

Factors Affecting Consumers' Decision in Purchasing MUI Halal-Certified Food Products

Qurroh Ayuniyyah^a, Didin Hafidhuddin^b, Hambari^c

^aPh.D. Candidate at Department of Economics, International Islamic University Malaysia, Email : ayuniyyah@gmail.com

^bProfessor, Bogor Agricultural University, Indonesia, Email : hafidhuddin@yahoo.com

^cPh.D. Candidate at Department of *Fiqh* and *Usul Al-Fiqh*, International Islamic University Malaysia, Email : kangbari@yahoo.com

Abstract

Objective - As the largest Muslim population in the world, Indonesia has a promising potential of halal food industry in terms of economic and market values. This research aims at analyzing factors affecting consumers' decision in purchasing MUI halal-certified food products.

Method - This study employs survey method and descriptive analysis approach. Three hundred respondents are selected using non-probability convenience sampling technique and are analyzed using multiple regression. The criteria of the respondents are Muslim and have bought Indonesian halal-certified food products in the last one-month. While the dependent variable in this study is purchasing decision (Y), the four independent variables are cultural and religious factors (X_1), social factor (X_2), personal factor (X_3) and psychological factor (X_4).

Result - This study finds that the four independent factors significantly influence consumers' decision in purchasing MUI halal-certified food products. However, social factor are negatively related with the consumers' purchasing decision.

Conclusion - This study is expected to deliver the information on the halal food purchasing decisions from the perspective of the customers in order to provide recommendations to develop halal food industry in Indonesia.

Keywords: Halal Food Products, Purchasing Decision, and Consumers' Behavior

Abstrak

Tujuan - Sebagai negara dengan populasi Muslim terbesar di dunia, Indonesia memiliki potensi industri makanan halal yang menjanjikan baik dari sisi ekonomi maupun nilai pasar. Penelitian ini bertujuan untuk menganalisis faktor-faktor yang memengaruhi keputusan pembelian konsumen terhadap produk makanan bersertifikat halal MUI.

Metode - Penelitian ini menggunakan metode survey dan pendekatan analisis deskriptif. Sebanyak tiga ratus responden dipilih dengan menggunakan teknik pengambilan non-probabilitas *convenience*. Kriteria responden yang dipilih adalah Muslim dan minimal pernah setidaknya sekali membeli produk makanan bersertifikat halal MUI dalam sebulan terakhir. Peubah *dependent* adalah keputusan pembelian konsumen (Y), sedangkan peubah *independent* adalah faktor agama dan budaya (X_1), faktor social (X_2), faktor personal (X_3) dan faktor psikologis (X_4).

Hasil - Penelitian ini menemukan bahwa keempat faktor peubah tersebut secara statistik signifikan di dalam memengaruhi keputusan pembelian konsumen terhadap faktor makanan bersertifikat halal MUI. Meskipun demikian faktor sosial memiliki hubungan negatif dengan keputusan pembelian tersebut.

Kesimpulan - Penelitian ini diharapkan akan memberikan informasi mengenai keputusan pembelian produk makanan halal dari sisi kosumen sehingga dapat memberikan rekomendasi untuk mengembangkan industri makanan halal di Indonesia.

Kata Kunci: Produk Makanan Halal, Keputusan Pembelian Konsumen, Perilaku Konsumen

1. Introduction

As a comprehensive teaching, Islam is considered as life curriculum that becomes the main references and framework of life value system for mankind. In this context, Islam is not a mere moral and ethical base, but also an operational system that is applicable in human daily life. In other words, it encompasses all aspects of human life and is valid for all people in the world, anywhere and anytime (Hafidhuddin, 2008).

One of major concerns of Islamic teaching for its believers is to consume all products that are permissible (*halal*) and good (*thayyib*) according to the revelation specifically the Quran and the Prophet PBUH's sayings. Khan (2003) explains *halal* is derived from the Arabic word *al-ḥalāl*, which means permissible or lawful. The term of *halal* means "things and activities that are permitted by the *Sharīah*." This concept indicates that Muslims should base all their activities including consumption according to the *Shariah*.

As Islam obligates its believers to consume *halal* products, these products have become basic needs and even lifestyle particularly in Muslim major country including Indonesia. Pew Research Center (2010) reports that Indonesia constitutes the largest Muslim population in the world that shares 12.7 percent of the world's Muslims followed by Pakistan (11 percent), India (10.9 percent) and Bangladesh (10 percent). This reflects Indonesia has a promising potential of *halal* industry, including *halal* food industry, in terms of economic and market value (Yasid *et al*, 2016).

The Global Islamic Economy Report (2016/2017) reports that the global market size of food and lifestyle sector expenditure reached USD1.9 trillion in 2015 and is projected to increase by 8 percent in 2021. Besides, it also indicates that the global estimated revenues from *halal* certified foods and beverage products reached USD415 billion in 2015.

Table 1. The Global Islamic Economy Indicator Scores

Top 15 Countries	GIE Indicator Score	Islamic Finance	Halal Food	Halal Travel	Modest Fashion	Halal Media and Recreation	Halal Pharmaceuticals and Cosmetics
Malaysia	121	189	55	70	25	38	61
UAE	86	92	75	81	67	137	78
Bahrain	66	90	45	30	26	58	36
KSA	63	83	50	35	17	33	48
Oman	48	51	54	36	16	40	40
Pakistan	45	47	56	11	19	8	52
Kuwait	44	51	43	29	13	45	29
Qatar	43	47	45	35	15	46	32
Jordan	37	35	45	39	19	31	49

Indonesia	36	38	40	35	21	9	41
Singapore	32	22	39	44	26	75	56
Brunei	32	27	45	22	12	30	39
Sudan	28	30	33	23	5	17	23
Iran	28	30	29	36	10	20	27
Bangladesh	26	31	26	10	25	3	25

Source: Thomson Reuters (2017)

The report also shows Indonesia as the first top Muslim consumer food expenditure markets of USD154.9 billion in 2015 above Turkey, Pakistan, Egypt, Bangladesh, Iran, Saudi Arabia, Nigeria and Russia. Besides, Indonesia is among the top 15 countries that have highest scores of the Global Islamic Economy Indicator (GIEI) (vide Table 1).

According to Table 1, it is found that Indonesia occupies tenth place benefiting from better improvement in the halal travel indicator as compared to the previous period. In this case, Indonesia enhanced three places by virtue of a strong government drive to promote Indonesia as a halal travel destination. It is also found that halal pharmaceuticals and cosmetics shared the highest score of 41, while halal food shared the second highest score of 40. From this point of view, it can be concluded that the current performance of halal industry of food and beverage is relatively good among other indicators.

The halal certification and logo of products in Indonesia are managed by *Lembaga Pengkajian Pangan, Obat-obatan dan Kosmetika Majelis Ulama Indonesia* or Indonesian *Ulama Council* (abbreviated as LPPOM MUI). The institution aims at investigating, researching, analyzing and deciding whether or not food products, cosmetics and pharmaceuticals that circulate in the market comply with the health and halal standard according to Islamic teaching. Besides, LPPOM MUI also recognizes halal certificates issued by approved halal certification body only for product produced in the country where the halal certification body located, except for product produced in Europe can be used halal certificate by any approved halal certification body located in Europe (LPPOM MUI, 2017).

According to MUI (2009), the requirements of halal products are as follows. First, the products and its ingredients should be free from pork, pig and its derivatives. Second, they should also be free from wine and its derivatives. Third, halal meat refers to meat from animals, which are slaughtered based on Islamic procedure. Forth, the foods should be free from ingredients that are banned and free from carcasses, blood, substances derived from human organ, dirt, etc. Fifth, the storage, sale, processing, management and public means of transportation for the halal products must be free from pigs or other illicit goods.

However, the total of MUI halal-certified products in Indonesia, including food products,

cosmetics and medicines during 2011 to 2014 had been only 26.11 percent. In other words, the majority of products in the market are still halal-uncertified (*Direktorat Jendral Bimbingan Masyarakat Islam*, 2015). This condition should be improved in order to enhance the performance of halal food industry at both national and global levels. The improvement can be started from many aspects and should be done simultaneously, including from the perspective of the government as regulator, the producers of halal food, the distributors as well as the consumers.

This study, hence, attempts to analyze the MUI halal-certified food products from the point of view of the consumers. Understanding the perception and behavior of the consumers is very important for betterment of the halal food industry in Indonesia. This paper comprises four sections including introduction as the first one. Section two elucidates research method followed by empirical findings and discussion in section three. Finally, chapter four concludes.

2. Research Method

Methodology is defined as a general approach to conduct this particular research topic. In this regard, it is a system of explicit rules and procedures upon which research is based and against which claims knowledge are comprehensively evaluated (Imaduddin, 2006). This chapter discusses the data and methodology employed in the research. It makes a brief elucidation about place and time of research, types and sources of data, population and sampling methods as well as the analytical tools. Given the availability of reliable data, the quantitative analysis is undertaken to verify our objective.

2.1. Types and Sources of Data

There are two sets of data used in this study. The first set of data is primary data while the second one is secondary data. Primary data is obtained through survey with the selected samples, while secondary data is obtained through literature survey and accessing the data of LPPOM MUI and other relevant sources.

2.2. Place and Time of Research

The research employs online survey so that the researchers can spread the questionnaires to the respondents across Indonesia and outside the country through social media. The survey was conducted during 1-3 May 2017.

2.3. Population and Sampling Method

Population of this study is defined as the consumers of MUI Halal-certified food products.

Meanwhile sample is defined as the group of people selected to represent the population. This study selects 300 samples that are asked by using self-administered online questionnaires. This method helps researchers to collect data in an efficient timely manner and wider scope of demographic coverage.

Furthermore, this research employs non-probability convenience sampling method, where the samples are selected based on two basic criteria. These criteria are: (i) they are Muslim; and (ii) they buy MUI halal-certified food products for at least once in the last one-month.

2.4. Variables

Sumarwan (2011) highlights four elements in relation with consumers. First, consumers are users, buyers and decision makers. Second, they relate with goods, services, brands, packaging, quality and after sales service. Third, consumers have bargaining position and they look for information in order to compare brands. Forth, consumers also relate with perception, behavior, loyalty, satisfaction, motivation and lifestyle.

According to Solomon *et al* (2006), consumer behavior is “the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires”. Schiffman and Kanuk (2007) delineate that consumer behavior is “the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs”

Similarly, Kuester (2012) defines consumer behavior as “the study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy their needs and wants”. He also explains that consumer behavior is concerned with the social and economic impacts that purchasing and consumption behavior has on both the consumer and wider society.

Kotler (2000) explains that there are four driving factors of consumer behavior including cultural factor, social factor, personal factor and psychological factor. The explanation of each factor is as follows.

2.4.1. Cultural Factor

Kotler (2000) is of the opinion that culture affects most to the consumer behavior and within different types of societies. Furthermore, the culture is classified into three groups including cultural, sub-cultural and social class. The subcultural consists of the groups of nationalities, religions, racial and geographic regional. Schiffman and Kanuk (2007) opine that subcultural

factor is crucial as it can assist companies to deliver the best services and product in the market size.

In relation with the social class, Kotler and Armstrong (2004) argue that the human societies naturally present social stratification and there even exists a caste system. Besides, they also represent the level of income, education and occupation.

2.4.2. Social Factor

Kotler (2000) explains that consumer behavior is also affected by the social factor such as reference group that consists people who can give direct and indirect effects. For instance, family, friendships groups, work and shopping groups can affect consumer behavior including buying or purchasing decision.

2.4.3. Personal Factor

Kotler (2000) argues that personal factors including consumer's age and stage in the life cycle, personal occupation, economic circumstances and lifestyle of person can affect consumer behavior. These also are affected by personality and self-concept. Furthermore, Schiffman and Kanuk (2007) opine that the personality, product quality, self-concept and self-power, the product display methods are the main factors that influence on consumer behavior in the services industry.

2.4.4. Psychological Factor

Psychological factors that affect consumer behavior are motivation, perception, learning process, trust and attitudes. Swastha and Handoko (2000) are of the opinion that internal psychological driving factors toward consumer behavior are motivation, observing process, learning process, perception and behavior. Schiffman and Kanuk (2007) explain that motivation is "the driving force with in individual that impels then to action".

Besides the four factors as explained above, religious factor is also important in affecting Muslim consumers' behavior. Johnstone as cited in Shafie and Othman (2006) defines religion is a system of beliefs and practices by which group of people interprets and responds to what they feel is supernatural and sacred. The permissibility of foods products hence is crucial for Muslim consumers. Sumarwan (2011) finds that Muslim consumers prefer to choose halal-certified products than uncertified-halal product.

Based on the previous explanation, this study derives all the independent variables from the four factors into several statements containing religious and cultural factors, social factors, personal

factors and psychological factors. The consumers' decision on purchasing MUI halal-certified food products becomes the dependent variable. Table 2 and 3 below depict the independent and dependent variables used in this study.

Table 2. Independent Variables

Independent Variables	Notation
Religious and Cultural Factors (X₁)	I buy MUI halal-certified food products because my religion tells me to do so. X₁₁
	I buy MUI halal-certified food products because I believe it will invite God's Bless. X₁₂
	I buy MUI halal-certified food products because my surroundings have a high consumption level on halal food products. X₁₃
	I buy MUI halal-certified food products because I always buy granted halal food product. X₁₄
Social Factor (X₂)	I buy MUI halal-certified food products because it represents social class. X₂₁
	I buy MUI halal-certified food products because of influences from my surroundings. X₂₂
	I buy MUI halal-certified food products because the trend of halal industry is increasing. X₂₃
	I buy MUI halal-certified food products because of promotion and education in the social media. X₂₄
Personal Factor (X₃)	I buy MUI halal-certified food products because of my age and my thinking path. X₃₁
	I buy MUI halal-certified food products because of my own belief. X₃₂
	I buy MUI halal-certified food products because of my own decision. X₃₃
	I buy MUI halal-certified food products because I have proper knowledge and understanding on halal food product. X₃₄
Psychological Factor (X₄)	I buy MUI halal-certified food products because it gives me secured feeling. X₄₁
	I buy MUI halal-certified food products because it guarantees the halal-ness of the food product. X₄₂
	I buy MUI halal-certified food products because I believe that halal food products have better quality. X₄₃
	I buy MUI halal-certified food products because I believe it gives benefit for me. X₄₄

Source: Author's Own

Table 3: Dependent Variable

Decision on Purchasing MUI Halal-Certified Food Products (Y)	Dependent Variable	Notation
	The quality and <i>halalness</i> of the products become my consideration in purchasing food products.	Y ₁
	Knowledge on the food products become my consideration in purchasing halal food products.	Y ₂
	The formal halal logo from MUI gives secured feeling in consuming food products.	Y ₃
	The products with MUI halal label have guaranteed quality.	Y ₄
	The complete information on the ingredients of food products including formal halal label becomes my consideration in purchasing food products.	Y ₅
	I buy MUI halal-certified food products because it is in accordance with the Syariah.	Y ₆
	I will buy MUI halal-certified food products again in the future.	Y ₇
	I will recommend others to buy MUI halal-certified food products.	Y ₈

Source: Author's Own

2.5. Analytical Method

To assess the agreement level of respondents on the aforementioned variables, Likert scale is used. This scale allows the respondents to express intensity and their feelings on a certain characteristic of dependent and independent factors depicted in the aforementioned Table 2 and table 3.

Likert scale shows consumers' response on available choices that are made in order started from lower to higher agreement. These scales consist of strongly disagree, disagree, neutral, agree and strongly agree. Ambali and Bakar (2014), Salman and Siddiqui (2011) and Yasid *et al* (2016) employ the same scales in order to obtain the respondents' agreement on a certain characteristic of aforementioned dependent and independent variables. These five scales are depicted in the following Table 4.

Table 4. Likert Scale

Definition	Intensity of Agreement
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

Source: Author's Own

After the respondents score all sub-factors under independent and dependent variables in Table 2 and 3 based on their intensity of agreement, the scores are summed in order to obtain the interval value for each variable. Thus, this process marks each variable to have one value. Mathematically, the latent variables are obtained through equations that are as follows.

$$Y = \sum_{i=1}^8 Y_i \quad (1)$$

$$X_n = \sum_{i=1}^4 X_{ni} \quad (2)$$

Where $n = 1$ for religious and cultural factors, $n=2$ for social factor, $n=3$ for personal factor and $n=4$ for psychological factor.

In the applied econometric analysis, one of the assumptions of the classical linear regression model, including multiple regressions model, is that the model employed must be correctly specified or otherwise we face the problem of model specification error or model specification bias (Gujarati and Porter, 2009). Basically, a model represents the simplicity and abstraction from reality. Therefore, the economic model should be exact in order to represent the population. The explanatory or independent variables have to be correctly selected in order to obtain the correct model. This can be achieved through understanding the theoretical basis; hence the strong relationship can be found between the model and the underlying theory.

According to Hendry and Richard, as cited in Gujarati and Porter (2009), there are several criteria of a model chosen for empirical analysis:

1. Be data admissible; that is, predictions made from the model must be logically possible.
2. Be consistent with the theory; that is, it must make good economic sense.
3. Have weakly exogenous; that is, the explanatory variables must be uncorrelated with the error term.
4. Exhibit parameter consistency; that is, the values of parameters should be stable. Otherwise, forecasting will be difficult.
5. Exhibit data coherency; that is, the residuals estimated from the model must be purely random (technically, white noise).
6. Be encompassing; that is, the model should encompass or include the entire rival model in the sense that it is capable of explaining the results.

There are two very common mistakes in specifying the model that may generate a spurious result. Firstly is the omission of relevant variables in the model that is usually recognized as under-fitting a model. The exclusion of significant variables will produce biased and inconsistent estimators. Secondly is the inclusion of irrelevant variables, or over-fitting a model.

When insignificant variables are comprised in the model, the estimated value will be generally inefficient (Gujarati and Porter, 2009). Both incorrect models of specification might generate spurious results that, economically, would render the findings meaningless.

In this study, the model is designed to measure the relationship between several independent or predictor variables and a dependent or criterion variable. To do so, this study employs multiple regressions. It is basically an extension of simple linear regression. In this case, this study attempts to analyze the relationship between consumers' decision in purchasing MUI halal-certified food products (Y) as the dependent variable with several predictors namely religious and cultural factors (X_1), social factor (X_2), personal factor (X_3) and psychological factor (X_4) as mentioned in Table 2 and Table 3. In general, the estimated equation is as follows.

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_t \quad (3)$$

Where β_i ($i= 0, 1, 2, 3$ and 4) are the parameters to be estimated that are assumed to be positive; ϵ_t is disturbance term at a certain time period. Each parameter reflects that for β_0 is expected to be a positive value of consumers' purchasing decision when other independent variables, namely religious and cultural factors (X_1), social factor (X_2), personal factor (X_3) and psychological factor (X_4) are zero. Moreover, β_1 implies an increase in consumers' decision due to an increase in religious and cultural factors, holding other variables constant. Besides, given β_2 as a positive sign, indicating the percentage change in consumers' decision per unit of a percentage change in social factor under assumption, the remaining variables are constant. Likewise, a positive sign of β_3 and β_4 also signifies the percentage change in the consumers' decision due to the change in personal and psychological factors, *ceteris paribus*.

There are eight assumptions that must be fulfilled in multiple regressions that are as follows. First, the dependent variable must be measured on a continuous scale. In other words, it is either an interval or ratio variable. This study transforms the dependent variable from Likert scale into ratio variable by summing up all the values existing in the consumers' purchasing decision as explained in equation (1).

Seconds, the model must have two or more independent variables, which can be either continuous or categorical (an ordinal or nominal) variable. In this study, the Likert scales obtained from respondents are summed and hence, the variables are transformed into ratio variables as mentioned in equation (2). Third, the model should have independence of observations or independence of residuals.

Forth, there needs to be a linear relationship between (a) the dependent variable and each of independent variables, and (b) the dependent variable and the independent

variables collectively. Fifth, the data needs to show homoscedasticity, which is where the variances along the line of best fit remain similar as we move along the line.

Sixth, the data must not show multicollinearity. Ghazali (2001) explains multicollinearity happens when two or more independent variables are highly correlated with each other. This can be recognized from the tolerance value and Variance Inflation Factor (VIF). If the tolerance value and VIF approximately equal to 1, it can be concluded that the model is free from multicollinearity.

Seventh, there should be no significant outliers, high leverage points or highly influential points. Eighth, the residuals (errors) are approximately normally distributed.

In terms of hypothetical tests, multiple regressions model employs F test, t test and coefficient of determination to measure the goodness of fit of the model. Ghazali (2001) explains F test is used to see the simultaneous effect of independent variables to dependent variable. If the significance level is less than 0.05, then we can conclude that all independent variables simultaneously have statistical significance in affecting dependent variables, vice versa.

Meanwhile t test is used to see the partial effect of each variable towards dependent variable. Similarly, if the significance level is less than 0.05, then we can conclude that each independent variable partially has statistical significance in affecting dependent variables, vice versa. Ghazali (2001) also explains coefficient of determination or R Square is used to see the ability of the model to explain the variances of the dependent variable.

3. Results and Analysis

3.1. Descriptive Analysis

Table 5 below depicts demographic information of the respondents. According to the table, it is shown that most of the respondents are female (69.3 percent). With respect to their age, more than half of the respondents are between 26 to 33 years old. Meanwhile only 1.6 percent of the respondents are above 50 years old. This indicates that majority of the respondents are in the productive age.

Table 5. Demographic Characteristics of the Respondents

Demographic Characteristics		Frequency	Percentage
Gender	Male	92	30.7
	Female	208	69.3
	Total	300	100.0
Age (years old)	18 - 25	89	29.7
	26 - 33	167	55.7

	34 - 41	39	13.0
	50 - 57	4	1.3
	Above 57	1	0.3
	Total	300	100.0
Occupation	Student	85	28.3
	Housewife	52	17.3
	Entrepreneur	25	8.3
	Employee at private company	56	18.7
	Employee at state owned enterprise	11	3.7
	Civil servant	30	10.0
	Others	41	13.7
	Total	300	100.0
Status	Married	172	57.3
	Not Married	127	42.3
	Divorced	1	0.3
	Total	300	100.0
Address	Java	226	75.3
	DKI Jakarta	26	8.7
	Outside Java	27	9.0
	Others	21	7.0
	Total	300	100.0
Monthly Income¹	USD0 – USD200	81	27.0
	USD201 – USD400	60	20.0
	USD401 – USD600	52	17.3
	USD601 – USD800	28	9.3
	USD801 – USD1000	22	7.3
	Above USD1000	57	19.0
	Total	300	100.0

Source: Authors' own

In terms of occupation, the top three jobs of the respondents are students, employee at private company and housewife with the percentage reaches 28.3 percent, 18.7 percent and 17.3 percent respectively. Regarding the marital status, almost 60 percent of the respondents are married while the remaining 40 percent are not married and divorced. Majority of them live in Java Island, followed by outside Java Island, DKI Jakarta and others.

It is interesting to note that the monthly incomes of the respondents are diverse. About 41 percent of the respondents earn between USD0 to USD400, followed by 19 percent of the respondents whose monthly income is above USD1000. The respondents who earn between USD401 to USD600, USD601 to USD800 and USD801 to USD1000 are 17.3 percent, 9.3 percent and 7.3 percent respectively.

¹ To simplify, USD1 equals to IDR10000.

Based on the information depicted in the table above, hence, it can be concluded that most of the respondents are female and in productive age, having various occupations including students, employee at private company and housewife, live in Java Island and earn between USD0-USD400 and more than USD1000.

Table 6. Halal Food Products' Consumption

Halal Food Products' Consumption		Frequency	Percentage
Monthly Expenditure on Halal Food Products	USD0 – USD200	156	52.0
	USD201 – USD400	96	32.0
	USD401 – USD600	31	10.3
	USD601 – USD800	5	1.7
	USD801 – USD1000	4	1.3
	Above USD1000	8	2.7
Total		300	100.0
Frequency of Halal Food Products Purchase	1 - 10 Times	86	28.7
	11 - 20 Times	86	28.7
	21 - 30 Times	45	15.0
	Above 30 Times	83	27.7
	Total	300	100.0

Source: Authors' own

Table 6 above shows the consumption on halal food products of the respondents. Based on the table, 52 percent of the respondents spend up to USD200 per month on halal food products followed by 32 percent of the respondents who spend between USD201 to USD400 for halal food products consumptions. These figures relate to the monthly income of majority of the respondents that equal to between USD0 to USD400. In terms of the frequency of buying halal food products in the last one-month, majority of the respondents choose 1-10 times and 11-20 times.

The following Table 7 depicts the mean of independent variables. As each variable is measured using Likert scale from 1 to 5 to represent respondents' agreement in ascending order, the standard of agreement equals to 3 that means neutral. From Table 6, it can be seen that the mean of religious and cultural, personal, and psychological factors are above the standard value. This indicates that most respondents agree that those factors are important in influencing their purchasing decision on MUI halal-certified food products. On the other hand, the mean of social factor is less than the standard value, which indicates that social factor is less important in affecting consumers' purchasing decision.

Table 7. Mean of Independent Variables

Independent Variables	Notation	Mean	Standard Deviation
Religious and Cultural Factors (X ₁)	X ₁₁	4.8833	.52022
	X ₁₂	4.8200	.58487
	X ₁₃	3.9533	1.04952
	X ₁₄	4.6533	.67429
Social Factor (X ₂)	X ₂₁	2.3467	1.20748
	X ₂₂	2.8800	1.28496
	X ₂₃	2.4133	1.23596
	X ₂₄	2.7900	1.23463
Personal Factor (X ₃)	X ₃₁	3.8400	1.23808
	X ₃₂	4.7400	.60022
	X ₃₃	4.7567	.55239
	X ₃₄	4.3367	.74734
Psychological Factor (X ₄)	X ₄₁	4.6400	.71093
	X ₄₂	4.6333	.70750
	X ₄₃	4.4000	.89965
	X ₄₄	4.4067	.82273

Source: Authors' own

Regarding the mean of dependent variables, Table 8 below shows that the mean of all the variables have value above the standard. This means majority of respondents agree towards statements related to their purchasing decision on MUI-halal certified food products.

Table 8. Mean of Dependent Variables

Dependent Variables	Notation	Mean	Standard Deviation
Purchasing Decision (Y)	Y ₁	4.6400	.64170
	Y ₂	4.5133	.71521
	Y ₃	4.5533	.72727
	Y ₄	4.2233	.84607
	Y ₅	4.5100	.74279
	Y ₆	4.6567	.62189
	Y ₇	4.6867	.64020
	Y ₈	4.5500	.75900

Source: Authors' own

3.2. Multiple Regression

In this study, multiple regression analysis is used to test if the religious and cultural, social, personal and psychological factors significantly affect consumers' decision in purchasing MUI halal-certified food products. Table 9 shows the model summary to determine how well the model fits.

Table 9. Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson (<i>d</i>)
.822	.676	.673	2.35324	2.062

Source: Authors' own

The multiple correlation coefficient (*R*) can be considered to be one measure of the quality of the prediction of the dependent variable namely consumers' purchasing decision on MUI halal-certified food products. From Table 9, it can be found that the *multiple correlation coefficient* (*R*) equals to .822 indicating a very strong level of prediction, as this value is between .800 – 1.00 (vide Table 10).

Table 10. Correlation Coefficient Interval

Correlation Coefficient Interval (<i>R</i>)	Level of Prediction
.000 – .199	Very Weak
.200 – .399	Weak
.400 – .599	Satisfactory
.600 – .799	Strong
.800 – 1.000	Very Strong

Source: Sugiyono (2006)

The coefficient of determination (R Square) is the proportion of variance in the dependent variable that can be explained by the independent variables. According to Table 9, the results of the regression indicate the five predictors explain 67.6 percent of the variance ($R^2=.676$) while the remaining 32.4 percent is explained by the other variables outside the model. This is also confirmed by the Adjusted R Square that equals to .673.

From Table 9, it can also be observed that the value of Durbin Watson (*d*) equals to 2.062. Durbin Watson (*d*) is a test statistic to predict whether or not the model suffers from the problem of autocorrelation. In order to detect the presence of autocorrelation, we need to compare the value of *d* with the value of Durbin-Watson in the table, i.e. upper value (*du*) and lower value (*dl*). If the value of *d* is more than *du*, the model is free from positive autocorrelation and if the value of *d* is less than *dl* the model suffers from positive autocorrelation. If the value of (*4-d*) is more than *du*, the model does not contain negative autocorrelation and if the value of (*4-d*) is less than *dl* the model has negative autocorrelation. In this case, the value of *du* and *dl* equal to 1.83773 and 1.78371 respectively as the number of respondents (*n*) is 300 and the number of variables (*K*) is 5. After comparing the values of *d* and (*4-d*) with the values of *du* and *dl*, it can be concluded that the model is free from the problem of both positive and negative autocorrelations.

Table 11. Multicollinearity

Model	Collinearity Statistics	
	Tolerance (1)	VIF (2)
Religious Social Factor	,528	1,894
Social Factor	,940	1,064
Personal Factor	,678	1,475
Psychological Factor	,520	1,922

Source: Authors' own

The above Table 11 presents the results of multicollinearity tests. A tolerance of less than 10 percent and a VIF of 10 and above indicates a multicollinearity problem. According to the table column (1) and (2), it can be concluded that the model is free from the problem of multicollinearity.

To test heteroscedasticity, the scatterplot of absolute value of residuals and regression standardized predicted value detect the presence of the problem of heteroscedasticity. If the plot of absolute value of residuals data shows a particular trend, it can be concluded that the model contains heteroscedastic data, vice versa. The following Figure 1 shows that the scatterplot does not show any trend indicating that the model is homoscedastic.

Scatterplot

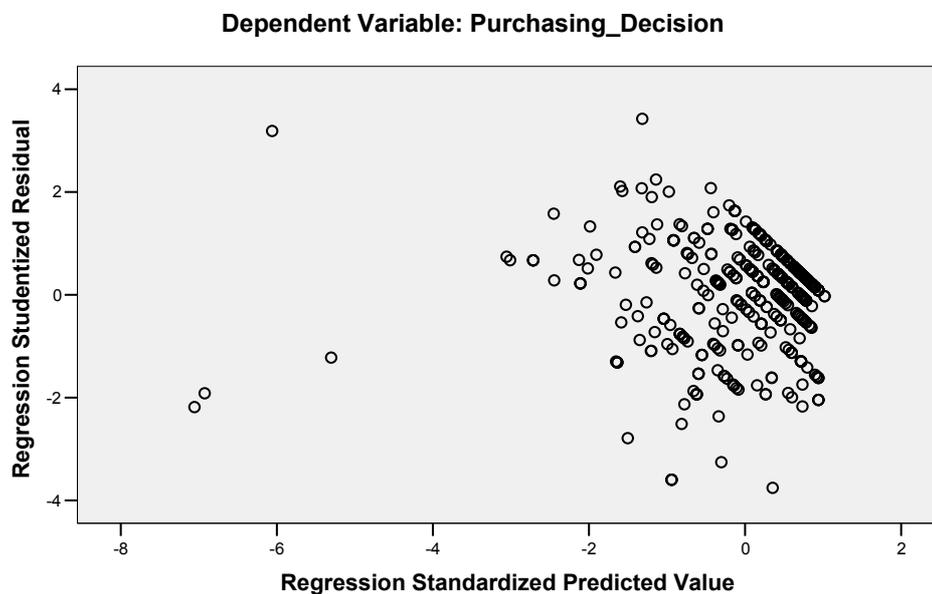


Figure 1. Heteroscedasticity Test

Table 12 below depicts ANOVA of the model to see whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(4,430) = 223.992, p < .05$. This indicates that the regression

model is a good fit of the data. Furthermore, the F-test also shows that all the independent variables are simultaneously statistically significant in influencing dependent variables.

Table 12. ANOVA

Model	Sum of Square	Df	Mean Square	F	Significance
Regression	4961.653	4	1240.413	223.992	.000
Residual	2381.235	430	5.538		
Total	7342.887	434			

Source: Authors' own

From Table 9, Table 11, Table 12 and Figure 1, it can be concluded that the model generally does not violate the classical assumptions as mentioned in previous section. In other words, the Gauss-Markov theorem apply indicating that the estimators are the Best Linear Unbiased Estimators (BLUE) and their variance is the lowest of all other unbiased estimators.

Table 13. Estimated Model's Coefficients

Variables	Unstandardized Coefficients (β)	t	Significance
Constant	6.202	5.447	.000
Religious and Cultural Factors (X_1)	.472	6.125	.000
Social Factor (X_2)	-.067	-2.357	.019
Personal Factor (X_3)	.280	4.532	.000
Psychological Factor (X_4)	.954	14.852	.000

Source: Authors' own

Table 13 above shows the estimated model's coefficients. It is interesting to note that religious and cultural factors are partially statistically significant in influencing consumers' purchasing decision ($\beta = .232$, $p < .05$), as do the remaining three factors including social factor ($\beta = -.067$, $p < .050$), personal factor ($\beta = .151$, $p < .05$) and psychological factor ($\beta = .565$, $p < .05$).

However, it is also surprising to observe that the coefficient of social factor is negative indicating that this factor is negatively related to consumers' purchasing decision. On the other hand, the remaining three factors, i.e. religious and cultural factors, personal factor and psychological factor, have positive coefficient indicating positive relationship with the dependent variable. The result is in line with the descriptive analysis found in Table 6 where the mean of social factor is less than the standard value while the other factors are more than the standard value.

The general form of the equation to predict consumers' purchasing decision (Y) from religious and cultural (X_1), social (X_2), personal (X_3) and psychological (X_4) factors derived from the aforementioned Table 12 is as follows.

$$Y = 6.202 + .472X_1 - .067X_2 + .280X_3 + .954X_4 + \epsilon_t \quad (4)$$

Equation (4) can explain several meaning that are as follows.

1. The value of 6.202 is a positive constant of consumers' purchasing decision when other independent variables, namely religious and cultural factors (X_1), social factor (X_2), personal factor (X_3) and psychological factor (X_4) are zero.
2. The coefficient of religious and cultural factors (X_1) equal to +.472, which means if religious and cultural factors increase by 1 unit, the consumers' decision will also increase by .472, holding other variables constant.
3. The coefficient of social factor (X_2) equals to -.067 implying that an increase 1 unit in social factor will decrease consumers' purchasing decision by .067, holding other variables constant.
4. The coefficient of personal factor (X_3) equals to +.280 implying that an increase 1 unit in personal factor will be followed by an increase in consumers' purchasing decision by .280, holding other variables constant.
5. The coefficient of psychological factor (X_4) equals to +.954 suggesting that if psychological factor increases by 1 unit, consumers' purchasing decision will also increase by .954, holding other variables constant.

From the above results, the study shows positive relationship between the religious and cultural factors, personal factor and psychological factor and the consumers' decision in purchasing MUI halal-certified food products. According to t-value, it appears that psychological factor is a dominant factor on the consumers' purchasing decision. This factor consists of such sub-indicators as perception, belief and motivation. The finding is in line with Nasythi (2016).

Our finding might suggest that the purchasing decision is affected more by internal factors of the consumers rather than external factors, although cultural factor also matters. The respondents are likely to purchase MUI halal-certified food products because of the obligation in their religion, the secured feeling obtained, the belief of getting bless, the personal factors including age, thinking path, their own decision and their knowledge. These reflect the consumers' awareness to fulfill the obligation to consume halal food products stem from themselves. This becomes evidence to the producers the importance of MUI-certified halal logo on the products. The consumers purchase these products because of their own belief.

It is surprising to observe that the multiple regressions also find the negative relationship between social factor and consumers' purchasing decision. Our finding might suggest that the respondents are likely to disagree that social class, trend of halal industry, influence from surrounding and promotion through social media influence their purchasing decision on MUI-certified halal food products.

4. Conclusion and Recommendations

This study attempts to analyze factors affecting consumers' decision in purchasing MUI halal-certified food products by surveying three hundred respondents all over Indonesia. This study finds that all the independent variables including religious and cultural, social, personal and psychological factors are statistically significant in influencing consumers' decision in purchasing MUI halal-certified food products. However, the social factor has negative relationship with the dependent variable, while the remaining three factors are positively related with the consumers' purchasing decision.

There are two recommendations can be drawn from the findings of this study. Firstly, religious and cultural factors, personal factor and psychological factor are positively related with the consumers' purchasing decision on halal-certified food products. It reflects consumers have good awareness on halal-certified food products. This suggests that the producers should provide more halal-certified food products, as the consumers are aware on this matter. Secondly, the government should support the development of halal food industry from many aspects including regulation support, administration support and financial support. This suggests economic policy actions should include the improvement of national halal industry as a fundamental strategy for development of the country.

However, this study has several limitations. Therefore, there are several suggestions for further research. Firstly, the present study employs quite small sample size. Therefore, further research should employ a larger sample size by surveying more respondents. Larger sample size will improve the robustness of the results.

Secondly, the current study applies the multiple regression method to measure the significance of the independent variables on the dependent variables. It might be useful if future research employs such different method as factor analysis.

Thirdly, the determinants of consumers' purchasing decisions are only religious, cultural, personal, social and psychological factors. Future research might utilize other influencing variables including price, location, service, branding image, promotion and many more.

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