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Exploring the OIC Food Manufacturer Intention Towards Adopting Malaysian Halal Certification

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ABSTRACT

Halal refers to the Islamic processing methods which places a great value on respect for the individuals and also the society. Currently, there are about 1.5 billion Muslims around the world and people from diverse races and religions are looking for cleaner and purer foods. There is no one set of standards as reference or any in the development phase for Halal certification in the Muslim world. Each country has its own Halal standards and regulations for Halal certification of manufactured food products. This phenomenon has attracted some of the food manufacturers to seek standardization of Halal certification. Malaysian Halal certification is now among the most widely recognized and respected symbols of Halal compliance in the world. Malaysia as a member of the Organization of the Islamic Conference (OIC) has aspirations of having their Halal logo adopted as the internationally recognized and accepted Halal certification especially among the member states. This study aims to understand the determinants that influence the OIC food manufacturers' intention to adopt Malaysian Halal logo as the globally accepted Halal certificate through the application of an extended Theory of Planned Behaviour (TPB). Three hundred (300) OIC food manufacturers were interviewed. Structural Equation Model was used to assess the direct relationship between attitude, perceived behavioural control and subjective norms towards the food manufacturers' intention to adopt Malaysia Halal logo as the International Halal Certification. The study found that perceived behavioural control is an important influential factor in creating the intention to adopt Malaysian Halal certification. Moreover, attitude is an important mediator for the OIC food manufacturers to have the intention to adopt Malaysian Halal certification.

Key words: Halal certification, intention, food manufacturer, TPB, OIC

INTRODUCTION

Malaysia, being a model Islamic nation is well poised to contribute to ever-increasing Halal industry. Being a member of the Organization of Islamic Conference (OIC), Malaysia is pushing its Halal certification, the only logo in the world that is supported by its government as an international standardized logo and certification to be used by all Muslim nations (Rahman *et al.*, 2013). This move is currently being supported by the OIC members but other countries such as Turkey (Ireland and Rajabzedah, 2011); Pakistan (Qureshi, 2011) and the United Arab Emirates

(Omar and Jaafar, 2011) are also starting to show their interest in promoting their own Halal certification among the OIC members. It is an important question as to whether or not the food manufacturers and industry players in the Islamic countries see this standard as necessary and if it is certification from which country is the most preferred one to endorse their food products. Thus it is inevitable to gauge the intention to adopt Malaysian Halal certification from the perspective of the OIC food manufactures.

The demand for Halal products is on the rise (Ahmed, 2008) and the Halal industry players believe that Halal labelled products will give a better understanding to Muslims. However, the consumption of Halal products is not only due to religious motivation but also in relation to issues such as health, hygiene, environmental friendliness and respect for animal welfare which influence public perception towards Halal principles (Badrudin *et al.*, 2012). Halal refers to the Islamic processing methods which place a great value of respect for the individuals and the society. Halal as a principle explains characteristics such as being with Islamic guidelines, clean, hygienic, wholesomeness as well as being friendly to society, environment and animal welfare. These characteristics are not visible and cannot be validated by the consumer even after consuming the product, yielding potential quality uncertainty during the pre-purchasing stage. As a result of the complexity of the Halal production system, consumers have to rely on factors in the chain to provide Halal products. Conferring trust in the advertisement is a difficult task for an individual thus the Halal certification presented by the Halal logo is the only way consumers can be compensated for the lack of knowledge or the intangible aspect of the production or manufacturing process (Andersen, 1994).

The OIC is an international organization grouping 57 countries to safeguard their interests while securing the progress and well-being of Muslims worldwide. Plans are initiated by the Malaysian government with the support of the OIC member countries in adopting the Malaysian Halal standard certification as the global standard for Halal products and also in cooperating ISO accreditation (Jamil, 2006). Currently, OIC countries do not have a common standard but several members have used the Malaysian standards as a benchmark (Jamaluddin, 2007).

The main objective of this study, therefore, is to examine in a holistic framework of the link between the determinants that could influence the OIC food manufacturers' intention to adopt and accept Malaysian Halal logo as the International Halal Certification. Based on the discussions, we proposed the following hypotheses:

- H₁₀ : There is a significant positive relationship between knowledge and intention to adopt Malaysian Halal certification as mediated by attitudinal factors
- H₂₀ : There is a significant positive relationship between perceived behavioural control and intention to adopt Malaysian Halal certification
- H₃₀ : There is a significant positive relationship between subjective norms and intention to adopt of Malaysian Halal certification

MATERIALS AND METHODS

Conceptual framework: The Theory of Planned Behaviour (TPB) that was developed by Ajzen and Fishbein (1985) is a leading framework in the literature used in this study to examine food manufacturers' intention behaviour. The TPB provides a framework to investigate the factors that could influence the food manufacturers' behaviour about their choices. There are three independent determinant of behavioural intention which is attitude, subjective norms and the perceived

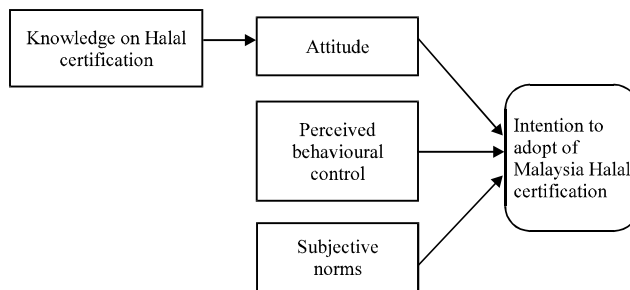


Fig. 1: Conceptual framework of OIC manufacturers in adopting Malaysian Halal certification based on TPB, Source: Adapted and modified model from (Ajzen, 1991, 2002)

behavioural control. Intention is the indicator of how willing the food manufacturers are towards adopting Malaysian Halal certification for their products.

According to Bandura (1986) in the social cognitive theory, the expectation of outcome refers to people's estimation of a given behaviour yielding a particular outcome which is closely related to people's attitude towards behaviour. In addition, the subjective norm could also be a factor that will contribute towards the food manufacturer's behaviour to have the intention of adopting the Malaysian Halal certification. In the same token, the motivational and perceived benefit behaviour can also contribute to the adoption of the certification.

There are many control factors which can influence the food manufacturers to adopt the Malaysian Halal certification including the wholesomeness, hygiene and cleanliness of their products after being endorsed by JAKIM (Zurina, 2004). This will increase their perceived behavioural control. Figure 1 shows the conceptual framework of manufacturer's intention to adopt Malaysian Halal certification based on TPB with the three dimensions stated above.

The study used data collected from a structured questionnaire that has been distributed to 350 OIC Halal food manufacturers during the 9th International Halal Showcase from 4-7 April 2012. In this study, cluster sampling is applied. Cluster samplings works best when each cluster provided a small scale representation of the population. The elements in the population are first divided into separate groups called 'clusters'. Each elements of the population belongs to one and only one cluster. Then a simple random sample of the clusters is taken out. All elements within each sample clusters form the sample. The samples were collected from 57 OIC countries. Only 300 out of 350 food manufacturers from the OIC countries fully responded to the given questionnaires. The respondents are mostly involved in the management level of the companies. Twenty statements were constructed in relation to the theory of planned behaviour domain in measuring the intentions in adopting Malaysia Halal certification. They are knowledge of Malaysia's intention in becoming the leader in Halal certification (KNOW) (four items), attitudes towards the Halal concept (ATT) (five items), Perceived Behavioural Control (PBC) (four items), Subjective Norms (SN) (three items) and intention to adopt the Malaysian Halal certification (INT) (four items). A Likert scale of 1 to 7 (1 represent strongly disagree while 7 represent strongly agree) was used to measure the intention of adopting the Malaysian Halal certification. In order to verify the hypotheses mentioned earlier, a multivariate technique called the Structural Equation Modelling (SEM) technique was applied. SEM is used to analyze the hypothesized relationships based on the Theory of Planned Behaviour (TPB) and later being transformed into path diagrams. The company profiles and backgrounds of food manufacturers were also collected. Table 1 show the items used as the parameters in each latent construct. These latent constructs are the main entity in constructing the structural model based on conceptual framework discussed earlier.

Table 1: List of items used as parameters in each of Structural Equation Modeling (SEM) latent constructs

Construct	Item
Knowledge of Malaysia's intention to become leader in Halal certification	
KNOW 1	Malaysia Halal certification can create strong networking for my company
KNOW 2	Malaysia Halal certification not only practices Halal Manufacturing Processes (HMPs) but also Good Manufacturing Processes (GMPs)
KNOW 3	Malaysia can be a good representative as Halal certification leader among the OIC countries
KNOW 4	Malaysia Halal certification is trusted more by consumers
Attitudes towards Halal concept	
ATT 1	Geographic and location accessibility
ATT 2	Proper facilities and equipment for Halal certification
ATT 3	Malaysia has advanced Halal development and research in Halal certification
ATT 4	Malaysia has advanced technology in Halal processing
ATT 5	Halal endorsement from Malaysia will create maximum confidence among consumers
Perceived behavioural control	
PBC 1	I have enough budget to apply for Malaysian Halal certification
PBC 2	It is easy to get Malaysia Halal certification
PBC 3	If Malaysia becomes leader in Halal certification, I have no doubt about those who have control over the manufacturing process of my products
PBC 4	Procedures in Malaysia is less costly than in the others
Subjective norms	
SN 1	Consumer will trust more one international Halal certification from one Halal hub
SN 2	My competitors influence me to obtain Halal certification
SN 3	Demand of Muslim consumers for Halal Hub creates the potential for one international Halal certification
Intention to adopt Malaysian Halal certification	
INT 1	To have Malaysia Halal certification will improve the image of my organization
INT 2	Prefer to use Malaysia Halal certification because it is supervised by the Government
INT 3	I intend to adopt Malaysia Halal certification
INT 4	Adoption of Malaysia Halal certification would help my Halal products to be recognized globally

RESULTS AND DISCUSSION

The study shows the descriptive analysis and assessed the reliability and validity of the measurements used. This is followed by testing of the hypotheses by assessing the model fit using various indices in evaluating the research model.

Descriptive analysis: The descriptive analysis discussed the respondents' profiles. Based on the survey, approximately 75.7% of the respondents are male and about 24.3% are female. About 77.0% of the respondents have higher level qualifications which are bachelors, master's and doctor of philosophy degrees. Approximately, 40.0% of the respondents who were interviewed fall in the category of CEOs, owners and managers of the companies. About 54.3% of the respondents are aged between 31 to 40 years.

In terms of religious background of the respondents, 75.3% of them are Muslims while 37.3% are Non-Muslims. They come from various regions of the world including Asia, Middle East, South America and Africa.

The food products that are being manufactured and traded include dairy products, fats and oil, fruit and vegetable based products, cereals and wheat, meat and poultry, sweets based and beverages. Out of the 300 firms, 188 are Muslim based companies and 79.0% of the companies export their products to the OIC member states. Approximately, 43.3% are corporations while the rest are divided into sole proprietors with 37.3% and partnerships with 19.3%. Table 2 shows the respondents demographic and company profile.

Table 2: Demographic profile of the respondents in the field survey (n = 300)

Characteristics	(%)	Characteristics	(%)
Gender		Iran	7.3
Male	75.7	Pakistan	3.0
Female	24.3	Bahrain	1.0
Education level		Tajikistan	1.3
Lower Level	33.0	Turkey	3.7
Upper Level	77.0	Turkmenistan	1.3
Position in the company		Saudi Arabia	1.3
Upper level management	40.0	Syria	1.3
Lower level management	60.0	Iraq	0.7
Age		Oman	1.0
20-30	20.7	Palestine	1.0
31-40	54.3	Kyrgyz	2.0
41-50	21.7	Qatar	1.3
Above 50	3.3	Kuwait	1.3
Owner religion		Lebanon	1.7
Muslim	75.3	Egypt	1.0
Non Muslim	24.7	Yemen	1.7
Level of involvement		Republic of Azerbaijan	1.0
Domestic	21.0	Republic of Albania	1.3
International	27.0	South America region	
Both of them	52.0	Republic of Suriname	1.3
Company structured		Republic of Guyana	1.3
Muslim	62.7	Gabon	1.7
Non Muslim	37.3	Gambia	1.3
Type of ownership		Guinea	0.7
Sole proprietorship	37.3	Guinea-Bissau	0.7
Partnership	19.3	Africa region	
Corporations	43.3	Comoros	1.3
Type of food produced		Cameroon	1.0
Dairy based	16.3	Cote D' Ivoire	1.0
Fats and oil based	9.7	Libya	1.0
Fruits and vegetables based	8.3	Mali	1.3
Cereals and wheat based	12.7	Morocco	1.7
Meat and poultry based	19.3	Mauritania	1.0
Sweets based	13.0	Mozambique	1.0
Beverages	20.7	Niger	0.7
Country origin		Nigeria	1.7
Asia region		Uganda	1.0
Malaysia	8.3	Benin	1.0
Indonesia	12.0	Burkina-Faso	1.0
Brunei	1.0	Chad	1.7
Bangladesh	4.0	Togo	1.0
Kazakhstan	1.0	Tunisia	1.3
Maldives	1.0	Algeria	1.3
Middle East region		Djibouti	1.3
Jordan	1.7	Senegal	1.0
Afghanistan	1.0	Sudan	1.3
United Arab Emirates	1.7	Sierra Leone	1.3
Uzbekistan	1.0	Somalia	1.0

CFA: Confirmatory factor analysis

Table 3: Results of confirmatory factor analysis

Model	χ^2/df	CFI	RMSEA
Cut-off point	<5.0	>0.900	<0.10
CFA (measurement model)	3.375	0.917	0.089

CFI: Comparative fit index, RMSEA: Root Mean Square Error of Approximation

Table 4: Results of the measurement model (CFA)

Latent variables	CR	AVE	MSV	ASV
Knowledge	0.900	0.693	0.504	0.373
Attitude	0.901	0.645	0.596	0.361
Perceived	0.873	0.632	0.412	0.310
Subjective	0.833	0.625	0.277	0.145
Adoption	0.948	0.820	0.596	0.345

CR: Critical ratio, AVE: Average variance extracted, MSV: Maximum shared square variance, ASV: Average shared square variance

The information obtained from the respondents was subjected to data cleansing and preliminary analysis to check for normality, adequacy and reliability. The Maximum Likelihood Estimate (MLE) was used in the CFA. According to Pallant (2007) and Hair and Anderson (2010), MLE is robust against a moderate departure from the assumption of multivariate normality which is quite common in the social science data. An exploratory factor analysis was conducted and five factors were identified. The factors were used as the latent variables in the structural equation modelling at a later stage.

There are several indicators in order to access the fitness of the data to the hypothesized model in this case, the TPB. However, in this study, we follow the best practices being suggested by Mueller and Hancocks (2008). The fit indices included the likelihood ratio (CMN/df) which is 3.375, Comparative Fit Index (CFI), 0.917 and the Root Mean Square Error of Approximation (RMSEA), 0.089. Table 3 shows the results of confirmatory factor analysis.

Test of the measurement model (CFA): Before we conducted test of the structural model, we did evaluate the measurement model by checking the convergent and discriminant validity. Convergent validity will be appropriate when Average Variance Extracted (AVE) equals or exceeds 0.50 while discriminant validity is judged to be adequate, once the value of Average Shared Square Variance (ASV) is less than the Maximum Shared Square Variance (MSV). Once all the criterions being met, we may proceed to the test of structural model. Table 4 shows the result of the measurement model.

Structural equation model: Having fitted the measurement model, the structural model as shown in Fig. 2 was tested to find out if the model also fits the data.

Each path drawn follows the hypotheses that are being tested in this study. The hypothesized structural model was assessed for model fit based on maximum likelihood estimate. The output obtained indicate that the chi-square test was statistically significant, $\chi^2 (550.101, N = 300) = 163$, $p = 0.000$. This implies that the null model should be rejected. According to Mueller and Hancocks (2008), chi-square as the base statistical test in structural equation modelling is prone to reject the null hypothesis in a relatively large sample size. But here, our samples are relatively small. As such, a recommended alternative model fitting measure is the likelihood ration or normed chi-square.

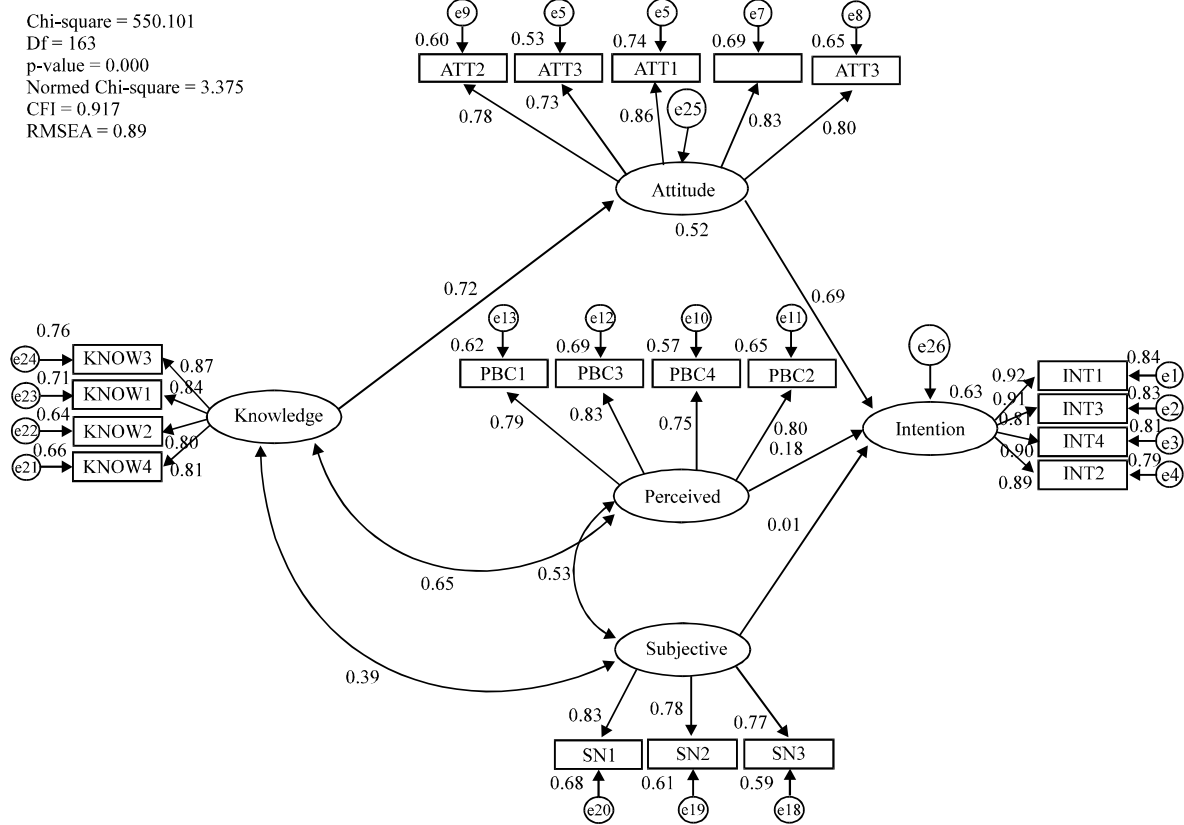


Fig. 2: Structural model of the intention to adopt Malaysia Halal certification among the OIC food manufacturers

Table 5: Results of the structural model test of the intention to adopt Malaysia’s Halal certification among the OIC food manufacturers

Hypotheses	Causal path	Estimate (β)	Threshold	p	Results
H1	Knowledge- Attitude- Adoption	0.50	>0.08	***	Supported
H2	Perceived- Adoption	0.18	>0.08	0.02	Supported
H3	Subjective- Adoption	0.01	>0.08	0.908	Not Supported

Author’s computation

Based on the recommended threshold of 5 or below, a normed chi-square of 3.375 was obtained in the analysis of the model. This suggests that the model fits the data. An assessment of other fit indices also yields positive results. With an index score of 0.917, the CFI is above the 0.9 recommended thresholds. Similarly, with a RMSEA score of 0.089, the model also satisfies the cut-off point for a desirable model. Another notable point is that all the path coefficients are statistically significance ($p < 0.05$) and practically significance (standardized $\beta > 0.20$) except for the path from subjective norms to adoption which is not supported by the data (Table 5).

When looking at the entire constructs in our model it is apparent that they are all above 0.5 which is the minimum requirement point in the SEM analysis. The statistically significant level

is at 95% level of confidence with a critical ratio of loadings higher than 1.96 (Hair and Anderson, 2010; Kline, 2010; Byrne, 2001).

It is found that the indicator of having knowledge on Halal certification has the highest loading towards attitude. As discussed by Anis (2009), knowledge is a fundamental criterion of adoption. Its absence will lead towards major drawbacks in sustainability. Moreover, it is not surprising that attitude contributes towards the second highest loading in the latent construct as food manufacturers' are willing to find the country with the highest potential to cater to their needs in terms of Halal verification.

Based on the structural model in Fig. 2, all of the four specified path coefficients are statistically significant apart from the path leading the subjective norms toward having the intention to adopt Malaysian Halal certification as the universal Halal certification body. As the manufacturers are key players in their own countries while operating within the international markets, the surroundings have not made much impact on their perceptions to adopt Malaysian Halal certification.

CONCLUSION

The theory of planned behaviour was used in this study to investigate the intention to adopt Malaysian Halal certification among the OIC food manufacturers. Malaysia with regards to its strategic location having modern technology and proper facilities and equipments as well as conducting Halal research on regular basis can be the reason for the food manufacturers' attitude towards favouring and accepting the Malaysian Halal certification among all available options. Furthermore, the influence of perceived behavioural control including the processing fees, information exposure and government incentives make them more aware of the benefits of the Malaysian Halal certification. Thus, understanding the intentions of the food manufacturers in adopting the Malaysian Halal certification is very important in establishing one standard logo within the OIC region and welcoming other countries to participate in the Malaysian Halal Hub for investment in addition to the benefits from the value added to their products through the use of an internationally accepted logo. This study has its own limitation whereby the sample size is relatively small compared to the real world case scenario. It is highly recommended that future researchers expand the sampling size and include the impact of the external variables such as the company demographic variables which include the religion of the company owner, company origin and company based structure and whether all of these factors have a strong relationship with the food manufacturers' perception towards his or her acceptance of the Malaysian Halal certification.

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