

## Modelling the Factors Influencing the Intention to Purchase Halal Products among Students in Higher Learning Institutions using Multiple Linear Regression

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**Abstract:** In Arabic, the word halal means “permissible” or an obligation that regulates all aspects of Muslims’ lives worldwide. Now, it appears that the definition of halal expands to the extent that virtually all goods and services including cosmetics, clothing, pharmaceuticals, financial services and even tour packages can obtain the status of halal. Halal product status in Malaysia is still vague which sometimes could lead to questionable halal status. Therefore, this study was conducted to determine the factors influencing university students’ intention to purchase halal products in Kelantan. A cross-sectional design was conducted among all full-time undergraduate students from March until July 2020, at Universiti Teknologi MARA, Kota Bharu Campus in Kelantan. About 327 students were randomly selected by using Proportionate Stratified Random Sampling. A self-administrated structured questionnaire was used as a research tool in this study. The data was analyzed by performing multiple linear regression analysis. Of the five factors, attitude, subjective norm, perceived behavior control and religiosity significantly influenced the intention to purchase halal products among students. Only halal awareness was not significantly influenced. Attitude was found to be the most influential factor that influenced university students’ intention to purchase halal products. This study’s finding can be used as an ongoing framework to enhance more optimal findings to halal sectors in Malaysia especially for those who are directly involved in buying behavior of halal products.

**Keywords:** Attitude, Halal Products, Purchase Intension, Regression

### 1 Introduction

In Arabic, the word halal means “permissible” or an obligation that regulates all aspects of Muslim’s lives worldwide. It most often applies in English to something that is acceptable under Islamic law (Kamali [1] as cited in Omar et al. [2]). In addition, as stated in Omar et al. [2], it may outspread to all consumable products such as toiletries, pharmaceuticals, cosmetics and services including finance. Each product group offers many different local and internationally recognized brands. At present, a broad selection of halal products and services are already available to Muslim consumers. Haram is the opposite of halal, which is illegal and banned in Arabic. Therefore, halal products are those that comply with shariah, such do not include haram (forbidden) ingredients, labor or environmental degradation, and are not dangerous or intended for harmful use [3]. According to Baharuddin et al. [4], the halal concept is not only shariah necessity but also the sustainability concept of cleanness, health and safety needs, it is affecting the acceptance of products or food for the consumer who cares about safety and healthy lifestyle.

In the geographical environment of Malaysia, the position of the halal concept is traditionally significant because Muslims constitute the majority of the nation’s population at 61.3%, followed by 19.8% Buddhist, 9.2% Christian, 6.3% Hindu, Chinese traditional religion like Taoism and Confucianism, 1% unknown, 0.7% free thinkers, and 0.4% of other religions (Department of Statistics Malaysia (DOSM) Official Portal as cited in Nordin [5]). The halal requirement among Muslims is an



important concept that plays a vital role in their daily consumption. At present, halal's concern is not only present among Muslims, but has also spread among non-Muslims [6]. Moreover, in daily activities such as eating, drinking or engaging in a business transaction, the word halal is used as a guideline for Muslims. Such operations include processing, displaying, store and preparation of consumer-related foods and services [7].

The Theory of Planned Behaviour (TPB) suggested by Azjen, as cited by Bashir et al. [8], states that the three factors which are attitude, subjective norm and perceived behaviour control are the factors to measure people's purchase intention. According to Bashir et al. [8], halal awareness affects simplifying the intention to purchase halal products. Besides that, there is a study that indicate the religious belief related to purchase intention of halal products [9]. According to Liaw's study, as cited in Afendi et al. [10], it is important to understand the factors that affect the purchase intention of customers to be a successful company. Other than that, as the willingness of consumers to purchase increased, the more likely they share their experiences with people nearby, known as word-of-mouth, and will offer some advice and recommendations to others. Therefore, it will be able to influence other potential consumers to purchase products according to Ismail and Fatt's study, as cited in Afendi et al. [10]. The same goes for the halal product, it is important to understand the factors affecting customers' purchase intention which relates directly to exploring potential consumers in purchasing halal products.

Malaysia has long aspired to be a regional center for supporting, supplying and exporting halal products and services to Muslim countries around the world [11]. From a Star Online article titled "Malaysia aims to be world Halal Hub" stated that "Malaysia, with its comprehensive halal ecosystem, wants to position itself as the Halal hub in the Asian region, if not the world". Malaysia External Trade Development Corp (Matrade) deputy chief executive officer said that "We are ranked No.1 in terms of halal economy and we have a comprehensive ecosystem in the halal industry compared to other countries" (Star Online, 2019). However, to fulfill that, many issues had been overlooked that affected the process of achieving the target. The issues starting from the halal product itself because some of the halal products lack information about the process whether it is following the halal rules or not. Lack of awareness to understanding the information about the halal concept will lead to loss of appreciation to halal [12]. Related to that, consumer also do not get sufficient information about halal products and their behaviour or attitude show that they do not take seriously about the information of the products, especially students. According to Khalek [13], it is still common that Muslim consumers would dine in non-halal restaurants because some of them assume that if the workers are Muslims, then the food should also be halal.

Another issue came to light where most Malay tourists consume non-halal products in Japan without realizing whether it is halal or non-halal (Sinar Harian, 2019). This shows that consumers are still uncertain about the definition of halal products. Moreover, 3.6 tonnes of frozen chicken smuggled from Thailand, the total confiscation of the truck, which amounted to about RM60,000 was made because there were no health certificates and a halal certificate from the home country (Sinar Harian, 2019). It shows that the halal status in Malaysia is still vague which sometimes could lead to questions regarding the halal status.

Hence, this study was conducted to determine the factors such as attitude, subjective norm, perceived behaviour control, halal awareness and religiosity that influenced university students' intention to purchase halal products. The study finding will be beneficial to the halal industry since the study focused on the scope of halal production between consumers and the halal products. Since many issues arise to support the halal product, halal production companies and Jabatan Kemajuan Islam Malaysia (JAKIM) can use the findings as an additional reference to enhance and further develop the halal industry in Malaysia. This study is also expected to educate people to support halal products and raise the awareness that can increase the purchase intention of people towards the halal products.

## 2 Methodology

### A Study and Sampling Design

The cross-sectional study was conducted among full-time undergraduate students in Part 2 to Part 6, Semester March until July 2020, studying at Universiti Teknologi MARA Kota Bharu Campus (UiTMKB). The sampling frame included approximately 1294 students with stated criteria. A proportionate stratified random sampling method was used to enrol 327 samples. This study divided the target population into two strata which were Faculty of Computer and Mathematical Sciences (FSKM) and Faculty of Business Administration (FPP). The percentage of Strata I (FSKM) and Strata II (FPP) were 28.98% and 71.02%, respectively. The sample size was determined by using Sample Calculator Online by RaosoftInc with 5% margin of error and 95% confidence interval. An additional 10% of the sample was considered for non-response.

### B Research Instrument and Data Collection Method

A self-administered structured questionnaire was used as a research tool in this study. The questionnaire was adapted mostly by using four main sources which were Hall et al. [14], Haque et al. [15], Awan et al. [16] and Kamarubahrin [17]. The questionnaire was divided into three sections: Section A for Demographic, Section B for factors (Attitude, Subjective Norm, Perceived Behaviour Control, Halal Awareness, and Religiosity) and Section C for Purchase Intention towards Halal Product. For Section B and Section C, the questions were constructed using a 10-point Likert scale from strongly disagree to strongly agree. Table 1 summarized the number of items for each section. The questionnaire was pre-tested on 39 students in April 2020 and was modified based on the feedback. The finalized questionnaire, together with the information letter, was distributed to all 327 randomly selected students.

Table 1: Summary of the Questionnaire by Section

Section	Variable	Number of Items
A	Demographic Profiles	5
B	Attitude	7
	Subjective Norm	7
	Perceived Behaviour Control	7
	Halal Awareness	7
	Religiosity	7
C	Purchase Intension	7

### C Statistical Analyses

The reliability analysis was used to test the stability and consistency of the items in the questionnaire and it demonstrates how well the items measuring the concept. The quantitative variables which are age, attitude, subjective norm, perceived behaviour control, halal awareness, religiosity and purchase intention were described as mean and standard deviation. Meanwhile, for qualitative variables which are gender, faculty, part and religion, the variables were described by using frequency and percentage.

Multiple linear regression with a stepwise variable selection procedure was used to determine the factors that contribute to university students' intention to purchase halal products in Kelantan. The significant variables were checked for multicollinearity. Meanwhile, the assumptions of multiple linear regression, the significance of the regression model and model adequacy were assessed. The estimated multiple linear regression model is shown in Eq. (1).

$$\hat{Y} = \hat{\beta}_0 + \hat{\beta}_1 X_1 + \hat{\beta}_2 X_2 + \hat{\beta}_3 X_3 + \hat{\beta}_4 X_4 + \hat{\beta}_5 X_5 \quad (1)$$

where:

$X_1$ : Attitude

$X_2$ : Subjective Norm

$X_3$ : Perceived Behaviour Control

$X_4$ : Halal Awareness

$X_5$ : Religiosity

A two-sided hypotheses testing was used in all analyses with  $p < 0.05$  was considered statistically significant. All the analyses were done by using Statistical Package for the Social Sciences (SPSS) version 23 (SPSS 23.0).

### 3 Results and Discussion

#### A Reliability Analysis

Table 2 shows the reliability test of the pilot and actual study. The Cronbach's Alpha Coefficient of the pilot study is in the range of 0.731 to 0.890 which indicate that the internal consistency for all construct varies from acceptable to good. Meanwhile, the Cronbach's Alpha Coefficient of actual study is in the range of 0.812 to 0.949 which indicate that the internal consistency for all construct were good and excellent.

Table 2: Cronbach's Alpha for Pilot and Actual Study

Variable	Cronbach's Alpha for Pilot Study	Cronbach's Alpha for Actual Study
Attitude	0.731	0.832
Subjective Norm	0.827	0.864
Perceived Behaviour Control	0.786	0.874
Halal Awareness	0.890	0.934
Religiosity	0.854	0.949
Purchase Intension	0.858	0.812

#### B Descriptive Statistics

All randomly selected respondents completed the questionnaire ( $n=327$ ). The number of respondents for the Faculty of Computer and Mathematical Sciences and the Faculty of Business Administration was 95 and 232 respondents, respectively. Majority of the respondents were female students with 79.11% of the total number of respondents. The highest number of respondents was from Part 4 students which were 38.36% ( $n=112$ ) of total respondents and the lowest percentage was from Part 6 students which were 5.14% ( $n=15$ ) of total respondents. All respondents were Muslim students.

Table 3 summarizes the quantitative variables based on mean and standard deviation. Most of the respondents were aged 21.71 years. The mean score of attitude, subjective norm, perceived behaviour control, halal awareness, religiosity and purchase intention was above nine.

Table 3: Descriptive Statistics of Quantitative Variables

Variable	Mean (SD)
Age (years)	21.71 (1.005)
Attitude	9.55 (0.549)
Subjective Norm	9.43 (0.670)
Perceived Behaviour Control	9.45 (0.632)
Halal Awareness	9.58 (0.614)
Religiosity	9.63 (0.564)
Purchase Intension	9.47 (0.618)

### C Multiple Linear Regression

The regression model obtained in this study was statistically significant with a  $p$ -value less than 0.05. The model was adequate since the assumption of normality of residuals, linearity, independent of residuals, and homoscedasticity for the model was met. The multicollinearity does not exist among the significant variables since the value of Variance Inflation Factor (VIF) and tolerance were satisfied which were smaller than 10 and larger than 0.1, respectively, for each variable.

Moreover, about 82.8% ( $R^2 = 0.828$ ) of the total variation of the purchase intention to halal product is explained by the independent variables (religious, attitude, subjective norm, perceived behaviour control). Meanwhile, the 17.2% of total variation can be explained by other factors. Since the  $R$  Squared value is more than 75%, it can be concluded that the model explains well the university students' intention to purchase halal products.

Table 4 shows that all factors, except halal awareness, were found to be associated with the intention to purchase halal products. Attitude was found to be the most influential factor that influenced university students' intention to purchase halal products with beta coefficient=0. 590. If all values of significant factors (attitude, subjective norm, perceived behaviour control and religiosity) are equal to 0, the purchase intention of halal products will decrease by 0.907. It can be concluded that, for every one-unit increase of the mean level of agreement on attitude, subjective norm, perceived behaviour and religiosity, the mean purchase intention of halal products increase by 0.590, 0.233, 0.170 and 0.093 units, respectively. This interpretation is valid for each significant factor provided that other factors are held constant.

Table 4: Regression Coefficient of the Regression Model

Variable	Beta Coefficient	t- statistics	p- value
Constant	-0.907	-3.076	0.002
Attitude	0.590	14.540	<0.001
Subjective Norm	0.233	5.559	<0.001
Perceived Behaviour Control	0.170	4.133	<0.001
Religiosity	0.093	2.199	0.029

Hence, the estimated regression models for this study are shown in Eq. (2).

$$\hat{Y} = -0.907 + 0.590X_1 + 0.233X_2 + 0.170X_3 + 0.093X_4 \quad (2)$$

where:

$\hat{Y}$ : Purchase Intention of Halal Products

$X_1$ : Attitude

$X_2$ : Subjective Norm

$X_3$ : Perceived Behaviour Control

$X_4$ : Religiosity

As stated by Saudien and Jabeur [18], consumers with higher Islamic beliefs will have a stronger intention to purchase halal products rather than conventional products. Then, Nursalwani and Zulariff [19] show that young Muslims with high positive attitudes seemed to have greater intentions to consume halal chocolate bar product. It is also supported by Marmaya et al. [20] that the subjective norm influenced behavioral intention among Gen Y consumers to buy halal products. Ali et al. [21] also found that halal buyers are more aware of perceived behavioral control when buying food.

In this study, the halal awareness was found not significantly contribute to the purchase intention of halal products. It is supported by Lee et al. [22] and Zakaria [23]. However, not to be forgotten, there are also different findings by Bashir et al.[8] who stated that respondents who have positive halal awareness have an effect on simplifying the intention to purchase halal products. Aziz and Chok [24] also stated that non-Muslim consumers that demonstrate halal awareness give a positive effect on the intention to purchase halal products. Thus, halal awareness is possible to be considered as one of the factors that influence the intention to purchase halal products.

#### **4 Conclusion and Recommendation**

The regression model obtained in this study was statistically significant and adequate since the assumption of normality of residuals, linearity, independent of residuals, and homoscedasticity for the model was met. The multicollinearity does not exist among the significant variables. Moreover, the total variation of the purchase intention to halal product is highly explained by the independent variables (religious, attitude, subjective norm, perceived behaviour control). The study found that the factors that influenced the university students' intention to purchase halal products are attitude, subjective norm, perceived behaviour control and religiosity. Only the halal awareness factor was found not significantly contribute to the purchase intention of halal products.

This study finding can be used as an ongoing framework to enhance more optimal findings to halal sectors in Malaysia especially for those who are directly involved in buying behavior of halal products. The suggestions that can be put into action from this study are that the researcher is suggested to employ another sampling technique such as cluster sampling technique for an efficient comparison and better scope of representative. Other methods of analysis are also recommended for future studies to obtain a more comprehensive model. Hence, the finding of this study might be changed accordingly depending on the future expansion of purchase intention on the halal products model.

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#### **Conflict of Interest Statement**

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

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