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# Academia Open



*By Universitas Muhammadiyah Sidoarjo*

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## Halal Compliance Driven by Awareness, Knowledge, Convenience, and Producer Attitude

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### Abstract

**General Background:** The increasing demand for halal-certified products underscores the importance of regulatory compliance among micro, small, and medium enterprises (MSMEs). **Specific Background:** In Indonesia, especially in regions like Deli Serdang, halal certification among MSMEs remains limited despite supportive policies. **Knowledge Gap:** Few studies empirically assess the behavioral and cognitive factors influencing halal certification compliance at the MSME level. **Aims:** This study aims to examine the relationship between halal certification compliance and four factors: halal awareness, knowledge, convenience, and producer attitudes among MSMEs in Deli Serdang Regency. **Results:** Using a quantitative descriptive approach with multiple linear regression on data from 100 purposively sampled participants, the study found that knowledge and convenience significantly affect compliance ( $p = 0.000$ ), while awareness and producer attitudes do not ( $p = 0.100$  and  $0.120$ ). Collectively, these factors explain 69% of the variance in compliance ( $R^2 = 0.690$ ,  $p = 0.000$ ). **Novelty:** The research uniquely combines psychological and practical constructs to analyze halal certification behavior, providing a comprehensive behavioral framework. **Implications:** These findings offer actionable insights for policymakers, certification authorities, and MSME stakeholders to design targeted training and regulatory support aimed at enhancing halal compliance and reducing certification barriers.

### Highlights :

- Highlights the dominant role of knowledge and convenience in halal certification compliance.
- Reveals that awareness and attitude alone do not ensure compliance.
- Offers policy insights to improve MSME halal practices through targeted interventions.

**Keywords:** Halal Awareness, Halal Certification, MSME Compliance, Producer Attitudes, Halal Knowledge

# Academia Open

Vol 10 No 1 (2025): June (In Progress)

DOI: 10.21070/acopen.10.2025.11301 . Article type: (Business and Economics)

Published date: 2025-06-23 00:00:00

## Introduction

To address the rapid growth of micro, small, and medium enterprises (MSMEs), the Indonesian government has implemented halal regulations, as stated in Law Number 33 of 2014 concerning Halal Product Assurance. The regulation explicitly states that “ownership of halal certification, which was previously voluntary, is now mandatory.” The majority of Indonesia’s population is Muslim, meaning that these regulations are necessary to ensure that Muslim consumers follow the Quranic requirements to consume only halal (permitted) and tayyib (healthy) foods and avoid haram (forbidden) items, as stated in al-Baqarah: 172. According to the Quran, halal encompasses many different concepts, including but not limited to: tidiness, safety, nutrition, virtue, creation, pre-production processes, honesty, trustworthiness, and food administration as well as other monetary and social issues. Halal techniques should not include synthetic products made from pork or alcohol, as well as these two essential ingredients. Islamic teachings describe halal goods as healthier, more hygienic, and tastier than haram alternatives, which is why halal cuisine is so popular and acceptable [1].

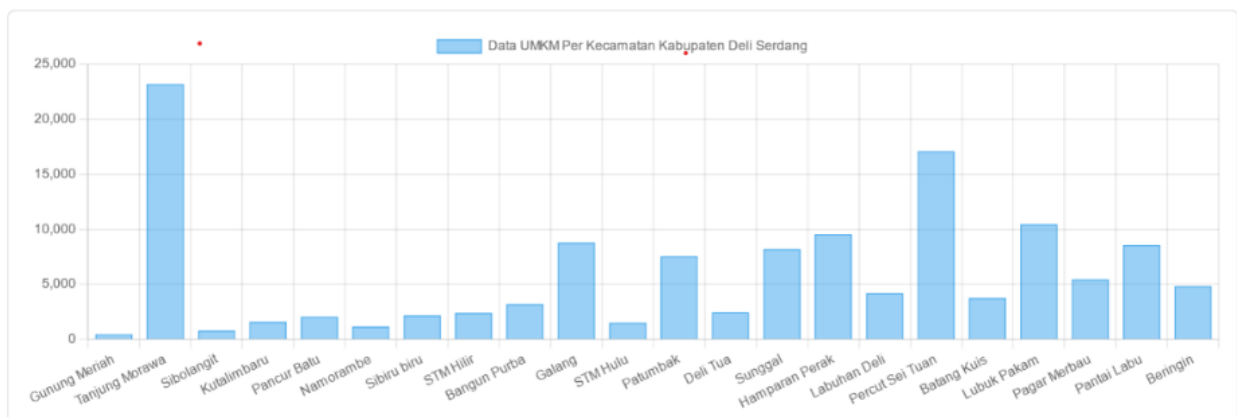
Halal certification of a product is an important indicator of its halalness, which influences consumer choices when shopping for food and other products. Obtaining halal certification for its products is still a challenge for Indonesian MSMEs [2]. Halal certification not only increases the competitiveness of producers, but also assures Muslims in Indonesia that the food and drinks they consume are safe. This accreditation makes it easier for Muslims to find and choose goods that are halal, healthy, and in accordance with Islamic law. Because food businesses can suffer financial losses and even go bankrupt if customers do not buy, fulfilling their desires is of the utmost importance [3]. Manufacturers are required to comply with strict regulations set by the government to apply for halal certification from a certification body. The law on halal product assurance contains these rules. In 2021, the government passed a copyright law, which made the process of applying for halal certification easier and cheaper [4].

Companies are categorized as micro, small, or medium enterprises (MSMEs) based on criteria including number of employees, revenue, or asset value. While many countries use different ways to categorize MSMEs, the most common scales are micro, small, and medium enterprises [5]. Due to their significant influence on employment, innovation, economic development, and social welfare, micro, small, and medium enterprises (MSMEs) play an important role in this regard [6]. Micro, small and medium enterprises (MSMEs) play a vital role in the economy by providing employment opportunities and tax revenues. The large number of MSMEs in Indonesia's food and beverage industry is a testament to the diversity of the country's food business landscape.

It seems that consumers do not care whether the food they buy is halal or not. Similarly, the halal status of food produced by MSME companies or stakeholders is often ignored. Many food producers assume that their products do not require halal certification because they use safe ingredients. Food products do not necessarily become halal just because they contain safe ingredients; this is especially true if halal factors are not taken into account during the production and delivery process [7].

This lack of concern can not only damage a company’s reputation but can also alienate Muslim consumers. Businesses can protect their clients from substandard food and increase the market competitiveness of their products by following halal certification guidelines. Attracting customers who prioritize halal standards and opening doors to a larger market are two major benefits of obtaining halal certification. So, business owners must understand that halal certification is more than just a formality; it is an essential part of their social obligation.

## Grafik Seluruh UMKM Di Kabupaten Deli Serdang





## Figure 1. Graph of All Deli Serdang MSMEs

The graph shows that Deli Serdang has a variety of MSMEs, including MSMEs in the food and beverage sector and other sectors. Each sub-district has its own MSMEs, and not all of them comply with halal licensing. Among micro, small, and medium enterprises (MSMEs), only 6% have consistent certification policies. This illustrates the gap between the increasing demand for halal goods in the market and the level of MSME compliance with certification requirements.

Several previous studies have revealed that the level of understanding and knowledge of business actors regarding halal certification has a significant influence on their decision to apply for halal certification. For example, Khairawati et.al 2025 [8] study found that the low level of understanding of MSME actors is one of the main challenges in the halal certification process. A similar thing was also revealed by Anas et.al 2023 [9], who stated that limited understanding of halal standards causes low interest in certification among small business actors. However, not all research results are consistent; several studies such as by Maulana et.al 2022 [10] show that halal understanding is not always significantly weakened by certification decisions, but is influenced by external factors such as convenience services and incentives from the government. On the other hand, studies in Malaysia focus more on consumer preferences for halal products than on business actors' compliance with certification [11].

Unlike previous studies that tend to be general or focus on national or international areas, this study specifically describes MSME compliance with halal certification in Deli Serdang Regency an area with a high variety of culinary businesses but a low level of certification. The uniqueness of this study lies in its approach that combines analysis of internal factors such as the level of awareness, understanding, and attitudes of MSME actors with external factors such as ease of access to halal certification services. By highlighting that only 6% of MSMEs comply with certification policies, this study provides a more contextual and in-depth empirical contribution to understanding the gap between halal regulations and the reality of their implementation at the local level.

Knowing the percentage of MSMEs in Deli Serdang Regency that have halal certification is the main objective of this study. To find out, researchers will examine factors such as the level of awareness, understanding, convenience, and positive attitudes of producers towards halal.

## Method

This research falls into the category of quantitative research. Instead of looking at the process, quantitative research uses a value-free framework to measure and analyze causal relationships between several variables [12]. The core of the quantitative approach is the collection of numerical data or other data that can be analyzed quantitatively. Using purposive sampling based on criteria, from a total population of 17,062 individuals from sub-districts in Deli Serdang Regency which is home to a high concentration of culinary MSMEs. this study uses a Likert scale as a measurement scale for the questionnaire distributed. For this project, the sample size will be determined using the Slovin technique which provides a margin of error of 10%. The formula is:

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{17.062}{1 + (17.062 \times 0,1^2)}$$

$$n = \frac{17.062}{1 + (170,62)}$$

$$n = 99,4$$

Where:

n = sample size

N = population size (17.062)

e = error rate (10% atau 0.1)

Slovin's formula states that a sample size of 99.4 (rounded to 100) is required.

Data analysis in this study was conducted using multiple linear regression to determine the effect of independent variables, namely halal awareness (X1), halal knowledge (X2), convenience (X3), and producer attitude (X4) on halal certification compliance (Y) as the dependent variable. Data processing was carried out using SPSS software to obtain more accurate and systematic results. The results of the regression analysis show the extent to which each independent variable contributes significantly to the dependent variable. In this case, the regression coefficient obtained can indicate a positive or negative relationship and statistical significance of each independent variable on the level of halal certification compliance. With this approach, researchers can draw conclusions about the dominant factors that influence producer compliance with halal certification, as well as provide a basis for policy recommendations or strategies to improve compliance in the future.

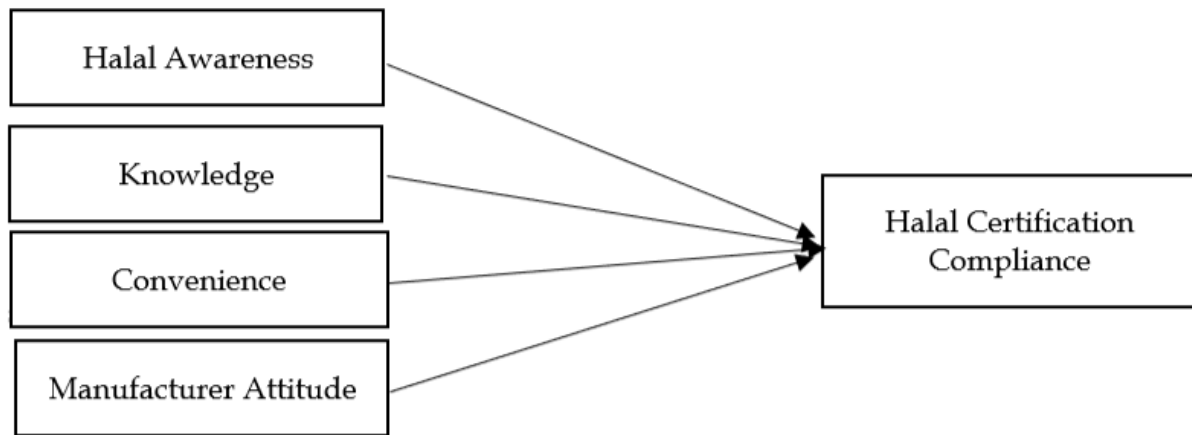


Figure 2.

## Results and Discussion

### A. Result

#### 1. Descriptive Results of Respondents' Answers

Descriptive Statistics			
	Mean	Std. Deviation	N
Halal Certification Compliance	14.1800	2.40530	100
Halal Awareness	17.8300	1.88591	100
Knowledge	15.8600	2.35282	100
Convenience	11.7300	3.43145	100
Manufacturer Attitude	16.8600	2.33558	100

**Table 1.** Descriptive Results of Respondents' Answers

The majority of respondents appear to have a deep understanding of halal procedures, as evidenced by the highest mean score for halal understanding (17.83). The variable 'Convenience' has the most widespread opinions on how to obtain halal certification or goods, with the lowest mean score (11.73) and the largest standard deviation (3.43). Halal Certification Compliance, Knowledge, and Manufacturer Attitude all have close mean scores, indicating that respondents may view these factors as interrelated.

#### 2. Validity Test

The results of the SPSS-based validity test with one hundred respondents showed that  $r_{table}$  was given by  $df = n - 2$ , with  $n$  as the total sample size. The degrees of freedom ( $df$ ) estimated as  $100 - 2 = 98$  gave an  $r_{table}$  value of 0.196 when tested at a significance level of 0.05 with a sample size of 100.

Item Pernyataan	Nilai R Tabel	Nilai R Hitung	Keterangan
Halal Awareness (x1)			
X1_1	0,196	0,537	Valid
X1_2	0,196	0,857	Valid
X1_3	0,196	0,834	Valid
X1_4	0,196	0,525	Valid
Knowledge (X2)			
X2_1	0,196	0,818	Valid
X2_2	0,196	0,840	Valid
X2_3	0,196	0,713	Valid
X2_4	0,196	0,395	Valid

Convenience (X3)			
X3_1	0,196	0,871	Valid
X3_2	0,196	0,903	Valid
X3_3	0,196	0,893	Valid
X3_4	0,196	0,875	Valid
Manufacturer Attitude (X4)			
X4_1	0,196	0,649	Valid
X4_2	0,196	0,821	Valid
X4_3	0,196	0,859	Valid
X4_4	0,196	0,640	Valid
Halal Certification Compliance UMKM (Y)			
Y1	0,196	0,814	Valid
Y2	0,196	0,836	Valid
Y3	0,196	0,552	Valid
Y4	0,196	0,817	Valid

**Table 2.** Summary of Validity Test Results

There is not a single item in the table whose value is less than or equal to the r-table value of 0.196. The components of the instrument can be guaranteed to function properly.

### 3. Reliability Test

The reliability of the questionnaire is a measure that can be used to evaluate the signal of a variable. When the respondent's response to the statement in the questionnaire does not change over time, we can trust the results (Ghozali, 2016). To determine the dependence, Cronbach's alpha is used. The dependence of each variable is confirmed by Table 4, which shows that all Cronbach's Alpha values exceed 0.6.

Variables	Cronbach Alpha	Kriteria	Results
Halal Awareness	0,649	0,6	Reliable
Knowledge	0,679	0,6	Reliable
Convenience	0,907	0,6	Reliable
Manufacturer Attitude	0,724	0,6	Reliable
Halal Certification Compliance	0,748	0,6	Reliable

**Table 3.** Summary of Reliability Test Results

### 4. Classical Assumption Test

#### a. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	1.33969568
Most Extreme Differences	Absolute	.065
	Positive	.059
	Negative	-.065
Test Statistic		.065
Asymp. Sig. (2-tailed)		.200c,d

**Table 4.** Normality Test Results

The Kolmogorov-Smirnov test was used to determine whether the study was typical. Table 4 shows that the data showed normality, because the significance level of 0.200 is greater than 0.05.

### b. Multicollinearity Test

Researchers in this study used the VIF Tolerance and Variance Inflation Factor metrics to measure the level of multicollinearity. Here are the results.

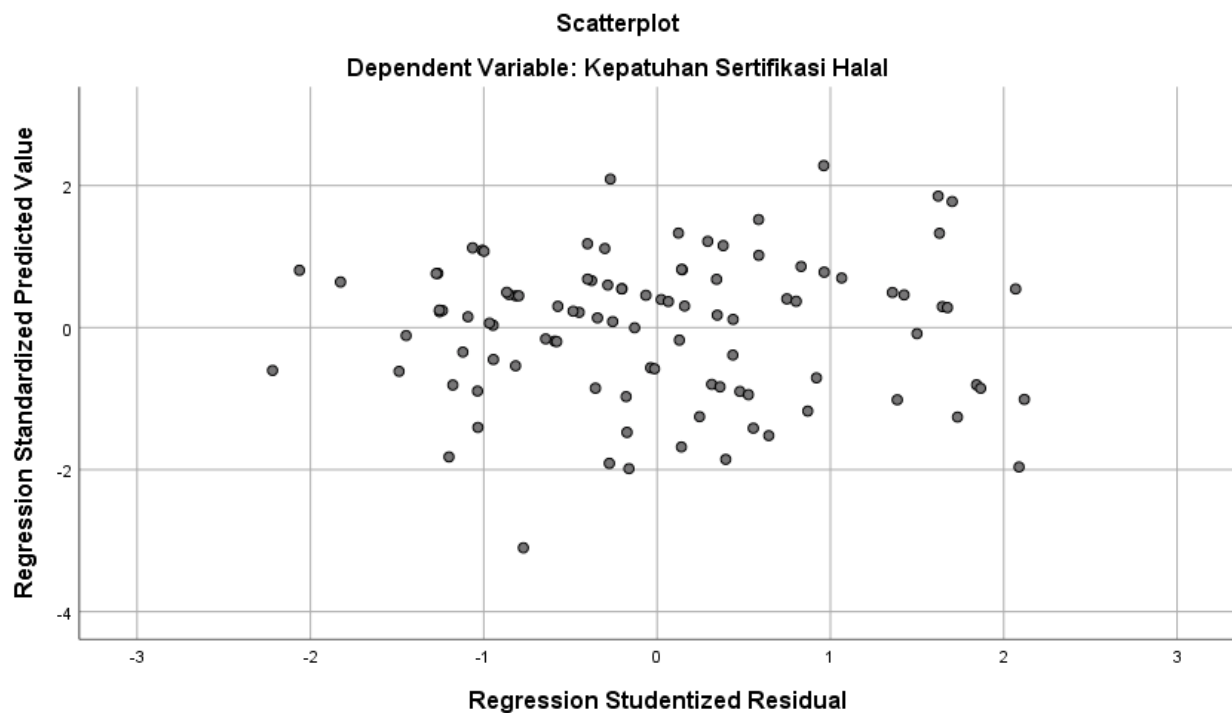
		Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.112	1.497		-.075	.941		
	Halal Awareness	.133	.080	.104	1.663	.100	.829	1.207
	Knowledge	.429	.085	.420	5.067	.000	.476	2.102
	Convenience	.253	.054	.361	4.647	.000	.542	1.844
	Manufacturer Attitude	.127	.081	.124	1.571	.120	.527	1.897
a. Dependent Variable: Halal Certification Compliance								

**Table 5.** Multicollinearity Test Results

X1, X2, X3, and X4 have VIF values of 1.207, 2.102, 1.844, and 1.897, respectively, according to the data in the table above. X1, X2, X3, and X4 have ranges of 0.829, 0.476, 0.542, and 0.527, respectively. If the VIF is below 10 but the limit is greater than 0.10, then it is ignored.

### c. Heteroscedasticity Test

To find out if there is inequality, the heteroscedasticity test is used. differences in the regression model from one observation to the next. The residual variation must be constant across all data points for the regression model to be considered good. To detect heteroscedasticity, this study uses a scatter diagram. The following is a summary of the results:



**Figure 3.** Heteroscedasticity Test Results

The following is shown in the scatter diagram output image:

- a) Instead of being concentrated in one place, the data points are scattered around the value 0, or above it.
- b) There is no clear structure in the arrangement of the data points, either expanding or contracting.
- c) Patterns cannot be detected in the organization of the data set.
- d) The absence of heteroscedasticity in the regression model indicates that the model is successful and suitable for use.

## 5. T Test

To determine the individual (partial) impact of the independent variable, the t-test is used. The working hypothesis of the t-test:

- a. If the Sig. value < 0.05 or t count > t table then there is an influence of variable X on Y.
- b. If the Sign. value > 0.05 or t count < t table then there is no influence of variable X on Y.

Finding the t-table value is a prerequisite for running a t-test. We will compare the t-table value with the calculated t-value provided by SPSS. Here is the formula for getting the t-table value:

$$df = n - k$$

$$df = 100 - 4$$

df = 96 Then the t table is 1.984

The next step is to find the t-count after you have determined the t-table values. The examiner calculates the following t-count values for X1, X2, X3, and X4 after running the data through SPSS.

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.112	1.497		-.075	.941
	Halal Awareness	.133	.080	.104	1.663	.100
	Knowledge	.429	.085	.420	5.067	.000
	Convenience	.253	.054	.361	4.647	.000
	Manufacturer Attitude	.127	.081	.124	1.571	.120
a. Dependent Variable: Halal Certification Compliance						

**Table 6.** T-Test Results

Table 6 provides the necessary information, which allows to understand:

- a. Significance value more than 0.05 (0.100 > 0.05) and t count lower than t table value (1.663 < 1.984) indicates that halal Knowledge has no impact on Halal Certification Compliance.
- b. Significance value below 0.05 (0.000 < 0.05) and t count higher than t table value (5.067 > 1.984) indicates that Knowledge significantly and positively influences compliance with halal certification.
- c. Significance value for impact on Convenience compliance with halal certification more than 0.05 (0.000 < 0.05) and t count greater than t table value (4.647 > 1.984), indicating positive and substantial effect.
- d. The significance value is more than 0.05 (0.120 > 0.05) and the calculated t is lower than the t table value (1.571 < 1.984) indicating that Manufacturer Attitude has no effect on Halal Certification Compliance.

## 6 . F Test

One way to find out how many independent factors affect the dependent variable at the same time is to use the F test. To calculate the F table, use the following formula:

$$df 1 = \text{total variables} - 1 = 5 - 1 = 4$$

df 2 = total respondents - total variables = 100 - 4 = 96 (2.47)

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	395.076	4	98.769	52.808	.000b
	Residual	177.684	95	1.870		
	Total	572.760	99			
a. Dependent Variable: Halal Certification Compliance						
b. Predictors: (Constant), Manufacturer Attitude, Halal Awareness, Convenience, Knowledge						

**Table 7.** *F Test Results*

Table 7 shows that there is a positive and statistically significant relationship between the dependent variable (Halal Certification Compliance) and the independent factors (Halal Awareness, Knowledge, Convenience, and Manufacturer Attitude). This is evidenced by the estimated F value of  $52.808 > 2.47$  and a significance value of  $0.000 < 0.05$ . This refutes  $H_0$  and supports  $H_a$ . Therefore, the level of manufacturer compliance with Halal Certification is positively and significantly influenced by awareness, expertise, Convenience of use, and Manufacturer Attitude.

## 7. Test of Determination Coefficient

Model Summary b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831a	.690	.677	1.36761
a. Predictors: (Constant), Manufacturer Attitude, Halal Awareness, Convenience, Knowledge				
b. Dependent Variable: Halal Certification Compliance				

**Table 8.** *Results of the Determination Coefficient Test*

Based on the statistics in the table above, there is a strong positive correlation. Factors such as Halal Awareness, Knowledge, Convenience, and Manufacturer Attitude explain 69% of the variation in Halal Certification Compliance, according to the adjusted R-squared value of 0.690. Other variables explain the remaining 31%.

## B. Discussion

### 1. The Influence of Halal Awareness on Halal Certification Compliance of Deli Serdang MSMEs

Halal knowledge does not seem to have a significant influence on MSME compliance in Deli Serdang Regency towards halal certification based on the results of the hypothesis test. This shows that MSME actors are aware of the importance of halal goods, but have not fully taken steps to comply with halal certification requirements. This may occur because local consumers do not yet see halal certification as an urgent need at this time, or because the importance of halal certification is not yet fully understood.

This result is in line with previous research by [7] which also found that whether or not a product is halal certified is not greatly influenced by halal awareness. According to Ajzen's Theory of Planned Behavior (TPB), this finding is in line with the idea that observation and Knowledge alone are not enough to influence behavior itself; a strong intention and a sense of control over the action are also needed. In this case, even though MSMEs have Knowledge about halal, they may not be able to apply their Knowledge due to misunderstandings about the certification process or their assumption that halal certification is not important. In addition, according to Herzberg's motivation theory, awareness is more of a maintenance component than a primary motivator; without other driving forces such as incentives or market needs, awareness cannot drive compliance.

Therefore, the author argues that there should be a more practical way to raise awareness of halal procedures among MSMEs in Deli Serdang. It is not enough to just understand the basics; one must also be critically aware of the consequences of doing business without halal certification and be able to transform this understanding into real compliance.

### 2. The Influence of Knowledge on Halal Certification Compliance

Theoretical tests in the study show that data plays an important role in determining the compliance of MSMEs in Deli Serdang Regency with halal certification. If MSME actors have a good understanding of halal certification, how to apply, and its benefits, then they will find it easier to follow the rules and complete the halal certification

process correctly.

This finding is in line with the research results of Faizal et.al [13] and Fuadi et.al [14] which shows that business actors' compliance with the halal certification method is largely influenced by their level of Knowledge. With all the facts that have been presented, MSME actors can understand the various legal issues and business opportunities related to halal certification, thus encouraging them to carry out the certification process seriously.

Johan Fischer's research on halal training in Singapore provides theoretical support for this conclusion by highlighting the importance of Knowledge as a primary requirement for halal certification. Fischer in Tawil et.al [15] explained that in order to empower business actors and operators to be able to confidently undergo the certification process, a deep understanding of halal raw materials, sharia-compliant production practices, and the rules set by the certification body is essential. The ability of MSME actors to perfect the production process according to recognized halal standards is increasing thanks to this information.

In addition, Mathew et.al [16] also emphasized that the overall performance of the halal process in production depends on internal elements such as human resources and competence. The knowledge of company stakeholders about halal requirements and their technical competence in implementing halal standards are examples of such internal factors.

The author argues that to improve compliance with halal certification, the main emphasis of the plan should be on increasing awareness among MSME stakeholders. Formal socialization, direct technical assistance in the field, and easily accessible online learning are part of what the government and related organizations must do to improve education and training programs. To overcome the various obstacles that have so far prevented MSMEs from meeting halal certification standards, comprehensive education is needed. As a result, as people learn more and change their habits to be more compliant, halal products will be more credible and customers will be able to meet their criteria for halal certification.

### **3. The Influence of Convenience on Halal Certification Compliance**

The results of this research hypothesis testing indicate that MSME compliance in obtaining halal certification is greatly influenced by how simple the halal certification method is. According to this study, MSME participants are more likely to comply with halal certification standards if the procedures and related services are easy to obtain. A number of factors contribute to Convenience of use, such as easy-to-understand information, straightforward administrative procedures, reasonable prices, and the availability of technical support and direct assistance from appropriate organizations.

This research is in line with previous studies, such as those conducted by Azis et.al [17] and Widayat et.al [18] who consistently found that companies are more likely to participate in halal certification if the certification process is easy to access and understand. Since MSME participants often view the official certification process as long, complicated, and full of bureaucracy that can hinder compliance, this simplicity acts as an incentive for them to participate.

The PBC framework, which is an important part of the Theory of Planned Behavior, may provide insight into these results [19]. Personal Best Choice (PBC) is a measure of how easy or difficult something is to do. When it comes to halal certification, companies are more likely to adhere to the process if they perceive it to be easy and accessible. This is because they will have more control over their perceptions, which in turn will increase their intentions and behavior. Compliance tends to decrease if the technique is perceived as difficult and complicated.

In addition, the Technology Acceptance Model (TAM) developed by Davis (1989) is also very relevant in this context, especially the concept of ease of use or Convenience of use. The positive attitude of users towards a new system or technique is influenced by their perception of Convenience of use, according to the Technology Acceptance Model. Consequently, adoption choices are influenced by this perception. Participants from SMEs are more likely to follow the required certification norms if they perceive the halal certification process to be easy.

Access to support services, effective outreach, and financial assistance mechanisms (such as subsidies for certification costs and accelerated capital assistance applications) all contribute to this sense of Convenience, along with the technical aspects of the process. Due to limited resources and expertise, many MSMEs are unable to reach their full potential; therefore, they need extensive support.

According to the author, the government and halal certification bodies should simplify the certification process and provide opportunities for technical assistance if they want MSMEs to improve their compliance with halal certification. Simplifying the process reduces administrative barriers and eases the mental burden and anxiety of business members over processes they find difficult. With direct assistance, MSMEs will be able to overcome technical challenges faster and have more motivation to complete the certification process.

As MSMEs hesitate or delay in obtaining halal certification due to internal and external barriers, this Convenience technique will play a vital role in removing these barriers. By making it easier for customers to comply, MSME halal goods will gain credibility and be more competitive in the international and domestic markets.



## 4 . The Influence of Manufacturer Attitude on Halal Certification Compliance

Based on the test results, there is no significant relationship between Manufacturer Attitude and Halal Certification Compliance. The test results do not show a strong relationship between Manufacturer Attitude and compliance, so the null hypothesis is rejected.

This research is in line with the views of Yunus et.al [20] which emphasizes that local cultural factors, lack of awareness, and pragmatic viewpoints of MSME stakeholders can hinder the halal certification process, even though producers generally support the idea. Without a strong desire, external support, or an accurate understanding of the benefits of certification, a positive attitude alone will not guarantee action.

In the context of theory, these results can be explained through the Theory of Planned Behavior which states that among the three main factors that influence the desire to behave, attitude is in third place, behind subjective norms and perceived behavioral control [21]. Self-confidence in one's own abilities, along with a positive attitude, is essential for producers to comply with halal certification standards. However, if this self-confidence is lacking, it may be due to limited resources, expertise, or technical assistance.

In addition, additional clarification can be found in the Expectancy Value Theory. This theory states that actions will be taken by individuals when they perceive that the outcome of an endeavor is valuable and within their reach. However, not all producers will feel compelled to comply with the administrative procedures of halal certification if they determine that the benefits are inadequate or unimportant to their target market.

Khalek et.al [21] also stated that individual perspectives on policies or goods are highly subjective and can change depending on their life events. Here, producers may not show a strong commitment to the halal certification process, instead being neutral or even apathetic.

Using these results as a basis, the authors suggest streamlining the certification process, providing financial incentives, increasing practical understanding, and fostering positive attitudes as a means to improve compliance. Even if producers' opinions about certification are not entirely solid, it is important to help generate their intentions and actions.

Therefore, it is reasonable to assume that the mindset of producers is not the main factor influencing compliance with halal certification in this study. Overall, MSMEs' compliance with halal certification procedures is likely to be more influenced by other factors, such as technological difficulties, declining perceptions of benefits, and inadequate external incentives.

## 5 . The Influence of Halal Awareness, Knowledge, Convenience and Producer Attitudes Towards Halal Certification Compliance of MSMEs

This study found that four independent variables, namely halal awareness, Knowledge, Convenience, and Manufacturer Attitude, substantially influence the level of compliance with the halal certification process among MSMEs. The findings of simultaneous testing are presented in this study. Business actors' compliance with halal certification is not the result of just one factor, but rather the result of a complex interaction between cognitive, affective elements, and perceptions of the external environment, as well as mutually reinforcing moral and religious awareness.

Halal awareness is the religious and moral understanding of the importance of halal products by MSMEs, which motivates them to participate in certification of their own accord. The cognitive factor is provided by Knowledge, which is a technical understanding of the halal certification process and its benefits. When people talk about how easy something is to use, they mean external aspects such as methods, facilities, and access that make certification easier to do. Meanwhile, Manufacturer Attitude represents the emotional component, which includes values and sentiments held, along with the desire to follow halal standards.

This finding is in line with the research of Nukeriana et.al [22] which confirms that all these factors work together to influence the producer's decision to achieve halal certification with utmost dedication and perseverance. It will be more difficult to improve compliance by only improving one aspect without also strengthening the other parts.

These findings are relevant to eclectic philosophy, which seeks to explain human behavior by integrating internal and external factors. According to this idea, an individual's social and environmental settings, as well as their internal experiences, interact in complex ways, and this in turn determines their behavior. These findings are in line with what is referred to as the Theory of Planned Behavior (TPB) paradigm. Conformity to halal certification, according to the Theory of Planned Conduct, is the result of an intention formed by a combination of positive attitudes toward an activity, perceived behavioral control, and subjective norms, which include halal knowledge as part of social and moral standards.

The influence of these four elements on compliance behavior is strengthened and magnified when they interact simultaneously and synergistically. This confirms that a holistic and coordinated approach is needed to improve Halal Certification Compliance, with an emphasis on increasing Knowledge and ethical awareness, simplifying



procedures, and strengthening positive attitudes of producers.

According to the author, there needs to be systematic coordination and accuracy between the government, the Indonesian Ulema Council (MUI), the Halal Product Guarantee Agency (BPJPH), and MSME community activities. The training and socialization provided must teach technical skills while encouraging halal awareness and positive attitudes. At the same time, to reduce procedural barriers, it is necessary to increase the accessibility of certification services by digitizing the process, providing technical assistance, and subsidizing certification costs.

Through the implementation of this comprehensive plan, we aim to increase the number of MSMEs that obtain halal certification and ensure long-term compliance. In addition, social norms and positive pressures for compliance behavior can be strengthened by strengthening the MSME community network that promotes halal certification.

Based on these findings, it appears that driving MSME Halal Certification Compliance is highly dependent on a combination of internal and external factors working together to drive consistent and long-term compliance.

## Conclusion

This study concludes that the level of MSME compliance with halal certification in Deli Serdang Regency is significantly influenced by knowledge and convenience factors, while halal awareness and producer attitudes do not show a significant influence. The results of the analysis show that although MSME actors are aware of the importance of product halalness, this has not been able to encourage real action in fulfilling halal certification obligations. Adequate knowledge of certification procedures and ease of accessing certification services have proven to be the main drivers for business actors to comply with regulations. Simultaneously, the four factors halal awareness, knowledge, convenience, and producer attitudes contribute 69% to the variation in halal certification compliance, indicating that a holistic approach is needed to improve MSME compliance. Therefore, synergy between the government, BPJPH, MUI, and the MSME community is crucial in developing strategies to improve education, simplify procedures, and provide incentives so that the halal certification process becomes more affordable, easy, and responded to positively by business actors.

### Acknowledgement

The active involvement of respondents in providing their perspectives and thoughts was crucial to the completion of this study. Their openness to share knowledge and experiences has greatly enhanced the results of this study. For their support and approval of this work, I am very grateful to the State Islamic University of North Sumatra. The ethical compliance and smoothness of this study were made possible by the support and facilitation of the university. My deepest gratitude goes to all those who have provided significant assistance and motivation during my studies, especially to my supervisors. Their guidance and support are greatly appreciated and have played a significant role in the successful completion of our project.

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