

Awareness level analysis of Indonesian consumers toward halal products

Dwi Agustina Kurniawati and Hana Savitri

Department of Industrial Engineering, Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia

522

Received 5 October 2017
Revised 6 July 2018
28 January 2019
31 January 2019
Accepted 6 February 2019

Abstract

Purpose – This paper aims to measure and analyze the halal awareness of Indonesian consumers toward halal products. This paper also measures the religious belief, health reason, halal logo certification and exposures of Indonesian consumers and tests the correlation between those and halal awareness. The finding can be used as reference for government and halal policymakers related with halal product.

Design/methodology/approach – The research is performed using self-administrated questionnaires and convenience sampling. The questionnaires were distributed for Muslim respondents in Indonesia, male and female, aged 18 up to 60 years old. The data are statistically analyzed by Cronbach's alpha and Pearson correlation test using SPSS 16.0.

Findings – The study found that halal awareness of Indonesian consumers is very good (very high) with index of 94.91. The halal awareness is supported with very high index of religious belief (96.61), health reason (89.83) and logo certification (84.71), and good index of exposures (78.72). The study also shows that religious belief becomes the most factor that influence the Indonesian halal awareness, followed by health reason then logo certification, while exposure is the least factor influencing the halal awareness.

Originality/value – This research is one of few studies in Indonesian context which is investigating and measuring the index of halal awareness of Indonesian consumers. The study also provided new findings of Indonesian halal awareness influence factors (religious beliefs, health reason, logo certification and exposure); its index and its correlation to the halal awareness level. The result of the study is quite different with other halal awareness studies. Therefore, this paper becomes one of the pioneer for study in the context of Indonesian halal awareness analysis.

Keywords Halal certification, Halal product, Religious belief, Halal awareness, Health reason, Indonesian consumer

Paper type Research paper

1. Introduction

As Muslims, eating halal and good food (thayib) is the command of Allah that must be implemented by every Muslim. This is commanded by Allah in his word. "And eat the lawful and good food (thayib) from that which has been granted to you and fear Allah and believe in Him" (Surah Al Maidah 5: 88). Thus, consuming halal food based on faith and taqwa because following the command of Allah is a worship that brings a reward and gives the good of the world and the hereafter. On the contrary, consuming the haram is a sinful act

The authors acknowledge the full financial support from Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM), Universitas Islam Negeri Sunan Kalijaga under the grant "Penelitian Kompetitif Kluster Madya" Year 2017, which has made the research and presentation of this paper possible.



that brings sin and harm to both the world and the hereafter. In the Qur'an, it has been asserted that food and drink are banned is:

- carcasses;
- blood;
- pigs;
- animals slaughtered by mentioning names other than Allah; and
- khamr or intoxicating drinks.

Forbidden to you (eating) the carcasses, the blood, the flesh of swine, the flesh of beasts slaughtered in the name of other than Allah, strangled, struck, fallen, struck, and slaughtered beasts, except that you slaughtered it, Forbidden to you eating animals slaughtered for idols. (Surah Al Maidah 5: 3).

Based on the above description, it is clear that consuming halal food is a basic need for Muslims. As shown in [Figure 1](#), according to data from Badan Pusat Statistik (BPS), this is the Central Bureau of Statistics in Indonesia, in 2010 Indonesia's Muslim population amounted to about 207,176,162 people, which is 87.18 per cent of the total population in Indonesia (www.bps.go.id). Meanwhile, according to data from the Pew Research Center, in 2010, the world's total population of Muslims was 1.6 billion people, which amounted to 23 per cent of the entire population of the world (www.pewforum.org). In addition, the Pew Research Center projected that by 2030 the number of Muslim populations in Indonesia will be 238,833,000 inhabitants (www.pewforum.org). With this number, Indonesia ranks first as the country that has the highest number of Muslims in the world ([Riaz and Chaudry, 2004](#)).

The above facts show that the number and growth of the Muslim population is enormous, both in Indonesia and the world in general. It shows that the Muslim community is a large and promising consumer and become a huge market potential. The large number of Muslim populations, both in Indonesia and the world, has created consumers for halal markets (potentially halal markets) for the food, beverage, cosmetics, medicine, fashion, banking and tourism industries. The facts above are also supported by [Wilson \(2014\)](#) who stated that the halal industries were having a worldwide value of US\$2.3tn.

To capture the market demand for halal products and ensure the availability of halal products for Muslim consumers, many countries have issued halal certification and halal logo to ensure the halal-ness of a product. Indonesia has Majelis Ulama Indoensia (MUI), an

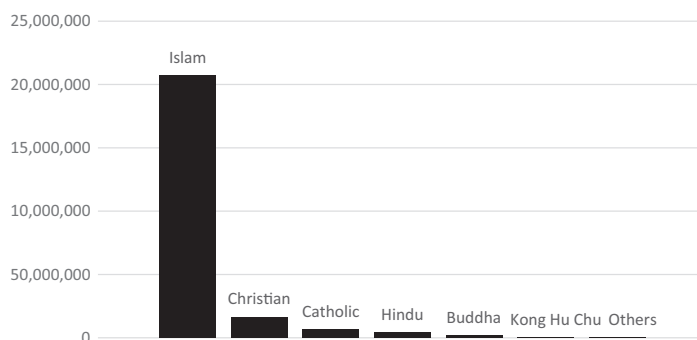


Figure 1.
Religion data of
Indonesia in 2010
(www.bps.go.id)

institution authorized to audit and issues halal certification in Indonesia. Jabatan Kemajuan Islam Malaysia (JAKIM) is the authorized party to issue halal certification in Malaysia. While in Singapore, the authority to issue halal certification is Majlis Ugama Islam Singapura (MUIS), this is the Islamic religious council of Singapore.

Based on the data from MUI, currently the food products that have been certified by Halal MUI in 2010-2015 as many as 309,115 (www.halalmui.org). In addition, the industries that have been certified by Halal MUI in Indonesia are still very few, only about 10-15 per cent. The above data show that very few products that have halal certified compared to the number of existing Muslim consumers.

On the other hand, there are a lot of previous research have been done related to the topic of this paper. In 2010, Wilson and Liu (2010) found that halal has brought into the creation and culmination of brands. However, the full potential of halal has yet to be harnessed and there are still misunderstanding and discrepancy of it. In the following year, Wilson and Liu (2011) stated that consumers who conscious for halal are risk averse, which drives the awareness and behavioral traits of high involvement. They proposed a paradigm for halal decision-making – as a basis for developing a prominent and attractive brand of halal.

In 2014, [Ambali and Bakar \(2014\)](#) studied the determinants and identify the sources of halal awareness of Malaysian Muslim consumers on halal products or foods. Their study found that the religious belief, exposure, certification logo and health reason are the potential sources of Muslim awareness about halal consumption, which are the health reason is the most contributing predictor of level of halal awareness. [Is moyowati \(2015\)](#) studied about the determinant factors that influencing the Indonesian consumers' decision to consume halal chicken-based food in Yogyakarta, Indonesia. The study found that taste and nutrition is the top of priority in consuming the chicken-based food, while halal becomes the second priority. Another research performed by [Potluri et al. \(2017\)](#) who studied about Indian Muslims' attitude and consciousness toward halal product. The study found that the respondents do not have proper exposure to halal, believe that the halal concept is very significant to Muslim consumers and the lack of awareness of the factual meaning of halal.

[Said et al. \(2014\)](#) studied about perception, knowledge and religiosity on Malaysia's halal food products. The study found that halal knowledge, information and education by the government agencies are perceived as lacking. [Salman and Siddiqui \(2011\)](#) studied about measuring the Pakistani consumers' awareness and perceptions toward halal foods. The study found that beliefs are closely knitted with religious commitment, people with high religiosity may not have necessarily have high level of awareness about halal food and attitude toward halal food is closely akin to the notion of beliefs. [Hasan \(2016\)](#) surveyed and measured the halal awareness among the Muslim students in Kota Kinibalu, Malaysia and related it with religiosity and the certified halal logo. This study shows that the consumers have a high level of religiosity. The study concluded that there is positive relationship between religiosity and halal awareness, the importance of Halal Malaysia logo toward food products, the importance of online and traditional media tools to educate and creating awareness among the Muslim consumers.

[Aris et al. \(2012\)](#) studied about Muslim attitude and awareness toward Istihalah in Malaysia. The result showed that these students are lacking knowledge of Istihalah, and they are ready to gain more information on this matter. Although these students are not well informed on this matter, they were ready to accept the products of the Istihalah process. [Rezai et al. \(2012\)](#) studied about non-Muslim consumers' understanding of Halal principles in Malaysia. The study measured the awareness of halal principles. As purchasing halal foods cannot be considered to be an expression of the consumer's religious obligations for non-Muslims, the study stressed the benefits of halal food principles within other contexts

such as food safety, environmental friendliness and animal welfare. The results of this study suggest that non-Muslim consumers are aware of the existence of halal food in Malaysia. The findings also suggest that non-Muslims understand that halal principles are also concerned about food safety issues and environmentally friendly. [Maichum *et al.* \(2017\)](#) investigates the influence of attitude, halal knowledge, halal quality on purchase intention toward halal food of young non-Muslim consumers in Thailand. The results indicated that attitude has a strongest direct influence on intention to purchase and also the results indicated that halal knowledge has a significant effect on attitude toward halal food and had no significant effect on halal purchase intention. Therefore, the halal knowledge has significant effect on the young non-Muslim attitude toward halal foods in Thailand. [Yusoff and Adzharuddin \(2017\)](#) study about the correlation between halal awareness with information seeking behavior among Muslim family. This study found that the factor of awareness is vital in information seeking of halal food products among Muslim families.

In 2018, [Nusran *et al.* \(2018\)](#) study about the halal awareness on the socialization of the halal certification. [Ramadania *et al.* \(2018\)](#) study about intention toward halal and organic food. The study found that knowledge of halal and green foods, natural content and religiosity have a positive effect on consumer awareness of the products. This study also found that consumer awareness of the product can affect the purchase intention positively. [Perdana *et al.* \(2018\)](#) proposed a research framework to study about the halal certification role in purchase intention of Muslim Consumers in the Middle East and North Africa countries.

Based on descriptions of the previous research works, there is very little research conducted to develop halal food practice in Indonesia. The majority of halal practice research is conducted by researchers from Malaysia and takes the research topic of halal practice in Malaysia. While Indonesia is the largest Muslim country in the world, it is necessary to do a lot of research related to halal practice in Indonesia to improve the halal practice in Indonesia. One of interesting research related to halal practice in Indonesia is the measurement and analysis of halal awareness level of Indonesian consumers.

According to the author's knowledge, up to date, there is still very little research conducted to measure and analyze the awareness level of Indonesian consumers toward halal-certified products. The authors found two papers studied about the halal awareness level in Indonesian context. [Yasid *et al.* \(2016\)](#) studied about factors which affecting the Muslim students awareness of halal products in Yogyakarta, Indonesia. While in 2017, [Nurchahyo and Hudrasyah \(2017\)](#) studied about the influence of halal awareness and halal certification perception toward purchase intention of instant noodle consumption. The respondents of the study were college student in Bandung, Indonesia. The shortcoming of both papers is the papers only studied for student population and the studies were located only in one province in Indonesia. In addition, the study of [Nurchahyo and Hudrasyah \(2017\)](#) only focus for instant noodle consumption. On the other hand, the study proposed in this paper, tries to cover the shortcomings of the previous studies. Respondents of this study come from many provinces in Indonesia and the respondents are not just students but Indonesia Muslim aged from 18 up to 60 years old. Also, the proposed study is not focus only for one product but for all food products.

Therefore, this study can provide inputs for policy makers in Indonesia to determine the right strategy for marketing the halal-certified products, to increase the supply of halal certified products and to penetrate the halal market in Indonesia. By measuring the awareness level of consumers in Indonesia to halal-certified products, it can be seen how aware consumers in Indonesia to halal certified products and what factors can make the consumers aware with these products.

Based on the background above, the following are formulated three problems that become the focus in this research. The problem formulation in this research is:

- RQ1.* How is the awareness level of Indonesian consumers toward halal certified products?
- RQ2.* What factors are influencing the awareness level of Indonesian consumers toward the halal products?

Based on the background and the problem formulation, this research has four research objectives; these are:

- (1) knowing the awareness level of consumers in Indonesia toward halal-certified products;
- (2) knowing the factors that affect the awareness level of consumers in Indonesia toward halal-certified products;
- (3) knowing the strategies and efforts to increase the awareness level of consumers in Indonesia toward halal-certified products; and
- (4) providing recommendations and suggestions for halal policymakers in Indonesia.

2. Literature review

2.1 *Halal awareness level*

Refer to [Ambali and Bakar \(2014\)](#), the halal awareness can be defined as having special interest or experience or having well informed of something about halal foods, drinks and products. So the halal awareness is the informing process to increasing the Muslim's level of consciousness about what is allowed to eat, drink and use ([Ambali and Bakar, 2014](#)).

Level of awareness means level of consciousness. Different people can have different level of awareness. According to one psychologist, level of awareness means awareness of outside events and internal sensations that occur with passionate conditions ([King, 2008](#)). Some scholars have distinguished this level of awareness to a few levels. According to [King \(2008\)](#), level of awareness is divided into five levels:

- (1) higher level consciousness;
- (2) lower level consciousness;
- (3) subconscious awareness;
- (4) sleep and dream (low level of consciousness); and
- (5) no awareness (non-conscious processes/unconscious though).

2.2 *Influencing factors for halal awareness level*

Many studies have been performed related with halal awareness, halal attitude, halal consciousness, halal perception, halal knowledge and halal purchase intention. There are some previous research works that become the references to develop the theory for halal awareness level and to determine the influencing factor for halal awareness level.

One important research work is done by [Ambali and Bakar \(2014\)](#). They studied about the determinants and factors that influence the halal awareness of Malaysian consumers. The findings show that the religious belief, exposure, certification logo and health reason are potential sources of Malaysian Muslim awareness about halal consumption. In addition, the study found that health reason is the most contributing predictor of level of halal awareness.

There are also another study performed by [Ismoyowati \(2015\)](#). The study took the case study in Yogyakarta, Indonesia to determine the factors that influencing the Indonesian consumers' decision to consume halal chicken-based food. The study found that the taste and nutrition is the top of priority in consuming the chicken-based food, while halal becomes the second priority. In addition, the variation, texture and packaging only considered as the third, fourth and fifth priority when selecting the food. The study also found that the consumer's knowledge about halal are differ among consumer's groups, but they agreed on perception that religion as well as nutrition were factors influencing their decision to consume halal food.

The study performed by [Potluri *et al.* \(2017\)](#) studied about Indian Muslims' attitude and consciousness toward halal product. Their study took two groups of respondents, general Indian Muslim community and Indian Muslim students. The study found that the respondents agreed that they do not have proper exposure to halal, believe that the halal concept is very significant to Muslim consumers and are intended to know more about halal. The study showed that they are lacking in the exact ken of halal and they are ready to gain more information on the concept. There are 98 per cent of the Indian Muslims thought that halal means prayer offerings before slaughtering of sheep or chicken or cow. So the study shows they have lack of awareness of the factual meaning of halal.

[Said *et al.* \(2014\)](#) studied about perception, knowledge and religiosity on Malaysia's halal food products. The study found that different nationalities have different perception toward Malaysia's Halal food products. Research result shows that the consumers' perception and their level of knowledge and religiosity differs. Halal knowledge, information and education by the government agencies are perceived as lacking. Furthermore, this research also shows that about 40 to 50 per cent of the consumers have high level of religiosity. The study showed that knowledge, trust and religiosity (KTR) are the significant determinants for the Muslim consumer to purchase halal food products.

[Salman and Siddiqui \(2011\)](#) studied about measuring the Pakistani consumers' awareness and perceptions toward halal foods. The study found that Beliefs are closely knitted with religious commitment while people with high religiosity may not have necessarily have high level of awareness about halal food and attitude toward halal food is closely akin to the notion of beliefs.

[Hasan \(2016\)](#) studied the awareness and perception toward halal foods among Muslim students in Kota Kinibalu, Sabah, Malaysia. The study surveyed and measured the halal awareness among the Muslim students in Kota Kinibalu and related it with religiosity and the certified halal logo. This study shows that the consumers have a high level of religiosity. The consumers with a strong religious background will also take care of what they eat and consume. However, the result for the purchase intention and Islamic brand is not a good sign. This is one of the factors that lead to the increasing numbers of fake halal logo in the current market in Malaysia. The study concluded that there is positive relationship between religiosity and halal awareness, the importance of halal Malaysia logo toward food products, the importance of online and traditional media tools to educate and creating awareness among the Muslim consumers.

[Aris *et al.* \(2012\)](#) studied about Muslim attitude and awareness toward Istihalah. Istihalah means substantial change, which can be stated as when a substance is converted into a new substance, the lawfulness of the new substance is not determined by the lawfulness of the original substance. Gelatin, mono and diglycerides, glycerol and lecithin that can be derived from animals, including pigs are several examples of Istihalah. The result showed that the students are lacking knowledge of Istihalah, and they are ready to gain more information on this matter.

Rezai *et al.* (2012) studied about non-Muslim consumers' understanding of halal principles in Malaysia. The study measured the awareness of halal principles. Since purchasing halal foods cannot be considered to be an expression of the consumer's religious obligations for non-Muslims, the study stressed the benefits of halal food principles within other contexts such as food safety, environmental friendliness and animal welfare. The results of this study suggest that non-Muslim consumers are aware of the existence of halal food in Malaysia. Socio-environmental factors such as mixing with Muslims socially and the presence of advertised halal food significantly influence non-Muslims' understanding of halal principles. The findings also suggest that non-Muslims understand that halal principles are also concerned about food safety issues and environmentally friendly.

Maichum *et al.* (2017) investigate the influence of attitude, halal knowledge, halal quality on purchase intention toward halal food of young non-Muslim consumers in Thailand. The results indicated that attitude has a strongest direct influence on intention to purchase and also the results indicated that halal knowledge has a significant effect on attitude toward halal food and had no significant effect on halal purchase intention. Furthermore, halal quality has significant positive influences on the purchase intention among the studied group in Thailand. Therefore, the halal knowledge has significant effect on the young non-Muslim attitude toward halal foods in Thailand.

Pahim *et al.* (2012) conducted a study related to the need for training for halal logistic workers to produce halal products. The survey was conducted to determine whether there is a correlation between the need for halal training with the demand and awareness of halal logistics workers. Ahmad (2015) studied about halal brands as valuable business assets based on a proposed halal brand personality dimension in the micro-spectrum of halal (lawful) Tayyiba (good) concept in Malaysia. The chances of using brand personality attributes as a mechanism to get the primary dimensions of halal branding attributes are high. Ngah *et al.* (2015) investigated the determinants of the adoption factors of halal warehousing activities among halal manufacturers in Malaysia. Awareness, complexity and top management support were found to be the determinant factors in the halal warehousing services adoption among Malaysian halal manufacturers.

Prabowo *et al.* (2015) explored various factors that hamper halal certification in food service industries in East Kalimantan, Indonesia. Food service industries such as restaurants and caterings show less concern in putting priority on the issue of halal certification. The lack of socialization and information has led to the lack of knowledge and awareness. Rahman *et al.* (2015) studied about the attitude and intention to choose a halal product. The study shows that the relationship between knowledge and attitude is insignificant, but there is a significant positive relationship between religiosity and attitude. The study indicates that there is a positive relationship between attitude and intention to choose halal cosmetic products. This study also found a significant difference between consumers' attitudes toward halal cosmetics and attitudes toward halal food products, as well as consumers' intentions to choose halal cosmetics and intentions to choose halal food products among Malaysian consumers. Moreover, the results indicate that Malaysian consumers have more positive attitudes and intentions toward halal food products than toward halal cosmetic products.

Suki and Salleh (2016) examined the influence of halal image, attitude, subjective norm and perceived behavioral control on consumer behavioral intention to patronize halal stores in Malaysia. Empirical results revealed that consumers' intention to patronize halal stores is influenced by attitude, perceived behavioral control, subjective norm and halal image. Azam (2016) investigated the determinant factors that consumers may consider in buying halal packaged food produced by non-Muslim manufacturers. The study found that halal

awareness and product ingredients have significantly influenced Muslims' intention to buy halal packaged food that are produced by non-Muslim manufacturers. The findings show that the religious belief, exposure and certification/logo are potential sources of Muslim awareness about halal packaged food from non-Muslim manufacturers. [Ishak et al. \(2016\)](#) examined the potential determinants of halal perception and to validate the mediating model of halal perception on purchasing decision of Malaysian consumers. The halal perception is the mediating variable that intervenes in the relationship of a few independent variables and the purchase decision trends. The independent variables such as manufacturer identity, product label, physical product and packaging as well country of origin are considered to be important extrinsic cues that deliver messages regarding the halal of certain food products. [Krishnan et al. \(2017\)](#) conducted a study for awareness level of halal food industry in Malaysia related to halal issues and opportunities. The results show that people are still skeptical of halal logos and certificates. Some small and medium industries also have difficulty in following and obtaining halal certification.

Based on the literature review above, it is shown that there is very little research conducted either by researchers from Indonesia and research that took the topic of halal practice research in Indonesia. Most research are conducted by researchers from Malaysia with the topic of halal practice in Malaysia. The results of the literature review above have motivated to conduct research related to halal practice in Indonesia, with the topic "Awareness Level Analysis of Indonesian Consumers toward Halal Products". According to the author's knowledge, until now there has been no research on awareness level analysis of consumers in Indonesia associated with halal-certified products. By doing this research, it is expected to increase the number of halal practice research in Indonesia. Result of this study can be used by halal policymakers in Indonesia to improve halal food practice in Indonesia and also increase the awareness level of consumers in Indonesia toward halal-certified products.

Refer to above previous works, this study focus on factors that may influence the halal awareness level of Indonesian consumers. Refer to the works of [Salman and Siddiqui \(2011\)](#), [Ambali and Bakar \(2014\)](#), [Hasan \(2016\)](#) and [Azam \(2016\)](#), the religious belief is considered to be the factor that may influence the Indonesian halal awareness level. Refer to the works of [Rezai et al. \(2012\)](#) and [Ambali and Bakar \(2014\)](#), the health reason becomes the second factor that may influence the Indonesian halal awareness level.

Another factor is halal logo certification. This factor is considered to be a factor that may influence the Indonesian halal awareness level by referring to the works of [Ambali and Bakar \(2014\)](#), [Azam \(2016\)](#) and [Hasan \(2016\)](#). The last factor that considered influencing the Indonesian halal awareness level is exposure, by referring to the studies of [Azam \(2016\)](#), [Potluri et al. \(2017\)](#), [Ambali and Bakar \(2014\)](#) and [Prabowo et al. \(2015\)](#). By doing some statistical analysis, it will be measured the index of the four factors and some hypotheses test will be done to determine the correlation between Indonesian halal awareness level with those four factors.

3. Research methodology

3.1 Population

The population is a composite of all elements in the form of events, things or people who have similar characteristics that become the center of attention of a researcher because it is viewed as a universe of research ([Ferdinand, 2006](#)). The population used in this study is Muslim (male or female) community in Indonesia who consuming the halal food products.

3.2 Sample

The sampling technique used in this study is convenience sampling. Based on the above technique, the selected sample is Muslim (male and female) with age of 18 to 60 years who live in Indonesia. Because this study does not know the number of population and its proportion, the number of samples is determined using the Bernoulli formula:

$$n = \frac{(Z_{\alpha/2})^2 \times p \times q}{e^2}$$

In this research, it is used the level of accuracy (α) of 5 per cent and 95 per cent confidence, so the obtained Z value is 1.96, while e value (error rate) is determined by 10 per cent. Probability of population not taken as sample is 0.5, so the probability of population taken as sample each 0.5. Then get the number of respondents minimal is 97. Based on the calculation above, it is known that the minimum number of samples or respondents is 97 respondents. So, this study uses 116 questionnaires as samples; then the data are considered more than enough.

3.3 Source of data

There are two source of data, these are:

- (1) Primary data. Primary data used in this research is the result of questionnaires regarding the awareness level of respondents for halal certified food products, r table and the value of Cronbach's alpha.
- (2) Secondary data. Secondary data in this research are element of halal awareness and the questionnaires about awareness from other scholars.

3.4 Data collection method

The data collection is done by distributing a list of questions that must be filled by the respondent. The questionnaire used is a questionnaire with a Likert scale of 1 to 5. Scale 1 indicates strongly disagree, Scale 2 indicate disagree, Scale 3 indicates less agree, Scale 4 indicates agree and Scale 5 indicates strongly agree.

The questionnaires were developed refer to some previous research work related with study to measure the halal awareness and identifying the factors influencing the halal awareness such as Said *et al.* (2014), Salman and Siddiqui (2011), Hasan (2016), Azam (2016), Ambali and Bakar (2014), Rezai *et al.* (2012), Potluri *et al.* (2017) and Prabowo *et al.* (2015). Refer to those some previous research works above; in this research, the questionnaires were developed into five categories. First category is awareness level. Second category is religious belief. Third category is health reason. Four category is logo certification. Fifth category is exposure.

At the first time, the questionnaires were developed for 41 items. Then a pilot study was done to test the reliability and validity of the questionnaire to ensure its validity and reliability. After the reliability and validity of the questionnaires are confirmed, then the questionnaire can be distributed to numbers of respondents for data collection. The questionnaires were distributed to respondents using self-administrated questionnaire and analyzed using SPSS 16.0.

3.5 Data analysis method

3.5.1 Normality test. The purpose of the normality test according to [Ghozali \(2011\)](#) is to find out whether the distribution of a data follows or approaches the normal distribution. The Kolmogorov–Smirnov test is one of several tools that can be used for normality test.

3.5.2 Likert-scale interpretation. According to [Sugiyono \(2010\)](#), Likert scale is a scale used to measure attitudes, opinions and perceptions of a person or a group of people about social phenomena. The analysis of the questionnaire using Likert scale was done by using the interval formula according to [Darmadi \(2011\)](#). The following criteria are determined based on the interval of index value ([Table I](#)).

3.5.3 Hypotheses testing. In this study, it is conducted hypotheses test consisting of correlation test. The correlation test was performed using Pearson correlation and multiple correlation test.

The correlation test with Pearson correlation is used to know the relation of each variable seen from the value of r count to then compare with r table. If r count $>$ r table, then there is a significant correlation. In addition, the significance of relationship between variables is presented in its significance value. If the significance value <0.05 , then it means there is a significant correlation.

There are five hypotheses developed to determine the correlation between Indonesian consumers' halal awareness with four other factors. The hypotheses are developed refer to some previous research work related to halal awareness analysis, such as [Said et al. \(2014\)](#), [Salman and Siddiqui \(2011\)](#), [Hasan \(2016\)](#), [Azam \(2016\)](#), [Ambali and Bakar \(2014\)](#), [Rezai et al. \(2012\)](#), [Potluri et al. \(2017\)](#) and [Prabowo et al. \(2015\)](#). Then the hypotheses are tested using correlation test of Pearson correlation. These hypotheses are:

H1. Correlation between Indonesian consumers' halal awareness and religious belief.

H1a. There is no correlation between Indonesian consumers' halal awareness and religious belief.

H1b. There is correlation between Indonesian consumers' halal awareness and religious belief.

H2. Correlation between Indonesian consumers' halal awareness and health reason.

H2a. There is no correlation between Indonesian consumers' halal awareness and health reason.

H2b. There is correlation between Indonesian consumers' halal awareness and health reason.

H3. Correlation between Indonesian consumers' halal awareness and halal logo certification.

No.	Index value	Criteria
1	0%-19.99%	Least
2	20%-39.99%	Not good
3	40%-59.99%	Enough
4	60%-79.99%	Good
5	80%-100%	Very good

Table I.
Likert scale
interpretation
([Darmadi, 2011](#))

H3a. There is no correlation between Indonesian consumers' halal awareness and halal logo certification.

H3b. There is correlation between Indonesian consumers' halal awareness and halal logo certification.

H4. Correlation between Indonesian consumers' halal awareness and exposure.

H4a. There is no correlation between Indonesian consumers' halal awareness and exposure.

H4b. There is correlation between Indonesian consumers' halal awareness and exposure.

Double correlation test is done to know the relationship between two or more independent variables which is in this research independent variables include religious belief, health reasons, logo certification, and exposure with one dependent variable (that is awareness) simultaneously. In this research, *H5* is developed and tested by double correlation test. The hypothesis is:

H5. Simultaneously correlation between Indonesian consumers' halal awareness with religious belief, health reason, logo certification and exposure altogether.

H5a. There is not existing the simultaneously correlation between halal awareness with religious belief, health reason, logo certification and exposure altogether.

H5b. There is existing the simultaneously correlation between halal awareness with religious belief, health reason, logo certification and exposure altogether.

Based on the description of the methodology above, the research methodology conducted in this research, is shown in the [Figure 2](#) below.

4. Results and discussion

Before distributing the questionnaires to all respondents, pilot study was done by distributing questionnaires to 35 respondents to know the validity and reliability questionnaire question. Editing process will be done with consideration of completion of questionnaire filling, consistency and answer relevance.

4.1 Validity and reliability tests

The first test is to check the validity and reliability of the questionnaire. The pilot study was performed to check the validity and reliability of the questionnaires with 35 respondents. The results of the test are shown in [Table II](#).

Based on the result of reliability test, it is shown that all (41) items are reliable. While based on the validity test result, from 41 items there are 1 item is not valid, it is item no 29. So the questionnaire must be revised; item no 29 must be deleted from the questionnaire. Therefore the revised questionnaire now is having 40 items. After that, it is performed the reliability and validity test for the revised questionnaire. The result of the reliability and validity test of the revised questionnaire are as follows ([Table III](#)).

Based on the reliability and validity tests of the revised questionnaire, it is shown that all items of the questionnaire (40 items) are reliable and valid. Those means that now the questionnaire is reliable and valid enough to measure and analyze the halal awareness of Indonesian consumers toward halal certified products.

4.2 Normality test

Based on the normality test conducted by SPSS 16.0, as shown in [Table IV](#), it is known that the awareness category of the questionnaire has Kolmogorov–Smirnov value of 2.049. It

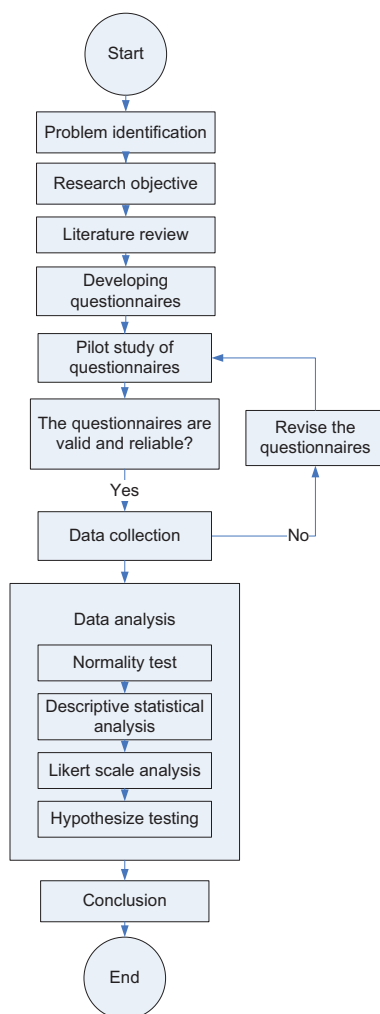


Figure 2. Flowchart of the research methodology

means that the null hypothesis is accepted, and the population is normally distributed. In addition, the questionnaire categories of religious belief, health reasons, logo certification and exposure have value of Kolmogorov–Smirnov as 4.471, 2.854, 0.936, and 0.895 respectively. These mean that the Kolmogorov–Smirnov values for all categories are greater than 0.05. Then it can be concluded that all populations are normally distributed.

4.3 Descriptive statistical analysis

Table V presents a summary of descriptive result of the respondent characteristics according to gender, age, tribe, job, last education, income per month and access information respectively. The result shows that from 116 respondents there are 36 respondents (31 per cent) are male and 80 respondents (69 per cent) are female. Based on Table V, the

Reliability test result of the pilot study				
No.	Variable	Cronbach's alpha count	Limit value of Cronbach's alpha	Conclusion
1	Awareness	0.801	0.7	Reliable
2	Religious belief	0.724	0.7	Reliable
3	Health reasons	0.903	0.7	Reliable
4	Logo certification	0.838	0.7	Reliable
5	Exposures	0.827	0.7	Reliable
Validity test result of the pilot study				
<i>Item for awareness level</i>				
No.	Item	r count	r table	Conclusion
1	Q1	0.57	0.1824	Valid
2	Q2	0.674	0.1824	Valid
3	Q3	0.678	0.1824	Valid
4	Q4	0.563	0.1824	Valid
5	Q5	0.628	0.1824	Valid
6	Q6	0.603	0.1824	Valid
7	Q7	0.695	0.1824	Valid
8	Q8	0.586	0.1824	Valid
9	Q9	0.626	0.1824	Valid
10	Q10	0.483	0.1824	Valid
<i>Item for religious belief</i>				
No.	Item	r count	r table	Conclusion
1	Q11	0.801	0.1824	Valid
2	Q12	0.874	0.1824	Valid
3	Q13	0.738	0.1824	Valid
<i>Item for health reasons</i>				
No.	Item	r count	r table	Conclusion
1	Q14	0.9	0.1824	Valid
2	Q15	0.938	0.1824	Valid
3	Q16	0.914	0.1824	Valid
<i>Item for logo certification</i>				
No.	Item	r count	r table	Conclusion
1	Q17	0.421	0.1824	Valid
2	Q18	0.502	0.1824	Valid
3	Q19	0.637	0.1824	Valid
4	Q20	0.735	0.1824	Valid
5	Q21	0.74	0.1824	Valid
6	Q22	0.728	0.1824	Valid
7	Q23	0.71	0.1824	Valid
8	Q24	0.639	0.1824	Valid
9	Q25	0.679	0.1824	Valid
10	Q26	0.388	0.1824	Valid
11	Q27	0.486	0.1824	Valid
12	Q28	0.387	0.1824	Valid
13	Q29**	0.137	0.1824	Not valid

Table II.
Reliability and
validity test of the
pilot study

(continued)

Table II.

Reliability test result of the pilot study				
No.	Variable	Cronbach's alpha count	Limit value of Cronbach's alpha	Conclusion
<i>Item for exposures</i>				
No.	Item	r count	r table	Conclusion
1	Q30	0.516	0.1824	Valid
2	Q31	0.646	0.1824	Valid
3	Q32	0.67	0.1824	Valid
4	Q33	0.725	0.1824	Valid
5	Q34	0.713	0.1824	Valid
6	Q35	0.637	0.1824	Valid
7	Q36	0.499	0.1824	Valid
8	Q37	0.419	0.1824	Valid
9	Q38	0.563	0.1824	Valid
10	Q39	0.609	0.1824	Valid
11	Q40	0.592	0.1824	Valid
12	Q41	0.502	0.1824	Valid

respondents aged 18 to 30 years old as much as 70 respondents (60.3 per cent), aged 31 to 50 years old as much as 44 respondents (37.9 per cent) and aged 51 to 60 years old as much as 2 respondents (1.8 per cent). The table also shows that there are 91 respondents (78.4 per cent) are from Jawa, 6 respondents (5.2 per cent) are from Sunda, 1 respondent (0.8 per cent) are from Madura and so forth. The table also shows the characteristic of respondents according to their jobs, the respondents' last education, the respondents' income per month and the respondent's access of information.

4.4 Likert scale analysis

Likert scale analysis is performed by referring to index formula and interval criteria in Darmadi (2011). In this research, the interpretation of Likert scale is done for each item of the questionnaire, so there are 40 items' interpretation and are shown in Table VI. In addition, the Likert scale analysis is also summarized for each category, so there are five category's interpretation and shown in Table VII.

Refer to Table VI; it can be seen that for ten items in awareness category, the results are very good index for all items in awareness category. For this category, there are nine items from ten items that having index more than 90 per cent, and only one item which the index is below to 90 per cent. These results show that the awareness level of Indonesia consumers is very good (very high) toward halal certified products since all the items are very good index. From the questionnaires, it is known that Indonesian consumers already known and aware that they must be consume the halal products. They also know the products that belong to halal and non-halal. The respondents already known the meat of animals that belongs to halal and non-halal and drinks that contain alcoholic is haram.

For items in religious belief, all the items (three items) are having very good index also. These three items are having index more than 90 per cent. The result of the questionnaires shows that the consumers know that they must consume halal product because they are Muslim and this is accordance with Al-Qur'an and Al-Hadiths. They realize that as Muslim, it is prohibited to consume non-halal product. These results represented that Indonesian

Reliability test result of the revised questionnaire				
No.	Variable	Cronbach's alpha count	Limit value of Cronbach's alpha	Conclusion
1	Awareness	0.801	0.7	Reliable
2	Religious belief	0.724	0.7	Reliable
3	Health reasons	0.903	0.7	Reliable
4	Logo certification	0.838	0.7	Reliable
5	Exposures	0.827	0.7	Reliable
Validity test result of the revised questionnaire				
<i>Item for awareness</i>				
No.	Item	r count	r table	Conclusion
1	Q1	0.57	0.1824	Valid
2	Q2	0.674	0.1824	Valid
3	Q3	0.678	0.1824	Valid
4	Q4	0.563	0.1824	Valid
5	Q5	0.628	0.1824	Valid
6	Q6	0.603	0.1824	Valid
7	Q7	0.695	0.1824	Valid
8	Q8	0.586	0.1824	Valid
9	Q9	0.626	0.1824	Valid
10	Q10	0.483	0.1824	Valid
<i>Item for religious belief</i>				
No.	Item	r count	r table	Conclusion
1	Q11	0.801	0.1824	Valid
2	Q12	0.874	0.1824	Valid
3	Q13	0.738	0.1824	Valid
<i>Item for health reasons</i>				
No.	Item	r count	r table	Conclusion
1	Q14	0.9	0.1824	Valid
2	Q15	0.938	0.1824	Valid
3	Q16	0.914	0.1824	Valid
<i>Item for logo certification</i>				
No.	Item	r count	r table	Conclusion
1	Q17	0.421	0.1824	Valid
2	Q18	0.502	0.1824	Valid
3	Q19	0.637	0.1824	Valid
4	Q20	0.735	0.1824	Valid
5	Q21	0.74	0.1824	Valid
6	Q22	0.728	0.1824	Valid
7	Q23	0.71	0.1824	Valid
8	Q24	0.639	0.1824	Valid
9	Q25	0.679	0.1824	Valid
10	Q26	0.388	0.1824	Valid
11	Q27	0.486	0.1824	Valid
12	Q28	0.387	0.1824	Valid
<i>Item for exposures</i>				
No.	Item	r count	r table	Conclusion
1	Q30	0.516	0.1824	Valid
2	Q31	0.646	0.1824	Valid

Table III.
Reliability and
validity test of the
revised questionnaire

(continued)

Reliability test result of the revised questionnaire

No.	Variable	Cronbach's alpha count	Limit value of Cronbach's alpha	Conclusion
3	Q32	0.67	0.1824	Valid
4	Q33	0.725	0.1824	Valid
5	Q34	0.713	0.1824	Valid
6	Q35	0.637	0.1824	Valid
7	Q36	0.499	0.1824	Valid
8	Q37	0.419	0.1824	Valid
9	Q38	0.563	0.1824	Valid
10	Q39	0.609	0.1824	Valid
11	Q40	0.592	0.1824	Valid
12	Q41	0.502	0.1824	Valid

Table III.

No.	Category	Kolmogorov–Smirnov value	Decision
1	Awareness	2.049	Data is normally distributed
2	Religious belief	4.471	Data is normally distributed
3	Health reasons	2.854	Data is normally distributed
4	Logo certification	0.936	Data is normally distributed
5	Exposure	0.895	Data is normally distributed

Table IV.
Kolmogorov–
Smirnov value

consumers having a very good religious belief and the very good religious beliefs already driven the very good awareness level of Indonesian consumers toward halal products.

For items in health reasons, the three items also are having very good index. It means that the halal awareness of Indonesian consumer are also driven by the very good health reason of Indonesian consumers. The Indonesian consumers relate the halal products with cleanliness, quality, healthy product and more hygienic product.

For items in logo certification, there are 12 items of the questionnaire. From these, there are only three items that having good index, while the rest items (nine items) are having very good index. The result shows that Indonesian consumers already known that halal logo and certification is important, as it guarantees the halal-ness of the product. Further, Indonesian consumer already familiar with the halal logo issued by Indonesian Government (MUI), while for halal logo issued by other countries such as Malaysia, Singapore and Thailand, the Indonesian consumers need more socialization for those logos.

For the last category, this is exposure category, there are 12 items, while majority items are having good index. From 12 items, there are eight items are having good index and four items are having very good index. From the questionnaire, it is shown that Indonesian consumer needs more exposure for halal product, especially from government. From the questionnaire, it is shown that the government exposure about halal product is rated as the lowest index (67.07) than others party, such as Ulama, community gathering, mass media, and so forth.

The result of [Table VI](#) is summarized in [Table VII](#). [Table VII](#) shows that the halal awareness of Indonesian consumers toward halal food is very good with index of 94.91. This

Gender of respondents	Frequency	(%)
<i>Gender</i>		
Male	36	31
Female	80	69
<i>Age of respondents</i>		
<i>Age</i>		
18-30 years old	70	60.30
31-50 years old	44	37.90
51-60 years old	2	1.80
<i>Tribe of respondents</i>		
<i>Tribe</i>		
Jawa	91	78.40
Sunda	6	5.20
Madura	1	0.80
Betawi	2	1.70
Minangkabau	6	5.10
Melayu	1	0.80
Dayak	1	0.80
Banjar	4	4
Jawa-Sunda	1	0.80
Tidore	1	0.80
Jawa-Padang	1	0.80
Jawa-Minang	1	0.80
<i>Job of respondents</i>		
<i>Job</i>		
Entrepreneurs	6	5.20
Private	39	33.60
Government's corporation	6	5.20
Foreign companies	1	0.80
IT Consultant	1	0.80
Expert staff	1	0.80
GTT	1	0.80
Freelance	1	0.80
Social Entrepreneurs	1	0.80
Teacher	2	1.70
Laborers	1	0.80
Housewife	20	17.20
Civil servants	14	12.10
Students	22	19.40
<i>Last education of respondents</i>		
<i>Last Education</i>		
High School	17	14.60
Diploma	9	7.70
S1	73	63
S2	13	11.30
S3	4	3.40
<i>Respondents' income per month</i>		
<i>Income per month</i>		
< 2 million	48	41.40

Table V.
The respondents'
descriptive analysis

(continued)

Gender of respondents	Frequency	(%)
2-4 million	26	22.40
4-6 million	18	15.50
6-8 million	6	5.20
>8 million	18	15.50
Respondents' access of information		
<i>Access of information</i>		
Newspaper, brochure, magazine	56	48.28
Television	52	44.83
Internet	111	95.69
Recitation	44	37.93
Counseling	19	16.38
Social media group	8	6.90

high awareness is supported by a very good religious belief (as index is 96.91), very good health reason (with index 89.83), very good halal logo certification reason (with index 84.71) and good exposures reason (with index 78.72).

The results show that the religious belief of Indonesian consumers is the dominant driven for the Indonesian consumer halal awareness, since the religious belief category has the highest index among other categories. While exposure is the least index, showing that exposure still need to be improved so that it can increase the halal awareness of Indonesian consumers.

In addition, the analysis of Likert scale also shows that the halal logo certification index has the third rank after religious beliefs and health reason. It means that the halal logo certification still need to be improved, such as the number of products that have the halal logo certification, the awareness of Indonesian consumers about the importance of halal logo certification and so forth, as its position is the third rank of determination for halal awareness of Indonesian consumers.

4.5 Hypothesis testing result

4.5.1 Correlation test. Table VIII and IX show the result of correlation test conducted by using Pearson Correlation between variables. The value of r count between halal awareness and religious belief is 0.792 with the significance value of relationship is 0.000. The value of r count is greater than 0.184 (r table) and the significance value is less than 0.05. Based on this value, *H1a* is rejected and *H1b* is accepted. It means that there is a significance correlation between halal awareness and religious belief. As the r value is positive, so the correlation between both is directly proportional. If the religious belief is higher, the halal awareness will also become higher.

The r count between halal awareness and health reason is 0.473 with the significance value of relationship is 0.000. The value of r count is greater than 0.184 (r table) and the significance value is less than 0.05. Based on this value, *H2a* is rejected and *H2b* is accepted. It means that there is a significance correlation between halal awareness and health reason. As the r value is positive, so the correlation between both is directly proportional. If the health reason is higher, the halal awareness will also become higher.

The r count between halal awareness and logo certification is 0.489 with the significance value of relationship is 0.000. The value of r count is greater than 0.184 (r

No.	Item	Index	Interpretation
<i>Awareness criteria</i>			
Q1	You understand what is halal	93.45	Very good
Q2	When buying food products definitely in your mind is the food must be halal	97.07	Very good
Q3	You always consume the halal food product	94.66	Very good
Q4	Consuming halal food is important for you	98.10	Very good
Q5	Buying the halal product have been becoming your life style	93.97	Very good
Q6	You know the food products that belongs to halal and non-halal	88.10	Very good
Q7	You know that lamb/ beef/chicken meat slaughtered are not in accordance with Islamic <i>Shari'ah</i> including haram food	93.62	Very good
Q8	You know that pork, dogs, and other wild beasts are among the unlawful (haram) foods eaten	98.10	Very good
Q9	You know that processed food from unlawful (haram) meat makes the food unlawful (haram) also	94.66	Very good
Q10	You know that alcoholic drinks include unlawful (haram) drinks	97.41	Very good
<i>Religious Belief</i>			
Q11	You consume halal food products because you are a Muslim/Muslim	97.07	Very good
Q12	You consume halal food products because it is in accordance with the teachings of Islam in Al-Quran and Al-Hadith	94.66	Very good
Q13	You consume halal food products because Islamic teachings prohibit you from consuming non-halal products	98.10	Very good
<i>Health reasons</i>			
Q14	You believe that halal food provides more benefits than non-halal products	92.41	Very good
Q15	You believe that buying halal food means buying food that is guaranteed its cleanliness, safety, and quality	88.79	Very good
Q16	You believe that consuming halal food can prevent you from health hazards	88.28	Very good
<i>Logo Certification</i>			
Q17	You know that the logo below is a halal logo from Indonesia	95.69	Very good
Q18	You acknowledge that MUI is an institution that issues halal certification in Indonesia	93.97	Very good
Q19	You know there are some countries that also issue halal certification and logo for food products	85.00	Very good
Q20	You acknowledge that the logo below is a halal logo for Malaysian food products	75.34	Good
Q21	You know that the logo below is a halal logo for Thai food products	73.79	Good
Q22	You acknowledge that the logo below is a halal logo for food products from Singapore	74.14	Good
Q23	Halal certification and logos are essential to ensure that the food is halal	92.41	Very good
Q24	Food products you buy must be halal logo	88.79	Very good
Q25	The first priority when you buy a food product is the presence of a halal logo	88.28	Very good
Q26	You can easily find kosher halal food products in the supermarket where you shop	84.31	Very good
Q27	You will not buy food products that do not have a halal logo on the packaging	82.24	Very good
Q28	If you do not find a halal logo, you will check the ingredients or ingredients	82.59	Very good
<i>Exposure</i>			
Q29	You have enough information about halal food products	79.14	Good

Table VI.
Likert scale analysis

(continued)

No.	Item	Index	Interpretation
Q30	You often access or search for information about halal food products	75.69	Good
Q31	You always update about food products that include halal and haram	71.90	Good
Q32	People around you already provide enough information about halal and haram food products	75.69	Good
Q33	Recitation, community gatherings, and ulama have given enough information about halal and haram food products	77.41	Good
Q34	Mass media (television, newspapers, magazines, brochures, and internet) already provide enough information about halal and haram food products	71.38	Good
Q35	The government has provided sufficient information about halal and haram food products	67.07	Good
Q36	Socialization from Government is important to update your knowledge about halal and haram food products	85.34	Very good
Q37	The role of the people around you is very effective in providing understanding related to halal and haram foods	86.38	Very good
Q38	The role of recitation, community gathering, and ulama are very effective in providing insights regarding halal and haram foods	87.24	Very good
Q39	The role of media (television, newspapers, magazines, brochures, and internet) is very effective in providing understanding related to halal and haram food	85.00	Very good
Q40	The role of government is very effective in providing understanding related to halal and haram food	82.41	Very good

Table VI.

No.	Category	Index	Interpretation
1	Awareness	94.91	Very good
2	Religious	96.61	Very good
3	Health reasons	89.83	Very good
4	Logo certification	84.71	Very good
5	Exposures	78.72	Good

Table VII.
Summary of the
Likert scale analysis

table) and the significance value is less than 0.05. Based on this value, *H3a* is rejected and *H3b* is accepted. It means that there is a significance correlation between halal awareness and logo certification. As the *r* value is positive, so the correlation between both is directly proportional. If the logo certification is higher, the halal awareness will also become higher.

The *r* count between halal awareness and exposure is 0.414 with the significance value of relationship is 0.000. The value of *r* count is greater than 0.184 (*r* table) and the significance value is less than 0.05. Based on this value, *H4a* is rejected and *H4b* is accepted. It means that there is a significance correlation between halal awareness and exposure. As the *r* value is positive, so the correlation between both is directly proportional. If the exposure is higher, the halal awareness will also become higher.

4.5.2 *Double correlation test.* Table X shows the results of multiple correlation test. Based on this table, it is known that the sig value. F Change is 0.000 (less than 0.05) which means that *H5a* is rejected and *H5b* is accepted. It means that there is a relationship between religious belief, health reasons, logo certification and exposure with awareness. The amount of relationship between religious belief, health reasons, logo certification and exposure

Table VIII.
The Pearson
correlation test result

Correlations		Awareness	Religious_belief	Health_reasons	Logo_certification	Exposure
Awareness						
Pearson correlation		1	0.792 ^{**}	0.473 ^{**}	0.489 ^{**}	0.414 ^{**}
Sig. (2-tailed)			0.000	0.000	0.000	0.000
N		116	116	116	116	116
Religious_belief						
Pearson correlation		0.792 ^{**}	1	0.377 ^{**}	0.276 ^{**}	0.299 ^{**}
Sig. (2-tailed)		0.000		0.000	0.003	0.001
N		116	116	116	116	116
Health_reasons						
Pearson Correlation		0.473 ^{**}	0.377 ^{**}	1	0.783 ^{**}	0.366 ^{**}
Sig. (2-tailed)		0.000	0.000		0.000	0.000
N		116	116	116	116	116
Logo_certification						
Pearson correlation		0.489 ^{**}	0.276 ^{**}	0.783 ^{**}	1	0.524 ^{**}
Sig. (2-tailed)		0.000	0.003	0.000		0.000
N		116	116	116	116	116
Exposure						
Pearson correlation		0.414 ^{**}	0.299 ^{**}	0.366 ^{**}	0.524 ^{**}	1
Sig. (2-tailed)		0.000	0.001	0.000	0.000	
N		116	116	116	116	116

Table IX.
Summary of Pearson
correlation test

X	Y	r	count	r table	Decision
Awareness	Religious Belief	0.792		0.1824	Reject <i>H1a</i> , accept <i>H1b</i> . There is significance correlation between Indonesian halal awareness and religious belief
	Health reasons	0.473		0.1824	Reject <i>H2a</i> , accept <i>H2b</i> . There is significance correlation between Indonesian halal awareness and health reasons
	Logo certification	0.489		0.1824	Reject <i>H3a</i> , accept <i>H3b</i> . There is significance correlation between Indonesian halal awareness and logo certification
	exposure	0.414		0.1824	Reject <i>H4a</i> , accept <i>H4b</i> . There is significance correlation between Indonesian halal awareness and exposure

toward awareness is 0.843 which means that the correlation is strong enough. In addition, the simultaneous contribution of religious belief variables, health reasons, logo certification and exposure to awareness is 71.1 per cent. So the rest (28.9 per cent) is determined by other variables.

The hypothesis testing result finds the same result with the Likert scale analysis. The hypothesis testing found that there is relationship between awareness with religious belief, logo certification and exposures. From the Likert scale analysis, it is also seen that the very high index of halal awareness is supported from very high index of religious belief, health reason and logo certification and high index of exposures.

This study is also having almost similar finding with [Ambali and Bakar \(2014\)](#) study, which is found that halal awareness is determined by religious belief, health reason, logo certification and exposures. The difference is in this study the most determinant factor of halal awareness level is religious belief. While in [Ambali and Bakar \(2014\)](#), health reason becomes the most determinant factor for halal awareness level.

This study also found the same result with study performed by [Said et al. \(2014\)](#) which are there is a lack of exposure and information about halal. The study suggests that government and other parties improve the exposure and giving better education for society about halal.

This study also having the same results with study performed by [Hasan \(2016\)](#) which are found that halal awareness is high and have correlation with religiosity. The study also found that halal logo must be increased. In addition, the finding of this study found quite different results with [Ismoyowati \(2015\)](#), which are [Ismoyowati \(2015\)](#) found that the nutrition is the most dominant factor for purchasing a chicken-based food and halal (religious) is the second priority. While the study performed by this paper finds that religious beliefs is the most determinant factor and the halal awareness of the Indonesian consumer is very high.

5. Conclusions and future work

This study is one of few studies in Indonesian context to investigate and measure the halal awareness of Indonesian consumers toward halal certified product. In addition, this study is different with two previous study, [Yasid et al. \(2016\)](#) and [Nurchayyo and Hudrasyah \(2017\)](#), which is this study take respondents for Indonesia Muslim aged from 18 to 60 years old and located in many provinces in Indonesia. Also, the study is not just focus for one specific food product but for all food products. Therefore, this research can give insight for the government, halal policymaker and other related party in Indonesia to support the decision-making about halal food product. Based on the result of analysis above, it can be concluded that Indonesian consumer already have a very good halal awareness that it is supported by very good religious belief, health reason and logo certification and good index of exposures. This research find that Indonesian consumers already have a very good halal awareness, means that Indonesian consumers already become a huge halal market demand, that must be supplied by halal products. Otherwise, there will be a big loss of sales.

With this result, the Indonesian Government, halal policymaker and other related party must take this challenge and capture this potential market. This survey found that Indonesian consumers already have a very good awareness level toward halal products. Government and other related party must be able to take this challenge to fulfill this huge market potential. Otherwise, there will be big loss of sales, and, the worst, the Muslim customer dissatisfaction will occur. One effort that can be applied is through increasing the products that having halal logo and certification. From the study, it is found that Indonesian consumers already having a good knowledge about halal logo and certification, as it can

Model Summary^b

Model	R	R square	Adjusted R square	Sth. error of the estimate	Change statistics				
					R Square change	F change	df1	df2	Sig. F change
1	0.843 ^a	0.711	0.701	1.546	0.711	68.404	4	111	0.000

Note: ^aPredictors: (Constant), Exposure, Religious_belief, Helath_reasons, Logo_certification, ^bDependent Variable: Awarness

Table X. Multiple correlation test result

guarantee the halal-ness of the products. There are some programs can be offered by government, MUI, and other related party to improve the number of small and medium industries producing halal product and certified by the halal logo and certification. The government must improve the number of halal products supplied to the market, so that it can fulfill the Indonesian consumers' demand for halal products. In addition, the halal logo certification even its index is very high, but the position at the third rank of the factor that influence the halal awareness. It means that the government and other related parties can improve the number or quantities of halal product that certified by halal logo and also give more information about halal logo certification to Indonesian consumers. Another finding is that government and other related party must increase the exposure for the halal product, to update the information and the knowledge about halal product so that the halal awareness of Indonesian consumer becomes more increase. Exposure for halal product is very important to be increase in the next period since it can educate the Indonesian consumers about halal concept and halal product, so that can increase the halal awareness of Indonesian consumer. For the future work, it is required to investigate the relationship between halal awareness and halal purchase intention. It is because this research has not investigated the relationship between halal awareness and halal purchase intention. This issue is important to know the relationship between halal awareness and willing to buy the halal product.

References

- Ahmad, M.F. (2015), "Antecedents of halal brand personality", *Journal of Islamic Marketing*, Vol. 6 No. 2, pp. 209-223.
- Ambali, A.R. and Bakar, A.N. (2014), "People's awareness on Halal foods and products: potential issues for policy-makers", *Procedia-Social and Behavioral Sciences*, Vol. 121, pp. 3-25.
- Aris, A.T., Nor, N.M., Febrianto, N.A., Harivandaran, K.V. and Yang, T.A. (2012), "Muslim attitude and awareness towards istilahah", *Journal of Islamic Marketing*, Vol. 3 No. 3, pp. 244-254.
- Azam, A. (2016), "An empirical study on non-Muslim's packaged halal food manufacturers: Saudi Arabian consumers' purchase intention", *Journal of Islamic Marketing*, Vol. 7 No. 4, pp. 441-460.
- Darmadi, H. (2011), *Metode Penelitian Pendidikan*, Penerbit Alfabeta, Bandung.
- Ferdinand, A. (2006), *Metode Penelitian Manajemen*, Badan Penerbit Universitas Diponegoro, Semarang.
- Ghozali, I. (2011), "Aplikasi analisis multivariate dengan program IBM. SPSS 19", Badan Penerbit Universitas Diponegoro, Semarang.
- Hasan, H. (2016), "A study on awareness and perception towards Halal foods among Muslim students in kota kinabalu, sabah", *Proceedings of the Australia-Middle East Conference on Business and Social Sciences, Dubai (in partnership with The Journal of Developing Areas, TN State University, USA)*.
- Ishak, S., Awang, A.H., Hussain, M.Y., Ramli, Z., Sum, S.M., Saad, S. and Manaf, A.A. (2016), "A study on the mediating role of halal perception: determinants and consequence reflections", *Journal of Islamic Marketing*, Vol. 7 No. 3, pp. 288-302.
- Ismoyowati, D. (2015), "Halal food marketing: a case study on consumer behavior of chicken-based processed food consumption in central part of java, Indonesia", *Agriculture and Agricultural Science Procedia*, Vol. 3, pp. 169-172.
- King, L.A. (2008), *The Science of Psychology*, McGraw Hill, New York, NY.
- Krishnan, S., Omar, C.M.C., Zahran, I., Syazwan, N. and Alyaa, S. (2017), "The awareness of gen Z's toward Halal food industry", *Management*, Vol. 7 No. 1, pp. 44-47.

- Maichum, K., Parichatnon, S. and Peng, K.C. (2017), "The influence of attitude, knowledge and quality on purchase intention towards Halal food: a case study of young non-Muslim consumers in Thailand", *IRA-International Journal of Management and Social Sciences (Issn 2455-2267)*, Vol. 06 No. 3, pp. 354-364.
- Ngah, A.H., Zainuddin, Y. and Thurasamy, R. (2015), "Barriers and enablers in adopting of Halal warehousing", *Journal of Islamic Marketing*, Vol. 6 No. 3, pp. 354-376.
- Nurchahyo, A. and Hudrasyah, H. (2017), "The influence of Halal awareness, Halal certification, and personal societal perception toward purchase intention: a study of instant noodle consumption of college student in Bandung", *Journal of Business and Management*, Vol. 6 No. 1, pp. 21-31.
- Nusran, M., Gunawan Razak, M., Numba, S. and Wekke, I.S. (2018), "Halal awareness on the socialization of Halal certification", *IOP Conf. Series: Earth and Environmental Science*, Vol. 175, IOP Publishing, Bristol, p. 012217.
- Pahim, K.M., Jemali, S. and Mohammad, J.S.N. (2012), "People and awareness towards training needs: a case study in Malaysia Halal logistics industry", *2012 IEEE Business, Engineering and Industrial Applications Colloquium (BELAC), IEEE, Piscataway, NJ*, pp. 246-251.
- Perdana, F.F.P., Jan, M.T., Altunişik, R., Jaswir, I. and Kartika, B. (2018), "A research framework of the Halal certification role in purchase intention of Muslim consumers on the food products from Muslim majority countries in the Middle East and North Africa", *International Journal of Modern Trends in Business Research (IJMTBR)*, Vol. 1 No. 2, pp. 15-28.
- Potluri, R.M., Ansari, R., Khan, S.R. and Dasaraju, S.R. (2017), "A crystallized exposition on indian Muslims' attitude and consciousness towards Halal", *Journal of Islamic Marketing*, Vol. 8 No. 1, pp. 35-47.
- Prabowo, S., Rahman, A.A., Rahman, S.A. and Samah, A.A. (2015), "Revealing factors hindering Halal certification in East Kalimantan Indonesia", *Journal of Islamic Marketing*, Vol. 6 No. 2, pp. 268-291.
- Rahman, A.A., Asrurhaghighi, E. and Rahman, S.A. (2015), "Consumers and Halal cosmetic products: knowledge, religiosity, attitude and intention", *Journal of Islamic Marketing*, Vol. 6 No. 1, pp. 148-163.
- Ramadania, Putri, E.O. and Juniwati (2018), "Intention toward Halal and organic food: awareness for natural content, religiosity, and knowledge context", in *The 2018 International Conference of Organizational Innovation, KnE Social Sciences*, pp. 801-810.
- Rezai, G., Mohamed, Z. and Shamsudin, M.N. (2012), "Non-Muslim consumers' understanding of Halal principles in Malaysia", *Journal of Islamic Marketing*, Vol. 3 No. 1, pp. 35-46.
- Riaz, M.N. and Chaudry, M.M. (2004), *Halal Food Production*, CRC Press LLC, FL.
- Said, M., Hassan, F., Musa, R. and Rahman, N.A. (2014), "Assessing consumers' perception, knowledge and religiosity on Malaysia's Halal food products", *Procedia – Social and Behavioral Sciences*, Vol. 130, pp. 120-128.
- Salman, F. and Siddiqui, K. (2011), "An exploratory study for measuring consumers awareness and perceptions towards Halal food in Pakistan", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 3 No. 2.
- Sugiyono (2010), *Metode Penelitian Kuantitatif, Kualitatif Dan R&D*, Penerbit Alfabeta, Bandung.
- Suki, N.M. and Salleh, A.S.A. (2016), "Does Halal image strengthen consumer intention to patronize Halal stores? Some insights from Malaysia", *Journal of Islamic Marketing*, Vol. 7 No. 1, pp. 120-132.
- Wilson, J.A.J. (2014), "The Halal phenomenon: an extension or a new paradigm?", *Social Business*, Vol. 4 No. 3, pp. 255-271.
- Wilson, J.A.J. and Liu, J. (2010), "Shaping the Halal into a Brand?", *Journal of Islamic Marketing*, Vol. 1 No. 2, pp. 107-123.
- Wilson, J.A.J. and Liu, J. (2011), "The challenges of Islamic branding: navigating emotions and Halal", *Journal of Islamic Marketing*, Vol. 2 No. 1, pp. 28-42.

- Yasid, Farhan, F. and Andriansyah, Y. (2016), "Factors affecting Muslim students awareness of Halal products in Yogyakarta, Indonesia", *International Review of Management and Marketing*, Vol. 6 No. S4, pp. 27-31.
- Yusoff, S.Z. and Adzharuddin, N.A. (2017), "Factor of awareness in searching and sharing of Halal food product among Muslim families in Malaysia", *i-COME'16, SHS Web of Conferences, EDP Sciences, Les Ulis*, Vol. 33 p. 00075.

Web cited

www.bps.go.id
www.pewforum.org
www.halalmui.org

Further reading

- Sugiyono (2001), *Statistika Untuk Penelitian*, Alfabeta, Bandung.
- Suharjanti (2014), "Analisis validitas dan reliabilitas dengan skala likert terhadap pengembangan SI/TI dalam penentuan pengambil keputusan penerapan strategic planning pada industri garmen", *Prosiding Seminar Nasional Manajemen Informatika, BSI, Jakarta*.

About the authors

Dwi Agustina Kurniawati, M.Eng., PhD is an Assistant Professor in Industrial Engineering department, Faculty of Science and Technology, Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia. She received her bachelor's degree in 2003 in Industrial Engineering from Institut Teknologi Bandung (ITB), Indonesia. After that, in 2006, she received her Master of Engineering degree from Universiti Teknologi Malaysia (UTM). Finally, in 2016, she received her PhD degree in the field of systems and Engineering Management from Nanyang Technological University (NTU), Singapore. She has published many papers in Industrial Engineering research area, both in International and national journals. Her research interests are mathematical modeling, operation research, halal related issue, supply chain management, cross-docking warehouse, optimization, scheduling and metaheuristics method. Dwi Agustina Kurniawati is the corresponding author and can be contacted at: dwiagustina123@gmail.com and dwi.kurniawati@uin-suka.ac.id

Hana Savitri, S.T. is a graduate of bachelor degree from Industrial Engineering, Universitas Islam Negeri Sunan Kalijaga in April 2017. After that, she worked as a Research Assistant in Industrial Engineering Laboratory, Universitas Islam Negeri Sunan Kalijaga. Currently, she works as operation manager in one of famous pharmaceutical company in Indonesia.