

Halal Certification Awareness Perceptions in Indonesian Food SMEs: An Investigation on Understanding, Knowledge, Impact, and Regulations

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Abstract. *The importance of Small-Medium Enterprises (SMEs) perception towards halal food certification needs to be evaluated. This study aims to assess food SMEs perception of their understanding, knowledge, impact, and regulation of halal certificates. Understanding halal food certification is important in the context of obedience to halal food standards and SMEs business continuity. As many as 67 SMEs that produce food and beverages in Malang City, Indonesia, were surveyed to collect relevant data. This survey consists of 4 factors and 19 indicator questions, using a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Analysis shows that SMEs have a high understanding and confidence toward halal products and recognize the importance of halal certification. However, this study's main discovery is that SMEs know little about halal food regulation and socialization. This discovery implies that socialization and education about procedures and rules need extra effort. This study contributes to SMEs' perception of halal food certification in Indonesia. It highlights the challenges SMEs face towards halal certification in Indonesia to increase obedience toward halal standards.*

Keywords: *halal certification, awareness, perceptions, indonesian food SMEs*

I. INTRODUCTION

Halal Certification is a mandatory act for entrepreneurs, especially for small and Small-Medium Enterprises (SMEs) that produce food in Indonesia because Indonesia is a Muslim-majority country (Giyanti et al., 2021). Based on data from the Central Bureau of Statistics (BPS), Indonesia's total number of Muslims is 229 million, or around

87% of the total population, in 2020 (BPS, 2021). Therefore, awareness about halal certification is important for food SMEs to attract Muslim consumers (Ruslan et al., 2018). However, the lack of awareness among food producers about the importance of selling food with halal certification causes most Indonesian products not to have halal certification [(Haleem et al., 2020) (Oemar et al., 2022)]. The level of halal awareness among food SMEs is caused by their knowledge about halal and their perception of the benefit of halal certificates. A higher awareness would impact SMEs intention to get halal certification (Septiani & Ridlwan, 2020) (Siswara et al., 2022). Nevertheless, misunderstanding the procedures to get a halal certificate slowed the registration process (Khan et al., 2022). Because of that, learning about the understanding, knowledge, impact, and regulation of food SMEs is important to decrease the lack of awareness and misunderstanding of food SMEs and to promote halal-certified food production and sale in Indonesia.

Understanding halal certification is important for food SMEs in Indonesia to improve Muslim consumer belief and loyalty that dominate the Indonesian market (Ambali & Bakar, 2014). Study

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shows that business people with a low understanding of halal certificates negatively impact Muslim consumer belief (Rajagopal et al., 2011). The lack of awareness and knowledge about halal certificates can also harm food SMEs business continuity because it can cause a loss of belief and potential consumers (Dawam & Iswandi, 2023). Moreover, a lack of understanding and knowledge of the procedure and benefits of halal certification causes a low interest in SMEs to register for halal certification (Said et al., 2014). Whereas, without a halal certificate, food SMEs have difficulty surviving and developing. Because of that, increasing the understanding and knowledge about halal certification is important. Conversely, halal certification regulation must be clear and strict and can also push interest in halal certification registration in Indonesian SMEs (Latif et al., 2014). Therefore, increasing proper understanding, knowledge, and regulation can support SMEs continuity and competitiveness.

Some past studies give an important understanding of halal certification and food SMEs. AmbaliBakar (2014) and Nuratifah et al. (2019) highlighted the importance of SMEs' awareness of halal certification. JaffarMusa (2014) and AhmadovaAliyev (2021) studied the behavior and food industries' views on halal certification. Meanwhile, Zailani et al. (2010) stated the benefit of halal certification in influencing SMEs awareness and intention to register. The problem of applying for halal certification is identified by Khan et al. (2019) and bin Md Rodzi et al. (2023) have studied highlighting food SMEs' obstacles. Supportive environment and government on halal certification, also investigated by Suparti et al. (2020) and YakubZein (2022). On the other hand, Sudarsono et al. (2024) and Usman et al. (2022) highlighted the religious role in registering halal certification by SMEs. This study gave a strong foundation for understanding factors that influence awareness and implementation of SMEs halal certification, which became the main focus of this study.

Most of the past studies focused on halal certification from a consumer perspective. However, consumers have a significant role in halal product demand, and there have been few

studies about producer perception awareness, especially in SMEs. Because of that, a gap in the study needs to be filled, especially in the producer's perspective and understanding of Halal certification. Besides that, as far as we know, no study explores food SMEs' halal certification on perception awareness in Indonesia that investigates some aspects, for example, understanding, knowledge, impact, and regulation. With this study gap, this study hopefully could give a deeper comprehension of the perception level of food SMEs in Indonesia toward understanding, knowledge, impact, and regulation of halal certification.

The main focus of this study is to evaluate food SMEs levels of perception in Indonesia towards halal certification understanding, knowledge, impact, and regulation. Through a direct SMEs survey in Indonesia, this study will collect relevant data to measure how far their understanding and knowledge about halal certification, as well as the impact of understanding on their business. Besides that, this study will analyze their perception of halal certification regulation, such as the challenges and obstacles they face in obeying those regulations. The contribution of this study hopefully could give a better understanding and knowledge of Indonesian food SMEs halal certification. Thus, this study will give wider knowledge valuable for stakeholders, government, halal certification institutions, business associates, and food SMEs to plan the rule and strategies that effectively support halal certification implementation on the SMEs level. Furthermore, this study can be a step for the next studies in this field and also become a foundation for developing training programs or education to increase the understanding and awareness of food SMEs towards halal certification. Thus, this study hopefully can positively contribute to strengthening SMEs fiid on fulfilling halal standards and increasing local or international competitiveness.

II. RESEARCH METHOD

This study utilizes a survey research design to investigate the perception of halal awareness among small and medium-sized enterprises (SMEs) in the food and beverage sector in Malang, Indonesia. 67 food and beverage SMEs were successfully surveyed to collect relevant data. Respondents were randomly selected from the population of SMEs that had not previously obtained halal certification to gain a deeper understanding of their views on halal awareness.

The research instrument was a survey of 4 factors and 19 indicator questions. Each question was assessed using a Likert scale, where respondents were asked to rate the extent to which they agreed or disagreed with the given statements, ranging from 1 (strongly disagree) to 5 (strongly agree) (Bell et al., 2022). The factors and indicators used to measure the perception of halal awareness can be found in Table 1.

The validity and reliability of the research instrument were thoroughly examined. The validity of each question indicator was assessed

based on the "sig" or significance value ($\text{sig} < 0.05$), indicating whether these items were statistically valid [25]. In addition, reliability was measured using Cronbach's alpha criteria for each calculated factor. Cronbach's alpha values above 0.600 indicated adequate reliability for the collected data (Agustianti et al., 2022).

Data analysis presented the average perception scores for each factor and indicator from the completed survey. Furthermore, an ANOVA test was performed to determine the factors with the highest and lowest perceptions in the context of halal awareness among food and beverage SMEs in Malang. This analytical method was designed to provide an in-depth understanding of the studied context's perception patterns and influencing factors.

III. RESULT AND DISCUSSION

Validity and Reliability Test

The results of the validity and reliability testing of factors and indicators are presented in Table 2. These results depict that all items show a

Table 1. Factors and Indicators of Awareness in SMEs in Indonesia

Factor	Indicator	Code
Understanding and Convictions of SMEs Regarding Halal Products	SMEs or producers understand the halal status of products.	X1
	SMEs or producers comprehend the importance of producing halal products.	X2
	Muslim SMEs or producers are convinced to produce halal products.	X3
	SMEs or producers believe that all food and beverage products consumed by Muslims must be halal.	X4
	SMEs or producers believe that their products are halal food and beverages.	X5
Knowledge about Halal Certification.	SMEs or producers are aware of the criteria for halal products.	X6
	SMEs or producers believe that the ingredients used are guaranteed to be halal.	X7
	SMEs or producers are willing to register their products to obtain halal certification.	X8
	SMEs or producers are knowledgeable about the procedures to obtain halal certification.	X9
	SMEs or producers are aware of the importance of halal certification.	X10
Impact of Halal Certification for SMEs	SMEs or producers believe that the halal certificate/label will increase sales.	X11
	SMEs or producers believe that the halal certificate/label will increase profits.	X12
	SMEs or producers believe that halal products are more beneficial than non-halal products.	X13
	SMEs or producers believe halal products ensure cleanliness, safety, and quality.	X14
Knowledge of Regulations and Socialization	SMEs or producers know Law No. 33 of 2014 regarding the obligation to obtain halal certification.	X15
	SMEs or producers know whether the halal certification submission scheme is self-declared or regular.	X16
	SMEs or producers know the requirements and process of applying for halal product certification.	X17
	SMEs or producers are aware of the authorized institutions for issuing halal certification.	X18
	SMEs or producers have received socialization about halal certification.	X19

Table 2. Validity and reliability of factors and indicators

Factor	Indicator	code	Validity (sig)	Validity (r-count)	Reliability (Cronbach alpha)
Understanding and Convictions of SMEs Regarding Halal Products	SMEs or producers understand the halal status of products.	X1	0.000	0.680	0.840
	SMEs or producers comprehend the importance of producing halal products.	X2	0.000	0.879	
	Muslim SMEs or producers are convinced to produce halal products.	X3	0.000	0.897	
	SMEs or producers believe that all food and beverage products consumed by Muslims must be halal.	X4	0.000	0.833	
	SMEs or producers believe that their products are halal food and beverages.	X5	0.000	0.833	
Knowledge about Halal Certification	SMEs or producers know the criteria for halal products.	X6	0.000	0.419	0.722
	SMEs or producers believe that the ingredients used are guaranteed to be halal.	X7	0.022	0.279	
	SMEs or producers are willing to register their products to obtain halal certification.	X8	0.000	0.723	
	SMEs or producers know the procedures to obtain halal certification.	X9	0.000	0.781	
	SMEs or producers are aware of the importance of halal certification.	X10	0.000	0.614	
Impact of Halal Certification for SMEs	SMEs or producers believe that the halal certificate/label will increase sales.	X11	0.000	0.865	0.712
	SMEs or producers believe that the halal certificate/label will increase profits.	X12	0.000	0.910	
	SMEs or producers believe that halal products are more beneficial than non-halal products.	X13	0.000	0.619	
	SMEs or producers believe halal products ensure cleanliness, safety, and quality.	X14	0.000	0.468	
Knowledge of Regulations and Socialization	SMEs or producers know Law No. 33 of 2014 regarding the obligation to obtain halal certification.	X15	0.000	0.909	0.957
	SMEs or producers know whether the halal certification submission scheme is self-declared or regular.	X16	0.000	0.960	
	SMEs or producers know the requirements and process of applying for halal product certification.	X17	0.000	0.956	
	SMEs or producers are aware of the authorized institutions for issuing halal certification.	X18	0.000	0.871	
	SMEs or producers have received socialization about halal certification.	X19	0.000	0.928	

significant level of validity, with significance values (sig) ranging from 0 to 0.022 and r-values between 0.279 and 0.957. These results indicate that all items have a significant relationship with the measured factors. In the context of this research, sig values less than 0.05 are considered significant, meaning that these items can be regarded as valid.

Furthermore, reliability is measured using Cronbach's alpha for each factor in the study. The alpha values range from 0 to 1, where higher

values indicate better reliability. Generally, alpha values above 0.7 are considered acceptable, above 0.8 are considered good, and above 0.9 are considered excellent. The "Understanding and Beliefs about Halal Products" factor shows good reliability (Cronbach's alpha = 0.84), indicating consistency in measuring the same concept.

The "Understanding of Halal Certification" factor shows sufficient reliability (Cronbach's alpha = 0.722), indicating an adequate level of consistency in measurement. Furthermore, the

factors "Impact of Halal Certification for SMEs" and "Understanding of Regulations and Socialization" show excellent reliability (Cronbach's alpha is 0.712 and 0.957, respectively), indicating very high measurement consistency.

All indicators demonstrate strong validity based on significance and r-values from the validity and reliability tests. Additionally, the reliability of the factors in the study indicates an adequate level of consistency, even very high in some cases, based on Cronbach's alpha values.

Perception of Halal Awareness for Each Factor

From the research results presented in Figure 1, it can be observed that perceptions of aspects of Halal Awareness among SMEs can provide a clear picture of their level of understanding and awareness of Halal products. Regarding SMEs' knowledge and beliefs about halal products, the average perception score reaches 4.854, approaching the maximum value of 5. It indicates that SMEs strongly understand and believe in halal products. This belief may serve as a strong foundation for facing challenges and requirements related to halal products. Regarding knowledge about halal certification, the average score reaches 4.221, indicating a fairly good level of knowledge among SMEs. However, this score is slightly lower than their understanding of halal products, suggesting there is still room for improvement in their knowledge of the halal certification process. It can be a focus for SMEs to deepen their knowledge to obtain halal certification.

Regarding the impact of halal certification on SMEs, the average score reaches 4.366, reflecting positive perceptions from SMEs. They believe that halal certification positively impacts business operations and consumer perception of their products. Although this score is slightly lower than the understanding of halal products, it still indicates strong agreement among SMEs. Regarding knowledge of regulations and socialization of halal certification, the average score only reaches 2.943, the lowest among the factors examined. It indicates a slight disagreement or even uncertainty among SMEs

regarding regulations and the socialization process of halal products. It highlights the need to improve the understanding and information received by SMEs about applicable regulations and appropriate socialization strategies related to halal products.

The results of ANOVA analysis show significant variations in the perceptions held by SMEs regarding the tested factors, such as Knowledge of Regulations and Socialization, Knowledge of Halal Certification, Impact of Halal Certification for SMEs, and Understanding and Beliefs of SMEs Regarding Halal Products. The obtained F value from the ANOVA test is 66.882, with a very low significance level of 0.000, indicating a significant difference in average perceptions between the tested groups. The comparison of average perceptions in the ANOVA test, as seen in Table 3, also shows a significant difference in perceptions among the examined factors. In particular, SMEs' Perception of halal products and their knowledge of halal certification shows a very substantial difference, with a significance value approaching zero. It indicates that the average responses between these two groups are significantly different. Similarly, knowledge about regulations and socialization also shows a significant difference in perception compared to understanding and beliefs about halal products and the impact of halal certification on SMEs.

However, when comparing the impact of halal certification for SMEs with knowledge of regulations and socialization, the results show no significant difference ($p = 0.733$). It indicates that SMEs perceive the impact of halal certification and knowledge of regulations and socialization as aspects that have a similar effect on their operations or that both factors have parallel influences in their perception.

Group analysis based on Tukey HSD, listed in Table 4, shows that the Understanding and Beliefs of SMEs Regarding Halal Products is the factor with the best perception, with an average perception of 4.8537. In contrast, Knowledge of Regulations and Socialization is the factor with the lowest average perception, namely 2.9433. Overall, the results of ANOVA analysis and this

Table 3. Comparison of Average Perceptions in ANOVA Test.

(I) Factor	(J) Factor	Sig.	Decision
Understanding and Convictions of SMEs Regarding Halal Products	Knowledge about Halal Certification	0.000	There is a difference in perception.
	Impact of Halal Certification for SMEs	0.003	There is a difference in perception.
	Knowledge of Regulations and Socialization	0.000	There is a difference in perception.
Knowledge about Halal Certification	Impact of Halal Certification for SMEs	0.733	There is no difference in perception.
	Knowledge of Regulations and Socialization	0.000	There is a difference in perception.
Impact of Halal Certification for SMEs	Knowledge of Regulations and Socialization	0.000	There is a difference in perception.

Table 4. Group based on Tukey HSD

Factor	Subset for alpha = 0.05		
	1	2	3
Knowledge of Regulations and Socialization	2.9433		
Knowledge about Halal Certification	4.2209		
Impact of Halal Certification for SMEs	4.3657		
Understanding and Convictions of SMEs Regarding Halal Products	4.8537		
Sig.	1	0.733	1

group indicate important insights for policy-makers or stakeholders in understanding key areas that require more attention in the development and socialization of halal products and related regulations. Differences in perceptions among the examined factors can be a basis for more targeted measures to improve understanding and implementation of halal practices among SMEs in Indonesia.

From this analysis, it can be concluded that SMEs understand and believe in halal products and recognize the importance of halal certification. The level of understanding regarding halal certification among food SMEs in Indonesia is high, driven by several relevant reasons. AmbaliBakar (2014) note that most food SMEs in Indonesia know the importance of halal certification in attracting Muslim consumers who dominate the domestic market. A high understanding of the benefits of halal certification to enhance competitiveness and business sustainability also stimulates SMEs' interest in applying for halal certification for their products, as stated by Abdelsamie *et al.* (2014). Specifically, the implementation of halal certification programs has drawn attention from various Muslim-majority and non-Muslim countries,

significantly increasing awareness and demand for halal products in the market (Silalahi, 2024).

Additionally, the efforts of the Indonesian government to emphasize the importance of halal certification through legislation and regulations have created awareness of obligations and compliance among SMEs (Effendi, 2022). The perspective of halal certification as a tool to strengthen purchasing interest and enhance consumer trust also contributes to SMEs' high level of understanding (Dawam & Iswandi, 2023) (Astuti *et al.*, 2023). Thus, this high understanding indicates that food SMEs in Indonesia widely accept and understand the importance of halal certification in their business context.

Based on the research results regarding the perceptions of food SMEs in Indonesia towards halal certification, it was found that the level of knowledge of SMEs about the regulations and socialization of halal certification is still low. The complex certification process and the lack of guidance and assistance provided to SMEs are the main factors hindering their understanding of these regulations (Giyanti & Indriastiningsih, 2019). Limited access to information and resources on halal certification also contributes to low knowledge among food SMEs (Arifin, 2020). Other causes include the lack of socialization and

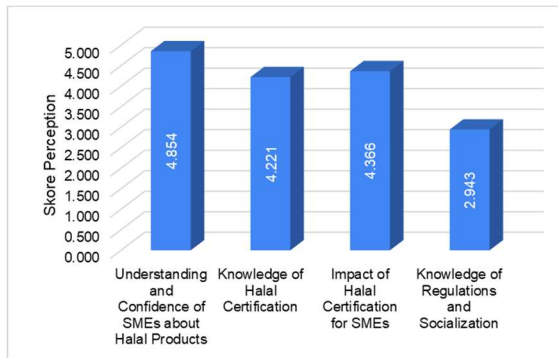


Figure 1. Perception of each factor

education conducted by the government and related institutions regarding the procedures and processes of halal certification that are not yet optimal and comprehensive (Puspaningtyas, 2021). Furthermore, understanding various government regulations and policies related to the obligation of halal certification for food SMEs is also lacking. The low level of knowledge about regulations and socialization impacts the limited interest of SMEs in registering for halal certification. Thus, it can be concluded that efforts to improve the understanding and knowledge of food SMEs about halal certification need to be enhanced through more intensive socialization and more effective guidance and assistance.

Perception of Halal Awareness for Each Indicator

Based on the research results presented in Figure 2, the analysis of perception scores for each factor reveals an interesting picture. In the factor of understanding and belief of SMEs about halal products, indicators in this area show high average scores, indicating that respondents tend to agree or strongly agree with statements related to understanding and beliefs about halal products. The highest score is found in the indicator "SMEs or Muslim producers believe in producing halal products" (X3) (4.910), indicating the highest level of agreement and strong belief in the importance of producing halal products. However, the indicator "SMEs or producers understand the halal status of products" (X1) has the lowest score (4.761), although it still indicates a very high level of understanding. Regarding

knowledge about halal certification, the average scores tend to vary. The indicator "SMEs or producers know the procedure to obtain halal certification" (X9) has a lower score (3.119) compared to other variables in the knowledge factor. It indicates that SMEs have less knowledge about the procedures for halal certification and the process to obtain it, although they understand the importance of halal certification.

In terms of the impact of halal certification on SMEs, respondents show positive perceptions, with the indicators "SMEs or producers believe that halal products are more beneficial than non-halal products" (X13) and "SMEs or producers believe that halal products are guaranteed cleanliness, safety, and quality" (X14) having high average scores (4.642 and 4.687), indicating a belief that halal products have more benefits. However, the indicator "SMEs or producers believe that the halal certificate/label will increase profits" (X12) has a score of 4.000, indicating a lack of confidence in the increased profits from halal certification. Meanwhile, the factor of knowledge about regulations and socialization shows much lower average scores compared to other factors, indicating a gap in SMEs' knowledge about halal certification regulations. All scores below 3.0 indicate disagreement with statements about their understanding of halal regulations and socialization. The indicator with the lowest score is "SMEs or producers know the scheme for submitting halal certification, either self-declare or regular" (X16) with a value of 2.791, followed by the indicator "SMEs or producers know the requirements and procedures for submitting certification for halal products" (X17) with a score of 2.866.

The research results indicate that the SMEs who responded have a high understanding and belief in the importance of halal products. The highest score is found in the indicator "SMEs or Muslim producers believe in producing halal products" (X3). It indicates that most food SME producers in Indonesia are Muslim, hence having a strong belief in producing products that comply with Islamic law, especially regarding the halal status of their products (Zulfa et al., 2023). The high score in this indicator is driven by the

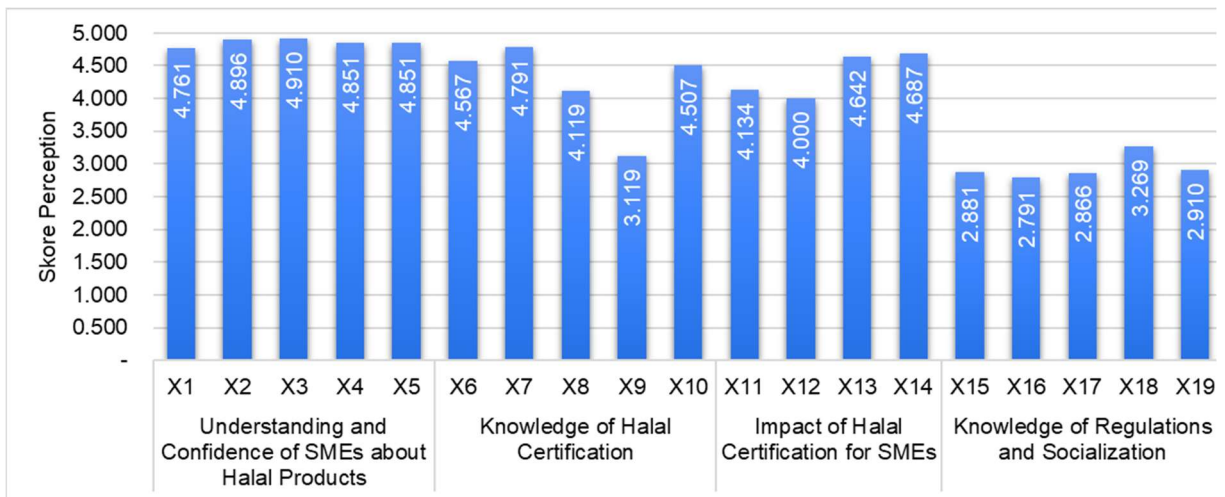


Figure 2. Perception of each indicator

religious awareness of Muslim SME business owners about the obligation to produce halal products for Muslim consumers. Additionally, the understanding that halal products are a primary necessity for Muslim consumers in Indonesia also motivates Muslim SME producers to ensure the halal status of their products (Prayuti, 2020). Thus, Muslim business owners' internal beliefs and motivations become dominant factors driving efforts to produce halal products for their consumers.

However, more attention is needed to improve SMEs' knowledge of halal certification regulations and socialization, as this area has lower average scores. The indicators with the lowest scores are "SMEs or producers know the scheme for submitting halal certification, either self-declare or regular" (X16) and "SMEs or producers know the requirements and procedures for submitting certification for halal products" (X17). SMEs in the Indonesian food industry still have significant knowledge deficiencies regarding the submission process and requirements related to halal certification (Giyanti & Indriastiningsih, 2019). Both indicators are crucial points in the halal certification process that directly impact the success of SMEs in obtaining certification. Therefore, more attention is needed to improve SMEs' understanding of halal certification regulations and socialization so they can better understand the certification submission scheme

and the requirements to obtain halal certification (Tumiwa et al., 2023). Efforts to improve knowledge of these indicators can help Indonesian food SMEs be more successful in halal certification and, in turn, enhance their competitiveness and business sustainability.

Research Implications

The theoretical implications of this research refer to consumer awareness and understanding theories and the compliance and regulatory influence theory in the context of halal certification for SMEs in the food industry in Indonesia. The results of the analysis indicate that SMEs have a high understanding and belief in halal products, aligning with consumer awareness theory. It suggests that SMEs understand the importance of meeting halal standards to fulfill the increasing demand for halal products. However, the results also reveal that the knowledge level of SMEs about halal certification regulations and socialization is still low. These findings indicate that, despite SMEs being aware of the importance of halal certification, they may still face constraints in understanding and following the required certification processes. It underscores the government's and related institutions' importance in providing greater guidance and support to SMEs in understanding halal certification regulations and procedures. Thus, the compliance and regulatory influence

theory emphasizes the need for measures to enhance the knowledge and understanding of SMEs regarding halal certification regulations, enabling them to comply with requirements more effectively and obtain halal certification efficiently. With a better understanding of halal regulations, food SMEs in Indonesia can enhance their compliance with halal standards, improve the credibility of their products in the market, and enhance their competitiveness in the increasingly competitive food industry.

The practical implications of this analysis are that food SMEs in Indonesia exhibit a high understanding and belief in halal products, acknowledging the importance of halal certification. However, the finding that their knowledge level about halal certification regulations and socialization is still low highlights the need for appropriate education and training strategies. These steps are essential to help improve SMEs' knowledge and understanding of halal certification procedures, processes, and regulations so that they can fully leverage the benefits of halal products and ensure compliance with existing standards. Therefore, intensive efforts to enhance socialization and education related to halal certification must be carried out so that food SMEs can improve their knowledge and awareness and effectively implement halal certification in their business operations. Thus, these measures are expected to enhance food SMEs' competitiveness and sustainability in an increasingly competitive market.

IV. CONCLUSION

Overall, this research successfully revealed the level of perception of food SMEs in Indonesia regarding the understanding, knowledge, impact, and regulation of halal certification. The analysis results indicate that although SMEs have a high understanding and belief in halal products and acknowledge the importance of halal certification, their level of knowledge about the regulations and socialization of halal certification is still low. The implications of these findings highlight the need for more intensive efforts to enhance SMEs' understanding and awareness of the procedures,

regulations, and requirements for halal certification.

Limitations of this research include the use of specific factors in the analysis and the sample employed. The study restricted the factors influencing SMEs' perceptions of halal certification, so there is a possibility that other unconsidered factors exist. Additionally, the sample used may not represent the entire population of food SMEs in Indonesia, requiring careful consideration when generalizing the findings. For future research, it is recommended to broaden the scope of factors considered in the analysis, including external factors such as environmental and market factors that may influence SMEs' perceptions of halal certification. Furthermore, future research could expand its sample to encompass more geographical regions and types of food SMEs to obtain a more representative understanding of these perceptions. Thus, subsequent research could provide a more comprehensive and reliable insight into the factors affecting food SMEs' perceptions of halal certification in Indonesia.

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