

Drivers of Halal Certification Value Chain: PLS-SEM Approach

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Abstract

Purpose: This study intends to identify the factors that impede the implementation of the value chain for halal certification in Depok City in order to better understand how to improve the halal certification process for micro, small, and medium-sized enterprises (MSMEs) in Depok city.

Design/methodology/approach: This study employs a mixed-methods, case-study research design. Using 102 questionnaires and in-depth interviews, researchers gathered information for this study.

Findings: The results of this research are Government, Identity, and Product Originality are Significant in Relation to Halal Awareness.

Research Implication: The government should increase the quota for halal certificates again, aggressively spread halal certification information, and strengthen its readiness to implement it.

Originality/value: the originality and value of the research lie in its focused examination of the challenges and opportunities related to halal certification adoption among MSMEs in Depok City, as well as its practical recommendations for addressing these issues.

Keywords: Halal Certification; PLS-SEM; MSMEs

Introduction

Assurance of the halalness of a product can be created by establishing a halal certification. Halal certification is proof stipulated by the MUI (Majelis Ulama Indonesia) where the products marketed by manufacturers have fulfilled all the halal requirements, thus the products are allowed to be traded within the community (Syafitri et al., 2022). MSMEs are business institutions that have proved to be the engine of the economy and able to withstand various crises, both national and global. Since the enactment of the JPH Law, MSMEs have confronted a new challenge, namely the obligation to have halal certification for every product marketed. However, halal certification is actually a necessity for MSMEs in an effort to develop and promote their business. Because the halal certification possessed by MSMEs is able to increase buying interest, buying and selling decisions. But still the awareness to take care of halal certification in MSMEs is still low (Rido & Sukmana, 2021).

The development of MSME in Depok is very promising, from year to year it has increased especially through the mayor's appointment program, namely the increase of 5,000 new entrepreneurs and 1,000 women entrepreneurs where this program is the mayor's appointment program until 2024, it is proven that in 2022 there are already 2,100 MSME who have been trained. Depok City was chosen as the research location with the consideration that Depok City is the most

successful city in fostering Micro Enterprises. This is the cumulative from the initial year of the strategic plan, namely in 2016 which could only be implemented in 2017 and reached 270 people, in 2018 reached 275 people, in 2019 there were 275 people and in 2020 there were 325 people. Of the 1,145 WUB participants, they were spread across 11 sub-districts, namely Beji 46, Bojongsari 62, Cilodong 312, Cimanggis 58, Cinere 8, Cipayung 67, Limo 17, Pancoran Mas 179, Sawangan 42, Sukmajaya 175 and Tapos 179 people (DKUM Performance Report, 2020).

Currently, MSME presence has made a significant contribution to the decrease of unemployment, such as reducing unemployment. But currently, only 50 MSMEs have obtained a halal certificate from DKUM (Dinas Koperasi Usaha dan Mikro) in Depok City. This means that only 1.8% of MSMEs in Depok City are halal-certified, which is a long way from the target that will be enforced in Indonesia in 2024. All food and beverage products distributed in Indonesia must have Halal certification. This provision is included in Act No. 33 of 2014 on Guarantee of Halal Products. Halal certificates are very important for small, medium, and micro businesses. If a product has passed Halal certification, it can be improved and more easily accepted by the global market. However, there are still many MSMEs in Depok who do not use it Halal certification as business ethics. Although Depok locals need halal certification as a guarantee for their proof of food or drink purchase.

Literature Review

Halal is an Arabic word that literally means "allowed" or "legal", traditionally Halal means "pure food" related to meat, especially through proper Islamic practices such as ritual slaughter and avoidance eat pork. In the modern world, halal food is no longer an expression of esoteric forms of production, trade, and consumption, but part of a vast and ever-expanding globalized market. The Qur'an and the Sunnah (the life, deeds, and teachings of the Prophet Muhammad) advise Muslims to eat good, legal food that Allah has provided for them, but also observe some prohibitions. Muslims are expressly forbidden to eat carrion, spurts of blood, pork, and holy relics of anyone but Allah. These substances are haram ("illegal" or "prohibited") in this research stated that Halal in a country such as Malaysia cannot be divorced from economic growth, the emergence of large groups of Malay Muslim middle-class consumers, and centralized state incentives to strengthen halal production, trade, and consumption (Fischer, 2011).

Hasan et al (2020) showed that they understand the role of halal certification and how halal will make them competitive in the market. Most of them are very interested in becoming a Halal-certified company, but SMEs replied that the process of becoming a Halal-certified company is expensive and complicated. According to the research Aprilia & Priantina (2022) found that the lack of information distribution and outreach about halal certification is the top issue facing South Bangka MSME actors. Puspita Ningrum (2022) conducted research on Halal certification issues confronted MSEs in Madiun Region. From a knowledge and information standpoint, the first problem is a dearth of socialization that can reach MSEs in rural areas. Second, In terms of economic, financial, and accessibility adequacy, the issue is that MSEs find it difficult to care for halal certification due to their minimal and uncertain income levels. The inaccessibility of halal certification is also hindered by the limited use of information technology during the online certification procedure. Thirds, as a legal aspect of halal certification processing, business actors lack documents as well. Fourth, From the perspective of the mentality of MSE actors, the problem is that halal certification is only available to large-income businesses, resulting in apathy and passivity in pursuing halal certification. This study aims to identify the inhibitors factors in implementing the value chain of halal certification implementation in Depok to better understand how to improve the process of halal-certified for MSME in Depok City.

In Indonesia, halal certification is crucial for business competition and consumer protection. Halal certification is a procedure undertaken to meet specific requirements. The ultimate objective of halal certification is legal and official recognition that the products sold meet halal requirements

(Lubis et al., 2022). This study is a continuation of previous research conducted in the city of Medan city. Medan city is one of the cities in Indonesia which has the largest number of Micro, Small and Medium Enterprises (MSME) in its culinary business sector and has the largest Muslim population. However, there are still many MSMEs in Medan City who have not used halal certification as ethics in doing business. Even though halal certification is really needed by the people of Medan City as a guarantee of proof that the food or drinks they buy are halal. Therefore, it is necessary to pay attention to the ecosystem, especially in terms of raw materials, auxiliary materials, processing, serving methods, and packaging to marketing.

This study aims to analyze and see whether MSMEs in Medan City have implemented the halal value chain ecosystem. This study uses a mixed method with a case study approach. Data collection techniques in this study were carried out using questionnaires, interviews, responses, and observations. The results of this study are from the results of data tabulation, at the non-critical point of halal obtaining a very good category with a total of 78.89%, which means that the raw materials and auxiliary materials used are safe and guaranteed to be halal, while at the critical point of halal obtaining a total of 15.6%, which means the management and materials used by MSMEs are not clear. So the conclusion of this study is that there are many MSMEs that run the halal ecosystem, but there are still many MSMEs that do not have halal certification due to several factors (Julistia et al., 2021).

This study employs sequential mixed techniques of explanation. The first step is a quantitative investigation of the supporting and inhibiting factors of Micro Medium Small Enterprise (MSME) in implementing the halal certification value chain. The primary data using an online questionnaire with 102 respondents has been collected. Each construct's components were measured using a seven-point Likert scale ranging and then analyzed PLS-SEM by SMART-PLS tools. The next step or phase is a qualitative analysis of primary data gathering using in-depth interviews with 8 (eight) experts selected and determined using the purposive sample technique. Participants were selected based on activity in Micro Medium Small Enterprise (MSME) in Depok City.

Method

Alan Bryan noted in the book *Mixing Methods: Qualitative and Quantitative* by Julia Brannen that the approach Quantitative has advantages and disadvantages, too qualitative research has advantages and disadvantages, and merging is the route to complete or perfect research. (Brannen, 1992). The explanatory design of this research is:

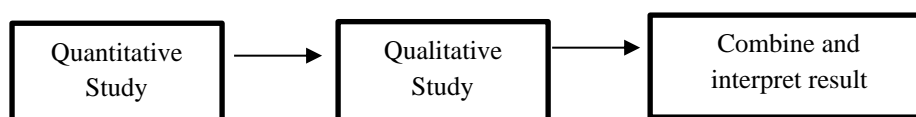


Figure 1. The Explanatory Research Design

In the first phase of the sequential explanatory design, quantitative data are analyzed, followed by qualitative data analysis in the second phase (Creswell 2014). This study employs sequential mixed techniques of explanation. The first step is a quantitative investigation of the supporting and inhibiting factors of Micro Medium Small Enterprise (MSME) in implementing the halal certification value chain. The primary data using an online questionnaire with 102 respondents has been collected. Each construct's components were measured using a seven-point Likert scale ranging and then analyzed PLS-SEM by SMART-PLS tools. The next step or phase is a qualitative analysis of primary data gathering using in-depth interviews with 8 (eight) experts selected and determined using the purposive sample technique. Participants selected based on activity in Micro Medium Small Enterprise (MSME) in Depok City.

Zuhdi, Suharjo & Sumarno (2016) utilizing Structural Equation Modeling (SEM) is one of the appropriate statistical tools for problem-solving, as it allows researchers to test and systematize the model coefficients systematically and simultaneously from the interaction between variables. Marketing, psychology, economics, psychometrics, education, economics, behavior, and other social sciences have made extensive use of SEM. Partial Least Square Structural Equation Modeling is one of the other estimation strategies in SEM (PLS-SEM). PLS-SEM is particularly advantageous when the sample size is limited (Reinartz, Haenlein, & Henseler, 2009). The SEM estimation is stated as Covariance-Based based on a strong theory (confirmation model) with a good estimate coefficient, however, in PLS-SEM it is Component-Based and flexible, which means prioritizing suspected predictive outcomes without assuming a normal distribution. PLS-SEM indicated that the minimal sample size for PLS-SEM was 30 - 100 samples. In this scenario, the sample size is tiny, as PLS-SEM has a smaller sample size than SEM (Chin et al., 1996).

Quantitative Phase

The first step is the quantitative phase, and the method employed in this study is a survey method and data gathering by questionnaire distribution. The initial step in constructing the survey was to establish the survey instrument based on past research; the independent variable is the outcome of an earlier study, specifically X1, X2, X3, X4, X5, and X6. There are 7 possible responses for each question: strongly agree (SS), agree (S), slightly agree (CS), neutral (N), slightly disagree (CTS), disagree (TS), and strongly disagree (STS). Google Forms is used to collect data via an online questionnaire, and the SMART PLS program is used for data processing. Respondents in this study were 102 people who had been actively involved at Micro Medium Small Enterprise (MSME) in Depok City. Respondents were chosen using the snowball sampling technique, and each respondent assisted in the distribution of questionnaires to other respondents.

Table 1. Dependent and Independent Variables

Variabel	Code	Items/ Indicators
Product Originality (Adopted from Yusuf et al., 2021)	X1.1	I am aware that the adoption of halal certification might raise a product's worth (Unique Selling Point)
	X1.2	More valuable products will be more appealing to consumers.
	X1.3	With the purpose of implementing halal product assurances, the availability of a halal certificate (uniqueness) has additional value in order to reaching the worldwide market.
Identity (Adopted from Nashar, 2022)	X2.4	I am aware that as Muslims we must get a halal certification for any product we purchase.
	X2.5	Indonesia, which has a majority Muslim population, should be the hub of the global halal sector.
Time (X3) (Muhlishatin, 2020)	X3.6	An issue impeding the halal certification procedure is a lack of time or a lack of availability due to a hectic schedule.
	X3.7	Regarding halal certification, the outdated procedure is "inattentive".
	X4.8	Too lengthy document handling process

Assessment Procedure (Ningrum, 2022)	X4.9	Requirements Documents that are very intricate
	X4.10	Document Incompleteness
	X5.11	Government Halal Certification for Free is still restricted.
Government (Hasan, 2020)	X5.12	Free Government Halal Certification Facility with lack of information
	X5.13	Readiness of the Federal Government to carry out its responsibilities regarding Halal certification.
	X6.14	The process of halal certification is extremely costly.
Cost (Mumtahanah, 2021)	X6.15	Fees for certification are prohibitive.
	X6.16	Fees associated with the processing of halal certificates.
	Awareness of Halal (Maryati et al., 2016)	Y1
Y2		I am aware that halal items are unquestionably hygienic.
Y3		I am aware that halal products are unquestionably safe.

Based on past studies and Table 1, it is possible to develop the following research model:

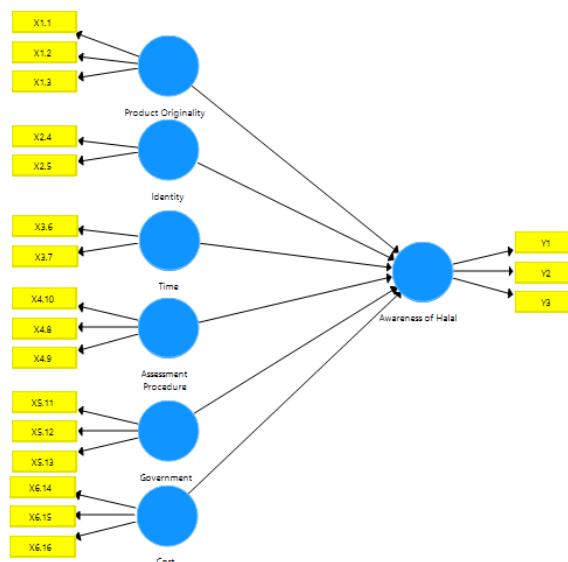


Figure 2. Research Framework

Table 2. Sample Profiles

Characteristic		N	%
Religion	Islam	102	100
	Cristian	0	0
	Catholic	0	0
	Hinds	0	0
	Budhism	0	0
	Others	0	0
Age	18-27 years	23	23%
	28-37 years	37	36%
	38-47 years	25	25%
	48-58 years	17	17%
Sex	Male	37	36%
	Female	65	64%
Highest Study	Junior High School	2	2%
	Senior High School	32	31%
	Diploma	10	10%
	Bachelor	51	50%
	Master	6	6%
	Doctor	1	1%

Table 3. Types of MSME Products

Characteristic	N	%
Culinary	65	64%
Fashion	10	10%
Creative Industry	1	1%
Farm	26	25%

Table 4. Mean, STDEV, T-Values, P-Values

Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
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Assessment Procedure -> Awareness of Halal	-0,116	-0,093	0,126	0,920	0,360
Cost -> Awareness of Halal	-0,047	-0,034	0,085	0,559	0,578
Government -> Awareness of Halal	0,205	0,228	0,081	2,537	0,013
Identity -> Awareness of Halal	0,256	0,247	0,094	2,742	0,007
Product Originality -> Awareness of Halal	0,494	0,461	0,122	4,036	0,000
Time -> Awareness of Halal	0,004	-0,007	0,132	0,032	0,975

Based on the table in the image of bootstrapping direct effects, the following can be deduced:

Direct Effects X1 Against Y

The parameter coefficient for the variable X1 on Y has a magnitude of 0.494, indicating that X1 has a positive effect on Y. Alternatively, it can be interpreted that Y will increase as X1 increase. A one-unit increase in X1 will rise Y by 49.4%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X1 on Y are 0.461 with a t-count value of 4.036 and a standard deviation of 0.122. Then the p-value is $0.000 < 0.05$, thus accept H1 or which means that the direct effect of X1 on Y is statistically significant.

Direct Effects X2 Against Y

The parameter coefficient for the variable X2 on Y has a magnitude of 0.256, indicating that X2 has a positive effect on Y. Alternatively, it can be interpreted that Y will increase as X2 increase. A one-unit increase in X2 will rise Y by 25.6%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X2 on Y are 0.247 with a t-count value of 2.742 and a standard deviation of 0.094. Then the p-value is $0.007 < 0.05$, thus accept H1 or which means that the direct effect of X2 on Y is statistically significant.

Direct Effects X3 Against Y

The parameter coefficient for the variable X3 on Y has a magnitude of 0.004, indicating that X3 has a positive effect on Y. Alternatively, it can be interpreted that Y will increase as X3 increase. A one-unit increase in X3 will rise Y by 0.4%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X3 on Y are -0.007 with a t-count value of 0.032 and a standard deviation of 0.132. Then the p-value is $0.975 > 0.05$, thus accept H0 or which means that the direct effect of X3 on Y is statistically insignificant.

Direct Effects X4 Against Y

The parameter coefficient for the variable X4 on Y has a magnitude of -0.116, indicating that X4 has a negative effect on Y. Alternatively, it can be interpreted that Y will increase as X4 decrease. A one-unit increase in X4 will decrease Y by 1.6%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X4 on Y are -0.093 with a t-count value of 0.92 and a standard deviation of 0.126. Then the p-value is $0.360 > 0.05$, thus accept H0 or which means that the direct effect of X4 on Y is statistically insignificant.

Direct Effects X5 Against Y

The parameter coefficient for the variable X5 on Y has a magnitude of 0.205, indicating that X5 has a positive effect on Y. Alternatively, it can be interpreted that Y will increase as X5 decrease.

A one-unit increase in X5 will decrease Y by 20.5%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X5 on Y are 0.228 with a t-count value of 2.537 and a standard deviation of 0.081. Then the p-value is $0.013 < 0.05$, thus accept H1 or which means that the direct effect of X5 on Y is statistically significant. The parameter coefficient for the variable X5 on Y has a magnitude of 0.205, indicating that X5 has a positive effect on Y. Alternatively, it can be interpreted that Y will increase as X5 decrease. A one-unit increase in X5 will decrease Y by 20.5%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X5 on Y are 0.228 with a t-count value of 2.537 and a standard deviation of 0.081. Then the p-value is $0.013 < 0.05$, thus accept H1 or which means that the direct effect of X5 on Y is statistically significant.

Direct Effects X6 Against Y

The parameter coefficient for the variable X6 on Y has a magnitude of -0.047, indicating that X6 has a negative effect on Y. Alternatively, it can be interpreted that Y will increase as X6 decrease. A one-unit increase in X6 will decrease Y by 4.7%. Based on calculations using bootstrap or resampling, where the results of the estimated coefficient test X6 on Y are -0.034 with a t-count value of 0.559 and a standard deviation of 0.085. Then the p-value is $0.578 > 0.05$, thus accept H0 or which means that the direct effect of X6 on Y is statistically insignificant.

Qualitative Phase

Research questions serve as the starting point for qualitative inquiry. The technique of data gathering and analysis will be determined by the study topics. The qualitative technique is dynamic, meaning that it is always amenable to modifications, additions, and substitutions during the analysis process (Srivastava & Thomson, 2009). In this second phase, this study employed a qualitative phenomenology research strategy. The number of participants who were interviewed included the following:

Table 5. The Number of Interview

Name	Institution	Position	Date/Time
R 1	Department of Cooperatives and Small Businesses Depok City	Assistant for MSME in Depok City	20/12/2022, 09.44 am - finish
R 2	Department of Cooperatives and Small Businesses Depok City	Assistant for MSME in Depok City	22/12/2022, 08.00 pm - finish
R 3	Department of Cooperatives and Small Businesses Depok City	Officer of Halal Self Declare UMKM City of Depok	21/12/2022, 08.00 am - finish
R 4	Self – Institution	MSME actor	19/12/2022, 07.36 pm - finish
R 5	Self – Institution	MSME actor	19/12/2022, 06.06 pm - finish
R 6	Self – Institution	MSME actor	19/12/2022, 09.00 am - finish
R 7	Self – Institution	MSME actor	19/12/2022, 09.30 am - finish

All participants were asked two questions, the first question is, "What are supporting factors Micro Medium Small Enterprise (MSME) in Implementing Halal Certification Value Chain in Depok

City?" and the second question is "What are inhibiting factors Micro Medium Small Enterprise (MSME) in Implementing Halal Certification Value Chain in Depok City?" The interviews last approximately fifteen–thirty minutes. Participant engagement is voluntary, and participants are questioned via telephone, zoom meetings, and face-to-face using Indonesian. In order to protect the anonymity of the participants in this study, their names, religions, and other personal information were concealed under pseudonyms. For the current research report, all participants were given the initials R1 through R7 as their identifiers.

According to (Creswell & Creswell, 2018) One of the benefits of qualitative research is validity, which is the assessment of whether the conclusions are true from the perspective of the researcher, the participant, or the audience of an account (Creswell & Miller, 2000). There are many words used to describe validity in qualitative literature, including trustworthiness, authenticity, and credibility (Creswell & Miller, 2000; Lincoln, Lynham, & Guba, 2011).

The importance of using mixed methods is that it allows us to use quantitative and qualitative data simultaneously. Second, it allows us to “mine” data further beyond the additional insights of quantitative and qualitative data. We gain additional insights by using Mixed Method Research. Insight from quantitative data, it generalizes from sample to population, i.e. by outcome, and measures the magnitude of a phenomenon or differences between groups. The insight from mixed methods is to compare the results of the two databases, and describe the quantitative measures of quality data. Next, from qualitative data, we understand the views and personal experiences of participants in a study, understand these views in a context or setting, and present the complexity of a phenomenon. (Creswell J. W., International Distinguished Scholar Webinar Series World Class University, 2021).

This study uses a mixed method because it is not enough to answer research problems or answer research questions only with quantitative data. More data is needed to expand, describe, or explain the study. Quantitative data yields specific numbers that can be analyzed statistically whereas qualitative data, such as open interviews which give the actual words of the people in the study, offer many different perspectives on the research topic and provide a complex picture of the situation. When the two are combined (quantitative and qualitative data), researchers get a very effective combination. (Aini & Nur, 2020).

Result and Discussion

The outcomes of this study are described in two stages, the first of which is a quantitative analysis and the second a qualitative analysis.

Quantitative Phase Result

Partial Least Square (PLS) is a fairly effective method of analysis because it does not rely on numerous assumptions. Data also need not be regularly distributed multivariate (categorical, ordinal, and ratio indicators can be employed in the same model), and it does not need big sample (Gozali, 2012). (Purwanto, Ardiyanto, & Sudargini) If all indicators in the PLS model meet the criteria for convergent validity, discriminant validity, and reliability test, the PLS analysis results could be utilized to assess the research hypothesis.

Convergent Validity Testing

The outer loading of each variable indicator reveals the validity of the indicator as a measurement of the variable. Good reliability is attributed to an indicator if the outer loading value for each indication is greater than 0.70 (0.5-0.6 in research on undeveloped countries). In social science research, outer loadings are usually less than 0.70, particularly when newly constructed scales are employed (Hulland, 1999). Instead of immediately removing indicators when their outer loading is less than 0.70, researchers should analyze the implications of item removal on the composite reliability and content validity of the construct. In general, indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when removing the indicator

increases the composite reliability (or the extracted average variance; see the following section) above the proposed threshold value. In deciding whether to delete an indicator, the amount to which its removal affects the content's authenticity must also be considered. On occasion, indicators with weaker outside loadings are kept due to their contribution to content validity. Indicators with extremely low outer loadings (below 0.40) can be utilized in d-fields. If the default value for Convergent Validity > 0.70 is utilized, loading values below 0.70 are eliminated from the model. (Jr, Hult, Ringle, & Sarstedt, 2017).

Table 6. Items Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE)

Variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Product Originality (X1)	X1.1	0.919	0.890	0.932	0.820
	X1.2	0.864			
	X1.3	0.933			
Identity (X2)	X2.4	0.933	0.835	0.924	0.858
	X2.5	0.919			
Time (X3)	X3.6	0.972	0.703	0.844	0.735
	X3.7	0.724			
Assessment Procedure (X4)	X4.8	0.769	0.878	0.923	0.801
	X4.9	0.948			
	X4.10	0.955			
Government (X5)	X5.11	0.829	0.711	0.835	0.628
	X5.12	0.779			
	X5.13	0.768			
Cost (X6)	X6.14	0.880	0.864	0.916	0.784
	X6.15	0.866			
	X6.16	0.911			
Awareness of Halal (Y)	Y1	0.915	0.918	0.948	0.859
	Y2	0.936			
	Y3	0.930			

In the model depicted in Table 4, all loading factors have values greater than 0.70, indicating that the constructs for all variables are no longer deleted. The construct can be concluded to satisfy the convergent validity criterion. Table 4 also demonstrates that the Composite Reliability values for all structures are greater than 0.07. Thus it can be concluded that all constructs have good reliability. By examining the Cronbach Alpha value of the construct-measuring indicator block. If the value of Cronbach Alpha is larger than 0.70, all constructs are declared reliable. Thus, it can be deduced from Table 4 that the constructs of usability and learnability have the reliability that falls within the minimum value constraints necessary. In order for all structures to be deemed dependable According to Table 4, the AVE (Average Variance Extracted) value for all constructions is greater than 0.70 except for government is 0.628 but still tolerated because more than 0.60. Therefore, there is no issue with the tested model's convergent validity.

Table 7. Discriminant Analysis Based on Fornell-Larcker Criterion

Assessment Procedure	Awareness of Halal	Charge	Government	Identity	Product Originality	Time
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Assessment Procedure	0,895						
Awareness of Halal	0,184	0,927					
Cost	0,474	0,178	0,886				
Government	0,601	0,449	0,429	0,793			
Identity	0,259	0,721	0,272	0,469	0,926		
Product Originality	0,266	0,753	0,245	0,431	0,831	0,906	
Time	0,615	0,226	0,399	0,456	0,291	0,292	0,857

**Note: Results of discriminant analysis using the Fornell-Larcker criterion. Diagonal lines represent the square root of AVE, while off-diagonal lines represent the correlation*

The AVE square root value on the Product Originality (X1) is 0.906, greater than the construct correlation value on the other latent variables. The AVE square root value on the Identity (X2) is 0,926 greater than the construct correlation value on the other latent variables. The AVE square root value on the Time (X3) is 0.857, greater than the construct correlation value on the other latent variables. The AVE square root value on the Assessment Procedure (X4) is 0.895, greater than the construct correlation value on the other latent variables. The AVE square root value on the Government (X5) is 0.793, greater than the construct correlation value on the other latent variables. The AVE square root value on the Cost (X6) is 0.886, greater than the construct correlation value on the other latent variables. The AVE square root value on the Awareness of Halal (Y) is 0.927, greater than the construct correlation value on the other latent variables. All of these are larger compared to the construct's associated values with other latent variables. It can be proved that all the research variables fulfilled the discriminant validity.

Examining the Hypothesis

The inner model is a structural model used to anticipate causal linkages (causation relationships) between latent or unmeasurable variables. The structural model (inner model) describes the causal link between latent variables constructed based on the theory's substance. Output Other tests of the model are carried out by looking at the R Square value which is a goodness-fit-model test in the PLS SEM inner model.

Table 8. R Square Value

Awareness of Halal	R Square
	0.620

The R Square value of the simultaneous or simultaneous influence of X1, X2, X3, X4, X5, and X6 on Y is 0.620. The simultaneous effect of all exogenous constructs (X1, X2, X3, X4, X5, and X6) on Y is 0.620%, or 62%. Because R Square is among 33% - 67%. Then the effect of all exogenous constructs X1, X2, X3, X4, X5, and X6 on Y is moderate.

Qualitative Phase Result

In this qualitative phase, in-depth information regarding Supporting and Inhibiting Factors Micro Medium Small Enterprise (MSME) in Implementing Halal Certification Value Chain in Depok City is gathered through in-depth interviews based on a review of relevant literature. Interviews last approximately 15 – 30 minutes. The following is a summary of the responses to open-ended questions posed to 8 participants during the interview.

Product Originality (X1)

Based on the interview for Product Originality (X1) R1 as MSME assistant in Depok City stated that the current situation is very important to carry out halal certification, both Muslims and non-Muslims. because if the target product is Muslim then it must have halal certification. Besides that, R2 as an MSME assistant in Depok City said that it is very important because halal certificates have many functions apart from guaranteeing product safety that this product is halal, besides that to create trust in the community also when participating in government tenders in food procurement, every SME must be halal certified. R3 as Halal Self Declare Officer in Depok City agrees that it is mandatory because in 2024 all halal certification is mandatory. Also, R4 as MSME actor noticed that halal certification is very important as a Muslim. Another sight from R5 as MSME actor think that halal certification is quite important. because some people are sentimental about products that are not yet halal. R6 also added that Halal-certified food tends to attract consumer willingness to a product. But, R7 as MSME actor interested if the program is already massive.

Identity (X2)

Based on the interview for Identity (X2) R1 as MSME assistant in Depok City said that halal certification as an Identity is true, the fact Indonesia is far behind to Thailand, Korea, and Japan which incidentally are not Muslim countries. Besides that, R2 as MSME assistant in Depok City agrees because as a Muslim is mandatory to have halal certification. R3 as Halal Self Declare Officer in Depok City said that Indonesia as a country with a high Muslim population must become the center of halal industry. Also, R4 as MSME actor noticed that halal certification conformed that As a Muslim, concern in halal certification is important. Another sight from R5 as MSME actor agree because Indonesia is a Muslim majority country. R6 also added that motivation to practice and spread Islamic economics. But, R7 as MSME actor supported halal certification.

Time (X3)

Based on the interview for Time (X3) R1 as MSME assistant in Depok City think that it is not the main factor. R2 as MSME assistant in Depok City added the process is accesible, there is no reason because of time. Another opinion from R3 as Halal Self Declare Officer in Depok City said that the long and complicated time makes SMEs reluctant to take care of halal certification. R4 as MSME actor confirmed that halal certification needs a long time process, which made as an inhibiting factor to process halal certification. Another sight from R5 as MSME actor agree time too lengthy. R6 also added that the process quite a long time, even for the PIRT process it takes about 3 months also confirmed by R7 as MSME actor that the time is too lengthy proceed halal certification.

Assessment Procedure (X4)

Based on the interview for Assessment Procedure (X4) R1 as MSME assistant in Depok City said that too complicated procedure. Many forms must fill out, many MSME actors are old, inattentive, and the procedure is difficult. R2 as MSME assistant in Depok City thought that managing halal licensing is very easy, especially with the addition of government programs for SMEs who want halal, especially SMEs that produce low-risk food, it is greatly facilitated. Another opinion from R3 as Halal Self Declare Officer in Depok City said that the long and complicated time makes SMEs reluctant to take care of halal certification. R4 as MSME actor confirmed that halal certification procedure is too complicated and difficult. R5 also agree that files are complicated, there must be a visit, checking the ingredients in detail. R6 same as previous opinion that complicated procedure, there was a visit, even borrowed a place when the visit was held. also confirmed by R7 as MSME actor that the procedure is too complicated.

Government (X5)

Based on the interview for Government (X5) R1 as MSME assistant in Depok City said that actually

halal certification facility is not limited, but limited information, The recommendation must join the MSME community. Many forms must fill out, many MSME actors are old, inattentive, and the procedure is difficult. R2 as MSME assistant in Depok City thought that the limited budget of the Depok city government, which resulted in MSME having to pay for it themselves. Another sight from R3 as Halal Self Declare Officer in Depok City said that lack of information from the government is one of the inhibiting factor MSME to apply halal certification. R4 as MSME actor confirmed that halal certification urgently needs government assistance. R5 also said that waited for the long turn of the government visit in halal certification process. R6 same as the previous opinion that complicated procedure. Also confirmed by R7 as MSME actor that information from the government is not comprehensive.

Cost (X6)

Based on the interview for Cost (X6) R1 as MSME assistant in Depok City said that about the cost actually Halal Certificate Application (regular): a. Micro and Small Enterprises: IDR 300,000.00 b. Medium Business: IDR 5,000,000.00 c. Large Enterprises or originating from abroad: IDR 12,500,000.00. Whether it is affordable or not is seen from the size of the MSME themselves. R2 as MSME assistant in Depok City thought that the cost of certification for private lines is quite expensive. Another sight from R3 as Halal Self Declare Officer in Depok City said that related to the costs through the self-declare route for small-scale Micro Enterprises, but due to a lack of information, they are worried that there are naughty self-declare officers, charging fees. R4 as MSME actor state that self-claim is enough for halal procedure. R5 also said that no need to pay for halal certification because it is not too urgent, it is definitely halal. R6 same as the previous opinion that for a small business the charge is quite expensive. Also confirmed by R7 as MSME actor said that it does not matter if it's affordable.

Table 9. Comparative Analysis of Quantitative and Qualitative Results

Correlation	Quantitative	Qualitative	
(H1) There is a significant relationship between Product Originality and awareness of Halal	Product Originality perception has a positive and significant effect on awareness of Halal	<p>“...The current situation is very important to carry out halal certification, both Muslims and non-Muslims. because if the target product is Muslim then it must have halal certification...,” (R1)</p> <p>“...Very important, because halal certificates have many functions apart from guaranteeing product safety that this product is halal, besides that to create trust in the community and also when participating in government tenders in food procurement, every SMEs must have halal...” (R2)</p> <p>“...I think it's mandatory, because in 2024 all halal certification is mandatory...”(R3)</p> <p>“...I think halal certification is very important as a Muslim...” (R4)</p> <p>“...I think halal certification is quite important. because some people are sentimental about products that are not yet halal...”(R5)</p> <p>“...Halal-certified food tends to attract consumer willingness to a product...”(R6)</p> <p>“...I'm interested if the program is already massive...” (R7)</p>	
	(H2) There is a significant relationship between Identity and awareness of Halal	Identity perception has a positive and significant effect	<p>“...It's true, the fact is that they lost to Thailand, Korea, Japan which incidentally are not Muslim countries...”(R1)</p> <p>“...I agree, because as a Muslim you have to have halal certification...”(R2)</p>

	on awareness of Halal	<p>“...Indonesia as a country with a high Muslim population must become the center of the halal industry...”(R3)</p> <p>“...As a Muslim, I am aware that halal certification is important to me...”(R4)</p> <p>“...I agree because we are a Muslim majority country...”(R5)</p> <p>“...motivation to practice and spread Islamic economics..” (R6)</p> <p>“...we must support this halal certification”.. (R7)</p>
(H3) There is a significant relationship between Time and awareness of Halal	Time perception has a positive and significant effect on awareness of Halal	<p>“...I don't think it's the main factor....”(R1)</p> <p>“...because in my opinion it's easy, there is no reason because of time...”(R2)</p> <p>“...the long and complicated time makes SMEs reluctant to take care of halal certification...”(R3)</p> <p>“...a long time process, made me not want to make halal certification...”(R4)</p> <p>“...time too long...”(R5)</p> <p>“...quite a long time, even for the PIRT process it takes about 3 months...”(R6)</p> <p>“...time to halal certification quite long...”(R7)</p>
(H4) There is a significant relationship between Assessment Procedure and awareness of Halal	Assessment Procedure perception has a positive and significant effect on awareness of Halal from all interviewee except R2	<p>“...Too complicated procedure. Many forms are filled out, many MSME actors are old, inattentive, and the procedure is difficult....”(R1)</p> <p>“...reluctant to implement halal certification due to lack of understanding of the flow. complicated, difficult, expensive, need assistance...”(R3)</p> <p>“...procedure is too complicated and difficult...”(R4)</p> <p>“...files are complicated, there must be a visit, checking the ingredients in detail...”(R5)</p> <p>“...complicated procedure, there was a visit, I even borrowed a place when the visit was held...”(R6)</p> <p>“...the procedure is too complicated..”(R7)</p>
(H5) There is a significant relationship between government and awareness of Halal	Government perception has a positive and significant effect on awareness of Halal	<p>“...Not limited, but limited information. They must join the MSME community...”(R1)</p> <p>“...The limited budget of the Depok city government, which resulted in MSME having to pay for it themselves...”(R2)</p> <p>“...lack of information from the government...”(R3)</p> <p>“...urgently need government assistance..”(R4)</p> <p>“...waiting for the long turn of the government visit”(R5)</p> <p>“...long procedure...”(R6)</p> <p>“...information from the government is not comprehensive...”(R7)</p>
(H6) There is a significant relationship between Cost and awareness of Halal	Cost perception has a positive and significant effect on awareness of Halal	<p>“...Halal Certificate Application (regular): a. Micro and Small Enterprises: IDR 300,000.00 b. Medium Business: IDR 5,000,000.00 c. Large Enterprises and/or originating from abroad: IDR 12,500,000.00. Whether it is affordable or not is seen from the size of the MSME themselves...” (R1)</p> <p>“...The cost for certification for private lines is quite expensive...”(R2)</p> <p>“...actually related to costs through the self-declare route for small-scale Micro Enterprises, but due to a lack</p>

of information, they are worried that there are naughty self-declare officers, charging fees...” (R3)

“...I think self-claim is enough because I'm sure it's definitely halal...” (R4)

“...no need to pay for halal certification because it's not too urgent, it's definitely halal...” (R5)

“...for a small business like me is quite expensive...” (R6)

“...it doesn't matter if it's affordable...” (R7)

Based on the results of the sequential explanatory method analysis and the data from the aforementioned recapitulation table, it is determined that the quantitative technique yields the same outcomes as the qualitative way. This indicates that qualitative procedures support the outcomes of quantitative methods.

Conclusion

In accordance with Law No. 33 of 2014 and its derivatives, three categories of products must be halal-certified as the first phase concludes. First, there are sustenance and beverage items. Second, food and beverage base materials, food additives, and auxiliary materials. Thirdly, slaughtering products and services. On the basis of the foregoing, we must support Indonesia's bid to become the world's halal center, given that Indonesia's Muslim population is very large. Despite numerous efforts, such as the provision of free halal certification training and facilities for Micro, Small, and Medium-Sized Enterprises (UMK) actors, the rate of halal certification adoption has yet to meet expectations.

Government, Identity, and Product Originality are Significant with Halal Awareness, as supported by both quantitative and qualitative research above. Therefore, it is preferable for the government variable to increase the quota for halal certificates again, to widely disseminate information about halal certification, and to increase its preparedness for implementing halal certification. Consequently, the Identity variable indicates that respondents are aware of the significance of halal certification, given that Indonesia has a sizable population and is recognized as a global halal center. In the Variable of Product Originality, respondents are aware that having a halal certification becomes a Unique Selling Point and the product becomes more valuable, and they concur that having a halal certification will facilitate entry into the global market. This study used a sample of 102 respondents. for the next can be done with a wider sample. This research was conducted in Depok City. Suggestions for conducting in-depth research related to the driving and inhibiting factors of the halal value chain in other regions.

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