

HALAL AWARENESS AND HALAL TRACEABILITY: MUSLIM CONSUMERS' AND ENTREPRENEURS' PERSPECTIVES

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ABSTRACT

The objective of this paper is to analyse the role of halal awareness, employing variables that can be both influential (determinant) and influenced (output). The study examines two perspectives, namely those from consumers and business actors. From a consumer perspective, this relates to the influence of halal awareness on the intention to purchase a halal product. Meanwhile, from the perspective of business actors, it considers how halal awareness affects the halal traceability of products. Halal traceability is also analysed from the consumers' perspective as a moderating variable in the relationship between halal awareness and consumer purchase intentions. Questionnaires were distributed online and data were collected from 176 consumers and 95 entrepreneurs. SEM-PLS was then applied to analyse the data. The results show that halal awareness influences the consumers' purchase intention and the halal traceability of the business actors. While the consumers' halal awareness was determined by knowledge and halal certification. In contrast, religiosity has an insignificant influence on the consumers' halal awareness. Meanwhile, the halal awareness of the business actors was influenced by knowledge, halal certification and religiosity. Halal traceability failed to moderate the relationship between halal awareness and consumer purchase intentions.

Keywords: Halal food, Halal awareness, Halal traceability, Halal lifestyle.

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I. INTRODUCTION

1.1. Background

Halal is a global trend that has caught the attention of many countries today (Indonesian Ministry of National Development Planning, 2019). Halal is not only considered part of compliance to religion, but also as a standard of lifestyle choices for Muslims (Golnaz, Zainalabidin, Mad Nasir, & Chiew, 2010), be it in the realm of business, commerce or in other areas (Omar, Nik Mat, Imhemed, & Ali, 2012). This renders the halal symbol a barometer for determining the quality of a good or service, ranging from its safety and hygiene to its goodness or benefit (Ambali & Bakar, 2014; Golnaz et al., 2010).

The concept of halal refers to something that is allowed or permitted in Islam (Abdul Aziz & Ahmad, 2018; Sadeeqa, Sarriff, Masood, Saleem, & Atif, 2013). The goods or services produced must have benefits for the survival of their users (Rachman, 2019). One element within the concept of halal is the halal lifestyle. This focuses more on how a person lives, which is all regulated by Islam. Over time, the halal lifestyle has become a global concern (Abdul Aziz & Ahmad, 2018). The concept can be applied in all aspects of life (Mutmainah, 2018). A halal lifestyle itself covers many areas: halal food, halal travel, halal media and recreation, along with halal pharmaceuticals and cosmetics, modest fashion, and Islamic finance (Indonesian Ministry of National Development Planning, 2019). However, the various previous studies in this area have applied more to food (halal food), such as Mathew, Raudah, and Nurazizah (2014), Khalek (2014), Said, Hassan, Musa, and Rahman (2014), Yunus, Wan Rashid, Ariffin, and Rasyid (2014), Tama and Voon (2014), Wibowo and Ahmad (2016), Mutmainah (2018), Setyaningsih and Marwansyah (2019), Mohtar, Amirnordin, and Haron (2014), and Al-Banna (2019).

According to The State of the Global Islamic Economy Report 2018/2019, Muslims' total global expenditure on the halal lifestyle reached USD 2.1 trillion in 2017 (salaamgateway.com, 2018). The increase in the global Muslim population is considered to be the main factor. Indonesia has the largest Muslim population in the world and could become the centre of the world's Islamic economy. This is based on several potentials held by Indonesia, especially those related to the halal industry (Rachman, 2019).

The large and growing population of Indonesian Muslims has created a large halal market (Mohtar, Amirnordin, & Haron, 2014). In line with this, demand for halal products has also increased (Mutmainah, 2018). This is evidenced by data showing that in Indonesia in 2017, the halal industry accounted for consumption totalling more than USD 200 billion, or more than 36 per cent of the total consumption of households and non-profit institutions serving households (Indonesian Ministry of National Development Planning, 2019). Out of this total, as much as USD 169.7 billion was contributed by the consumption of halal food. Despite this, the halal food sector in Indonesia has not consistently featured within the GIEI top 10 halal food rankings since 2014, while its score decreased in 2018 (Figure 1).

TOP 15 Countries GIE Indicator Score			TOP 10 Halal Food	
No.	Country	Score	No.	Country
1	Malaysia	127	1	UAE
2	UAE	89	2	Malaysia
3	Bahrain	65	3	Brazil
4	Saudi Arabia	54	4	Oman
5	Oman	51	5	Jordan
6	Jordan	49	6	Australia
7	Qatar	49	7	Brunei
8	Pakistan	49	8	Pakistan
9	Kuwait	46	9	Sudan
10	Indonesia	45	10	Qatar
11	Brunei	45		
12	Sudan	37		
13	Iran	34		
14	Bangladesh	32		
15	Turkey	31		

Source: (salaamgateway.com, 2018)

Figure 1.
Global Islamic Economy Indicator 2018/2019 Ranking

This reflects the fact that most of the halal products consumed in Indonesia continue to be imported (Indonesian Ministry of National Development Planning, 2019). Indonesia by itself has not been able to meet the increasing public demand for halal products despite the continued rise in awareness within the Muslim community of the need to consume halal food (Mutmainah, 2018). Indeed, the Muslim community focuses not only on halal resources or raw materials, but also on overall food management activities (Ab Rashid & Bojei, 2019). This affects the purchasing or consumption power of the Muslim community, meaning business actors must also be aware of the concept of halal (halal awareness) in food that is to be produced or sold.

In addition, in today's digital era, almost all aspects of life are influenced by technology (Elasrag, 2016). This inevitably also has an impact on a person's halal lifestyle, where the use of social media affects the new purchasing power of the community (KPMG International, 2018). The notion of just one 'click' facilitates consumers' ability to trace and obtain information related to the desired halal product, which will then affect their purchasing decisions (Girish & Barbuddhe, 2020; Poniman, Purchase, & Sneddon, 2012; Zailani, Arrifin, Abd Wahid, Othman, & Fernando, 2010). This indicates that access to information on halal trends (online halal traceability) is becoming easier for consumers and it is increasingly important for business actors to provide it.

Based on this background, it can be concluded that there are two important aspects for consumers and entrepreneurs, namely halal awareness and halal traceability. However, relatively few researchers have focused on these two aspects from the consumer and business actor perspective. Salman and Siddiqui (2011) and Nusran, Gunawan, Razak, Numba, and Wekke (2018) support this

by highlighting that not many studies have successfully described the state of halal awareness among Muslims. Besides, there is ongoing debate regarding the importance of halal traceability. Some studies emphasise that halal traceability helps to improve product safety and quality, while others oppose this (Folinas, Manikas, & Manos, 2006 in Mattevi & Jones, 2016). There are also still very few studies that focus on the importance of halal traceability from the perspective of entrepreneurs (Rahman, Singhry, Hanafiah, & Abdul, 2017), thus indicating the need for further research.

1.2. Objective

This research attempts to analyse and develop a more comprehensive understanding of halal awareness. This is carried out by identifying variables that can be both influential on (determinant) and influenced by (output) halal awareness. The determinants of halal awareness in this study are knowledge, religiosity and halal certification (Ambali & Bakar, 2014). Meanwhile, the halal awareness outputs are purchase intention (Aziz & Chok, 2013) and halal traceability (Khan, Haleem, Khan, Abidi, & Al-Ahmari, 2018).

Also, the importance of this research is reinforced by the fact that most existing studies to date have only examined consumer perceptions (e.g. Ab Rashid & Bojei, 2019; Poniman et al., 2012; Sayogo, 2018). In seeking to obtain more comprehensive results, this research employs two perspectives (entrepreneurs and consumers). Based on this, the study has the following objectives: (1) To determine the extent to which the halal awareness of food/beverage entrepreneurs can affect the halal traceability of their products; (2) To determine the extent to which the role of (online) halal traceability increases the influence of Muslim consumers' halal awareness on their decision to buy halal food/beverages.

The study is structured as follows: Section II comprises a review of the background theory pertaining to all the variables, previous studies and conceptual framework. Section III discusses the data, hypothesis development and methodology. Section IV consists of a description of the results presented in tables and figures, and an in-depth analysis. Section V concludes the study.

II. LITERATURE REVIEW

2.1. Background Theory

2.1.1 Halal Awareness

Awareness emphasises the way in which a person understands, perceives and feels a certain event or object (Amarul, Sukirno, & Kurnia, 2019; Aziz & Chok, 2013). In order to understand halal awareness, it is first necessary to look at how individuals understand and perceive the concept of halal. Indeed, halal awareness is critical, not only for consumers but also for business actors.

For consumers, halal awareness can be in the form of awareness to buy and consume halal products. Halal products can be produced by both Muslims and non-Muslims (Amarul et al., 2019; Yunus, Wan Rashid, Ariffin, & Rasyid, 2014). For entrepreneurs, halal awareness relates to the awareness of employing a halal process when making products. Entrepreneurs need to ensure the coordination and

participation of various parties in the product supply chain in order to prioritise 'halal' as an important attribute (Amarul et al., 2019; Yunus et al., 2014). In seeking to develop a deeper understanding related to halal awareness, Ambali and Bakar (2014) identified factors that can affect a person's halal awareness. These include:

a. Knowledge

Knowledge is defined as the facts, feelings or experiences that someone knows (Briliana & Mursito, 2017; Rahman et al., 2017). Several studies have stated that knowledge is a form or result of awareness of something obtained from experience or the learning process. In line with this, a person's level of knowledge can indicate their level of awareness of something.

Many studies have highlighted knowledge as an important factor that can influence consumer decision-making (Mutmainah, 2018; Said, Hassan, Musa, & Rahman, 2014). Consumers make decisions after they have obtained information and/or remembered different information (Said et al., 2014). To this end, the source of their knowledge is based on information in their previous memory (Lynch, Jr., Marmorstein, & Weigold, 1988; Said et al., 2014). A Muslim consumer's level of knowledge regarding halal food indicates the extent of their awareness of the importance of consuming halal food (Mutmainah, 2018; Shaari & Shahira, 2010).

b. Religiosity

Religion serves as the foundation for a person to behave by the religious values in which he/she believes. In this regard, the concept of religiosity can be interpreted as the extent to which a person is committed to his/her religion (Said et al., 2014). This commitment will then be reflected in their attitudes and behaviour (Sungkar, 2010, in Said et al., 2014). As such, religion has a significant impact on a person's behaviour in areas as diverse as their food consumption (Abd. Rahim & Junos, 2012), cosmetics (Majid, Sabir, & Ashraf, 2015), life insurance (Souiden & Jabeur, 2015) and banking (Amin, Abdul-Rahman, & Razak, 2014). On the other hand, people have different levels of religiosity, including high, moderate or low levels. Thus, a person's consumption behaviour tends to reflect their level of religiosity (Dali, Yousafzai, & Hamid, 2019).

Religiosity can also affect consumer orientation (Said et al., 2014). Consumers will consider buying or consuming products that do not violate or conflict with their beliefs. This is reinforced by many studies that have focused on the influence of religiosity on food consumption behaviour, such as Simanjuntak and Dewantara (2014), Aisyah (2014), Yener (2015), Jamal and Sharifuddin (2015), Varinli, Erdem, and Avçılar (2016), Khan, Asad, and Mehboob (2017), Sukesti and Budiman (2014), and Razzaque and Chaudhry (2013).

c. Halal Certification

The word 'halal' in Islam refers to something that can be consumed by Muslims (Henderson, 2016) and covers not only food but also all aspects of products and services (Rejaini & Arianfar, 2016). Meanwhile, halal certification is a representation

of product quality by Islamic sharia standards. Halal certification therefore serves as a guideline for Muslims to consume foods that follow Islamic values (Muhamad, Leong, & Isa, 2017).

Furthermore, while halal certification denotes food that can be consumed by a Muslim, the term halal also means safe and fit for consumption (Ghadikolaei, 2016). Halal certification is considered a crucial factor in raising consumer confidence that the products being consumed are halal, safe and clean (Ambali & Bakar, 2014).

2.1.2 Halal Traceability

One of the challenges for Muslim consumers today is ensuring the 'halalness' of a product, for example being able to distinguish whether or not a product has been processed according to sharia principles (Sayogo, 2018; Verbeke, Rutsaert, Bonne, & Vermeir, 2013). This arises due to the asymmetry of information that may occur between buyers and sellers (Eisenhardt, 1989; Sayogo, 2018). However, current technological advances can prevent or reduce this information asymmetry (Luna-Reyes et al., 2014; Sayogo, 2018) through the ability to browse and research products online. This is known as halal traceability.

Halal traceability is the ability to trace a product from the production process to its distribution. It involves many parties, including suppliers, producers, logistics and end-users, all of whom help to ensure that the production process remains focused on halal attributes (Ab Rashid & Bojei, 2019). Various studies have proven that halal traceability provides many benefits, including increasing product safety and quality (Aung & Chang, 2014; Mattevi & Jones, 2016; Rahman et al., 2017) and ensuring the halal status of food products through tracing at each stage of the production process (Ab Rashid & Bojei, 2019).

2.1.3 Intention to Purchase

Intention as a predictor of behaviour has been tested in various fields of study (Muhammad & Saad, 2016). Intention is assumed to be a motivational factor that can influence a person's behaviour (Ajzen, 1991; Briliana & Mursito, 2017; Rahman et al., 2017). The stronger the intention to engage in a behaviour, the greater the likelihood that the behaviour will be carried out (Ajzen, 1991). Concerning this research, a person's attitude towards the concept of halal can affect their intention to consume halal products. Therefore, attitude is an important element in influencing consumer intentions to buy halal products (Marmaya, Zakaria, & Mohd Desa, 2019). In other words, if a person has a positive attitude towards halal products, this will have a major effect on their intention to buy halal products (Marmaya et al., 2019). This has been confirmed by the results obtained in a number of studies (Aziz & Chok, 2013; Lada, Tanakinjal, & Amin, 2009; Shah Alam & Mohamed Sayuti, 2011).

2.2. Previous Studies

According to Golnaz, Zainalabidin, Mad Nasir, and Chiew (2010), awareness will lead to positive behaviour. Likewise, halal awareness can affect the intention to buy a halal product (Aziz & Chok, 2013). This has been proven in studies that have focused on halal awareness as a determinant, including Setyaningsih and Marwansyah (2019), Aziz and Chok (2013), Amarul, Sukirno, and Kurnia (2019), Widagdo, Hakim, and Arsyianti (2015), Ambali and Bakar (2014), Ardyanti, Nashril, and Helmi (2013), and Nusran et al. (2018). It is also supported by Briliana and Mursito (2017), Parhan and Ismail (2015), Jamal and Sharifuddin (2015), Basri and Kurniawati (2019), and Aziz and Chok (2013). However, Salman and Siddiqui (2011) and Nusran et al. (2018) consider that not many studies have been able to describe the effect of halal awareness among Muslims.

Meanwhile, one manifestation of halal awareness is halal traceability. Halal traceability is useful not only for the business actor but also Muslim consumers (Girish & Barbuddhe, 2020; Poniman et al., 2012). However, most research has focused only on the importance of halal traceability from a consumer perspective. There remain very few studies with a focus on the importance of halal traceability from the perspective of business actors (Rahman et al., 2017). Based on this, halal traceability can be considered to be the result of awareness of the importance of the concept of halal (halal awareness), both for entrepreneurs in the context of producing a product and also for Muslim consumers in terms of consuming a product.

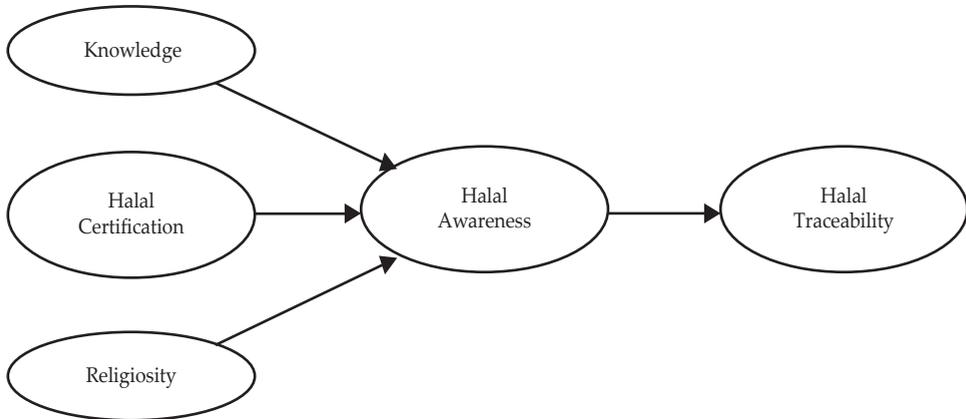
2.3. Conceptual Framework

For Muslims today, halal is an inherent part of their lifestyle and encompasses food and drinks. Muslim consumers are becoming increasingly aware of the need to only consume halal food/beverages, thus affecting the demand for halal products (Nusran, Gunawan, Razak, Numba, & Wekke, 2018). To this end, halal awareness should also be a concern for entrepreneurs. Halal awareness does not appear by itself but rather is affected by other factors, such as knowledge, religiosity and even the halal certification of a product.

A person's level of knowledge about halal products will affect the strength of their consumption intention when it comes to halal products. The greater the knowledge, the higher and more consistent the consumption intention towards halal products (Mutmainah, 2018; Waskito, 2015; Yunus et al., 2014). Thus, knowledge is critical in terms of its ability to either increase or decrease the level of awareness. A person's religiosity can also affect consumer orientation (Said et al., 2014). Consumers will consider buying or consuming products that do not violate or conflict with their beliefs, as is the case with Muslim consumers who only consume halal (permissible or allowed) and tayyib (clean) food following the Islamic religious orders in the Al-Quran, Surat Al-Baqarah: 172.

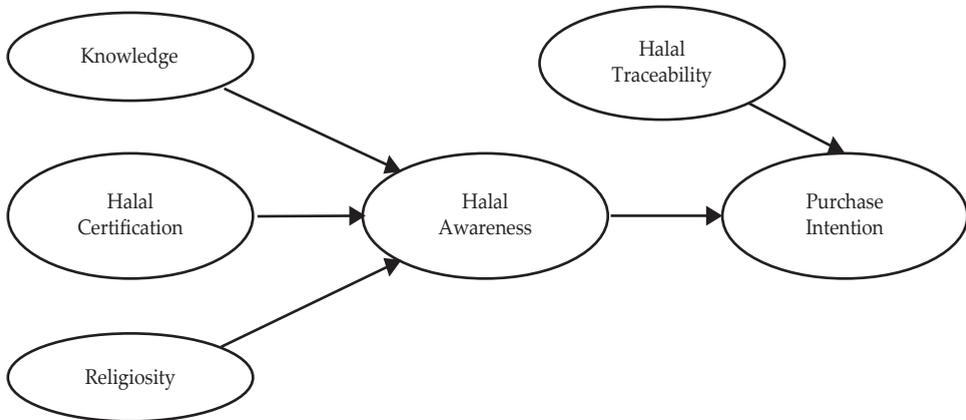
Furthermore, it is believed that Muslims who consume certified halal food are able to improve their experience in terms of food consumption (Jamal & Sharifuddin, 2015). This is supported by many studies that emphasise that halal certification can influence a person's food consumption decisions, such as Ghadikolaei (2016), Abdul Latiff, Rezai, Mohamed, and Ayob (2016), Awan, Siddiquei, and Haider (2015), and Sukesti and Budiman (2014).

Meanwhile, halal traceability is one of the manifestations of halal awareness. For business actors, halal traceability is a factor that affects the integrity of the halal food supply chain. According to (Ab Rashid & Bojei, 2019; Zailani et al., 2010), halal traceability helps business actors to improve the integrity of their halal food supply chain. It is used to ensure the halal status of food/beverages by tracing products through each stage of the production process to the point at which they are finished (Ab Rashid & Bojei, 2019).



Source: Authors, based on varios references (Ambali & Bakar,2014; Khan et al.,2018)

Figure 2.
Conceptual Framework of Business Actors Side



Source: Authors, based on varios references (Ambali & Bakar,2014; Aziz & Chok, 2013; Khan et al., 2018)

Figure 3.
Conceptual Framework of Consumer Side

III. METHODOLOGY

3.1. Data

In this study, we are concerned with two major issues between consumers and business actors. The first is the role of halal awareness among Muslim consumers in terms of its influence on their intention to purchase halal food. While the second issue is the role of halal awareness with regard to the halal traceability of entrepreneurs to produce halal food. Hence, the study uses primary data, which were collected through a self-administered questionnaire. The questionnaire contains two sections; the first consists of questions aimed at gathering the demographic characteristics of the consumer and entrepreneur respondents, while the second part contains questions relating to variables. Moreover, a Likert scale is used, ranging from 1 (strongly disagree) to 5 (strongly agree).

The population of the study is Muslim consumers and halal food sellers. A purposive sampling technique was used to determine the sample for both the Muslim consumers and halal food sellers, with several criteria applied to select the sample for both consumers and business actors. The criterion for consumers was that they should be Muslim. While the criteria for business actors were as follows: first, the seller should be Muslim; and second, the business should operate within the food and beverages industry. The questionnaire was then shared via Microsoft Forms in order to gather data from the Muslim consumers and halal food business actors. Hence, the questionnaire was distributed nationwide to the consumer and seller respondents. Moreover, in determining the sample size, we used the rule of thumb from (Hair, Ringle, & Sarstedt, 2011) (i.e. 10 times the largest number of formative indicators). According to (Hair et al., 2011)'s calculation, 50 should be the minimum sample size for entrepreneurs and consumers. Finally, we collected data from 176 consumers and 95 entrepreneurs for further analysis. We also had a 100% response rate from the online distribution of the questionnaire.

3.2. Model Development

Following the development of the halal industry over recent decades and the relative lack of wide-ranging literature reviews concerning producers' and consumers' perspectives, more comprehensive research is necessary.

3.2.1 Knowledge

Consumers have varying levels of knowledge (Said et al., 2014). Additionally, halal knowledge can lead to halal awareness (Akin & Okumuş, 2020), and previous studies have found that halal knowledge affects people's halal awareness (Nurhayati & Hendar, 2019; Nusran et al., 2018; Ramadania, Putri & Juniwati, 2018). Ardyanti et al. (2013) found that halal awareness is influenced by the extent of knowledge of the halal concept among consumers. Therefore, consumers' or entrepreneurs' knowledge is critical in terms of facilitating halal awareness among stakeholders. In summary, therefore, the hypotheses are:

H1: Knowledge positively influences the halal awareness of consumers.

H2: Knowledge positively influences the halal awareness of entrepreneurs.

3.2.2 Religiosity

The behaviour of religious people is influenced by the value of religion (Agag & El-masry, 2016; Said et al., 2014). Muslims have varying levels of religiosity, ranging from a high to moderate and even a low level. The level of religiosity has a significant impact on halal awareness (Ambali & Bakar, 2014; Ramadania et al., 2018) and also influences consumption behaviour (Amalia, Sosianika, & Suhartanto, 2020; Dali et al., 2019). The level of religiosity plays a crucial role in increasing the level of halal awareness among consumers. For entrepreneurs, the level of religiosity drives business actors to be more aware of implementing halal processes in their production. Thus, to sum up, the hypotheses are:

H3: Religiosity positively influences the halal awareness of consumers.

H4: Religiosity positively influences the halal awareness of entrepreneurs.

3.2.3 Halal Certification

Halal certification is the responsibility of business actors in manufacturing their product (Afifi et al., 2014). According to Nasution and Rossanty (2018), the country origin of halal certification influences consumers' intention to purchase imported food. Khan, Akhtar, Ansari, and Dhamija (2020) identified halal certification as one of the key drivers of purchase intention. Meanwhile, Ramadania, Putri, and Juniwati (2018), Ardyanti et al. (2013), and Ambali and Bakar (2014) found that halal certification is the antecedent of halal awareness. Pradana, Huertas-García, and Marimon (2020) found that halal certification influenced the purchase intention of tourists in Spain. To conclude, halal certification is used to denote food that Muslims are permitted to consume; therefore, it is important for producers and consumers to be aware of the existence of halal labelling on products.

We hypothesise:

H5: Halal certification positively influences the halal awareness of consumers.

H6: Halal certification positively influences the halal awareness of entrepreneurs.

3.2.4 Halal Awareness

Awareness refers to people's understanding, perceptions and feelings about specific issues and events (Amarul et al., 2019). While halal awareness denotes understanding, perception and feeling with regard to halal value. For consumers, halal awareness relates to an awareness to consume halal items such as food and beverages. For entrepreneurs, halal awareness refers to an awareness to produce or sell halal goods that have been produced in accordance with a halal process and this again includes food and beverages. Thus, halal awareness helps to drive consumers to purchase halal products (Aziz & Chok, 2013). Halal traceability is regarded as a bridge for business actors to assure halal integrity within the halal supply chain. Therefore, the combination of halal traceability and a high level of awareness leads to consumer satisfaction (Khan et al., 2018). Meanwhile, Khan et al. (2020) found that halal labelling acts as a strong determinant of purchase intention. Halal awareness is also an important consideration for tourists in terms of ensuring they purchase halal items when travelling to a foreign country

(Bashir, 2019). Thus, halal labelling influences the halal product intention (Basri & Kurniawati, 2019; Nurhayati & Hendar, 2019; Setyaningsih & Marwansyah, 2019).

According to Amarul et al. (2019), both consumers and business actors are concerned about halal labelling in their products.

H7: Halal awareness positively influences the purchase intention of consumers.

H8: Halal awareness positively influences the halal traceability of entrepreneurs.

3.2.5 Halal Traceability

Traceability is referred to as the ability to track a product's origin through its data history. Halal traceability concerns the availability of information on food within the supply chain, notably the ingredients it contains along with information on the production chain and data related to when and where the food was sourced, produced and/or processed (Yusaini, Abd Rahman, Azanizawati, & Mohd Ghazli, 2016). Halal traceability involves many parties such as suppliers, producers, logistics and end-users (Ab Rashid & Bojei, 2019). There is a crucial need for halal traceability within the halal supply chain in order to ensure the producer has an uninterrupted production, distribution and consumption process (Amir & Tjibtosubroto, 2019; Mostafa, 2020). According to Sayogo (2018), halal traceability is determined by three main factors: consumer trust, a healthy lifestyle and company reputation. For consumers, the ability to receive accurate information on halal compliance could stimulate their purchase intention. To conclude, we hypothesise that:

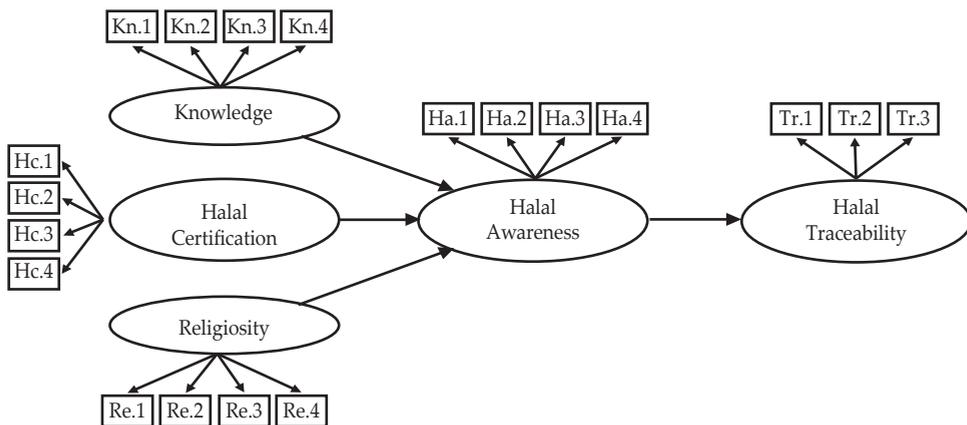
H9: Halal traceability positively influences the purchase intention of consumers.

Table 1.
The Instrument Explanation

Instruments	Constructs	References
	Knowledge	(Briliana & Mursito, 2017; Parhan & Ismail, 2015)
Know1	Knowledge of Islamic law about halal and haram food/drinks	
Know2	Knowledge of food/drink that is prohibited by Islam	
Know3	Knowledge to differentiate between what is allowed and what is not	
Know4	The importance of the halal concept for Indonesian people	
	Religiosity	(Basri & Kurniawati, 2019)
Religi1	Consuming/producing halal food/drinks because of religious beliefs	
Religi2	Consuming/producing halal food/drinks because they follow religious dogmas	
Religi3	Avoid buying/producing food/drinks that are prohibited by religion	
Religi4	The decision to buy/produce halal food/drinks is influenced by religious beliefs	

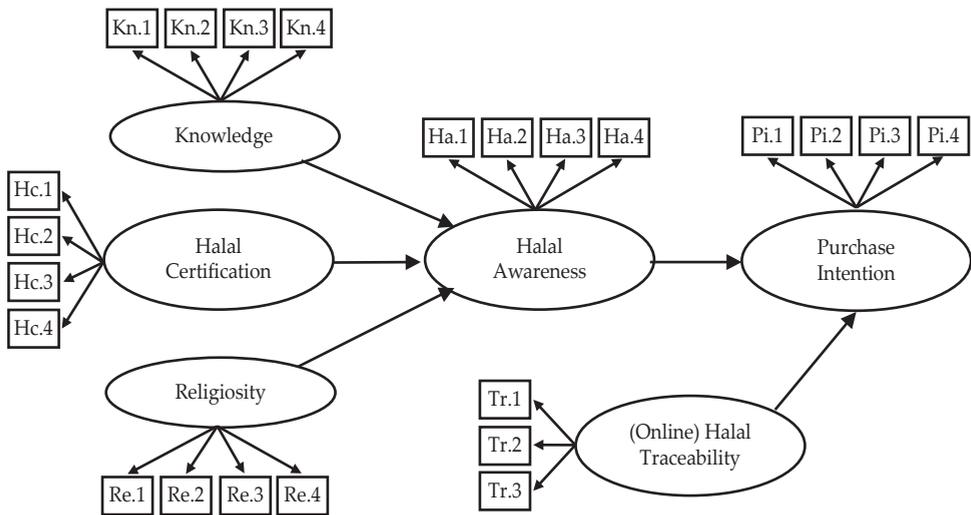
Table 1.
The Instrument Explanation (Continued)

Instruments	Constructs	References
	Halal Certification	
Crtf1	Give confidence in the food/drinks	(Basri & Kurniawati, 2019; Shaari & Shahira, 2010; Aziz & Chok, 2013)
Crtf2	Give a sense of security	
Crtf4	The importance of the halal logo	
Crtf5	The desire to choose food/drinks with a halal logo	
	Halal Awareness	
Aware1	The belief that what is consumed/produced is halal	
Aware2	The belief that what is consumed/produced contains halal ingredients	
Aware3	The belief that what is consumed/produced goes through the halal process	
Aware4	The belief that halal guarantees cleanliness in consumption/production	
	Purchase Intention	(Basri & Kurniawati, 2019)
Purchas1	The desire to buy food/drinks that are halal-certified	
Purchas2	The desire to buy halal food/drinks rather than famous products	
Purchas3	Confidence in buying halal food/drinks even though they are expensive	
Purchas4	The belief that consuming halal food/drinks makes you healthier	
	Halal Traceability	(Sayogo, 2018)
Trace1	The importance of knowing the halal process of food/drinks	
Trace2	Ease of ensuring information about products from media marketing	
Trace3	Ease of getting information about products from marketing media	



Source: Authors, based on Table 1

Figure 5.
Structural Model of Entrepreneur Side



Source: Authors, based on Table 1

Figure 6.
Structural Model of Consumer Side

The figure above depicts the path structural model of the partial least squares structural equation modelling (PLS-SEM). It contains two models, one for consumers and the other for entrepreneurs. For the entrepreneurs (see Figure 5), five constructs contain four exogenous latent variables and one indigenous latent variable. And for consumers (see Figure 6), six constructs contain four exogenous latent variables, one indigenous latent variable and one moderating variable.

3.3. Method

Once the data had been gathered, PLS-SEM was used to analyse the data. PLS-SEM was selected as a research methodology for the following reasons. First, PLS-SEM is the standard tool for analysing complex models (Sarstedt, Ringle et al., 2020). Second, PLS-SEM is a better tool than CB-SEM (Hair Jr., Matthews, Matthews, & Sarstedt, 2017; Sarstedt, Hair, Nitzl, Ringle, & Howard, 2020). Third, PLS-SEM is able to handle issues such as sample size, distributional assumption and goodness of fit (Hair, Risher, Sarstedt, & Ringle, 2018). Thus, PLS-SEM is an appropriate measurement tool for use in this study.

PLS-SEM contains two measurement models – an outer model and an inner model (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). In the outer model, we test the validity and reliability of the construct. The reliability of the construct is measured by the value of composite reliability and the value of Cronbach's alpha. The constructs can be deemed reliable if they have a composite reliability value > 0.70. While the value of Cronbach's alpha should be > 0.60. At the same time, the validity of the constructs is measured using the value of AVE (average variance extracted). The AVE value must be > 0.50 to be categorised as valid (Hair et al., 2011; Hair Jr et al., 2017).

Meanwhile, in the inner model, we examine the hypotheses testing and goodness of fit of the model. The model goodness of fit is determined by the value of the R^2 values. Values for R^2 of 0.25, 0.50 and 0.75 respectively indicate levels of weak, moderate and high determination for the exogenous latent variable to the endogenous latent variable. Thereafter, we estimate the hypotheses testing. Hypotheses are accepted with p-value significance levels of 10% (p-value < 0.10), 5% (p-value < 0.05) and 1% (p-value < 0.01) (Hair et al., 2011; Hair Jr et al., 2017).

IV. RESULTS AND ANALYSIS

4.1. Results

This research was conducted to obtain a more comprehensive understanding of halal awareness. It examines two perspectives, namely from the consumer and business actor. As shown in Table 2 below, the study had a total of 176 consumer respondents and 95 business actor respondents (from Table 3).

The consumer respondents were dominated by females, at around 65.91%, while males accounted for only 34.09%. With respect to age, most of the respondents were aged ≤ 24 years (57.39%), followed by those aged 25-38 years (39.77%). The majority of the consumer respondents were college students (50.57%), with the remainder distributed across several job types. Full details of the consumer respondents can be seen in Table 2.

Table 2.
Respondent Demographics (Consumer)

Gender	N	(%)
Male	60	34.09
Female	116	65.91
Age		0.00
≤ 24 years old	101	57.39
25 – 38 years old	70	39.77
39 – 54 years old	4	2.27
≥ 55 years old	1	0.57
Education		
High School or equivalent	77	43.75
Bachelor Degree	61	34.66
Master Degree	36	20.45
Doctoral Degree	2	1.14
Occupation		
College student	89	50.57
Lecturers / Teaching Staff	26	14.77
Entrepreneur	11	6.25
Civil servants	10	5.68
BUMN employee	4	2.27
Non-BUMN Employee	24	13.64
Housewife	8	4.55
Other	4	2.27

Table 2.
Respondent Demographics (Consumer) (Continued)

Gender	N	(%)
Monthly Income		
≤ 1,500,000	94	53.41
1,600,000 – 3,000,000	27	15.34
3,100,000 – 5,000,000	27	15.34
≥ 5,000,000	28	15.91

Table 3 contains the demographic data of the business actor respondents. These respondents are distributed across three types of business, namely food (53.68%), beverage (22.11%), and food and beverage (24.21%). Most of the businesses had operated for only a relatively short period, typically < 1 year (41.05%) and between 1 and 3 years (36.84%). The majority of the businesses reported a monthly income of ≤ 5 million (78.95%). For further details, see Table 3.

Table 3.
Demographic Respondents (Entrepreneurs)

Type of Business	N	(%)
Food	51	53.68
Beverage	21	22.11
Food and beverage	23	24.21
Length of Business		0.00
< 1 year	39	41.05
1 – 3 years	35	36.84
4 – 6 years	12	12.63
> 6 years	9	9.47
Monthly Income		0.00
≤ 5,000,000	75	78.95
6,000,000 – 10,000,000	14	14.74
11,000,000 – 15,000,000	3	3.16
> 15,000,000	3	3.16

The two perspectives considered in this study, namely from the consumer and business actor side, add to the point of view of seeing something so that the data obtained can be juxtaposed and compared. Figure 7 illustrates the respondents' perceptions of the halal concept. The majority of the answers from the consumers and business actors show the same thing, namely that more than 90% have the same opinion with regard to various halal indicators including clean, healthy, not containing alcohol, not containing pork, not intoxicating when consumed, and complies with Islamic law.

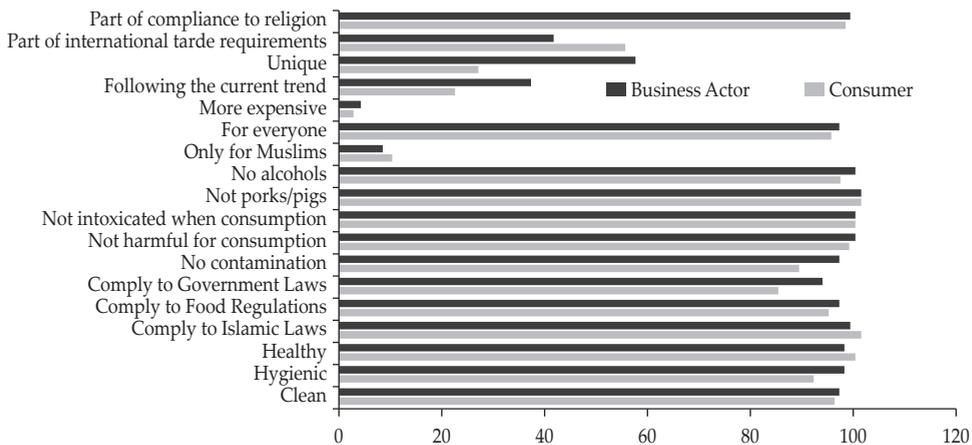


Figure 7. Halal Perception

Figures 8 and 9 contain information on the respondents' activity regarding online halal traceability. From a consumer perspective, the figures show the media sources that are often used for halal traceability when finding information on halal products, along with the types of information being sought. Meanwhile, from an entrepreneur's perspective, the level of halal traceability can be seen in the type of media used to market products and the information that is often presented in the media used.

Based on the results of the data processing, Instagram and websites are the types of media used most often by consumers. Similarly, Instagram is the most widely used media for entrepreneurs, although there is markedly lower use of websites (Figure 8). Meanwhile, halal certification and ingredients are the types of product information that consumers look for most often. This contrasts with the business actors, who provide more product information related to prices and sales locations (Figure 9).

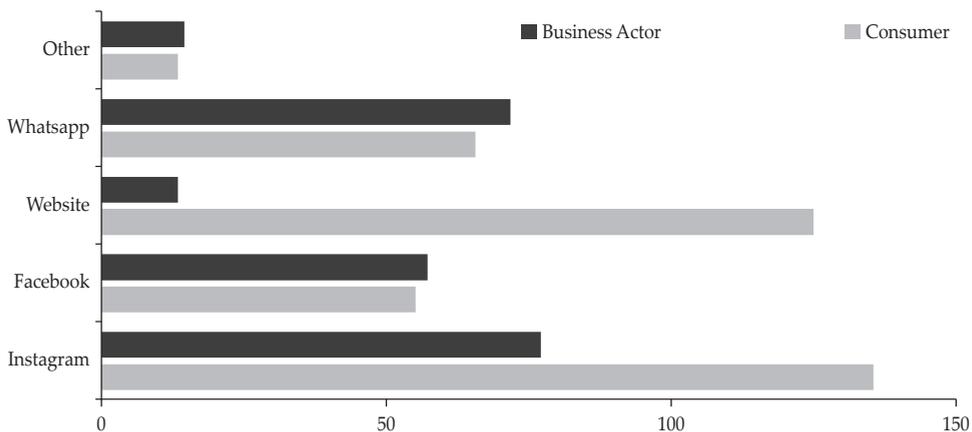


Figure 8. The Marketing Media Used

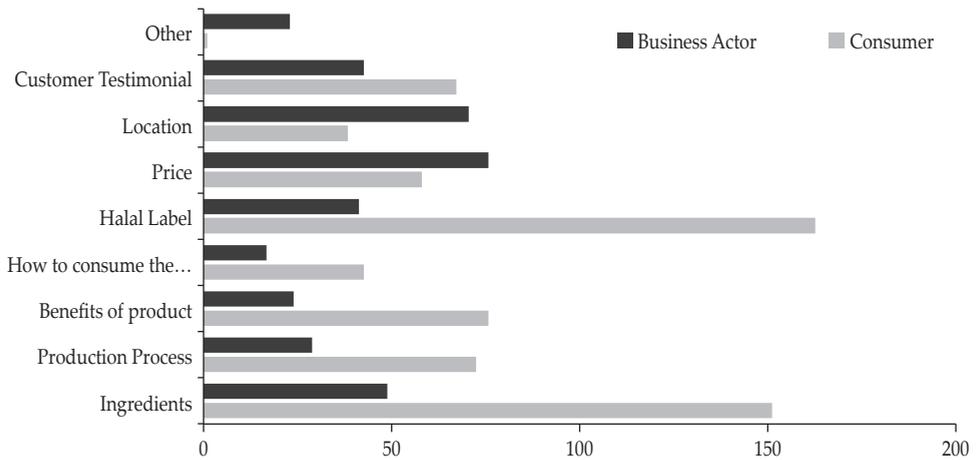


Figure 9.
Information about Product Needed

In this study, we used two types of questionnaire, one for consumers and one for entrepreneurs. We therefore had to conduct two evaluations of the measurement model. In Tables 4 and 5, every item question for each variable is shown to be both valid and reliable. This is evidenced by the fulfilment of all criteria, both for the validity test (AVE value > 0.5) and the reliability test (composite reliability value > 0.7 and Cronbach’s alpha > 0.6) (Hair et al., 2011).

Table 4.
The Result of Validity and Reliability Testing (Customer)

Variable	Loadings	AVE	Composite Reliability	Cronbach’s Alpha
Knowledge		0.623	0.864	0.784
Know1	0.884			
Know2	0.872			
Know3	0.828			
Know4	0.512			
Religion		0.695	0.901	0.853
Religi1	0.787			
Religi2	0.837			
Religi3	0.837			
Religi4	0.871			
Halal Certification		0.566	0.865	0.801
Crtf1	0.798			
Crtf2	0.800			
Crtf4	0.798			
Crtf5	0.805			
Crtf6	0.520			

Table 4.
The Result of Validity and Reliability Testing (Customer) (Continued)

Variable	Loadings	AVE	Composite Reliability	Cronbach's Alpha
Halal Awareness		0.663	0.886	0.827
Aware1	0.815			
Aware2	0.888			
Aware3	0.855			
Aware4	0.685			
Purchase Intention		0.623	0.868	0.798
Purchas1	0.768			
Purchas2	0.800			
Purchas3	0.782			
Purchas4	0.806			
Halal Traceability		0.781	0.914	0.857
Trace1	0.794			
Trace2	0.932			
Trace3	0.919			

Table 5.
The Result of Validity and Reliability Testing (Entrepreneurs)

Variable	Loadings	AVE	Composite Reliability	Cronbach's Alpha
Knowledge		0.642	0.877	0.812
Know1	0.794			
Know2	0.893			
Know3	0.802			
Know4	0.706			
Religion		0.675	0.892	0.839
Religi1	0.829			
Religi2	0.779			
Religi3	0.855			
Religi4	0.821			
Halal Certification		0.587	0.876	0.823
Crtf1	0.791			
Crtf2	0.812			
Crtf4	0.783			
Crtf5	0.748			
Crtf6	0.690			
Halal Awareness		0.734	0.916	0.877
Aware1	0.919			
Aware2	0.904			
Aware3	0.835			
Aware4	0.759			

Table 5.
The Result of Validity and Reliability Testing (Entrepreneurs) (Continued)

Variable	Loadings	AVE	Composite Reliability	Cronbach's Alpha
Halal Traceability		0.697	0.948	0.937
Trace1	0.788			
Trace2	0.827			
Trace3	0.864			
Trace4	0.864			
Trace5	0.893			
Trace6	0.865			
Trace7	0.793			
Trace8	0.777			

Furthermore, the R^2 value for consumer halal awareness is 37.5% (weak), which means there are many other variables outside the model that can affect consumer halal awareness. Meanwhile, the R^2 for entrepreneurs' halal awareness of 44.3% (moderate) indicates that the halal awareness in the structural model can be moderately explained by knowledge, religion and halal certification. In addition, R^2 for purchase intention is 42.3% (moderate). Meanwhile, R^2 for halal traceability is 60% (high), which means that halal awareness has a relatively large influence on halal traceability (Table 6).

Table 6.
 R^2 Results

Variable	R^2	Adjusted R^2
Halal Awareness (Consumer)	0.386	0.375
Purchase Intention (Consumer)	0.430	0.423
Halal Awareness (Entrepreneurs)	0.461	0.443
Halal Traceability (Entrepreneurs)	0.604	0.600

Table 7 shows the results of the hypothesis testing. From the nine hypotheses, only two were rejected (H3 and H9), and the rest were supported. H1, H5, H6, H7 and H8 have p-values < 0.01 , while H2 and H4 have p-values < 0.1 . This means that halal knowledge and certification affect halal awareness, for both consumers and entrepreneurs. However, religion only affects the halal awareness of entrepreneurs. Besides, halal traceability among the business actors is also proven to be influenced by their halal awareness. On the consumer side, halal traceability is not proven to moderate the effect of halal awareness (consumers) on purchase intention.

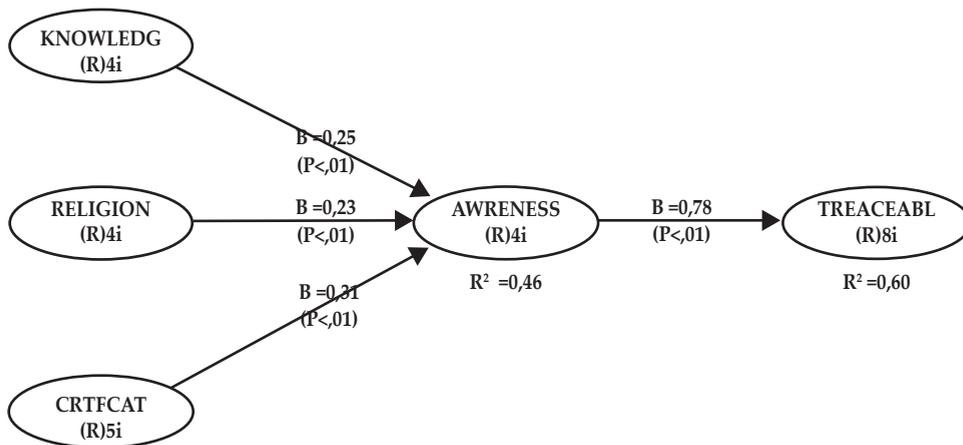


Figure 10.
Structural Model Result for Entrepreneur Side

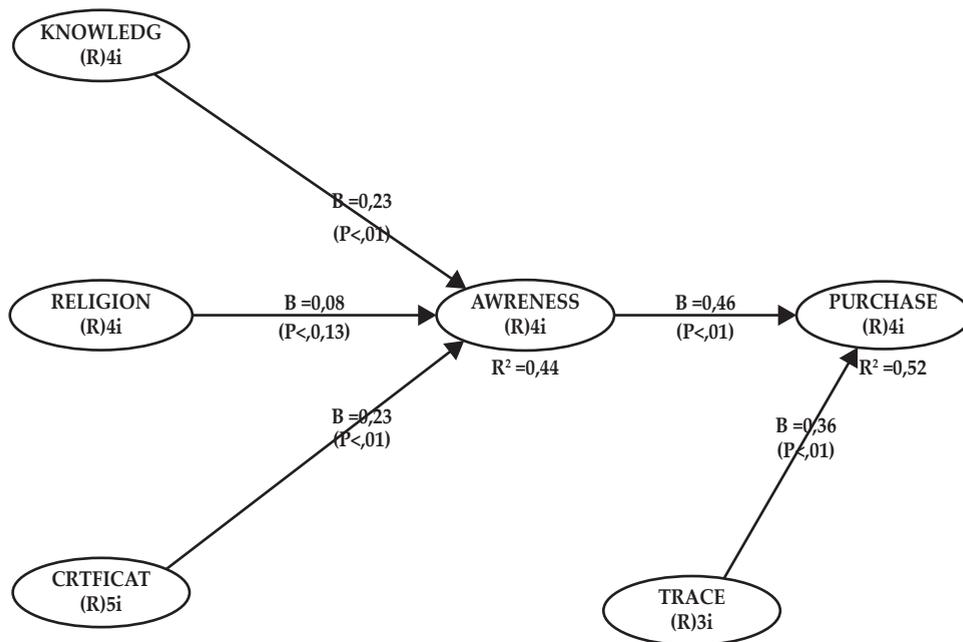


Figure 11.
Structural Model Result for Consumer Side

Table 7.
The Results of Hypothesis Testing

Hypothesis	Path Coefficient	Conclusion
H1 (Knowledge → Halal Awareness Consumer)	0.228*	Supported
H2 (Knowledge → Halal Awareness Entrepreneur)	0.245**	Supported
H3 (Religion → Halal Awareness Consumer)	0.083	Rejected
H4 (Religion → Halal Awareness Entrepreneur)	0.232**	Supported
H5 (Halal Certification → Halal Awareness Consumer)	0.233*	Supported
H6 (Halal Certification → Halal Awareness Entrepreneur)	0.312*	Supported
H7 (Halal Awareness → Purchase Intention)	0.461*	Supported
H8 (Halal Awareness → Halal Traceability)	0.777*	Supported
H9 (Halal Traceability → Purchase Intention)	0.364*	Supported

*p-value < 0,01; **p-value < 0,1

4.2. Analysis

Halal food is one of the fastest-growing industries in the halal industry ecosystem. As a result, comprehensive insight from the perspective of both consumers and entrepreneurs is a necessity for further improvement. Thus, there is an urgent need to research the determinant factors that influence consumers' perspectives on purchase intention and entrepreneurs' notion of providing halal information. This study has focused on how consumers' halal awareness affects their purchase intention. On the entrepreneurs' side, halal awareness affects halal traceability.

The study findings show that the consumers' halal awareness positively influences their purchase intention. This result is in line with Ramadania et al. (2018), Bashir (2019) and Basri and Kurniawati (2019). In contrast, Jaiyeoba, Abdullah, and Dzuljastri (2019) found that halal awareness in Nigeria negatively influences the buying decision. This indicates that consumers' purchase intention is determined by their level of halal awareness. The greater consumers' awareness, the more likely they are to consider purchasing halal food. The term awareness refers to understanding, perceptions and feelings with regard to a certain event or object (Amarul et al., 2019; Aziz & Chok, 2013). This means that consumers have an understanding of the concept of halal when consuming halal food, are consciously aware of halal consumption and truly feel through their senses that the purchased food is genuinely halal. To this end, the level of halal awareness also plays a significant role for foreign consumers in relation to the consumption of halal food when travelling abroad (Bashir, 2019). While the producers may be non-Muslims, consumers' halal awareness ensures that they always purchase halal food (Yunus et al., 2014). Moreover, the level of halal awareness also drives consumers' decisions to prioritise the issue of 'halal' at all times, wherever they may be (Muslichah, Abdullah, & Abdul Razak, 2019). In the case of Indonesia, consumers are categorised as having a high level of halal awareness (Kurniawati & Savitri, 2019). The assumption is therefore that Indonesian consumers are more concerned about halal food. As the world's most populous Muslim country with a high level of halal awareness, the consumption of halal food and beverages is an actual behaviour and habit.

On the other hand, halal awareness also influences halal traceability on the entrepreneur side. This result highlights that producers' level of halal awareness drives business actors to provide detailed information about halal food (Yusaini et al., 2016). Halal traceability is important in enabling producers to ensure an uninterrupted production, distribution and consumption process (Amir & Tjibtosubroto, 2019; Mostafa, 2020). Thus, the need for proper guideline on halal supply chain management for producers is undeniable (Shafii & Wan Siti Khadijah, 2012). It is reasonable for producers with a level of halal awareness to apply the latest technology in halal traceability, such as blockchain (Hew, Wong, Tan, Ooi, & Lin, 2020). According to Rashid, Supian, and Bojei (2018), halal traceability can influence the halal integrity of the halal supply chain, which is a key element of halal supply chain performance. Moreover, in Indonesia, halal food producers are spread across the nation, making it easy to find halal food. However, it is rare to find halal food producers that provide detailed halal information for their products. We believe that consumers will readily consume halal food that does not carry detailed information, so long as the food is halal. This includes the consumption of products such as fried chicken and grilled duck, even though they may not understand the process of how the chicken is fried or the duck is grilled. Therefore, producers could take advantage of the high level of halal awareness of Indonesian consumers by providing detailed information on halal food in order to further boost sales.

The findings also show that halal traceability influences the purchase intention of consumers at the 1% significance level (p -value < 0.01). This result indicates that the ability of consumers to track halal information directly influences and leads to purchasing decisions. It can also be understood from the viewpoint that consumers are curious about the process to which halal food is subjected prior to being served or sold. The awareness of Muslim consumers is in line with their ability to track the halal information of a product. Consumers are becoming smarter and Indonesian Muslim consumers are concerned about halal consumption, especially in food and beverages. Thus, the inclusion of detailed information about halal food on a product's packaging would seem to be an effective way of increasing sales.

Furthermore, we also examined the antecedents of halal awareness from both the consumers' and producers' perspectives. The finding showed that knowledge has a positive and significant influence on halal awareness on both the consumer and entrepreneur side. This result is supported by previous studies conducted by Ramadania et al. (2018), Nusran et al. (2018) and Nurhayati and Hendar (2019) and indicates that the level of knowledge affects the level of awareness among consumers and producers. The greater their knowledge, the more aware consumers and producers are (Nusran et al., 2018). For instance, Ramadania et al. (2018) stated that the level of knowledge of halal and green food affects awareness. However, consumers and producers are crucial in terms of obtaining more information and knowledge to improve their awareness relating to halal food. Thus, from the consumer perspective, halal awareness leads to purchase intentions. Therefore, producers should provide halal food information in order to sell more products.

Halal certification was identified as a further antecedent of halal awareness. The result showed that halal certification influences the halal awareness of consumers and business actors. This finding is consistent with Ramadania et al.

(2018), Ardyanti et al. (2013) and Ambali and Bakar (2014). Hence, the empirical evidence implies that the existence of halal certification on product packaging could enhance the level of awareness of both consumers and producers. Halal certification then serves as an identifier for consumers to ensure that the product is indeed halal (Muhamad et al., 2017). Hence, halal certification drives consumers' purchase intentions (Khan et al., 2020). For producers, meanwhile, halal certification informs consumers that the product is halal and is of particular value when travelling abroad or consuming imported food (Nasution & Rossanty, 2018). Halal certification also functions as a medium of trust and standard information with respect to adhering to Islamic dietary laws (Muhamad et al., 2017).

Meanwhile, religiosity has a significant influence on the halal awareness of business actors. In contrast, from the consumers' perspective, religiosity has an insignificant influence. Such conditions indicate that consumers' halal awareness is determined by the level of knowledge and the existence of halal certification. This result contrasts with that of Ramadania et al. (2018), who found that religiosity influences the halal awareness of the consumers in their study. While from the producers' perspective, religiosity determines the awareness of halal food. This implies that the higher level of producers' religiosity, the higher the level of halal awareness. The result is in line with Ambali and Bakar (2014) and Kurniawati and Savitri (2019) that religiosity influences halal awareness. Religiosity plays a significant role in shaping human behaviour such as decision-making. Hence, the degree of religiosity pushes religious believers to conform to their religious values (Muslichah et al., 2019).

V. CONCLUSION AND RECOMMENDATION

5.1. Conclusion

The objectives of this study were to gain comprehensive insight from producers and consumers regarding halal awareness and halal traceability. The results obtained showed that halal awareness has a positive and significant influence on consumers' purchase intention. On the producers' side, halal awareness has a significant influence on halal traceability. It was also determined that halal certification, religiosity and knowledge are the antecedents of halal awareness among business actors. Meanwhile, halal certification and knowledge are the determining factors of consumers' halal awareness. In contrast, religiosity has an insignificant influence on consumers' halal awareness. Halal traceability also failed to moderate the relationship between consumers' halal awareness and purchase intention. However, halal traceability was found to be capable of directly influencing halal awareness and consumer purchase intention.

Exploring halal awareness and halal traceability from the producers' and consumers' perspective adds to the limited existing literature in the area of halal food research. However, this paper also has several limitations. Firstly, the small sample size on the producers' part, and secondly, although the study provides a result with respect to consumers' halal traceability, further assessment in the model is crucial in order to obtain a clearer explanation. Nonetheless, this study makes a significant contribution to the research on business actors in terms of their

role in enhancing consumers' halal awareness and implementing halal traceability to attract new consumers.

5.2. Recommendation

The findings of this study suggest that the provision of halal traceability on halal food is a necessity for business actors in terms of enhancing the integrity of their company, which could in turn boost sales. In this digital era, there is an undeniable potential to apply the latest technology such as blockchain. Alternatively, adding detailed information on the standard halal process to the company's social media would be an effective way of convincing consumers of the halal process of the product. In considering the factors that determine consumer purchasing intentions, producers can take steps to further improve the halal awareness of consumers. For instance, by providing detailed information about halal ingredients, the halal process and supply chain management. Moreover, halal certification should be displayed on product packaging and companies' marketing needs to focus on large-scale campaigns aimed at raising awareness of the halal process. However, a recent paper has several limitations. First, this paper has a small sample size on the producer's part. Second, even though, the result of the consumer's halal traceability is identified, the need for further assessment in the model is crucial to gain a clearer explanation.

It is also suggested that policymakers push halal supply chain management, especially with regard to applying the latest technology such as blockchain. Hence, policymakers should push and facilitate small and medium-sized enterprises to acquire halal certification easily and at an affordable price. Further research is also needed on the supply side with respect to the limited amount of literature on halal food from the producers' perspective.

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