Ḥalāl food and products in Malaysia: People's awareness and policy implications

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Abstract: The concept of *ḥalāl* products or food is gaining worldwide attention because of its recognition as an alternative benchmark for safety, hygiene and quality assurance of what is consumed. Thus products or foods produced in line with *ḥalāl* prescriptions are acceptable to Muslim as well as many non-Muslim consumers. Given the significant role of *ḥalāl* awareness in the life of Muslims and their obligations to be *Sharīʿah* compliant, this paper addresses the determinants of Muslim consumers' awareness of *ḥalāl* products or foods in the city of Shah Alam, Selangor, Malaysia. It is argued that many factors have a bearing on the awareness of *ḥalāl* products or food but unfortunately most of the previous studies focused mainly on the *ḥalāl* certification logo. In order to fill the void, this paper delves into other factors that can influence the awareness of Muslims on *ḥalāl* consumptions. Using Partial Least Square-SEM, this study found that religious belief, *ḥalāl* exposure, Ḥalāl-logo, and health reasons are the determinants of Muslims' awareness about *ḥalāl* consumptions.

Keywords: Ḥalāl; Sharīʿah; policy; quality assurance; safety.

Abstrak: Konsep produk atau makanan halal semakin mendapat perhatian di seluruh dunia kerana pengiktirafannya sebagai penanda aras alternatif untuk keselamatan, kebersihan dan jaminan kualiti terhadap apa yang digunakan dan dimakan. Oleh itu, produk atau makanan yang dihasilkan selaras

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dengan preskripsi halal diterima oleh pengguna Islam dan bukan Islam. Memandangkan peranan penting kesedaran tentang barangan halal dalam kehidupan orang Islam dan kewajipan mereka untuk mematuhi Syariah, kertas kerja ini menekankan penentu kesedaran pengguna Islam di bandar Shah Alam, Selangor, Malaysia terhadap produk atau makanan halal. Terdapat banyak faktor yang menentukan kesedaran tentang produk dan makanan halal, namun apa yang mendukacitakan, kebanyakan daripada kajian sebelum ini hanya memberi tumpuan terhadap logo pensijilan halal sahaja. Dalam usaha untuk mengisi kekosongan itu, kertas kerja ini menumpukan kepada faktor-faktor lain yang boleh mempengaruhi kesedaran orang Islam terhadap penggunaan barangan halal. Dengan menggunakan "Partial Least Square-SEM," kajian ini mendapati bahawa kepercayaan agama, pendedahan terhadap barangan halal, logo halal, dan sebab-sebab kesihatan merupakan penentur kesedaran orang Islam tentang penggunaan dan pemakanan barangan halal.

Kata kunci: Ḥalāl; Syariah; dasar; jaminan kualiti; keselamatan.

Malaysia is moving towards becoming a developed country by the year 2020. Consequently, Malaysia depends on various economic generators that can contribute to the country's wealth and economic growth. In this context, one of the most important sectors is the *ḥalāl* food/ product sector that is no longer an industry that merely complies with religious requirements to feed about 60 per cent Malaysians who are Muslims but it is becoming an economic force in itself domestically and globally. As per the Third Industrial Master Plan (IMP3), the government is committed to making Malaysia the *ḥalāl* hub soon. Government efforts have started since 2006 yet there is much to do in making Muslim consumers more aware of what they eat, drink and use pertaining to *Sharīʿah* compliance (Bohari, Hin, & Fuad, 2013). According to the Malaysian Industrial Development Authority (MIDA) reports, part of the government's effort has been in terms of special tax incentives for *ḥalāl* food production. Companies that invest in *ḥalāl* food production and have already obtained *ḥalāl* certification from the Jabatan Kemajuan Islam Malaysia (JAKIM) (Department of Islamic Development Malaysia) are eligible for the Investment Tax Allowance of 100 per cent of qualifying capital expenditure within a period of five years (Amanda, 2012).

A major bottleneck in materializing and achieving the dream of becoming a *ḥalāl* hub lies in the issues of *ḥalāl* certificates and logos

especially for products manufactured outside Malaysia but locally sold. The problem is compounded further because of the absence of a globally-standardised *ḥalāl* authority that can properly monitor the production process in accordance with *Sharīʿah* stipulations. A starting point for policy-makers is to formulate policy-research questions such as: What is the level of awareness of *ḥalāl* food/products among Muslims? What are the factors that contribute to the level of awareness of Muslims about *ḥalāl* food or products? Are there any significant relationships between the identified factors and the level of awareness of the Muslims about *ḥalāl* food or products? What is the overall predictive capacity of these factors on the level of *ḥalāl* awareness among the Muslims? This study attempts to provide answers to these questions. The objectives of this paper are: (a) to examine the level of awareness of the Muslims about *ḥalāl* food or products; (b) to identify the factors that contribute to the level of awareness about *ḥalāl* among the Muslim; (c) to examine the relationships between the identified factors and level of Muslims' awareness about *ḥalāl* food or products among the Muslims; and (d) to examine the predictive capacity of the identified factors that influence Muslims' awareness about *ḥalāl* consumptions in Shah Alam, Selangor.

Literature review

According to Abdul Latif (2006), Islam is the fastest growing religion and second largest in the world are true. The increasing awareness of Muslims all over the world on their obligation to consume food that meets Islamic dietary requirements has created a much greater demand for *ḥalāl* food and products. In Malaysia, "*Halal* Express" by MISC Bhd has been established in response to the growing number and increased volume and movement of *ḥalāl* products and the demands for specialised transportation and/or logistics services.

Malaysia, though having Muslim majorities in states such as Kedah, Terengganu, Melaka, Negeri Sembilan, and Kelantan, and Shah Alam, is nonetheless multi-religious and multiracial, comprising the Malays, Chinese, Indians and other races. Apart from their own religious beliefs, customs and traditions that these races inherit from their ancestors, influences from the environment and uniqueness of the states they are from affect their way of living with special reference to their eating habits, perception and attitudes towards food and products. For example, for a Muslim consumer, *ḥalāl* food and drinks mean that the products

have met the requirements laid down by the *Sharīʿah* law as well as safety and hygienic matter, whereas for a non-Muslim consumer, *ḥalāl* consumptions represent hygiene, quality and safety given that the products are manufactured strictly under the Holistic *Ḥalāl* Assurance Management System. Therefore, in any region of Malaysia, people from different states converge and form diverse groups who have their own reasons for demanding *ḥalāl* food and products.

The word "*Ḥalāl*" means permissible or lawful according to Islamic laws. It also refers to food or products that are lawful for Muslim consumption. According to Wahab (2004), *ḥalāl,* when used in relation to food in any form in the course of trade or business or as part of a trade description, is applied to lawful products, foods and drinks. *Ḥalāl* can also be applied to any action indicating or likely to be understood as permissible by Islam. Concerning food, "*ḥalāl*" denotes that it does not contain anything which is considered to be impure according to the *Sharīʿah*. *Ḥalāl* meat indicates that the animal has been slaughtered in accordance with the *Sharīʿah*. In reference to food stuff, *ḥalāl* based on *Sharīʿah* means that it has not been prepared, processed or manufactured using instruments or ingredients that were impure. Moreover, it has not in the course of preparation, processing or storage been in contact with or close proximity to anything that is considered to be impure by *Sharīʿah* prerequisites. Thus, in Islam, all foods or products for consumption are considered *ḥalāl* except the following: swine/pork and its by-products; animals improperly slaughtered or are dead before slaughtering; animals killed in the name of other than Allah (SWT) and drinks that intoxicate such as alcohol and other intoxicants. *Ḥarām* also comprises carnivorous animals, birds of prey and land animals without external ears; blood and blood by-products and foods "contaminated" with any of the above mentioned products as Muslims are raised to eat or drink *ḥalāl*, hygienic and safe foods or products (Riaz & Chaudry, 2004).

Ḥalāl in the Qurʾān and Sunnah

To deem something lawful (*ḥalāl*) or unlawful (*ḥarām*) is the prerogative of Allah the Al-Mighty alone. No human being, no matter how pious or powerful, could wield that authority. The basis for a prohibition is due to impurity and harmfulness. A Muslim is not supposed to question why or how something is unclean or harmful in what Allah has prohibited,

rather he should be thankful to Him (SWT) as indicated in the following verse of the Qurʾān: "O ye who believe! Eat of the good things wherewith We have provided you, and render thanks to Allah if it is (indeed) He whom ye worship" (2:172).

An in-depth understanding of the prohibitions Allah (SWT) has decreed demands our appreciation because these prohibitions are for our own well-being. Looking for excuses are among the biggest lies told against Allah (SWT) or a form of distortion of what He (SWT) permits and forbids. Thus, Allah's command on prohibitions and non-prohibitions must be abided by all Muslims. The fact is that Islamic laws are universally applicable to all races, creeds, and sexes. Allah (SWT) has commanded us to do that which He commanded the Messengers, where He pronounces: "O ye Messengers! Eat of the good things, and do right. Lo! I am aware of what ye do" (23:51).

"Good things" in the *āyah* have a root in the term *ḥalāl*. Thus, *ḥalāl* encompasses cleanliness and hygiene in food preparation as well because cleanliness is part of religion whereby Allah sanctions only hygienic, safe and *ḥalāl* food or products for consumption. This is clearly highlighted in Qurʾān (2:173). In this *āyah* we have been clearly informed on the kind of foods Muslims should and should not consume. The reasons for prohibitions are even substantiated with clarifications through Qurʾānic exegeses. For example, the reasons for forbidding carrion and dead animals for human consumption are due to health implications whereby the decaying process leads to the formation of chemicals harmful to the human body. Blood that is drained from an animal contains dangerous bacteria and toxins, which are harmful to human metabolism and development. Some of these authentic reasons are even highlighted in the Qurʾānic verse 16:66 which makes it clear that Islam only allows good and healthy food for Muslims to consume. Likewise, milk is a complete food rich in protein, calcium and vitamins A and B. This natural and provisional advantage is only possible to be derived from lawful animals when they are alive.

Various sayings of Prophet Muhammad (SAW) equally address the concept of *ḥalāl* relating to all forms of food, products and drinks for human consumption regardless of race, colour or nationality. One of the *aḥādīth* of the Prophet (SAW) even explains the perfect way of slaughtering animals to make it lawful or *ḥalāl* for eating. It was

narrated by Rafi' ibn Khadij that the Prophet (SAW) told Muslims who were going to slaughter some animals using reeds: "Use whatever causes blood to flow, and eat the animals if the Name of Allah has been mentioned on slaughtering them..." (Al-Bukhārī, 44:668).

This *ḥadīth* shows that the fulfilment of *ḥalāl* requirements in the rules and process of slaughtering animals is fundamental in food processing in relation to its lawfulness for Muslim consumption. Other *aḥādīth* also address various unlawful or non-*ḥalāl* food or products for human consumption. For example, it was narrated by al-Zuri that "Allah's Messenger forbade the eating of the meat of beasts having fangs" (Al-Bukhārī, 7:4350). It can be understood from another *ḥadīth* that while there are varieties of food, drinks and products that are permitted to be consumed and used, there are also a lot of drinks and foods that are not permitted for human consumption, such as alcohol and pork.

Locus of safety and hygienic food or product in ḥalāl

Hygiene has been given much emphasis in the concept of *ḥalāl* and it includes various aspects of personal body cleanliness, clothing, equipment and the working premises for processing or manufacturing of foods, drinks and products. The objective of *ḥalāl* is to ascertain that the food (whatever kinds) produced is safe, hygienic and not hazardous to human health. Thus, in the context of *ḥalāl*, hygienic food, drinks and products can be defined as free from *najis* (dirt/impurity) or contamination and harmful germs. So, it is obvious that *ḥalāl* compliance is particularly important in food matters especially in the practice of keeping ourselves and the things around us clean in order to prevent diseases. Hence, safe food, drink or product is one that is prepared in accordance with *ḥalāl* requirements and does not cause harm to the consumer be a Muslim or non-Muslim. In order to ensure the safety of consumers, the producers should take necessary steps to comply with Good Manufacturing Practice (GMP) and Good Hygiene Practice (GHP). The producers should apply the combination of manufacturing and quality control procedures to ensure that the foods or products are consistently manufactured to their specifications and *ḥalāl* prescriptions laid down by the *Ḥalāl* Certification Body. The Codex General Principles of Food Hygiene and the Malaysian Standard MS1514 on General Principles of Food Hygiene have laid down a solid

procedure in hygienic practices to ensure food hygiene and safety of products (Abdul Talib, Mohd Ali, & Jamaludin, 2008; Sumali, 2009). There is no doubt that the objectives of *ḥalāl* as stipulated in the general principles of food hygiene complement the attainment of *ḥalāl* through vigorous enforcement. Therefore, these principles are internationally recognised and the guidelines can be used together with other specific and appropriate codes of hygienic practice pronounced in the *ḥalāl* certification processes by JAKIM.

Conceptualizing *ḥalāl* awareness

According to Randolph (2003), the word "awareness" means the knowledge or understanding of particular subject or situation. The word "awareness" in the context of *ḥalāl* literally means having special interest in or experience of something and/or being well informed of what is happening at the present time on *ḥalāl* food, drinks and products. As such, awareness describes human perception and cognitive reaction to a condition of what they eat, drink and use. Subjectively, awareness is a relative concept where a person may be partially aware, subconsciously aware or may be acutely aware of issues relating to *ḥalāl* aspects of what things are permitted by Allah (SWT). It may be focusing on an internal state, such as a visceral feeling or on external events or issues by way of sensory perception (Nizam, 2006). Awareness of something is, therefore, a basic part of human existence. On top of everything is self-awareness. Self awareness means one exists as an individual with private thoughts about the state of something related to *ḥalāl*. Hence, the awareness of *ḥalāl* can be conceptualised as the process of getting information in order to increase the level of consciousness toward what is permissible for Muslims to eat, drink and use. To have an in-depth understanding of this concept, it is befitting to examine different sources or determinants by which one can become conscious of matters pertaining to "*ḥalālity*" as discussed in the following section.

General factors of ḥalāl awareness

Exposure to ḥalāl: In this age of modern science and technology, people are exposed to food and products of various kinds. However, the wide range of food and products offered in the market often mislead the consumers. Many are unaware of what they consume. According to Anderson, Fornell, and Rust (1997), consumers have to rely on the seller or outside observers, and put their trust in the information

received. Hence, it is important to provide consumers with guidelines through transmitting knowledge and exposure to purchasing the right foods and drinks. Patnoad (2001) suggests that one of the best ways to make people aware of what they are consuming is through educational exposure. Education would empower consumers with the wisdom to make the right choices of what they consume daily. Thus, the major responsibility of the government or agency in charge of *ḥalāl* products lies in educational exposure. Food safety education efforts must be directed towards the consumers, school-aged children, and employees in food industries. In Malaysia and other Muslim countries, consumers' level of awareness on "*ḥalālity*" is increased via teaching and learning. People are exposed to *ḥalāl* consumption through the newspaper, television, radio, and the Internet (Ahmad, Abaidah, & Yahya, 2013).

Religious belief: Religion is a system of beliefs and practices by which a group of people interprets and responds to what they feel is supernatural and sacred (Johnstone, 1975). Most religions prescribe or prohibit certain behaviour including consumption. Schiffman and Kanuk (1997) assert that members of different religious groups in their decisions to eat, drink or use any product are influenced by their religious identity, orientation, knowledge and belief. This indicates that religion and belief are factors of awareness about consumption behaviour. Religious knowledge and belief is one of the main determinants of food avoidance, taboos, and special regulation in particular with respect to meat (Simons, 1992). Religious knowledge or belief is the best guide to determine one's food consumption because several religions impose food restrictions, e.g., the prohibition of pork and not ritually slaughtered meat in Judaism and Islam, and pork and beef in Hinduism and Buddhism. Christianity, however, has no food taboos. Although the dietary laws imposed by some religions may be rather strict, the number of people following them is usually quite substantial. For example, Hussaini (2004) points out that 75% of Muslim migrants in the US follow their religious dietary laws. This shows that wherever Muslims choose to live, they abide by their religious knowledge and belief on "*ḥalālity*". It must be noted that the concept of human awareness has been highlighted in the Qurʾān and *Sunnah* to guide Muslims to lawful actions in life. What constitute *ḥalāl* and *ḥarām* are declared through Qurʾānic injunctions, and the believers are obliged to accept them as such (Hussaini, 2004; Rezai, Mohamed, & Shamsudin, 2012).

Health reason of *ḥalāl:* It is not only religious motives that determine people's awareness about *ḥalāl* food or products for consumption, but also health issues related to religious identity and degree of acculturation in whatever they consume daily (Bonne, Vermeir, Bergeaud-Blackler, & Verbeke, 2007). For example, it is important to ensure that the meat comes from a healthy animal so that people can be healthy. Rice (1993) asserts that much modern ill-health is attributable to poor nutrition and unhealthy state of what consumers take daily. This is closely related to argument for *ḥalāl* consumption since the primary aim of Allah (SWT) on *ḥalāl* is to ensure healthy life for people. *Ḥalāl* urges to ensure full commitment to producing and serving clean, safe foods and products for the consumers. In other words, *ḥalāl* products should be recognised as a symbol of cleanliness, safety and quality for a healthy life. It can be concluded that health reasons are another determinant of *ḥalāl* awareness. As such, the relevant agency or government as a whole should use health reasons as an alternative policy source of information to convince Muslim consumers on the importance of their awareness of the nature of *ḥalāl* foodtuff or products.

Role of ḥalāl certification via logo/label: In a nation with a Muslim majority living with many non-Muslims, such as, Malaysia, *ḥalāl* certification is an absolute key to consumption. Muslim consumers nowadays are faced with a broad selection of products and services some of which are somehow doubtful. Manufacturers and marketers have been indirectly forced to obtain and display the *ḥalāl* certification or logo as a way to inform and reassure target consumers of the *ḥalāl* and *Sharīʿah*-compliance of their products. In general, Muslim consumers in Malaysia look for authentic *ḥalāl* certification as the one issued by Malaysia's Department of Islamic Development (JAKIM) which is under the purview of the Ministry in the Prime Minister's Department. The introduction of *ḥalāl* logo or certification by JAKIM has generated more awareness among the Muslims on the importance of consuming manufactured products and foods or engaging in services that follow Islamic guidelines and principles. In Malaysia, Muslims would ensure that the foods, drinks and manufactured products they consume or purchase carry the *ḥalāl* logo issued by JAKIM. The *ḥalāl* logo is an important endorsement that the food or drinks are truly *ḥalāl*, safe and hygienic. Thus, labelling via logo is important as a factor of awareness about safe and hygienic foods and drinks related to diet and health.

Conceptual model for ḥalāl awareness

Given the various factors found in literature that can contribute to people's awareness about *ḥalāl* consumption, it is important to empirically study them to identify actual significant roles played by each as a determinant of *ḥalāl* awareness among Muslims in Malaysia (Figure 1). The outcome of this empirical investigation is expected to serve two purposes: (a) to serve as a source of relevant information for the government or agency (JAKIM) to formulate a policy on improving the level of *ḥalāl* awareness among Muslims in the country and (b) to provide a new alternative direction for government policy on how to delve with issues associated with *ḥalāl* products or foods in the country.
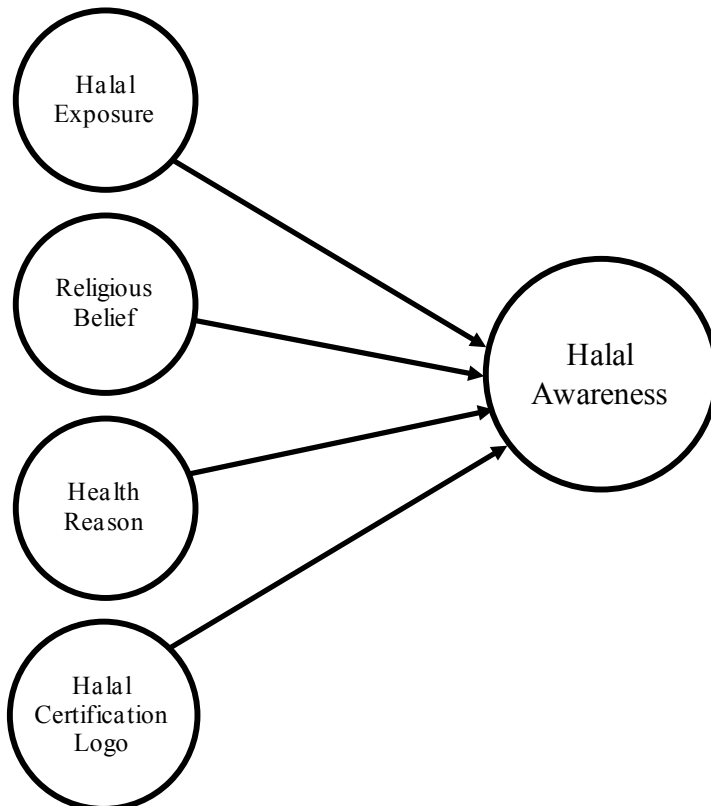

Figure 1: *The model: Explaining ḥalāl food and products*

In this conceptual framework, the level of awareness on *ḥalāl* food and products among Muslims is considered the dependent variable, which is

expected to be influenced by the independent variables in terms of *ḥalāl* exposure, religious belief, health reason, and role played by *ḥalāl* logo certification.

Exposure to *ḥalāl* food or products may include advertisement either in the newspaper, on television, radio, Internet or any other channel of communication, which can influence Muslims' level of awareness about *ḥalāl* consumptions (Patnoad, 2001; Anderson et al., 1997). Ambali and Bakar (2012) have explained the association between *ḥalāl* exposure and Muslims' awareness about daily consumption. Therefore, the research hypothesises that:

> H1: Ḥalāl exposure through advertisements and teaching has a positive influence on Muslims' level of awareness towards ḥalāl food or products.

Religion is often associated with diet, morality, and the worldview. It can also be understood that a person must pursue his religion with enthusiasm and intensely engage with his faith in relations to any item for consumption. For most Muslims, their religious belief has been theoretically identified to be a significant source in sculpting their behaviour and food habits as noted in the previous section of the literature. Therefore, the Muslims' belief in Islam can influence their level of awareness on *ḥalāl* food (Simons, 1992; Hussaini, 2004). Ahmad et al. (2013) found that religious belief to pursue *ḥalāl* food or products makes Muslims aware of what they consume daily (Rezai et al., 2012). Based on this point of view, it is hypothesised that:

> H2: Religious belief of Muslims has direct influence on their level of awareness towards ḥalāl food or products.

The fact that human health is related to fitness is one thing that Muslims cannot ignore. Muslims who are concerned about their health may possibly choose *ḥalāl* food because it offers healthy ingredients (see: Bonne et al., 2007). This then will lead to a level of awareness on *ḥalāl* food. For example, Ambali and Bakar (2012) and Ahmad et al. (2013) found in their study the association between health reason and Muslims' awareness of *ḥalāl* consumption. Consequently, it is hypothesised that:

> H3: Health related reasons have a positive influence on the level of awareness towards ḥalāl food or products among Muslims.

Ḥalāl logo via ḥalāl certification is a display of information about a product in its container or package. In this respect, the extent of information about ḥalāl food or products that must be impacted by a label is governed by the relevant safety in Muslim societies such as Malaysia (Ahmad et al., 2013). Thus, labelling and logo enforcement can serve as important influencing mechanisms in triggering Muslim's level of awareness on ḥalāl food or products. This is because they need to justify the products and foods' status either by its logo or by its labelling as *ḥalāl or non-ḥalāl* before purchasing or consuming it (Ambali & Bakar, 2012). Hence, this study hypothesises that:

> H4: Role of Ḥalāl certification has a direct influence on level of awareness towards ḥalāl food or products among Muslims.

Methodology

This study deals with the issue of Muslims' level of awareness about ḥalāl consumption; the unit of analysis is individual Muslim in the selected areas of Shah Alam. The sample is composed of 210 Muslims from 18 years old selected by using a convenience sampling method. The sample contains 60 working, 50 unemployed and 100 student respondents. The data were collected through personally administered questionnaires by research assistants between April and May 2012.

Goodness of measures for instrumentation

The questionnaire used was one with the five-point Likert scale to obtain data for each of the constructs in the model of the study. Based on the insights obtained from previous studies on consumer awareness and consumer perception towards brands, labels, ḥalāl Malaysia logo, product, science and technology (Leclerc, Schmitt, & Dubé, 1994; Mariam, 2006; Mazis & Raymond, 1997), a questionnaire was adapted to collect information. The questionnaire was subjected to both validity and reliability tests. Construct validity is used to test how well an instrument developed measures a particular construct (Sekaran & Bougie, 2010), while reliability is used to test how consistently the measuring instruments have measured the constructs. Validity measures in this research are of three types: construct, convergent and discriminant; they are used in order to examine how well the questionnaires used could tap the constructs as theorised in the model.

Construct validity

Construct validity is assessed by looking at loadings and cross loadings to identify problematic items, if any. Following Hair, Black, Babin, and Anderson (2010), a significant value of 0.5 loadings is used as a cutoff. As shown in Table 1, items measuring each construct in the study are highly loaded on their particular construct and loaded lower on others, thus construct validity of the instruments is established.

Table 1: Loadings and Cross Loadings for construct validity

Variables	Religious Belief	Halal Exposure	Halal Awareness	Health Reason	Halal logo/ Certification
EXPOSE2	0.039	**0.744**	0.139	0.006	0.140
EXPOSE3	0.009	**0.872**	0.215	0.114	0.136
EXPOSE4	0.205	**0.584**	0.076	0.066	0.165
RELIGION3	**0.861**	0.049	0.226	0.133	0.201
RELIGION4	**0.750**	0.044	0.174	0.089	0.219
HEALTH1	0.184	0.077	0.407	**0.819**	0.484
HEALTH2	0.115	0.133	0.448	**0.889**	0.342
HEALTH3	0.079	0.001	0.413	**0.869**	0.093
HEALTH4	0.079	0.024	0.371	**0.695**	0.018
LABEL2	0.322	0.160	0.048	0.094	**0.583**
LABEL3	0.233	0.175	0.420	0.262	**0.928**
LABEL4	0.199	0.140	0.298	0.277	**0.855**
AWARE1	0.2000	0.182	**0.713**	0.362	0.191
AWARE2	0.229	0.234	**0.758**	0.223	0.347
AWARE3	0.249	0.148	**0.899**	0.493	0.417
AWARE4	0.126	0.143	**0.813**	0.473	0.296

Convergent validity

The convergent validity of the instrument was also tested to examine the multiple items measuring the same construct of the study and the degree of their agreement with one another. In this respect, the factor loadings alongside both composite reliability and average variance were extracted as shown in Table 2.

Table 2: Results of measurement model

Model Constructs	Measurement Items	Loadings	t-value	Composite Reliability (CR)[a]	Average variance Extract (AVE)[b]
Halal Exposure	TEXPOSE2	0.744	4.502**	0.783	
	TEXPOSE3	0.872	9.968**		0.552
	TEXPOSE4	0.584	3.299**		
Religious Belief	RELGION3	0.861	11.139**	0.789	
	RELGION4	0.750	6.273**		0.653
Health Reason	HEALTH1	0.819	29.942**	0.892	0.675
	HEALTH2	0.889	49.059**		
	HEALTH3	0.869	36.963**		
	HEALTH4	0.695	16.907**		
Halal logo/Certification	LABEL2	0.583	5.311**	0.839	0.644
	LABEL3	0.928	48.898**		
	LABEL4	0.855	25.302**		
Halal Awareness	AWARE1	0.713	15.663**	0.875	0.638
	AWARE2	0.758	16.046**		
	AWARE3	0.899	64.226**		
	AWARE4	0.813	29.742**		

Note: ** p<0.01

(CR)[a] : Composite reliability $(\rho c) = (\Sigma \, \lambda i)2 \,/\, [(\Sigma \, \lambda i)2 + \Sigma \, Var \, (\varepsilon i)]$, where λi is the outer factor loading, and *Var* (εi) =1- λi. is the measurement error or the error variance associated with the individual indicator variable(s) for that given factor (see: Fornell & Larcker, 1981).

(AVE)[b] : Average Variance Extracted (AVE) = $(\Sigma \, \lambda 2i) \,/\, [(\Sigma \, \lambda 2i) + \Sigma \, Var \, (\varepsilon i)]$, where λi is the outer factor loading, and *Var* (εi) = 1 - λi, is the measurement error or the error variance associated with the individual indicator variable(s) for that given factor (see: Fornell & Larcker, 1981).

Clearly, all items' loadings exceeded the recommended value of 0.5 suggested by Hair et al. (2010). In addition, the composite reliability is used to test how far the construct indicators really represent the latent and the values obtained ranging from 0.782 to 0.893, which exceeded the recommended value of 0.7 by Hair et al. (2010) as shown in Table 2. The average variance extracted (AVE) was used to relatively examine the variance captured by the construct indicators to measurement error. According to Barclay, Higgins, and Thompson (1995), the value must be above 0.5 for justification. In this study, the AVEs for the indicators are within the range of 0.552 and 0.675, respectively. Looking at the results for the parameter estimates and the test of their statistical significance

(t-values), it can be concluded that all the five variables in the model are valid measures of their respective constructs (see: Chow & Chan, 2008).

Discriminant validity

The discriminant validity is carried out first by looking at correlations between the measures for possible potential overlapping of constructs. Second, whether items are strongly loaded on their own construct in the model were examined. Third, whether the average variance shared between each construct and that its measures are greater than the average variance shared between the constructs and other constructs are also explored, as suggested by Compeau et al. (1999). In this respect, the results of Table 3 show that the squared correlations for each construct is less than the average variance extracted by the indicators measuring that construct. Hence, the measurement model reflects an adequate convergent validity and discriminant validity.

Table 3: Discriminant validity result

Model Constructs	Religious Belief	Halal Exposure	Halal Awareness	Health reason	Halal logo/ Certification
Religious Belief	**0.653**				
Halal Exposure	0.003	**0.552**			
Halal Awareness	0.063	0.045	**0.638**		
Health Reason	0.019	0.004	0.016	**0.675**	
Halal logo/Certification	0.066	0.033	0.168	0.086	**0.644**

Reliability analysis

Reliability is an indication of the internal consistency of the instruments measuring the concepts and helps access the "goodness" of measure (Sekaran & Bougie, 2010). There are many different types of reliability estimates. One of the most widely used tests is Cronbach's Alpha that is employed in this study as shown in Table 4. By looking at the results of the Cronbach's Alpha range from 0.71 to 0.84 thus confirming the reliability of the instrument used. The range of reliability test using Cronbach's Alpha is from zero to one. The closer to one the higher the level of internal consistency among

items and thus the reliability of the instruments are ensured in this study.

Table 4: Reliability tests result

Variable	[a]Number of Item	Cronbach's Alpha
Halal Exposure	3(4)	0.71
Health Reason	4(4)	0.84
Religious Belief	2(4)	0.78
Halal logo/Certification	3(4)	0.81
Halal Awareness	4(4)	0.79

Note: [a]Final number of items is displayed outside and the initial number of items as in the figure 1 research model in parentheses.

Given the self-reported nature of the data, we also assessed Harman's one-factor test to examine any potential common method variance bias. As contended by Podsakoff & Organ (1986), common variance bias is problematic if a single latent factor accounts for the majority of the total explained variance. In this study, the result of the un-rotated factor analysis shows that the first factor only accounted for 23.72% of the total 76.3% variance and thus common method bias is not a problem.

Findings

Most of the respondents or 53.8% are within the age of 21-25 years old. Besides that, 57.4% of the respondents are female. In terms of educational qualification, most of the respondents are Bachelor degree holders (40.5%), followed by Diploma (26.2%). Furthermore, the number of respondents with working status is 60 (28.6%), while the self-employed are 23.8%. The rest are students comprising 47.6%.

The level of Muslims' *ḥalāl* awareness is examined by using mean statistics and standard deviations of both individual items and overall scale of the items. It is found that the overall mean level of *ḥalāl* awareness is very high among the Muslims in Shah Alam with a mean value of $M = 3.7$ and standard deviation of 0.74.

Exposure to ḥalāl: On a five-point Likert scale, 52.4% of the respondents strongly agree that their understanding of *ḥalāl* is based on their exposure to what they see and hear in advertisements. Also, 53.8% of the respondents agree that they can get information on *ḥalāl*

food or products easily from the mass media such as television, radio, magazines and the Internet. While 69% of the respondents strongly agree that their families have exposed them to *ḥalāl* food, 43.8% of the respondents reveal that they have been exposed to *ḥalāl* food and products through their friends.

Religious belief: The majority of the respondents (82.9%) strongly believe that they must consume only *ḥalāl* edible foods or products. In addition, 71.9% believe that as Muslims they must strictly abstain from taking non-*ḥalāl* food or products as required by Islamic religious tenets. Also 84.8% are of the opinion that eating non-*ḥalāl* food or products is a sin for Muslims and 91.4% believe that eating *ḥalāl* food or using *ḥalāl* products is obedience to Islamic injunctions.

Health reasons: The findings show that 34.3% of the respondents strongly agree that they can prevent any disease and remain hygienically healthy by consuming *ḥalāl* food or products. In addition, 40% of the respondents strongly agree that they must eat *ḥalāl* food for better diet. Likewise, most of the respondents (44.8%) strongly agree that *ḥalāl* food is healthy and that healthy food symbolises cleanliness, safety and high quality.

Role played by ḥalāl logo/certification: In this study it is found that 41.4% of the respondents strongly agree that the role of *ḥalāl* certification itself is very important with regard to the foods or products they consume. Also, 46.2% of the respondents strongly agree that they are especially attracted to buying foods or products that carry the *ḥalāl* logo certification. In addition, 48.6% agree that they will only consume products or food items with genuine *ḥalāl* logo or label. Interestingly, some of the respondents (40.5%) state that they can identify the genuine *ḥalāl* logo.

Examining relationships between identified determinants and *ḥalāl* awareness

The relationship between the identified determinant factors and the level of the Muslims' *ḥalāl* awareness is examined through path analysis. The results in Figure 2 show that religious belief and the role of *ḥalāl* logo certification are positively related to *ḥalāl* awareness among the Muslim respondents with beta values $\beta = 0.129$, p<0.01 and 0.220, p<0.01 respectively. The same goes to the *ḥalāl* exposure

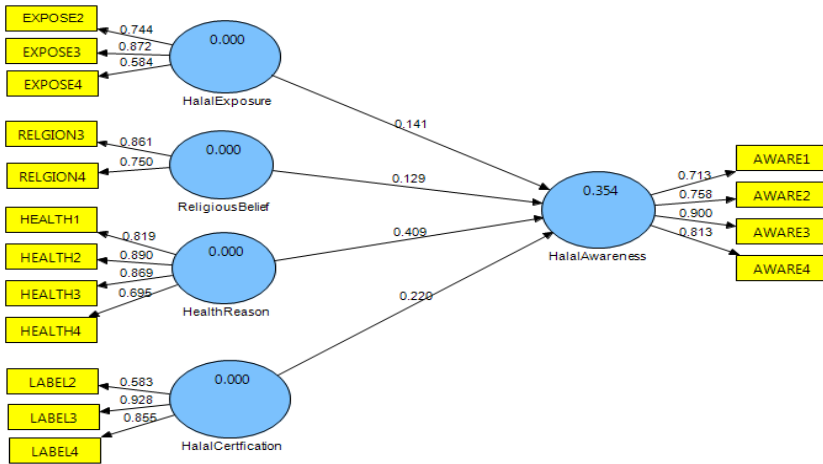and health reason with *β* values of 0.141, p<0.01 and 0.409, p<0.01 respectively.

Figure 2: Results of the path analysis for final research model

Predictive capacity of the identified determinant factors and hypotheses testing

The t-value of the path coefficients are generated to test the significant contribution of each path following the bootstrapping approach to validate the hypotheses put forward in the study (Chin, 1998). The results show that all hypotheses in this research are supported with t-values ranging from 1.837 to 5.466 at an alpha-value less than 0.01 respectively (Table 5). As the results depicted in Figure 2, the R^2 value of 0.354 indicates that 35.4% of the variance on Muslims' level of awareness about *ḥalāl* food and products can be explained by religious belief; the role of *ḥalāl* certification (through logo and labelling); exposures to *ḥalāl* information and health reasons of the individual respondents.

It is necessary to examine the predictive power of the research model of the study. According to Kock (2012, p. 31), this can be done by assessing the average variance inflation factor (AVIF) as a comprehensive analysis of a model's overall capacity and explanatory quality of the latent factors. This is important in order to address the absence of both vertical and lateral collinearities.

Table 5: Summary of path coefficients and hypotheses testing

Hypotheses	Relationship		Coefficient	t-value	Remarks
H1	Ḥalāl exposure →	Ḥalāl awareness	0.141	2.281**	Supported
H2	Religious belief →	Ḥalāl awareness	0.129	1.837**	Supported
H3	Health reasons →	Ḥalāl awareness	0.429	5.466**	Supported
H4	Ḥalāl logo/certification→	Ḥalāl awareness	0.220	4.028**	Supported

** p<0.01

The result shows a value of 1.24, which is below the threshold of 3.3 (Kock, 2012). Additionally, other indices for the model fit such as average path coefficient (APC), average r-squared (ARS) are addressed. The result of both APC and ARS are 0.226 and 0.354 respectively. In this study, the R^2 value of endogenous latent variable (i.e., *ḥalāl* awareness) explained by the four predictive or determinant constructs is 35.4%, (Figure 2) which is above moderate (Chin, 1998). Moreover, Q-squared coefficient is performed through blindfolding in order to assess the predictive validity associated with each latent variable block in the model. An "acceptable predictive validity in connection with an endogenous latent variable is suggested by a Q-squared coefficient greater than zero" (Kock, 2012, p. 42). The result of the predictive validity for the model of this research is 0.359.

Hence, this shows that the four predictive constructs in this study namely: *ḥalāl* exposure, religious belief, health reason, and the role played by *ḥalāl* certification are genuine predictors of Muslims' awareness of *ḥalāl* food and products for consumption.

Discussion on findings and implications for policy-makers

The findings reveal that a significant majority of the respondents in Shah Alam are aware of *ḥalāl* consumption which is a reflection of their adherence to the Muslim way of life. In addition, the findings of the study also show that the four constructs in the model which are exposure, religious belief, health related reasons, and the role of *ḥalāl* certification (*ḥalāl* logos or labels) are genuine predictors of Muslims' awareness of *ḥalāl* food and products. This means that there are positive relationships between all these identified determinants and the level of awareness of *ḥalāl* food or products among Muslims in Shah Alam. For example, educational exposure and the level of awareness on *ḥalāl* have a positive relationship with each other whereby $\beta = 0.141$, p < 0.01. It aligns with

Patnoad's view (2001) that media visual display of foods, drinks and products could create greater awareness through increased exposures. In Malaysia, ḥalāl products are regularly discussed over television, radio, print media as well as the internet. Religious staunchness also shows a positive relationship with the level of awareness of ḥalāl where $\beta = 0.129$, p < 0.01. Besides, health reasons influence the level of respondents' awareness of ḥalāl consumptions with a positive relationship where $\beta = 0.429$, p < 0.01. This finding indirectly supports the idea raised in a study by Rice (1993) that much modern ill health is attributed to poor nutrition. According to Kartina and Vathsala (2005), people have become more cautious of what they eat as they become more critical of cleanliness and health, which epitomise the ultimate value in ḥalāl consumption.

The implication here is that policy-makers have to recognise that ḥalāl is no longer merely a religious issue but a global symbol of quality assurance and healthy lifestyle. Thus, policy-makers should pay attention to health related components of what people of a country are consuming by reinforcing regulatory policy of ḥalāl compliance in food and products. Roles played by ḥalāl certification, which are translated through ḥalāl logos also have positive influence on the level of ḥalāl awareness among Muslims whereby $\beta = 0.220$, p < .05. This positive influence is supported by the study conducted by Lindenmayer (2001) that one aspect of labelling via logo is based on the principle that the consumer has a right to know what he or she is purchasing and subsequently using or consuming. With the awareness that the ḥalāl logo provides, Muslims may be better informed of the foods or products they are deliberating on buying or consuming. The implication here is that reinforcing the policy of ḥalāl certification will also protect the consumers from false, misleading or deceptive practices Lindenmayer (2001). Nowadays, Muslims are making their presence felt socially and politically and are requesting ḥalāl logo for foods or products (Riaz & Chaudry, 2004).

In a Muslim country, people are attentive to the permitted and prohibited ingredients of their foods or products, which may fuel uncertainty relating to process characteristics and credence attributes in the context of ḥalāl ṭayyib issue. Thus, the concept of ḥalāl ṭayyib is very vital for Muslims in choosing quality foods and products to consume (Arif & Ahmad, 2011). Funston (2006) points out that since

the 1980s Muslims in Malaysia have become more concerned about whether their foods fully meet ḥalāl requirements; being free of alcohol and pork is no longer considered sufficient. The word ṭayyib means good and pure where the quality or estimated value of lawfulness or unlawfulness (ḥalāl or ḥarām) must be taken into account in the process of production, manners and ways of consumption and their effects (Mohd Yunus et al., 2010).

However, it remains unclear whether the manufacturers of foods and products really take this element into consideration or not. In Islamic jurisprudence, harmfulness and defectiveness are prohibited because the harm or defect cannot be removed. For example, the emergence of Genetically Modified Organisms (GMO) that obscure the difference between plants and animals can potentially be perplexing Muslims. This is because such products could have been mixed with non-ḥalāl derived genes, especially where soybeans had been spliced with genes from a pig to create a resilient and bountiful harvest. In short, any food consumed must meet the criteria of ḥalālan ṭayyiban (lawful and good quality) which encompasses the holistic concept of quality (Arif & Ahmad, 2011).

From policy perspective, it can be argued that the realisation of a major part of ḥalālan ṭayyiban lies in the hands of the experts and authorities where the recognition of the concept is based on a set of collective principles to which all parties should adhere. Nonetheless, we argue that what constitutes the Islamic worldview on ḥalālan ṭayyiban and what is practiced by Muslims and non-Muslims or Western communities offer some overlap and tedious issues, which need to be carefully understood by policy-makers and Sharīʿah bodies.

With regard to Islamic branding and the issue of ḥalāl certification via ḥalāl logo or labelling of foods or products, until now, there seems to be no clear understanding of what the term Islamic Branding (IB) means (Copinath, 2007). Mere use of a ḥalāl logo will not rebrand a product or food for Muslim consumption. Also, mere labelling using ḥalāl certification is an attempt to incite the matter of *ambiguity* in the sale and purchase transactions, or aid the transactions which involve usury, gambling, falsehood or fraud in Islamic states. There is no worldwide authority on ḥalāl or a consistent ḥalāl trademark, hence quality reassurance based on Islamic branding does not seem to suffice yet and therefore consumers seek additional reassurance. In addition, the lack

of authority for systematic monitoring of the *ḥalāl* control throughout the marketing chain, and the lack of a trustworthy *ḥalāl* quality signal (Riaz, 1996) drive consumers to seek additional reassurance through effective policy standards and holistic principles.

The critical issue is to decide upon the authority that would monitor, control, and certify *ḥalāl* quality. In other words, the steps and procedures for quality assessment and monitoring need paramount consideration for policy redirection. Previous research shows that someone can strictly follow the diet without following religious prescriptions (Bonne & Verbeke, 2006). For example, in Malaysia, as there are more than 20 different agencies involved in *ḥalāl* regulation (Syed & Nazura, 2011), the governance of *ḥalāl* is unsystematic. Since several principles of *ḥalāl* have not been formalised yet, one would be rightly correct to say that there is no effective control over many food items and products especially those imported to Malaysia. Thus, monitoring is a potential issue in *ḥalāl* certification especially after the issuance of the certificate, where many companies no longer worry to comply with *ḥalāl* requirements as stated in the certification. Hence, certification and quality reassurance alone will not provide a satisfactory solution to determine the consumer's choice of foods and products.

Conclusion

The level of awareness about *ḥalāl* food and product consumptions among Muslims is gaining impetus in Shah Alam, Malaysia. The findings of the study show that the growing demands for *ḥalāl* consumptions are aided by a number of potential factors that are identified, which include religious belief, exposures, role played by *ḥalāl* certification via *ḥalāl* logo/label and health related reasons which have been established by modelling between these factors and the level of awareness. The paper also highlights some potential issues for future direction of food and product policies in Malaysia. This study found the lack of global standard for *ḥalāl* logo, and monitoring of the processing stages after certification has been issued to a company. The policy-makers need to readdress the motivations of the different actors within the *ḥalāl* chain, technical constraints, and economic necessities. This study draws the attention of the policy-makers that actors such as breeders, slaughterhouses, certifying agencies, retailers, consumers, and religious representatives in most cases have different viewpoints on *ḥalāl* production and processing, which may jeopardise the economic

potential of the *ḥalāl* market in the future. Hence, some policy actions are needed to tackle the *ḥalāl* issues in Malaysia. Finally, although the laws made by the government would eliminate the problem of fake *ḥalāl* certificates, new policy measured are still needed to secure the confidence of Muslims in the certified products.

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