.347	<b>0.6469</b>	0.4609	0.3473
AP_B3.12	0.4508	<b>0.5985</b>	0.3493	0.4398
AP_B3.15	0.3512	<b>0.726</b>	0.6122	0.3469
AP_B3.19	0.4092	<b>0.7777</b>	0.4979	0.4741
AP_B3.21	0.541	<b>0.8144</b>	0.5185	0.5081
AP_B3.23	0.5164	<b>0.7517</b>	0.4487	0.3906
AP_B3.24	0.5472	<b>0.6552</b>	0.3986	0.5206
AP_B3.25	0.4726	<b>0.777</b>	0.4944	0.4262
AP_B3.29	0.5348	<b>0.7236</b>	0.511	0.372
AP_B3.30	0.3872	<b>0.7101</b>	0.5819	0.2459
AP_B3.32	0.4058	<b>0.6846</b>	0.559	0.2792
AP_B3.35	0.4317	<b>0.702</b>	0.4594	0.2203
AP_B3.36	0.3438	<b>0.7426</b>	0.4385	0.3763
AP_B3.37	0.374	<b>0.7499</b>	0.5484	0.369
AP_B3.38	0.5506	<b>0.7657</b>	0.4621	0.4286
AP_B3.8	0.3265	<b>0.6353</b>	0.4433	0.4315
AP_B3.3	0.2102	0.4048	<b>0.7009</b>	0.2782
AP_B3.4	0.408	0.5534	<b>0.8197</b>	0.2944
AP_B3.5	0.3674	0.5628	<b>0.8497</b>	0.3119
AP_B3.6	0.3364	0.6201	<b>0.8063</b>	0.2905
AP_B3.46	0.2005	0.2538	0.1481	<b>0.5926</b>
AP_B3.47	0.2957	0.4965	0.2952	<b>0.88</b>
AP_B3.48	0.3059	0.5075	0.3878	<b>0.8767</b>



In addition the result of output between indicator with its construct can be shown in Figure 2

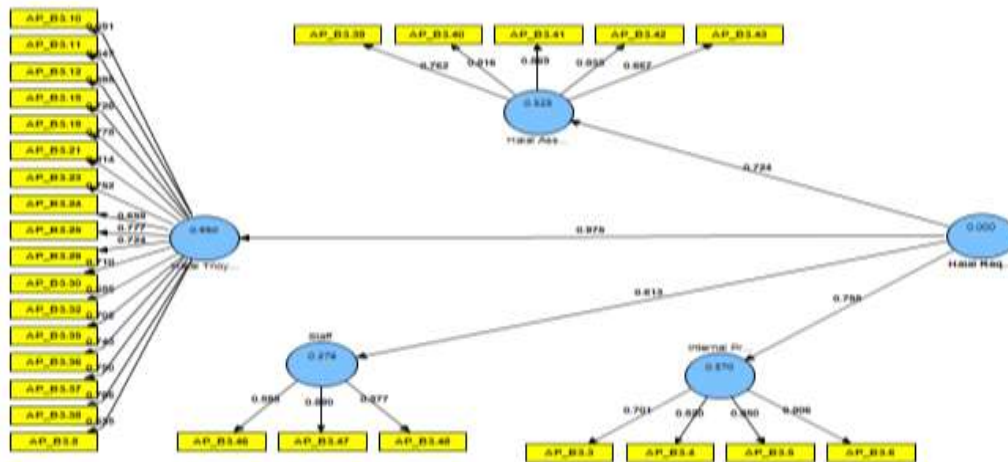


Figure 2: The results of loading factor

While the second order construct validity of the halal requirement practices can be seen in the Table 3. The result shown the outer model, Loading Factor and Composite Reliability.

Table 3: Composite Reliability (CR) and Average Variance Extracted (AVE) for Latent Variables

Second Order Construct	First Order Construct	Loading	AVE	CR
Halal Requirement Practices	Internal Process	0.755	0.605	0.856
	Halal Thoyibb	0.975		
	Halal Assurance	0.724		
	Staff Policy	0.613		

### Reliability Test Result

The reliability test is conducted to ensure that there is an acceptable internal consistency among the items that represent a particular factor and Cronbach’s Alpha is one of the most commonly used as reliability coefficients. Table 4 shows the result of reliability test conducted on Halal Requirement Practices with the alpha value is 0.856. It shows that Cronbach’s Alpha score has exceeded that Nually (1978) lower limit on reliability of 0.70. This indicates a high level of internal consistency of the instruments.

Table 4 : Reliability Test Result

Instrument	Type of variables	Original	Deleted	Study	Cronbach’s Alpha	Level of Reliability
Halal Requirement Practices	Internal Process	7	3	4	0.856	Adequate
	Halal & Thoyyib	31	14	17		
	Halal Assurance	7	2	5		
	Staff Policy	4	1	3		

## VII. LIMITATIONS

The questionnaires developed was intended to be administered to internal halal committee members appointed by food manufacturers. Therefore, among the limitation of this study are the halal requirements scope is only limited to the food industry category whilst there are more categories in the halal management such as an abattoir, logistics and others. Besides, the survey conducted is only among the multinational and SME without involving small or cottage industry.

## VIII. IMPLICATION FOR RESEARCH AND PRACTICE

The validity and reliability of the results obtained by the above analysis show that the act, standards, regulations and guidelines can be used as an instrument in order to comply halal requirements needed by halal certification body. Based on the items that are formed, this instrument can help organization, especially halal committee

members to control internally as well as early preparation before the evaluation made by halal certification body.

The findings could also help in increasing literature relating halal food. Besides, it consider as a basic step in getting a good model structure and effective in the halal dietary management empirically. The instrument is capable of filling the gap research on halal dietary management variables.

## IX. CONCLUSION

This article discussed on part of the research design, focusing on the data collection and analysis procedure with aspects of credible research are taken into account. The data collection procedures from the survey instrumentation until the actual survey were discussed in depth. Prior to the actual survey, any survey administration issues were resolved through proper survey construction guideline, pretested by experts and mini simulation from a pilot study. This study applies SPSS version 21 for Exploratory Factor Analysis (EFA) and following by Partial Least Square (PLS) 2.0 approach to analyze the data as there is evidence that this approach is more reliable and better construct validity. The results from these analyses provide empirical information for further research, especially related on halal.

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