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# Non-Muslim consumers' perception toward purchasing *halal* food products in Malaysia

Purchasing  
*halal* food  
products in  
Malaysia

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## Abstract

**Purpose** – This study aims to identify the factors that influence Malaysian non-Muslim consumers' perception towards buying *halal* food products.

**Design/methodology/approach** – A structured close-ended questionnaire was used for data collection through a random distribution to 500 non-Muslim consumers from various states in Malaysia.

**Findings** – Using SPSS package, the factor analysis was able to identify three main variables. Later, the hypotheses were tested using structural equation modelling. This study has indicated that the perception of non-Muslim consumers about *halal* food products is influenced by their attitude, subjective norm and perceived behavioural control, specifically in the context of Malaysia.

**Research limitations/implications** – This finding will help both the academics and the industry food makers in understanding the perception of non-Muslim consumers towards the concept of *halal* food products.

**Practical implications** – The outcome of the study can serve as a useful reference to relevant Malaysian statutory bodies on the current perception of the Malaysian non-Muslim consumers towards Malaysian *halal* agenda. This will also help the industry food makers to serve their customers better as well as maximize their profit through a well-planned marketing campaign.

**Social implications** – It prepares a sound basis for Malaysian policymakers to promote the involvement of Malaysian non-Muslim entrepreneurs within the *halal* food service industry with the intent of improving the socio-economic strata of its participants and, at the same time, fulfilling their religious obligations in providing *halal* foods for fellow Muslims.

**Originality/value** – Because very few researches have studied non-Muslim consumers' perception towards *halal* food products, the development of *halal* food theory will help in capitalizing the practices in non-Muslim countries.

**Keywords** Malaysia, Attitude, Subjective norm, *Halal* food product, Non-Muslim, Perceived behaviour control

**Paper type** Research paper



## Introduction

*Halal* protocol for the food is the most important protocol among Muslim consumers. This concept generally adopted by most of the food industries in Islamic countries.

However, because of the noble virtue of this concept, many of the food companies in non-Muslim countries have also adopted this in their business practices (Abdul-Talib, 2010; Wilson *et al.*, 2013). In that sense, many non-Muslim consumers' perceived that practice of *halal* concept forces the food producers to maintain an ethical consideration in their business activities (Bergeaud-Blackler, 2006). The *halal* orientation focusses on long-term business performance and is considered a new business entry (Wilson *et al.*, 2013; Wilson and Liu, 2010). Moreover, they also feel that *halal* products are better for health and taste. It is because based on the *halal* rule, organizations must treat animals in the light of religious manner which is very hygienic and purified (Abdullah, 2007). However, when referring to *halal* foods, it should bear several Islamic requirements throughout the process from production which includes slaughtering, storage, display preparation and overall hygiene and sanitation (Wilson, 2014).

Malaysia is a multi-racial country, where three main races are existed. Among these three races, all are not Muslims. Muslim consumers are obligated by their religion to only consume products that are *halal*. Therefore, when purchasing products, they look for the *halal* logo which is certified by the religious authority in Malaysia. Besides, the demand for *halal* product has been increasing since past few decades (Golnaz *et al.*, 2010). It is indentified by the researchers that a positive personal attitude towards consumption of *halal* foods by non-Muslims has been influenced by perceptions of controls on food safety and environmental friendliness. In contrast, many non-Muslim consumers yet consider *halal* food as an Islamic food (Alam and Sayuti, 2011; Mathew *et al.*, 2014). As a result, it is important to conduct research on measuring the perception of non-Muslim consumers towards *halal* food.

The overall objective of this study is to discuss the development of *halal* food theory in the local and international markets that follow *halal*-oriented companies. This theory is to be materialized by capitalizing on the practices in Muslim countries.

### Literature review

Food selection and its corresponding decision-making process are often shaped by the prevailing social norms and practices, with religion serving as a major foundation in the approach. The word "*halal*" is derived from Arabic language that means permission in law (Wilson and Liu, 2010). More specifically, *halal* refers to acceptable activities based on the Holy *Qur'an*. In relation with this word in English, most of the people has perception that *halal* is only related with foods which are acceptable to consume by the Muslims. However, according to Rehman and Shabbi (2010), *halal* concept obeys the *Shariah* rules which clearly specify what Muslims can and cannot accept. Based on the *halal* point of view, one must not use harmful ingredients, exploitation of labour and environment for unlawful use. Therefore, the term is not subjected to only food and encompasses the whole spectrum of a Muslim's conduct, highlighting what a Muslim should and should not do to receive mercy from Allah. *Halal* concept instructs that food producers must ensure good nutrition with permitted ingredients. Additionally, this concept also emphasizes on the cleanliness and hygiene of the environment from planting to serving food. Many countries' government has adopted this concept to make an international standard for the food industry (Afendi *et al.* 2014; IslamOnline.net, 2006). Interestingly, because of the religious diversification among the citizens in the United Arab Emirates and Malaysia, the governments have also introduced the concept of "non-*halal*" foods to serve their non-Muslim citizens (Wilson *et al.*, 2013).

### Theoretical foundation

The main constructs of this study were taken from the “Theory of Planned Behaviour (TPB)”. According to this theory, consumer’s intention to purchase any products entirely depends on three main factors, namely, attitude, subject norms and perceived behavioural control. The authors postulated that consumers are most likely to engage only in those behaviours where they have full control. Subjective norms that are considered in this theory are those norms which can be accepted by the society where consumers interact. According to [Ajzen and Fishbein \(1980\)](#), a subjective norm also can be termed as attitude towards a particular behaviour. In other words, this is the perception of an individual towards social factors that influence individuals to perform or not to perform particular behaviours. In this theory, attitude is considered as a result of belief. Consumers will hold positive or favourable attitudes if the behaviour performed leads to positive outcomes. On the other hand, consumers will hold negative or unfavourable attitudes if the behaviour performed leads to negative outcomes. However, a person is assumed to hold many behavioural beliefs associated to certain behaviour ([Ajzen, 2002](#)). Based on the prevailing accessible beliefs at any given time (relating to the subjective values of the expected outcomes based on the behaviour), the aggregate will result in a favourable or unfavourable “attitude” towards the behaviour. In the case of *halal* food purchase, the consumers’ behavioural belief will dictate whether or not the person will have a favourable/unfavourable attitude towards the purchasing of *halal* products. A person’s normative belief represents the perceived behavioural expectations from the persons’ important referent individuals or groups (i.e. spouse, family, friends, etc.) ([Ajzen, 2001](#)).

In fact, buying *halal* product can be affected by the subjective norm. For example, when a consumer feels pressure from their referrals, they may act according to those specific pressure groups ([Wilson and Grant, 2013](#)). Besides, a perceived behavioural control represents the individual’s perception of their ability to conduct an intended behaviour. Looking into the *halal* food purchasing scenario, a non-Muslim might consider several relevant control factors (e.g. food safety, cleanliness, price, etc.) and assess them against his/her ability, before proceeding to purchase the said *halal* food product. Hence, when producing and promoting *halal* products, the producer must be greatly concerned about this issue. In relation with this context ([Ajzen, 1989](#)), it can be confirmed that perceived availability of *halal* food products influence non-Muslim consumers to avoid non-*halal* food in Malaysia.

### Non-muslim consumers’ attitude

[Wilson and Liu \(2011\)](#) have noted the strong relationship between diet, food culture and religion. The authors further added that for many individuals, the dietary habits practiced by them are a reflection of their own religious persuasion. Some religions have ordained in a very specific manner, what, how and when to eat or to avoid consuming certain foods. Some examples of religions imposing food restrictions are the prohibition of pork and meat not slaughtered according to rituals practiced in Judaism and Islam. Thus, many prior researchers acknowledged that understanding consumers’ attitude towards *halal* product is an important area for investigation ([Bergeaud-Blackler 2006](#); [Golzaz et al., 2010](#); [Wilson et al., 2013](#)). In fact, in their research, they tried to assess perceptual differences between Muslim and non-Muslim consumers towards *halal*

products and concluded that food safety and hygienic environment significantly influence their consumption of *halal* foods.

Additionally, [Bergeaud-Blackler \(2006\)](#) noted that non-Muslim's intention of buying *halal* product depends on many important factors including age, educational qualification, religious thoughts and animal welfare. Similarly, [Abdullah \(2007\)](#) investigated non-Muslims' perception towards *halal* foods. He conducted research among French non-Muslims. The author unveiled that French non-Muslims strongly believe that *halal* foods are not only tastier and hygienic but also the best treatment for animal, as Islamic slaughtering system is much more effective for animals in terms of pain. Inspired from the Muhammad's research, [Golnaz et al., \(2010\)](#) also conducted research on Russian non-Muslims, and they also recognized similar type of perception among Russian non-Muslims towards *halal* food products. They have pointed out that Russian non-Muslims strongly believe that Muslim food producers always obey their religious belief in their food processing process. Besides, today, food poisoning is one of the most common issues of food safety; it is caused by the intake of food that is contaminated with dangerous bacteria (pathogens) or toxins ([Aziz and Vui, 2012](#); [Mimi Liana, 2010](#)).

Same situations are also existed in Malaysia. Health and food safety are very sensitive issues for Malaysian consumers. The major concern of Muslim consumers in Malaysia is *halalness* of foods products. Muslim consumers usually do not accept food products that are not certified as *halal* by the Malaysian religious authority. According to [Alserhan \(2010\)](#), research on greatest awareness regarding the size of the global *halal* market is the most importance source of information regarding this topic in today's world. Adding to this, [Wilson et al. \(2013\)](#) emphasized that "consumer-based religious obligation" should be looked into for the further development of *halal* markets internationally.

*Halal* food products provide extra guarantees on food safety and quality, which include *halal* certification that Muslims seek. However, *halal* certification is not enough for the foods to be "pork-free" but they should also be considered "guilt-free". [Ismail and Ehsan \(2008\)](#) concluded that there is a need to acquire the *halal* certification for all the consumer products from the department of Islamic development Malaysia (JAKIM). As such, in the case of *halal* food purchase, the consumers' behavioural belief will dictate whether or not the person will have a favourable/unfavourable attitude towards the purchasing of *halal* products ([Wilson, 2014](#)). Basing on the discussion, the following hypothesis is drawn:

*H1.* Attitude has a significant influence on the intention of non-Muslim consumers' purchase of *halal* food products.

### **Non-muslim consumers' subjective norm**

According to [El-Mouelhy \(2006\)](#), the food manufacturers and marketers' perception regarding *halal* food consumption showed that more than 70 per cent of the food manufacturers and marketers agreed that funding provided by the government could help to develop the *halal* food industry in Malaysia. They also exposed that 61.1 per cent of the companies in the food industry in Malaysia do not get any funding or incentives from any government agency. This situation was because of the lack of promotions and information about grants or incentives offered to the company involved in the *halal* food industry. [Shafie and Othman \(2009\)](#) conducted research on the effects on Malaysian society of *halal* food production and consumption, which is based on social regulation that has put pressure on internal practice and organizational structure. The paper was



based on a study on management of the operations of an organization of a similar structure to monitor trading in *halal* food organizations. The central point to be reached in this topic is an understanding of what effects there are on the *halal* food industry and the classification of institutions (Nasir *et al.* 2011). The pressure is the key in influencing homogeneity of *halal* transactions and the quality *halal* food industry. The data also include concerns of the Malaysian government that has established a mechanism to secure confidence in the Muslim consumer community in terms of food products, slaughterhouses and all *halal* transactions. This suggests that customers have more belief in *halal* foods and products (Norman Azah Anir, 2008).

Golnaz *et al.* (2010) found that the market for *halal* food products is growing globally. More export of *halal* food products to non-Muslim countries is coming in time. This can be considered a success in the establishment of Islamic values in the non-Muslim world. According to Butt and De Run (2010), advertisements of alcohol and gambling products in Malaysia are usually not allowed by *Shariah*. They are considered to negatively affect the moral and ethical status of the young population. De Run *et al.*, (2010) discussed the ethnic advertisement market which can be considered a good playing field for advertisers. According to Dali *et al.* (2007), the description of an Islamic brand has a qualitative difference with a non-*halal* product, i.e. an Islamic brand follows processing with *Shariah*-compliant procedures, which can include cleanliness in every step. A previous study of Lada *et al.* (2010) also supported that the difference believed to be existent in *halal* products, which is a subjective norm, plays a positive role related to influencing the attitude of persons. Wilson and Liu (2010) explained the concept of *halal* which has importance on Muslim's beliefs. However, it can establish a *halal* certificate which means trust, and it can carry on regardless of the product's lifespan.

A person's normative belief represents the perceived behavioural expectations from the persons' important referent individuals or groups (i.e. spouse, family, friends, etc.) (Ajzen, 2002). These normative beliefs or the motivations to comply with the perceived expectations from each referent can result in perceived social pressure or "subjective norm" (Wilson and Grant, 2013). Hence, subjective norms can then be seen as the perceived social pressure from his/her family and surrounding community will affect his/her intent towards the purchasing of *halal* food products. It might relate to intentions and influences by others (in this case, the non-Muslim consumers). Based on the discussion, the following hypothesis is drawn:

H2. Subjective norm (social influence) has a significant influence on non-Muslim consumers' the intention of buying *halal* food products.

### Non-Muslim consumers' perceived behavioural controls

Control beliefs are associated with the perceived existence of factors through which the perceived behavioural control can be determined. A perceived behavioural control represents the individual's perception to conduct an intended behaviour. Looking into the *halal* food purchasing scenario, a non-Muslim might consider several relevant control factors (e.g. food safety, cleanliness, price, etc.) and assess them against his/her ability, before proceeding to purchase the said *halal* food product. However, his/her favourable intention will only translate itself into behaviour when the perceived behavioural control is strong (Wilson and Grant, 2013). Thus, an actual behavioural control depends on the skills, resources and other relevant prerequisites.

Cutler (2007) articulated that consumers have more confidence on *halal* foods, as it follows strict rules for processing foods than non-*halal* food processing. According to Bello (2004), Hazard Analysis Critical Control Points invented new rules for food products where food safety was the predominant issue. They have included *halal* concept in their standard which ensure the effectiveness of *halal* concept for foods. Food producers greatly respond by adopting this new food processing techniques. Food manufacturers also adopted this new standard for the raw, semi-finished and finished foods which ensure quality foods for the consumers. According to Lindgreen and Hingley (2009), food safety and quality is a major concern for states, consumers, food producers, manufacturers and regulatory authorities. It is concerned with ensuring that food available to consumers is safe for consumption. As such, in many countries, government has enforced to acquire *halal* certificate before opening any restaurant (Dali *et al.*, 2007). For instance, in Malaysia, most of the restaurants need to obtain *halal* certificate from the proper authority.

In Malaysia, food safety and quality is an increasingly important issue (Golzaz *et al.*, 2010). Various factors, such as improper use of pesticides, are influencing food safety. Study conducted by Dali *et al.* (2007) has shown that the problem of food safety and quality is somewhat a matter of permanent concern. Advances in knowledge, science and technology in food industries render the food laws less effective. It is also recognized that ensuring food safety and quality requires more effort than mere enforcement of the existing legal provisions. Nasir *et al.* (2011) in their study discussed about the effect of radio frequency identification (RFID) technology on the awareness of *halal* products. The authors have identified five important characteristics which make RFID technology more promising in relation with the *halal* concept. These attributes of RFID are usability, efficiency, security, affordability and commercial visibility. Additionally, they have also pointed out that RFID technology has unique characteristics, e.g. it can read more than one tag at a time. Consequently, many companies have adopted this technology for providing an effective approach to ensure *halal* concept among Muslim consumers.

In another research, Widodo (2013) found that most of the *halal* producers in the USA perceived that *halal* products basically focussed on two important issues, including not using alcohol and way of slaughtering of animals. However, according to The Holy *Qur'an*, the *halal* concept goes beyond these two. As a result, many Muslim consumers were demanding to enforce a proper *halal* standard with continuous quality inspection through proper Muslim bodies (Salman and Siddiqui, 2011). The authors also found that many food producers in the USA do not have proper training for animal slaughtering in the light of *halal* concept. Hence, many Muslim consumers requested the authority to give permission to only Muslim producers to produce *halal* foods instead of non-Muslim producers.

According to Karim *et al.* (2011), Malaysia has established itself as the hub of *halal* foods. In some cases, the issues of Malaysian certification guarantee for food and products are greatly familiar, and it is suggested that in the international market, it is only Malaysia whose *halal* certification is issued by the government and authorized by their respective Islamic associations. That means, for *halal* foods, Islamic dietary requirements and Islam-accepted ways of slaughtering, storage, display, preparation, hygiene and sanitation are in practice in Malaysia. Abdul-Talib (2010) has conducted a research on the concept of the Malaysian *halal* foods orientation which observes the preparation of and the procedure in *halal* transactions.

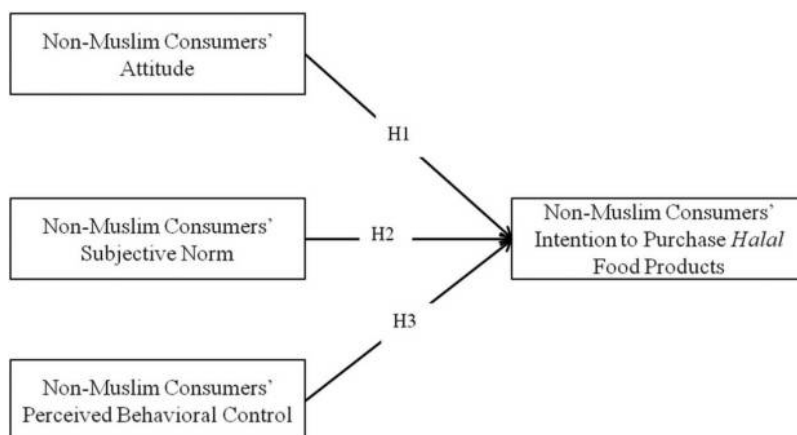


The *halal* logo can offer some security or guarantee, has more value and is more important than ISO or similar certification for all customers' perception (Golnaz *et al.*, 2010). *Halal* concept is not limited within animal slaughtering; it also focusses on processes from planting or producing raw material till delivery to final consumers. For instance, many countries produce dish detergent with animal fat which use for cleaning dishes in restaurants (Mimi Liana, 2010). In the light of *halal* concept, these animal fats should be taken from permissible animals. For example, fats that come from pigs must not be used in the production of detergent. Therefore, it is one of the difficult challenges for the *halal* product producers to ensure *halal* standards in every step of producing final products including sourcing, handling, processing and manufacturing. Therefore, it requires proper standardization for each action in the process of production.

Therefore, just labelling of *halal* may not confirm the *halalization*. According to Ismail and Ehsan (2008), many of the ingredients including flavours, colorants, beta-carotene, etc., should not be included in the *halal* products. All these issues highlighted above provide great challenges for the manufacturers to produce products for Muslim consumers (Ismail and Ehsan, 2008). However, many countries have started to develop authorities for ensuring proper *halal* process and inspecting before giving *halal* certification, although it is in initial stage (Shaharudin *et al.* 2010). Based on the discussion, the following hypothesis is drawn:

H3. Perceived controlled behaviour has a significant influence on non-Muslim consumers' the intention of buying *halal* food products.

By considering all these constraints and findings, this study developed a conceptual framework to assess the effect of three determinants identified in TPB on the intention of buying *halal* food products. However, this research has only focussed on the buying behaviour of non-Muslim consumers to discover the effect of these three determinants on intention to buy *halal* products among non-Muslim consumers in Malaysia. Figures 1 and 2 illustrates the conceptual model that has been created for the purpose of this study.



**Figure 1.**  
Conceptual  
framework of the  
study

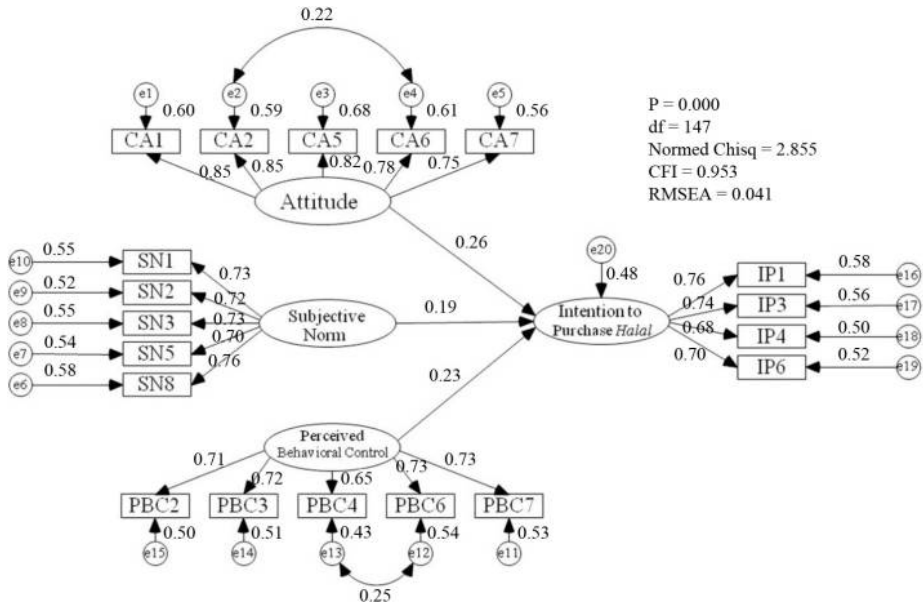


Figure 2. Structural model of the study

### Methodology

To achieve the objectives, this study mainly focussed on primary data that had been collected by a structured close-ended questionnaire. All the items in the questionnaire primarily focussed on understanding non-Muslim’s attitude, subjective norm and perceived behavioural control towards their intention to purchase *halal* food products. The questionnaire had two main parts including demographic and behavioural. In behavioural section, the questionnaire items had been adapted from Karim *et al.* (2011), Salman and Siddiqui (2011) and Shaharudin *et al.* (2010). These ensure the construct, content and face validity of the measurement tool used for this study. The data have been collected from the non-Muslim consumers from different states in Malaysia. The respondents of this study were selected randomly to avoid researcher’s bias. The respondents were told to select a number on a scale of 1 “strongly disagree” to 5 “strongly agree” to reveal to what extent they agree with the statements that were included in the questionnaire.

The questionnaire was originally written in English, and later was translated to Bahasa Malayu. A total of 500 questionnaires had been distributed to the selected samples of Malaysian non-Muslim consumers. The targeted respondents were working adults and students aged 20 years and above. In all, 432 questionnaires (response rate of 86.4 per cent) were returned, of which, 403 were usable. Furthermore, Cronbach’s alpha was used to check the reliability of the data (Hair *et al.*, 2010). In accordance with the outcome of the reliability from Cronbach’s alpha, it can be seen that the scale in which the reliability is in from 0.743 to 0.890. Therefore, it is safe to say that the results have achieved an acceptable reliability. This was adequate and deemed to be sufficient for conducting further analysis for this study. Finally, to achieve the objectives of the study, structural equation modelling (SEM) has been used to identify the structural relationships among the constructs identified and to test the hypotheses.

## Results and discussion

Descriptive analysis is used to provide information about the respondents' demographic characteristics. For the study at hand, it can be seen that more than 60.05 per cent of the respondents were male and 39.95 per cent were female. Within this, the Chinese (79.0 per cent) represents the majority of the respondents, followed by the Indians (21.0 per cent). That is why it is not unlikely that Buddhism (65.01 per cent) was the religion practiced by the majority of the respondents. Hinduism came in second (23.33 per cent) and finally followed by Christianity (11.66 per cent). The age range of 0-25 years represented 42.43 per cent of the respondents, followed by 45 years and above (21.59 per cent), 36-45 years (18.86 per cent) and 26-35 years (17.12 per cent). Majority (66.50 per cent) have a bachelor's degree. Besides, 29.03 per cent have master's degree, whereas 4.47 per cent have PhD. The respondents were categorized amongst four categories; students represented the highest number of respondent (62.78 per cent), followed by service holders (27.54 per cent), whereas business is 8.44 per cent and a small percentage of occupation is 1.24 per cent. Respondents' income distribution was mostly among three ranges, the highest being RM 0-2,000 per month (62.78 per cent), followed by 2,001-4,000 (19.11 per cent) and, finally, above RM 4,001 (18.11 per cent).

Factor analysis was used to identify the main factors related to the study through the usage of using principal component analysis. Later, Bartlett's test of sphericity was used to test the construct validity of the study. Sampling adequacy is generally measured through the means of Kaiser–Mayer–Olkin (KMO) test. Initially, the KMO is used to understand whether the data are suitable for running a factor analysis. Additionally, it is also used to predict whether there is any variable to be dropped because of multi-colinearity. The acceptable range of value must be more than 0.5; 0.5-0.7 fall under the mediocre range, 0.70 and 0.80 fall under the good category, whereas any value above 0.9 is considered to be superb (Hair *et al.*, 2010). The research at hand falls at the good level because the value achieved is 0.835. Hence, it can be said that the factor analysis is acceptable.

To test the null hypothesis, Bartlett's test of sphericity was applied. Hair *et al.* (2010) take the view that the minimum loading is necessary to identify the matrix. The Bartlett's test for this study is highly significant because  $p < 0.001$ ; therefore, we can conclude that the factor analysis for this study was appropriate. From a general perspective, the factor is considered to resemble an item for a respective group. When there is a higher factor loading, it means that there is a stronger relationship within the items. In total, four factors have been extracted from the factor analysis that explained 62.551 per cent of the total variance.

Hence, it can be said that each of the dimensions has been loaded into four respective factors which, in turn, is associated to the consumer factor, which influenced non-Muslim consumers of Malaysia when it comes to making purchase decisions towards *halal* food products. Table I indicates the relation of each of the items with a respective factor.

Finally, SEM has been used to test the hypothesis of the study after identifying three main independent variables through exploratory factor analysis (EFA). Prior to running the structural model, confirmatory factor analysis (CFA) as well as the measurement model was run to address the issues of unidimensionality, validity and reliability (Byrne, 2010; Zainudin, 2012). The results are presented in Tables II and III. In this study, the average variance extracted (AVE) and composite reliability (CR) were manually calculated based on the formula provided by Raykov (1997).

Items	Attitude	Factor loadings		Intention to purchase <i>halal</i>
		Subjective norm	Perceived behavioural control	
Choosing <i>halal</i> food products is a good idea	0.849			
I feel comfortable to consume <i>halal</i> food products	0.848			
I'm satisfied with the <i>halal</i> food products	0.838			
<i>Halal</i> food products are safer and more hygienic	0.815			
<i>Halal</i> food products are environment friendly	0.809			
I think <i>halal</i> food products are better quality		0.797		
My family members prefer <i>halal</i> food products		0.787		
My friends recommend to consume <i>halal</i> food products		0.779		
I experience <i>halal</i> food product as being part of a natural way of living		0.773		
I read good things about <i>halal</i> food products in the newspapers		0.739		
I choose <i>halal</i> food products because of cleanliness			0.796	
Most people who are important to me consume <i>halal</i> food products			0.780	
I decided to try <i>halal</i> food products due to its acceptance in my society			0.778	
<i>Halal</i> food product is likely to have a beneficial impact on my personal health			0.773	
I believe that <i>halal</i> food product is safe in terms of the source			0.730	
The probability that I would consider buying <i>halal</i> food product is high				0.783
I believe that <i>halal</i> food product is safe in terms of the process (slaughtered according to Muslim ritual)				0.744
I believe that <i>halal</i> food product is safe from animal diseases				0.733
I believe that <i>halal</i> food product is guaranteed with a <i>halal</i> certificate and is under the control of the Malaysian <i>halal</i> authority				0.720
Cronbach's alpha (a)	0.890	0.836	0.835	0.743
Overall Cronbach's alpha (a)			0.748	

**Table I.**  
Factor analysis

The value of the goodness-of-fit indices of the model summary shows exactly how much of variation of the three independent variables are caused by the dependent variable. However, in the first model, it was observed that the modification indices (MI) value between e2 and e4 and e12 and e13 were more than 15. Thus, these parameters were connected by “double headed arrow” to make them a free parameter, as suggested by Zainudin (2012). The model was re-specified, and the result shows that the fitness level for the model is achieved (Absolute fit [The root mean square error of approximation (RMSEA)] = 0.041; incremental fit [comparative fit index (CFI)] = 0.953; and Parsimonious fit [ $\chi^2/df$ ] = 2.855,  $p = 0.000$ ).

Therefore, the output shows that the model at hand obtains satisfactory results and, thus, indicates that the hypothesized model is accepted.

From Table IV, it can be seen that all the relationships drawn for the proposed model are significant = 0.000, indicating a result that can be considered to be statistically significant because  $p$  value < 0.05). Thus, results obtained from the structural model lead us to confirm that three different independent variables, namely, attitude, subjective norm and perceived behavioural control influence non-Muslim consumers' perception towards buying *halal* food products. As a result, there is a proof that these factors leave a significant influence on how non-Muslim consumers of Malaysia perceive *halal* food products.

Hypothesis testing was used to achieve the objectives of this study. Hence, the influences of the three independent variables reflect non-Muslim consumers' perception towards *halal* food products, and their influence is depicted in Table II. In terms of attitude, the results indicate that it shares a positive relationship with a path coefficient

Construct	Cronbach's alpha	CR	AVE
Attitude	0.890	0.906	0.658
Subjective norm	0.836	0.849	0.530
Perceived behavioural control	0.835	0.834	0.502
Intention to purchase <i>halal</i> food products	0.743	0.812	0.519

**Table II.**  
CFA results for the  
measurement models

Name of category	Required value	Remarks
Unidimensionality	Factor loading for each item $\geq 0.50$	Required level has achieved
<i>Validity</i>		
Convergent validity	AVE $\geq 0.50$	Required level has achieved
Construct validity	All fitness indexes for the models meet the required level	Required level has achieved
Discriminant validity	The correlation between exogenous constructs is $\leq 0.85$	Required level has achieved
<i>Reliability</i>		
Internal reliability	Cronbach's alpha $\geq 0.70$	Required level has achieved
Composite reliability	CR $\geq 0.60$	Required level has achieved
AVE	AVE $\geq 0.50$	Required level has achieved

**Table III.**  
CFA result summary

**Source:** Zainudin (2012)

		Estimate	SE	CR	$P$
Intention to purchase <i>halal</i> food products	<--- Attitude	0.264	0.071	3.718	***
Intention to purchase <i>halal</i> food products	<--- Subjective norm	0.185	0.066	2.827	***
Intention to purchase <i>halal</i> food products	<--- Perceived behavioural control	0.228	0.068	3.352	***

**Table IV.**  
Regression weights

**Note:** SE, standard error

of 0.264 at  $p < 0.000$ . Therefore, it can be said that attitude leaves a significant influence on non-Muslim customer's intention. The findings are identical with past findings (Abdullah, 2007; Bergeaud-Blackler 2006; Wilson, 2014; Golnaz *et al.*, 2010) where the authors also found that attitude plays a significant role in non-Muslim customer's intention to purchase *halal* foods.

Moreover, subjective norm (social influence) has significant impact on non-Muslims' perception of *halal* food products (the positive path coefficient of 0.185). Therefore, this study concludes that subjective norm (social influence) has a significant influence on non-Muslim consumers' intention to purchase *halal* food products ( $p < 0.000$ ). This is because of the fact that non-Muslim consumers in Malaysia are influenced by their friends or family members to consume *halal* products. Some of them might stay in Islamic environments (having Muslim friends or stay in Muslim village) where *halal* products are widely consumed and more accepted by the society. For example, this study has explored that non-Muslims in Kedah and Kelantan (Muslim majority states) are more likely to purchase *halal* products because of social influence. This also supports past findings where the authors pointed out that consumers will likely to engage only in those behaviours which can be accepted by the society where consumers interact (Ajzen and Fishbein, 1980). According to Wilson and Grant (2013), this also can be termed as "perceived social pressure". This also supports past findings where the authors found significant influence on non-Muslim consumers' intention to purchase *halal* food products in different settings (Lada *et al.*, 2010; Norman Azah Anir, 2008; Tanakinjal and Amin, 2010; Wilson and Grant, 2013; Golnaz *et al.*, 2010).

Finally, perceived behaviour control has also a significant positive relationship with non-Muslim consumers' intention to purchase *halal* food products (path coefficient is positive 0.228) at  $p < 0.000$ . Consumers formulate their own positive effect on how they perceive *halal* products since some of them give value to not only the quality of the product, but they also consider safety, hygiene and animal welfare. For example, some might think that quality does not count as long as they cannot get what they want. Therefore, non-Muslim consumer's perceived behavioural control has a positive influence on intention to purchase *halal* food products in Malaysia. The finding is similar to past studies (e.g. Cutler, 2007; Lindgreen and Hingley, 2009; Nasir *et al.*, 2011; Wilson and Grant, 2013; Golnaz *et al.*, 2010).

### Conclusion

This study utilizes the concept of TPB to determine the factors that have an effect on non-Muslim consumers' perceptions towards the *halal* food products in the context of Malaysia. Research has shown that when it comes to the consumption of *halal* food products, it is relatively different in comparison to their consumption of "regular" foods (Golnaz *et al.*, 2010). Attitude, subjective norms and perceived behaviour control were seen as the main factors that dictates their consumption of *halal* products. This study found that the positive attitudes of customers, such as self-concept, awareness and understanding of the *halal* concept, play an important role in determining non-Muslims' behavioural treatment towards *halal* products.

To support the findings of this study, we have shown that similar result has also been found in past studies (Abdullah, 2007; Afendi *et al.*, 2014; Bergeaud-Blackler, 2006; Lada *et al.*, 2010; Norman Azah Anir, 2008; Golnaz *et al.*, 2010; Shafie and Othman, 2009; Wilson and Grant, 2013; Wilson and Liu, 2010). Additionally, it has also been found that



perceived control leads to non-Muslim consumers' intention of consuming *halal* food products. Furthermore, social influence also affects non-Muslims' intentions regarding purchase of *halal* products. We have also found that perceived behaviour control such as food safety, animal welfare and environment-friendliness are important in influencing non-Muslim consumers, but not as much as positive attitude and social influence. The outcome of the study is hopefully able to serve as a useful reference to relevant Malaysian statutory bodies on the current perception of the Malaysian non-Muslim consumers towards Malaysian *halal* agenda. This will also help both the academics and the industry food makers in understanding the perception of non-Muslim consumers towards the concept of *halal* food products. Besides, this study can provide industrial food makers with an understanding of why as well as how consumers perceive *halal* food products; this will help manufactures to increase their knowledge as well as maximize their profit in the market. In addition, this study will also help to develop the *halal* food market segment and the *halal* industry in Malaysia and onwards.

On the observation of Malaysian non-Muslim consumers placing a high degree of confidence towards *halal* food products, it prepares a sound basis for Malaysian policymakers to promote the involvement of Malaysian non-Muslim entrepreneurs within the *halal* food service industry – with the intent of improving the socio-economic strata of its participants and, at the same time, fulfilling their religious obligations in providing *halal* foods for fellow Muslims.

Finally, although meeting the consumer's religious obligation is paramount, benefits associated with consuming *halal* foods can also be promoted to appeal to the broader market. Issues related to health, safety, quality, environment and ethical treatment of animals can be further elaborated to increase the awareness of the *halal* concept with the intent to generate a level of understanding and trust by both Muslim and non-Muslim consumers.

### Limitation and recommendation

As very few researches have conducted studies on non-Muslim consumers' perception towards *halal* food products, there were some limitations and problems, and for that, future studies need to be conducted. The limited time for data collection and questionnaire surveys was the key limitation for this study. The sample obtained from different states of Malaysia proves that different points of view on *halal* food products can cause the gap that occurred in this study. As a result, respondents in Kedah and Kelantan have different perceptions from Kuala Lumpur, Penang and Johor, where Muslims are the minority. This is because the social norms and cultures are different. Therefore, future studies should be specific about a focussed area of study or factors that influence non-Muslims in areas that are influenced by Islamic norms and Buddhist or Hindu norms.

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