



***KNOWLEDGE, ATTITUDE AND BEHAVIOURAL INTENTION TOWARDS  
HALAL FOOD PRODUCT RECALL AMONG MUSLIM CONSUMERS  
IN THE KLANG VALLEY, MALAYSIA***

**ROSMAWATI BINTI YOP @ AYOB**

**IPPH 2018 8**



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By

**ROSMAWATI BINTI YOP @ AYOB**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfilment of the Requirement for the Degree of Master of Science**

**June 2018**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirements for the degree of Master of Science

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**Chairman : Associate Professor Nitty Hirawaty Kamarulzaman, PhD**  
**Institute : Halal Products Research Institute**

The basic needs and essential to consumers is food. Muslim consumers have the right to get halal food for their consumption in order to preserve their faith. Therefore, it is important for Muslim consumers to ensure that only halal food is supplied to them. Besides, Muslim consumers are very concerned about the halal or haram status of the food and drink they take every day. This is due to increased knowledge among Muslim consumers regarding the importance of halal food and beverages. For a Muslim, the aspect of halal food should start from 'farm to fork'; meaning quality control must start from the slaughtering, handling, processing, transportation, storage of food until serving. The current way of life and the trend of Muslim consumers have led to increased demand for processed such as frozen food, canned food, organic food, bread products and dairy products that meet halal requirements. Halal means that the product meets the requirements set by Shariah law, it represents the hygiene, quality, safety and health symbol (Toyyib) when it is manufactured strictly under the Halal Assurance Management System (HAS).

Malaysia's halal food market had in recent time experienced several halal food products recall issues. Halal food product recalls were caused by cross-contamination of haram substances with halal food along the supply chain. Hence, halal food product recall from the market is aimed at ensuring that the food products that are withdrawn are not being bought and used by Muslim consumers. The success of halal food products recall programme relies on Muslim consumers' knowledge, attitude and behavioural intention towards them. Unfortunately, Muslim consumers' knowledge, attitude and behavioural intention towards halal food product recall are varied and unpredictable.

Therefore, the main objective of this study was to determine the knowledge, attitude and behavioural intention towards halal food product recall among Muslim consumers

in Klang Valley, Malaysia. The study adapted three variables namely attitude, subjective norm and perceived behavioural control from the Theory of Planned Behaviour (TPB) model and two additional factors namely socio-demographic profiles and Muslim consumers' knowledge as factors that influence Muslim consumers' behavioural intention towards halal food product recall.

This study was a quantitative study where a total of 1,050 of Muslim consumers were selected as respondents through a simple random sampling procedure in Klang Valley. A face-to-face interview with the respondents using a structured questionnaire based on 7-point Likert scales were used to obtain feedback on halal food product recall. Descriptive analysis, cross-tabulation analysis, chi-square analysis, Spearman's correlation analysis and multiple linear regression analysis were performed to analyse the collected data.

From the descriptive analysis, socio-demographic profiles of Muslim consumers were summarized into percentage and frequencies. The results from descriptive analysis revealed that respondents have a good knowledge level on halal food product recall, have a favourable level of attitude on halal food product recall and have a high level of behavioural intention towards halal food product recall. The results of cross-tabulation and chi-square analyses showed the associations between selected socio-demographic profiles namely gender, marital status and religiosity with behavioural intentions. Spearman's correlation coefficient revealed that there was a significant but weak correlation between knowledge and attitude. Multiple linear regression analysis has indicated that the six variables were significant and accepted. Attitude, subjective norms, perceived behavioural control, age, income and religiosity indicated positive relationship with behavioural intention towards halal food product recall. Nevertheless, knowledge, gender, residential area, race, education, marital status were not significant with behavioural intention towards halal food product recall among Muslim consumers in Klang Valley, Malaysia.

The results of this study can contribute to a better understanding of Muslim consumers' knowledge, attitude and behavioural intention towards halal food product recall. Furthermore, the result from this study will help food companies and government agencies to design appropriate programs regarding halal food product recall in Malaysia.

Abstrak thesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Master Sains

**PENGETAHUAN, SIKAP DAN NIAT TERHADAP PENARIKAN BALIK  
PRODUK MAKANAN HALAL DALAM KALANGAN PENGGUNA MUSLIM  
DI LEMBAH KLANG, MALAYSIA**

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Salah satu keperluan asas dan penting kepada pengguna adalah makanan. Pengguna Islam mempunyai hak untuk mendapatkan makanan yang halal bagi memelihara iman mereka. Oleh itu, adalah penting bagi pengguna Islam untuk memastikan bahawa hanya makanan halal yang dibekalkan kepada mereka. Disamping itu, pengguna Muslim hari ini sangat prihatin terhadap status halal atau haram makanan dan minuman yang mereka makan setiap hari. Ini disebabkan oleh peningkatan pengetahuan dalam kalangan pengguna Muslim berkaitan kepentingan makanan dan minuman halal. Bagi seseorang Muslim, aspek makanan halal harus bermula dari 'ladang hingga ke garpu'; bermaksud kawalan kualiti harus bermula dari penyembelihan, pengendalian, pemprosesan, pengangkutan, penyimpanan makanan hingga penghidangan. Cara hidup semasa dan trend pengguna Muslim telah menyebabkan peningkatan permintaan kepada makanan yang diproses seperti makanan sejuk beku, makanan dalam tin, makanan organik, produk roti dan produk tenusu yang memenuhi syarat halal. Halal bermakna bahawa sesuatu produk memenuhi syarat yang ditetapkan oleh undang-undang syariah, ia mewakili simbol kebersihan, kualiti, keselamatan dan kesihatan (Toyyib) apabila ia dihasilkan di bawah Sistem Pengurusan Jaminan Halal (HAS).

Pasaran makanan halal Malaysia telah mengalami beberapa pengalaman penarikan balik produk makanan halal sejak akhir-akhir ini. Penarikan balik produk makanan halal adalah disebabkan oleh berlakunya pencemaran silang bahan haram dengan makanan halal disepanjang rantai bekalan. Lantaran itu, tujuan penarikan balik produk makanan halal dari pasaran bertujuan untuk memastikan produk makanan yang ditarik tidak dibeli dan digunakan oleh pengguna Muslim. Kejayaan program penarikan balik produk makanan halal adalah bergantung kepada pengetahuan, sikap dan niat tingkah laku pengguna Muslim terhadap program tersebut. Malangnya, pengetahuan, sikap dan sikap tingkah laku pengguna terhadap produk makanan halal adalah berbeza-beza dan tidak menentu.

Oleh itu, objektif utama kajian ini adalah menentukan pengetahuan, sikap dan niat terhadap penarikan balik produk makanan halal dalam kalangan pengguna Islam di Lembah Klang, Malaysia. Kajian ini telah menggunakan tiga pemboleh ubah iaitu; sikap, norma subjektif dan kawalan tingkah laku yang diadaptasi dari model *Theory of Planned Behaviour* (TPB) dan beberapa pemboleh ubah tambahan iaitu profil sosio-demografi dan pengetahuan pengguna Islam sebagai faktor yang mempengaruhi niat pengguna Muslim terhadap penarikan balik produk makanan halal.

Kajian ini adalah kajian kuantitatif dan menggunakan prosedur persampelan rawak mudah untuk mengumpul data di Lembah Klang. Sejumlah 1,050 pengguna Muslim dipilih sebagai responden melalui prosedur persampelan rawak mudah di Lembah Klang. Satu wawancara bersemuka telah dilakukan terhadap responden menggunakan soal selidik berstruktur berdasarkan 7 mata skala Likert digunakan untuk mendapatkan maklumbalas mengenai pengetahuan, sikap dan niat terhadap pemulangan produk makanan halal. Analisis deskriptif, Analisis tab silang dan analisis Chi-square, analisis korelasi Spearman dan analisis regresi berganda linear dilakukan untuk menganalisis data yang dikumpul.

Dengan menggunakan analisis deskriptif, profil sosio-demografi pengguna Islam telah diringkaskan kepada peratusan dan kekerapan. Hasil daripada analisis deskriptif menunjukkan bahawa responden mempunyai tahap pengetahuan yang baik mengenai produk makanan halal, mempunyai tahap sikap yang baik terhadap produk makanan halal dan mempunyai tahap tingkah laku yang tinggi terhadap produk makanan halal. Hasil analisis silang dan analisis chi kuasa dua menunjukkan perkaitan diantara antara profil sosio-demografi terpilih iaitu jantina, status perkahwinan dan keagamaan dengan niat terhadap penarikan balik produk halal. Koefisien korelasi Spearman mendedahkan bahawa terdapat hubungan yang ketara tetapi lemah antara pengetahuan dan sikap. Analisis regresi linear berganda telah menunjukkan bahawa enam pemboleh ubah adalah penting dan diterima. Sikap, norma subjektif, kawalan kelakuan yang dianggap, umur, pendapatan dan keagamaan menunjukkan hubungan positif dengan niat tingkah laku terhadap produk makanan halal. Walaubagaimanapun, pengetahuan, jantina, kawasan kediaman, bangsa, pendidikan, status perkahwinan tidak mempunyai hubungan dengan niat tingkah laku terhadap produk makanan halal di kalangan pengguna Islam di Lembah Klang, Malaysia.

Hasil kajian ini dapat menyumbang kepada pemahaman yang lebih baik tentang pengetahuan, sikap dan niat tingkah laku pengguna terhadap pemulangan produk makanan halal. Lebih banyak hasil daripada kajian ini akan dapat membantu syarikat makanan dan agensi kerajaan untuk mereka bentuk program yang sesuai mengenai penarikan balik produk makanan halal di Malaysia.

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I certify that a Thesis Examination Committee has met on 27 June 2018 to conduct the final examination of Rosmawati binti Yop@ Ayob on her thesis entitled "Knowledge, Attitude and Behavioural Intention Towards Halal Food Product Recall Among Muslim Consumers in the Klang Valley, Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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## LIST OF ABBREVIATIONS

FTA	Free Trade Agreement
GHP	Good Hygiene Practice
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis Critical Control Point
HAS	Halal Assurance Management System
HCP	Halal Critical Control Point
HDC	Halal Development Corporation
IHC	Internal Halal Committee
JAKIM	Jabatan Kemajuan Islam Malaysia
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action

## CHAPTER 1

### INTRODUCTION

The first chapter of this study consists of discussions on halal and haram concept, overview of the halal industry, Muslim consumers, halal certification, halal food issues, halal product recall in Malaysia, problem statement, research questions, objectives of the study and significance of the study.

#### 1.1 Halal and Haram Concept

Islam comes with comprehensive guidelines to be adhered to by Muslims as a systematic way of life. Halal is an Arabic word which means lawful or permitted for Muslims. According to JAKIM (2015), *halla*, *yahillu*, *hillan*, *wahalalan* are original Arabic words for halal which means allowed or permissible by the Shariah law. It is a code of conduct under Shariah law and it applies to every activity carried out by Muslims including their dietary system. *Syara' or Shariah* means the orders of Allah S. W.T which refers to Islamic law according to the school of thought whether Sayfi'e, Maliki, Hambali or Hanafi, as decreed by the King of Malaysia. The objectives of Islamic law or Maqasid Shariah are to benefit individuals and communities on earth. The opposite of halal is haram, meaning unlawful or prohibited. Mushbooh lies between halal and haram, which means doubtful or suspected. The concept of halal and unlawful in Shariah law is intended to preserve the overall well-being of humankind. In relation to food, it refers to food which is in compliance with the laws of Islam (Rezai, Mohamed, Shamsudin & Eddie, 2008). In the perspective of Muslim consumerism, halal (lawful) or haram (unlawful) status of a product is very important for Muslim consumers as it relates to religious claims and consumer protection from any form of cheating and misappropriation.

According to JAKIM (2015), the definition of halal according to Trade Descriptions (Definition of Halal) Order 2011 and Trade Descriptions (Definition of Halal) (Amendment) Order 2012 is as follows:

i. When food or goods are described as halal or are described in any other expression to indicate that the food or goods can be consumed or used by a Muslim, such expression means that the food or goods are:

- a) neither is nor consist of or contains any part or matter of an animal that is prohibited by Shariah law for a Muslim to consume or that has not been slaughtered in accordance with Shariah law and Fatwa;
- b) Does not contain anything which is impure/najs according to Shariah law and Fatwa;
- c) Does not intoxicate according to Shariah law and Fatwa;
- d) Does not contain any part of a human being or its yield which are not allowed by Shariah law and Fatwa;
- e) Is not poisonous or hazardous to health;

- f) Has not been prepared, processed or manufactured using any instrument that is contaminated with najas according to Shariah Law and Fatwa; and
- g) Has not in the course of preparing, processing or storage been in contact with, mixed, or in close proximity to any food that fails to satisfy paragraph (a) and (b).

ii. When services in relation to the food or goods are described in any other expression to indicate that the services can be used by a Muslim, such expression means that the services in relation to the food or goods are carried out in accordance with Shariah law.

Eating is a matter of worship, like prayer and other religious activities in Islam. Allah has ordered Muslims to eat halal food because it's good for their physical health and also spiritual development. Comprehensive standards and guidelines come for each and every activity including a dietary code of laws. Food that is good or wholesome, with respect to quality, safety, hygiene, cleanliness and nutrition which are scientifically awesome is referred to in the term "toyyiban". Toyyiban concept requires a product to meet the critical elements of toyyiban and halal that is of high quality for human consumption.

The halal concept for food actually starts from the farm to the table and requires nutritious items prepared from permissible ingredients in a clean hygienic and proper manner. Whereas, when comes to the halal certification, the procedures refer to preparation, slaughtering, ingredients used, cleaning, handling and processing, right down to transportation and distribution. The halal concept also relates to the product development process and food safety rules such the Hazard Analysis Critical Control Points (HACCP) and Good Manufacturing Practice (GMP). Thus, all foods must be ensured not to come in contact with filth or haram materials as such food are considered as filth and Haram to be used or eaten (Wahab, 2004). Eating halal food is not only good, pleasant, delightful, delicious or sweet but also healthy and beneficial to our body but also has a good impact on our mind and spirit. Meanwhile, consuming haram foods (prohibited foods) and drinks can not only injure one's physical health but also affect the character and spiritual faculties of man which leaves a negative effect on the person's entire life (Nurdeng, 2009).

## **1.2 Overview of Halal Industry in Malaysia**

As a multi-racial nation country, Malaysia consists of Islam as the most widely professed religion (61.3%), followed by other religion embraced such as Buddhism (19.8%), Christianity (9.2%) and Hinduism (6.3%) (Disease Control Unit of MOH, 2012). The population of Klang Valley is expected to hit 10 million and urbanisation is expected to reach 70%. Representing about a quarter of the country's total population, currently, the Klang Valley population is 7.2 million. Klang Valley will be home to about 20 million by 2030 at this rate (Themalaysianreserve, 2017). Islam is the most professed religion in Malaysia with the proportion of 61.3% of the population. In 2015, the global Muslim population spent a total of US\$1.2 trillion on food and beverages. In Malaysia, the increasing demand for halal food from Muslims and non-Muslims have driven the growth of halal food market sector, Malaysian Muslims are ranked 4<sup>th</sup> in

terms of purchasing power among the global Muslim population (HDC, 2015). Malaysia is the most developed halal food economy with the strong awareness it creates through media coverage and events. The growing Muslim population and consumer purchasing power have driven the halal industry. Halal food market exists wherever there are Muslim consumers whose tastes and preferences are governed by halal rules on food specification (Krishnan, Che Omar, Zahran & Sayzwan, 2017).

Over the past few decades, the halal industry has been developed, integrating into the global market in Malaysia. Government and private sectors are collaborated together to develop the halal industry through various programs which include knowledge sharing, funding and training (MITI, 2015). Furthermore, Malaysia has the complete ecosystem, good industry development framework, efficient government agencies, huge food and non- food services, complete and reliable data or information via the Global Halal Support Centre for halal exports, investment, employment and establishment. In 2015, the major products certified halal were food products (76.87%) and non-food products (23.13%) (MITI, 2016). Demand for halal food and beverages around the world is worth USD 432 billion, but only USD 75 billion (17%) of this is being met with supplies from Malaysia (HDC, 2015). According to MIDA (2016), the majority of the approved and implemented projects in the year 2015 are involved in the manufacturing of halal food. In 2015, value for halal export was 42 billion; ingredients (RM1.7b billion), food and beverages (RM1.7 billion), palm oil derivatives (RM 0.9 billion), industrial chemical (0.1 billion), cosmetic and personal care (0.03 billion). A very good development of halal industry in Malaysia is proven by successful multinational companies such as Nestle (own 7 halal factories in Malaysia and 150 Nestle halal factories globally exporting to more than 50 countries) and Ramly (RM1 billion sales in 2015, 5 shops, 11 halal kiosks and 25,000 stalls). Nowadays, several multinational companies such as Nestle and Unilever are using the Malaysian Standard in order to ensure their efficiency on global food security and halal.

It is important to have a clear idea of addressing global food security and ensure halal development. HDC main objective is to introduce Malaysia as an international halal hub (Talib, Ali & Jamaluddin, 2008). HDC is the sole government mandatory company in the world that is responsible for coordinating and developing the national halal industry. The Malaysian government set up HDC in September 2006 to recognize the potential of halal businesses. The Halal Industry Development Corporation (HDC) is a unique development agency with its own right to lead the overall development of the halal industry. The halal industry encompasses various sectors cutting out the entire halal value chain. Hence, HDC has various roles to play across halal-related networks. For consumers, this means that with the growth of the halal industry, they will raise awareness and a better choice for halal goods. For business, this means halal is the channel for the new market with the help of HDC and its agencies. And finally, for the government, with new markets achieved through halal, it shows a very good economic growth.

Together with the growth of the halal industry, JAKIM was made responsible for establishing the procedure for halal assurance based on halal requirements to be adhered by the companies (Shafii & Zain, 2015). In addition, the collaborations among the agencies owned by the government agencies such as Department of Islamic

Development Malaysia (JAKIM), Ministry of International Trade and Industry (MITI) with Halal Industry Development Corporation (HDC), SME Corporation Malaysia (SME Corp), Malaysia External Trade Development Corporation (MATRADE) and Malaysian Investment Development Authority (MIDA), Ministry of Science, Technology and Innovation (MOSTI), Jabatan Standards Malaysia are seen as among the key efforts in promoting and uplifting our halal industry to become the global leader.

In addition, through the strategies laid out under the 11<sup>th</sup> Malaysia Plan (2016-2020), Malaysia has become a Global Reference Centre for Halal Integrity and Centre for Innovation, Product and Trade (MIDA, 2016). Now, Malaysia is in the final phase of the Halal Industry Master Plan (2008 to 2020) to make Malaysia the leader in innovation, production and trade for halal products and services. As a result, Malaysia received the best developed Islamic rank among 73 core countries in economy and in halal certification and standard global recognition (State of Global Islamic and Economic Report 2015/2016). The ranking was including first for halal food, islamic finance and halal travel as well as being within the top five countries for halal pharmaceuticals and cosmetics. The Government has announced the establishment of the Malaysia Halal Council. This demonstrates Malaysia's commitment in becoming a global halal leader through better coordination in the development of the halal industry and the United Nations has cited Malaysia as the world's best example of benchmarking of halal food.

### **1.3 Muslim Consumers' Behaviour**

According to Malaymail (2015), it expected that Malaysia's population in 2050 are 72.4% of Muslims compared to just 63.7% in 2010, high fertility rate among adherents as one of the key reasons behind the boom referring to the latest study by Washington-based pollster Pew Research Center, In numbers, there will be over 32.7 million Muslims out of the projected 45.2 million population in 2050, compared to around 18 million out of 28.4 million in 2010.

In 2016, the demand for halal food by Malaysian consumers has increased over the years whereby, the halal food industry continued to be a key area of focus as 60% of Malaysia's population are Muslims (MITI, 2016). When Muslims' socio-economic status increases, their preferences also improve; they demand products and services which meet the Islamic values. When the consumption habits of this social group have changed, the increasing level of education and income of the Muslim population has also changed. Those who are less confident with the halal labelled food products were those with higher education level and higher level of religiosity and the older generation, particularly the rural folk (Rezai, Mohamed, & Shamsudin, 2012). The knowledge and understanding on the concept of halal has highly influenced the behaviour of Muslim consumers in consuming halal products (Rimadhani & Baga, 2017). Therefore, companies must consider the changing habits of the Muslim consumers, consumer behavior on Islamic hotel is influenced by their knowledge (Idris & Razali 2016). Remain loyal to their religious requirements is a must for Muslim lanother main purpose that is to worship, as the evidence of his faith and devotion



towards Allah by practicing Islamic teaching in his daily life (Aisyah, 2014). Halal requirements have become important issues among Muslim consumers and make them be more conscious and sensitive towards it (Rachbini, 2018). As a way of maintaining observance of religious teachings and from personal preferences, Muslim consumers have purchased halal foods. A person's shows commitment to the Islamic faith and its teachings by consumption of halal products (Alhazmi, 2013). The loss of appreciation to halal may cause by lack of knowledge, awareness and understanding of the halal concept among Muslims and the manufacturers of halal products (Ismail, Abdullah, Ahmad & Sidek, 2016). Customer buying habits or behaviour patterns are certainly not sacred and not permanently fixed and usually their habits tenaciously resist change (Applebaum, 2009)

Muslim consumers are skeptical on whether the food products are originally produced according to the halal and Shariah law principles. In 2015, 68% halal certified companies were bumiputera and the remaining of 32% were non-bumiputera. The question of whether the products are actually halal keep on playing on the mind of the halal food consumers because the halal food products are now being produced and originated from all parts of the world. A halal sign was usually enough to convince any Muslim that the food sold was what it said. The halal food business is certainly a profitable one, especially in areas populated by Muslims. A personal curiosity about the product has occurred among Muslim consumers because some retailers want to attract Muslim consumers to buy their products by producing or using prohibited products (Dali, Sulaiman, Samad, Ismail & Alwi, 2007). In addition to that, information received from the sources especially when they are from the authorities or religious leaders are more trusted by the consumers (Nor & Ahmad, 2016). Perception and their level of knowledge and religiosity different among Muslims themselves (Said, Hassan, Musa, & Rahman, 2014). Friends, neighbours, family members, colleagues, teachers, communities, and the like are consumers' references in searching for when making decisions towards shopping at stores that display high degree of halal images (Mohd Suki, Abang Salleh, & Mohd Suki, 2014). Halal markings or logos and certifications give a sense of security when buying halal food for Muslim consumers. Manufacturers used logo and certification to prove to their consumers that their product is shariah compliant meaning that it has met the Islamic dietary guidelines (Mohamad & Backhouse, 2014).

In line with that, the only country in the world that has governmental regulations to penalize the violation of false halal description on products and services is Malaysia (Zakaria & Ismail, 2014). The Trade Description Act 2011 (TDA, 2011) came into force on 1st November 2011 as the new act replaced and repealed the 1972 Act and the regulations made under it. The amendments of the Trade Description Act 2011 has declared JAKIM as an authorized government agency to carry out enforcement activities against any business holder or individual who misuses the halal logo based on lawful provisions, operational principles, and strategies for halal business to comply with. Other by-laws were amended to enforce halal including the Trade Description (Use of Expression 'Halal') Order 1975, the Trade Description (Halal Labeling) Order 1975, the Trade Description (Definition of Halal) Order 2011, the Trade Description (Certification and Marking of Halal) Order 2011, and the Trade Description (Certification and Marking of Halal Fees) Regulations 2011. The objectives of these amendments to the TDA 2011 were to insert some provisions towards reforming the

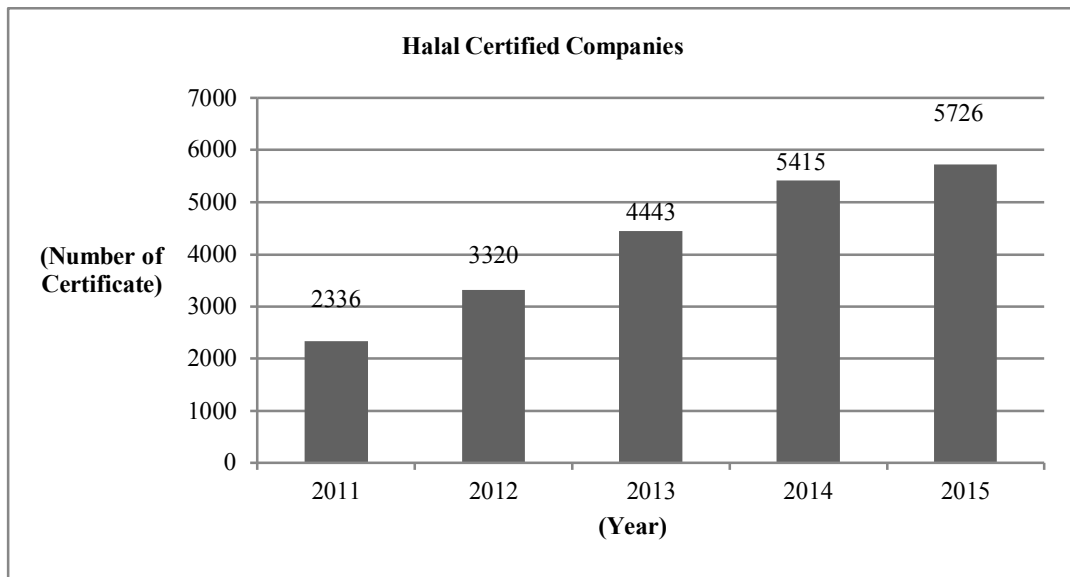
gaps in the laws regarding trade and halal. Sections 9 (1 and 2), 16, 20, 23, 32 and in the case of halal regulations, the most important introductions were Sections 28 and 29 along with several sections added after the amendments.

#### **1.4 Halal Certification**

Therefore, Muslim consumers in Malaysia generally look for the authentic halal certification issued by the Department of Islamic Development Malaysia (JAKIM), which is under the purview of the Ministry of the Prime Minister's Department. Effective from 1<sup>st</sup> August 2009, the Department of Islamic Development Malaysia (JAKIM) resumed responsibility as the halal certification body. Currently, halal certification application is following JAKIM guidelines. In addition to that, in ensuring halal integrity during the duration of halal-certified operation, JAKIM has issued a guideline to be observed by the halal certification holders. The manufacturer is responsible to develop and manage the Halal Assurance Management System (HAS) to ensure compliance of the entire supply chain process with the requirements set by the competent halal authority. In this guideline, the institution has to observe several requirements such as the establishment of halal control points (HCP), proper documentation and forming an Internal Halal Committee (IHC).

From the above discussion, the Malaysian Standard Development System, under the wing of Department of Standardization Malaysia (DSM), Ministry of Science, Technology and Innovation has developed the Malaysian Standard entitled 'Halal Food: Production, Preparation, Handling and Storage – General Guide (MS 1500:2009)'. The Malaysian Standard is one of the government initiatives in establishing Malaysia as the centre of halal food. Related to that, MS1500:2004 is a Malaysia's halal standard developed to help the food manufacturers to control and provide guidance in their product processing in order to follow halal rules, HACCP and GMP (Talib et al., 2008). The standard contains practical guidelines for the food industry on the preparation and handling of halal food (including nutrient enhancers) and it has become the ground rules for food products or food businesses in Malaysia. JAKIM uses the Malaysian standard as the basis for certification whilst other requirements will also be taken into account to complete the certification process.

Major products certified halal in 2015 include food products (76.87%) and non-food products (23.13%). Figure 1.1 shows numbers of halal certified companies, where there were 2,336 certified companies in 2011, the numbers of halal certified companies increased to 3,320 (38.53%) in 2012, the number increased to 4,443 (33.82%) in 2013, while a 21.88 % increase in halal certified company. In 2014 the number has increased to 5,415 (21.88%) and 5,726 and a 5.76% increase in 2015 made the numbers 5414 and 5726 respectively. Figure 1.1 shows the numbers of halal certified companies from 2011 to 2015.

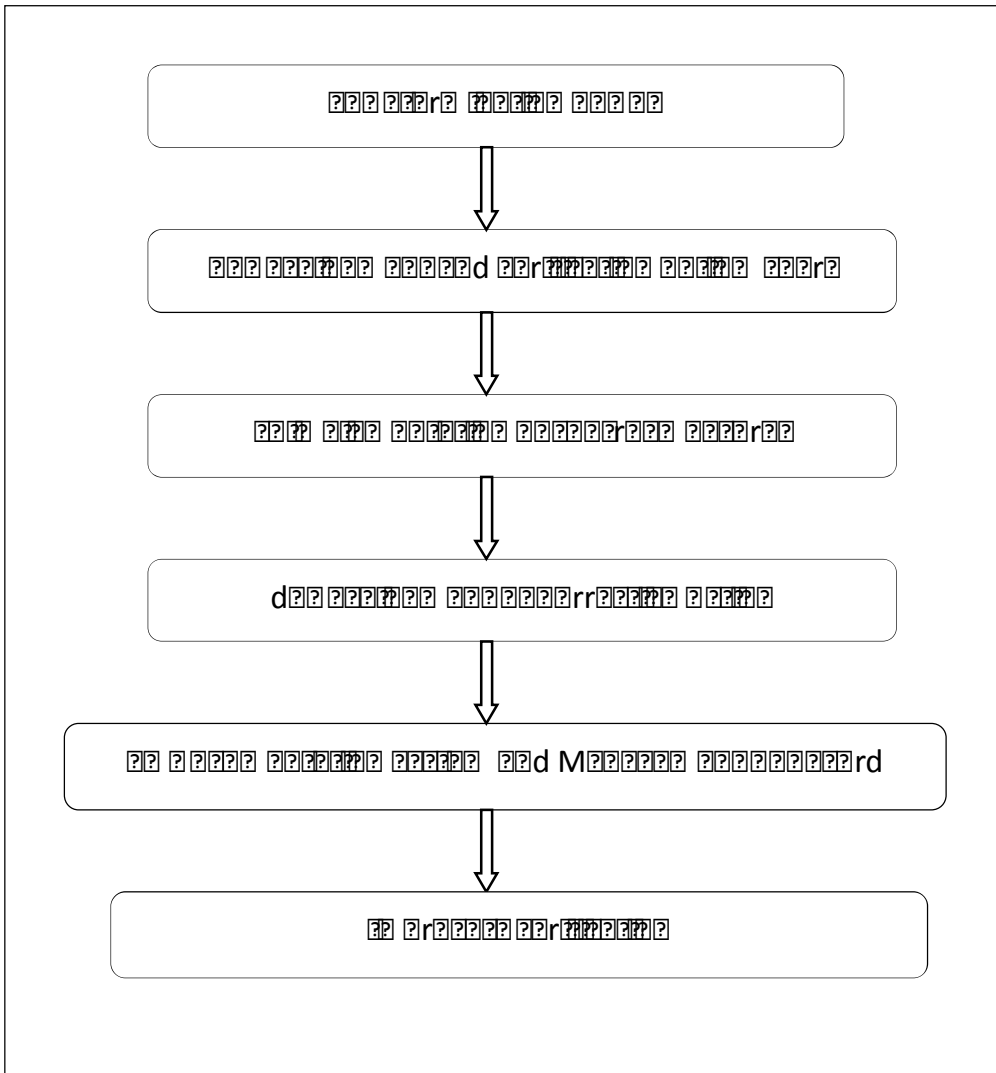


**Figure 1.1: Numbers of Halal Certified Companies**  
Source: MITI (2016)

However, halal certification and logo are not compulsory and it depends on application from food producers. Halal certification is granted to the worthy companies to enable them use the halal logo for printing on their products' packaging and or for display at the company's premises (Alam, 2012). The advantages of halal certification and halal logo to manufacturers is that it helps to capture a bigger market because the majority of Malaysian consumers are Muslims (Ahmad, Abaidah & Abu Yahya, 2013). The main objective of the certification is to ensure food safety and quality assurance of halal food. Halal certification in Malaysia is recognized worldwide amongst Muslim and Non-Muslim countries. It's compliant with ISO standard-MS1500:2004-developed by the Department of Standards Malaysia, includes standard for the production, handling and storage of halal food. All the standards are GMP and Good Hygiene Practice (GHP), which complies with international standards. Malaysian Standards are reviewed periodically and approval of a standard as a Malaysian Standard is governed by the Standards of Malaysia Act 1996 (Act 549). Malaysian Standards are aligned to or are the adoption of international standards to the greatest extent possible. The entire supply chain processes and activities must be certified as halal compliant and the process should be recorded for the purpose of investigation on its supply chain if anything happens, this is called halal traceability.

Halal Assurance Management System (HAS) is set up based on three zero concepts, which are zero limits (no haram material used in the production), zero defect (no haram product is produced), and zero risks (no disadvantageous risk) should be taken by the producer or company based on several principles as shown in Figure 1.2. An effective HAS should be emphasized due to high levels of supply chains' complexity and its uncertainty on *halalan toyyiban* (in accordance with the principles of Islamic laws and quality of health) concept.





**Figure 1.2: The General Principles of HAS**  
 Source: JAKIM (2013)

To ensure compliance of the entire supply chain process with the requirements set by the competent halal authority, the manufacturer is responsible for developing and managing the HAS. It is supposed to be an internal mechanism in halal monitoring with the emphasis on the HAS via the identification of Halal Critical Points (HCP). It provides a systematic approach to ensure and preserve the halal integrity of products based on the concept of effective quality management system throughout the supply chain. It provides constant control, monitoring, verification and a means of improving and preventing any non-compliance in producing halal products. HAS should include; effective product recall procedure; effective documentation to enable traceability; proper filing system for halal applications, documents, procedures and records which shall be made available for audit by competent authorities (JAKIM, 2013).

## 1.5 Halal Food Issues and Product Recall

One of the food-related issues occurs within the Muslim world today is food contaminated with non-halal substances. Muslim consumers in Malaysia have suffered from several food scares, for example, the non-halal bakery oil scandals with wide coverage from media which became alarming for Muslim consumers (Mohamed et al., 2008). The food consumed by Muslims must meet the Islamic dietary code called Halal (Teng, Rezai, Mohamed, & Shamsudin, 2012). Other related issues of food scares are poultry slaughtering inconsistent with shariah law and mixing non-halal ingredients in food (Majid & Chik, 2015). Food ingredients, food cleanliness, and halal food mixing with non-halal food in terms of storage and distribution, as well as the issue of poultry and meat slaughtering that does not comply with the Shariah principles, are example of halal food scares (Omar & Jaafar, 2011). Among other halal issues are the uses of emulsifiers, gelatin, enzymes, lecithin, glycerin, breadcrumbs, dyes whose sources are dubious from non-halal animals, doubtful substances or animal enzymes have been added into halal food products (Majid et al., 2015). A Muslim consumer will ignore his or her economic satisfaction when it is against Islamic rules (Alam, Mohd & Hisham, 2011). Muslim consumers' degree of confidence of halal is always related to the certainty and uncertainty about the process involved as well as wholesomeness and halal purity.

According to JAKIM (2013), the recall procedure shall include provisions of; notification to relevant interested parties (statutory and regulatory authorities, customers and or consumers); handling of withdrawn products as well as affected lots still in stock; sequence of actions to be taken; withdrawn or recalled halal products or goods to be segregated and quarantined; documentation of the cause, extent and result of the withdrawal or recall and reports to top management; and the IHC committee to verify and record the effectiveness of the withdrawal or recall procedure. If companies make a serious offence towards halal procedures such as using haram ingredients in food productions, mixing halal and haram food in the storage area or container, JAKIM will take two actions. The actions are suspension or withdrawal of halal certificate and recall of the halal product. Suspension and revocation of halal certification will be taken on a company that made a serious mistake, such company carrying the halal certificate of Malaysia (Shafii et al., 2013). Halal food Integrity is of great concern to Muslim consumers in Malaysia, they always questioned the authenticity of halal food products produced by food manufacturers. On the other hand, Malaysia is trying to enhance the halal food integrity in order to protect Muslim consumers from eating haram foods. Malaysia has claimed to be one of the successful halal hubs in the world, however, this is being challenged due to several findings on halal food integrity issues. This may happen due to halal industry players and stakeholders who are against the rules and regulation set by the halal authorities (Mohamed et al., 2016).

Product recall is one of the requirements in HAS, it helps companies to assure the halal quality of their products. The companies shall develop written effective product recall procedures, which are tested and evaluated to ensure the efficiency of the procedure. The purpose of the effective halal food product recall is to quickly remove the affected product from the market. Not all consumers are alert and react appropriately to the announcement of the withdrawal of the affected product from the market, so consumers

will continue to use it. This problem is caused by several factors such as the consumers not having enough knowledge on halal food product recall, unawareness of the recall, ignoring the recall, assuming that the information is not applicable to them and not checking the products involved at home. Consumers must be convinced that the recall is significant to them, the recall applies to them personally, and serious consequences might result if they failed to take the recommended actions.

Formal announcement from the manufacturer or government authority regarding product safety is called recall notice. Who is recalling the product, what the product is, and what is wrong with the product, possible action to be taken by consumers (safety or warning message for use or consumption of the product, including where to return, repair, or replace the product), where the product can be found or sold, and who to contact for further enquiries are all the information included in a recall notice (Ahsan & Gunawan, 2014). Table 1.1 shows a list of halal food product recalls in Malaysia.

**Table 1.1: List of Halal Food Product Recalls in Malaysia**

No.	Issue	Source
1.	Two brand canned sardines; TL Tan Lung and TLC brand has been recalled due to contaminated with roundworms which causing the nematode (worm) that attacks the gastrointestinal system such as the stomach and intestines of humans. It can give bad effect like abdominal pain, diarrhea, nausea and vomiting.	(The Star, 2018)
2.	Two batches of its chocolate products which tested positive for porcine DNA by the Health Ministry Malaysia have been recalled. Cadbury Confectionery Malaysia Sdn. Bhd. has recalled Cadbury Dairy Hazelnut and Cadbury Dairy Milk Roast Almond.	(The Star, 2014)
3.	JAKIM has withdrawn halal certificate from the company because it was confirmed that HP Sauce and Tabasco Pepper Sauce contained porcine DNA. All holders and new applicants for halal certification Malaysia using HP Sauce and Tabasco Pepper Sauce were told to change to another product which has a kosher certificate following the discovery of pig deoxyribonucleic acid (DNA) in the product.	(Utusan, 2011)
4.	Golden Churn Pure Creamery Butter sold in Malaysia was announced as non-halal after it was found to contain pig DNA by the Sarawak Islamic Religious Department. The Jabatan Kemajuan Islam Malaysia (JAKIM) confirmed it.	(The Star, 2011)
5.	JAKIM had withdrawn the halal status of the brand QBB pure ghee product QBI Packaging Sdn. Bhd. following the discovery of non-halal elements in its ingredients.	(Kosmo, 2010)

Source: Compiled by the Author (2018)

From Table 1.1, most of the halal issue is related to haram contamination (porcine DNA) along the food supply chain. JAKIM should ensure food companies and

manufacturers have a better plan or system of traceability in order to monitor halal issues such as ingredients, cleanliness, hygiene and transportation. While, just over a fifth (21%) of people surveyed responded that they had responded to a product recall and 5% responded that they have knowingly ignored a recall notice, most of people responding that they have never even seen a recall notice, (Buckle, 2014). Following a recall, the image of the company and its behavior during the recall has influenced consumer's evaluations of companies and brands (Bapuji & Etayankara, 2009). Lower the responsiveness to the recall was caused by consumers perceived a recall for such a brand less threatening (Eilert, 2013).

## 1.6 Problem Statement

From 2010 to 2018, most of the halal food-related issues occurring within the Muslim world today are food contamination with non-halal substances and food safety. Malaysia has experienced several major incidences of recall related to haram elements found in halal foods. Food products involved with the incidence were; QBB Pure ghee, pig DNA found in Golden Churn Pure Creamery Butter, porcine DNA found in HP Sauce and Tabasco Pepper Sauce and porcine DNA found in Cadbury Dairy Hazelnut and Cadbury Dairy Milk Roast Almond. Those incidences may frighten and prompted various reactions from Muslim consumers in Malaysia. As discussed earlier, several multinational companies are food manufacturer in Malaysia, this may lead to halal food mixing or contamination with non-halal food in terms of storage and distribution. Despite this, 68% of halal certified companies are Bumiputera and the remaining of 32% are non-Bumiputera.

Not many studies focused on the consumers' perspectives and their response towards halal food product recall. Most of the previous studies only focused on managerial perspectives (Kal-kausar, Rafida, Nurulhusna, Alina, & Siti Mashitoh 2013; Izzati, Aris, & Soon 2014). There are possibilities of Muslim consumers not knowing the purpose of halal food products recalled. On the other hand, some of the Muslim consumers are not alert to the recall notice on newspaper, television, radio and social media and do not care about the withdrawal of the involved product but choose to continue to use the affected product without hesitation. There are also possibilities of Muslim consumers who continue to stop buying the food brands involved, others stop buying the food involved, and some influence their friends and relatives not to continue buying products that have been declared as recall products. Consumers react in variety ways towards food product recall, so a complete study should be done on Muslim consumers' knowledge, attitude and behavioural intention towards halal food product recall.

Food recalls should generate sufficient attention and motivation among consumers that they take appropriate protective actions to make sure it is effective (William & Cara, 2009). The knowledge that a recall had been made, the perceived danger of the defective product, the perceived corporate responsibility of the company, the knowledge of recalls by other companies, and the perceived responsibility of the company for the defect has influenced consumers reactions (De Matos & Rossi, 2007). For many reasons, some consumers do not react to the recall even they notice about

the recall. They still consume the recalled product and do not check it in their homes. Eventually, they disregard the recall notice and just simply choose to eat the recalled product anyway (William, Cara& Neal, 2009).

Related to the above discussion, the factor that may influence Muslim consumers' behavioural intention towards halal food product recall is still not very clear. An in-depth understanding of the Muslim consumers' intention towards halal food product recall is important in ensuring the effectiveness of halal food product recall in Malaysia. Muslim consumers' knowledge, attitude, subjective norms, perceived behavioural control and socio-demographic profiles such age, gender, education level, income, and residence may affect behavioural intention towards halal food product recall. Good level of knowledge towards halal food product recall would lead to an appropriate action among Muslim consumers towards halal food product recall with effectiveness halal food product recall strategies.

### **1.7 Research Questions**

The research questions of this study are as follows:

- i. What are the levels of Muslim consumers' knowledge, attitude and behavioural intention towards halal food product recall?
- ii. What is the association between Muslim consumers' socio-demographic profiles and their behavioural intention towards halal food product recall?
- iii. What is the relationship between Muslim consumers' knowledge and attitude on behavioural intention towards halal food product recall?
- iv. What are the factors that influenced Muslim consumers' behavioural intention towards halal food product recall?

### **1.8 Objectives of the Study**

The general objective of the study is to determine behavioural intention towards halal food product recall among Muslim consumers in Klang Valley, Malaysia.

The specific objectives of the study are:

- i. To determine the levels of Muslim consumers' knowledge, attitude and behavioural intention towards halal food product recall.
- ii. To investigate the association between Muslim consumers' socio-demographic profiles and their behavioural intention towards halal food product recall.
- iii. To determine the relationship between Muslim consumers' knowledge and attitude on behavioural intention towards halal food product recall.
- iv. To determine the factors that influenced Muslim consumers' behavioural intention towards halal food product recall.



## **1.9 Significance of the Study**

This study will assist relevant government agencies, food manufacturers', and food companies to do on-going developments to relevant staff and IHC in developing a strategy on the effectiveness of halal food product recall among Muslim consumers. Moreover, the result of the study can help government agencies like JAKIM and related government agencies on how to educate Muslims consumers about the importance of their response towards halal food product recall to ensure the effectiveness of the recall. Since the purpose of the halal food product recall is to preserve Muslim consumers' faith, it is important to make them aware of this issue.

The findings of this study will assist future studies to test the relevant model namely Theory of Planned Behaviour (TPB) and several additional variables on factors affecting behavioural intention towards halal food product recall among Muslim consumers. This study should be expanded for future study on Muslim consumers' intention towards halal food product recall. In-depth study should be done on the effectiveness of the halal food product recall itself.

This study will help policymakers to design appropriate policy regarding halal food product recall in Malaysia. Policymakers can design suitable programs to make sure all information regarding halal food product recall can easily reach Muslim consumers to ensure they are knowledgeable on halal food product recall.

## **1.10 Organization of the Study**

Chapter one gives brief information regarding the halal and haram concept, an overview of the halal industry, halal food issue, Muslim consumers behaviour, halal food issue and products recall, problem statement, research questions, objectives and significance of the study. Chapter two provides a review of literature relevant to this study and theoretical framework adapted for the study. Chapter three reviews the methodologies used in this study which are adopted from previous studies; descriptive analysis, cross-tabulation, chi-square analysis, correlation analysis and multiple regression analysis among others were used. Chapter four provides the analysis and findings of the study. Chapter five provides relevant summary and conclusion of the study.

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