

“Unlocking barriers and strategies of halal certification for micro and small enterprises in Indonesia: Analytic network process approach”

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UNLOCKING BARRIERS AND STRATEGIES OF HALAL CERTIFICATION FOR MICRO AND SMALL ENTERPRISES IN INDONESIA: ANALYTIC NETWORK PROCESS APPROACH

Abstract

This study aims to identify and prioritize the barriers and strategies to improve halal certification accessibility for micro and small enterprises (MSEs) in Indonesia. The paper utilized the analytic network process (ANP) to model interrelationships among barriers and strategies. Data were collected through structured interviews and surveys involving representatives from halal certification bodies (e.g., BPJPH), government agencies (e.g., DKUM Depok), and experts from academia specializing in halal certification and MSE development. The findings highlight three major barriers: financial constraints, regulatory complexities, and limited awareness among MSE owners. Financial constraints include high certification fees and costs associated with compliance. Regulatory complexities stem from the intricate procedures and bureaucratic inefficiencies in the certification process, which deter small businesses from participating. Additionally, limited awareness and understanding of halal certification's importance and procedures exacerbate the problem, particularly among MSEs in rural or underdeveloped regions. Financial support, regulatory reforms, and educational programs emerged as the most critical strategies for overcoming these barriers. Specifically, reducing certification fees and simplifying regulatory procedures were deemed essential to increase the uptake of halal certification among MSEs. By integrating actionable insights, this study provides a roadmap for policymakers to foster a supportive ecosystem for MSEs in the halal economy. The recommendations emphasize a balanced approach that combines financial assistance, regulatory reforms, and educational initiatives to address the multifaceted barriers. This analysis contributes to the broader discourse on enhancing MSE participation in the halal market, offering implications for both local and international stakeholders seeking to optimize the halal certification process.

Keywords

certification, barriers, strategies, market access, microenterprises, financial supports, regulation

JEL Classification

L26, M38, K23, O17

INTRODUCTION

Micro and small enterprises (MSEs) are crucial drivers of economic development in Indonesia, contributing significantly to both employment and national income. According to the Indonesian Chamber of Commerce and Industry, MSEs account for approximately 99% of all businesses in the country, employing more than 97% of the workforce (Kadin Indonesia, n.d.). Despite their dominance in the economy, many of these enterprises struggle to compete in both local and international markets, particularly in sectors where compliance with stringent quality and safety standards is necessary. One such requirement is a halal certification (Nissa, 2024), which is essential for businesses looking to tap into the growing global halal economy, valued at over USD 2.8 trillion in the coming years (Dinar Standard et al., 2024).

In Indonesia, halal certification has become mandatory under the Halal Product Assurance Law No. 33 of 2014, which requires products, particularly in the food, beverage, and cosmetic sectors, to comply with Islamic law (Aziz et al., 2019). However, many struggle to comply with halal certification (Pratikto et al., 2023; Saima et al., 2024).

The existing literature highlights several challenges faced by MSEs in obtaining halal certification. High certification costs are a primary concern, especially for small-scale businesses with limited capital (Prawiro & Fathudin, 2023). Additionally, the complexity of the application process, which involves multiple steps and interactions with various regulatory bodies, creates a bureaucratic burden that is difficult for MSEs to navigate (Simbolon & Hidayat, 2021). Moreover, many MSE owners lack adequate knowledge and awareness of halal certification requirements and its benefits, further compounding the issue (Khasanah et al., 2024; Sukoso et al., 2022). These barriers are exacerbated by the fact that Indonesia's halal certification process has not yet been fully streamlined, despite recent regulatory reforms.

A large percentage of MSEs remain uncertified due to these hurdles. While the Indonesian government has introduced a "zero-tariff" program to waive certification fees, the complexity of the process, including a lack of sufficient halal auditors and bureaucratic inefficiencies, continues to hinder progress (Khasanah et al., 2024). Despite offering 349,834 self-declared halal certifications to ease access for MSEs, by the end of 2022, only 119,662 had utilized the opportunity, reflecting a significant gap in uptake. The government aims to improve this through continued financial subsidies and awareness campaigns, but the success of these measures remains to be seen (Arsyianti & Aurahma, 2023). Recent studies have underscored the importance of halal certification for improving market access, especially as consumer demand for halal products continues to grow (Abdul Latiff et al., 2016; Jaiyeoba et al., 2020; Jumani & Sukhabot, 2020; Muhnidin & Br. Pinem, 2024).

This study addresses these issues using the analytic network process (ANP) to analyze the interdependencies among barriers and strategies. It aims to provide actionable recommendations for increasing MSE participation in the halal market.

1. LITERATURE REVIEW

The global demand for halal-certified products has grown significantly, driven by both the increasing Muslim population and the recognition of halal as a mark of quality, safety, and ethical production. Halal certification refers to the process of verifying that products comply with Islamic dietary laws, including ensuring the absence of forbidden substances and the use of permissible methods in production. This certification is particularly important for Muslim consumers, who require assurance that their consumption aligns with religious principles (Vanany et al., 2020).

Halal certification not only plays a crucial role in satisfying the spiritual needs of Muslim consumers but also presents an opportunity for businesses to enter a rapidly expanding market (Jaiyeoba et al., 2020; Tumiwa et al., 2023). The demand for halal certification has grown beyond Muslim-majority coun-

tries, influencing global markets, particularly in regions with significant Muslim populations, such as Southeast Asia, the Middle East, and parts of Europe.

Moreover, halal certification serves as a tool for maintaining consumer trust and enhancing brand reputation. Companies that obtain this certification often see a competitive advantage in the global marketplace (Abdul Latiff et al., 2016; Elseidi, 2018; Kurniawati & Savitri, 2020; Parvin Hosseini et al., 2020). In many countries, especially in Southeast Asia, halal certification is a prerequisite for product acceptance, making it an essential business strategy.

The regulatory and procedural challenges associated with halal certification are among the most significant barriers to MSEs. In countries like Indonesia, where the implementation of the Halal Product Assurance Law (UU JPH) requires all consumable products to be halal certified, the bureaucratic complexity and financial burdens

can discourage small businesses from pursuing certification (Kusnadi, 2019; Mohammad, 2021). Jamaluddin et al. (2022) and Naisabur and Putra (2024) further emphasize that many MSEs, especially in rural areas, lack adequate knowledge about the halal certification process, contributing to low compliance rates.

Moreover, the fragmentation of halal standards across different countries complicates the certification process for MSEs aiming for international expansion. According to Ohgata (2023), the absence of standardized global halal guidelines often requires businesses to obtain multiple certifications to meet the demands of different markets, increasing costs and operational complexity. This lack of harmonization also undermines the potential for MSEs to efficiently scale their operations in the halal market.

Additionally, the complexity and cost of the halal certification process can act as barriers, particularly for micro small enterprises (MSEs). These businesses often struggle with compliance due to limited financial resources and a lack of understanding of certification procedures (Pratikto et al., 2023). In Indonesia, MSEs account for a significant portion of the economy, and their challenges in obtaining halal certification hinder broader market access and development (Dawam et al., 2023).

Several strategies have been proposed to address these barriers and enhance the accessibility of halal certification for MSEs. One commonly recommended solution is the harmonization of halal standards across regions, which would reduce the need for multiple certifications and streamline market entry for small enterprises. Collaborative efforts between governments, halal certification bodies, and international organizations could foster a more unified approach, enabling MSEs to navigate the global halal ecosystem more easily (Muhamad et al., 2017; Ohgata, 2023; Saima et al., 2024).

In addition, technological innovations such as blockchain and digital certification platforms have gained attention as tools for improving transparency and reducing certification costs. For instance, blockchain technology can provide real-time tracking and verification of halal compliance throughout the supply chain, thus minimizing fraud and enhancing consumer confidence in certified products (Arsyanti & Aurahma, 2023; Karyani et al., 2024). Digital platforms can also simplify the application process for MSEs, enabling them to access certification services more efficiently (Jamaluddin et al., 2022).

Another key strategy is providing targeted support for MSEs in the form of financial incentives, training, and capacity-building programs.

Table 1. Theoretical framework for the adoption of halal certification factors

Dimensions	Factors	References
Regulation	Law	Adiba and Amir (2023), Astuti et al. (2023), Aziz et al. (2019), Naisabur and Putra (2024)
	Government Regulation	
	Regional Regulation	
Human Resource	Religiosity	Anggraeni et al. (2024), Astuti et al. (2023), Agustina et al. (2019), Adila and Rahmi (2024), Pratikto et al. (2023), Purnama and Ulinnuha (2023), Vanany et al. (2020)
	Halal Awareness	
	Knowledge of the Halal Process	
	Halal Supervisor	
Cost	Halal Product Companion	Rahmanita et al. (2023), Simbolon and Hidayat (2021)
	Certification Fees	
Infrastructure	Training/Mentoring Fees	Arsyanti and Aurahma (2023), Astuti et al. (2023), Karyani et al. (2024), Khasanah et al. (2024), Mohammad (2021)
	Branch Service	
	Online Service	
Process and Procedure	Halal Inspection Agency	Fitri and Jumiono (2021), Rahmanita et al. (2023), Simbolon and Hidayat (2021)
	Ease of Access	
	Practicality of the Procedure	
	Speed of Service	
	Transparency	

Governments and non-governmental organizations (NGOs) play a critical role in supporting MSEs, particularly those in rural or underdeveloped regions. Programs that offer subsidies, simplified application procedures, and halal certification education can significantly lower the barriers to entry for smaller enterprises (Rachman & Sangare, 2023). Zakaria et al. (2024) highlight the importance of public-private partnerships in driving the development of these initiatives and fostering an ecosystem conducive to MSE growth in the halal sector.

This study addresses the need for a systematic approach to the halal certification challenges faced by MSEs in Indonesia, utilizing the analytic network process to assess the interdependencies of these barriers and prioritize feasible and impactful strategies. This study examined the main barriers and strategies for obtaining halal certification for micro and small enterprises (MSEs) in Indonesia. It aims to offer insights into improving MSEs' participation in the halal market, which is critical for enhancing their competitiveness both locally and globally.

2. METHODOLOGY

This study employs a qualitative-quantitative mixed-method approach to investigate the barriers and strategies related to halal certification for micro and small enterprises (MSEs) in Indonesia. The paper utilizes the analytic network process (ANP) to model the interrelationships among the identified barriers and strategies, providing a structured framework to prioritize solutions.

Primary data were gathered from key stakeholders who play a significant role in the halal certification process. These include representatives from the Department of Cooperatives and Micro Enterprises (DKUM) of Depok City, the Regional Committee for Islamic Economy and Finance (KDEKS), the Halal Product Assurance Organizing Body (BPJPH), and expert academics with specialized knowledge in halal certification and MSE development. A purposive sampling technique was used to ensure that participants possessed relevant expertise and experience in the field.

The data were processed and analyzed using the Super Decision software with the analytic network process (ANP) tool to identify differences in priority strategies for increasing halal certifications among culinary MSEs in Depok, West Java. This process involves addressing various relevant and valid issues and solutions. The ANP model is constructed by gathering data or foundational research theories through literature reviews, in-depth interviews, and discussion forums.

The qualitative data obtained from interviews were analyzed using thematic analysis to identify recurring themes related to the challenges and strategies of halal certification. These themes were used to construct the ANP framework. For the quantitative phase, ANP was employed to prioritize the barriers and strategies based on their interdependencies. ANP allows for the consideration of both direct and indirect relationships between elements in the network, making it an ideal tool for complex decision-making processes such as halal certification. The Super Decisions software was used to perform pairwise comparisons and derive the priority rankings of the factors (Saaty & Vargas, 2013).

During the quantification phase, the developed model is incorporated into the Super Decision software. Each element undergoes pairwise comparisons to create the ANP research questionnaire, which involves comparing the influence between two elements on a numerical scale from one to nine (Taherdoost & Madanchian, 2023). The questionnaire, initially generated in the Super Decision software, is reformulated using Google Forms for better respondent comprehension.

The analysis of ANP results begins by inputting questionnaire data into the Super Decision software, where it is processed to generate pairwise comparison matrices, eventually resulting in priorities and supermatrices. Supermatrices, composed of multiple matrices, are utilized in ANP due to the interconnectedness of elements within the network. Pairwise comparison matrices are considered consistent if the consistency ratio (CR) is 10% or lower, as per Saaty and Vargas (2013). A Consistency Index (CI) of zero indicates that the matrix is entirely consistent.

For the overall results from nine respondents, the questionnaire data are processed using the geometric mean in Microsoft Excel. In this study, the geometric mean represents the respondents' ($R1 - Rn$) tendencies toward problems, solutions, and strategies. The calculated results are then synthesized into the Super Decision software for recalculation, providing the final priorities and supermatrices from all respondents. The geometric mean is calculated as follows (Saaty & Vargas, 2013):

$$GM = \frac{R1 \cdot R2 \cdot \dots \cdot Rn}{n}. \quad (1)$$

The research framework consists of three key components: barriers to halal certification, strategies to overcome these barriers, and the relationships between them. Barriers were categorized into regulatory, human resources, cost, infrastructure, and procedure challenges, while strategies were categorized into financial support mechanisms, policy reforms, and capacity-building initiatives.

This methodology integrates qualitative insights and quantitative analysis to provide a comprehensive view of the barriers and strategies affecting the halal certification process for MSEs in Indonesia. The use of ANP ensures that the interdependencies between factors are rigorously assessed, leading to robust and actionable recommendations.

3. RESULTS AND DISCUSSION

This study utilized the analytic network process (ANP) to evaluate and prioritize the key dimensions affecting the success of halal certification initiatives for micro and small enterprises (MSEs) in Indonesia. By gathering insights from the expert respondents, the analysis highlighted the weight and influence of financial, regulatory, and capacity-building factors on the halal certification process. The results from the ANP provide a valuable framework (Figure 1) for understanding the relative importance of these factors and their implications for policy and practice.

This study employed the analytic network process (ANP) model to assess and prioritize strategies to enhance halal certification for micro and small enterprises (MSEs) in Indonesia. Drawing on the insights of the expert respondents, the analysis highlights the relative importance of various dimensions, providing a robust framework for understanding which factors most influence the halal certification process.

The limiting values (Table 2) obtained from the ANP analysis further underscore the difficulties posed by the current regulatory environment. Across respondents, the limiting factor for regu-

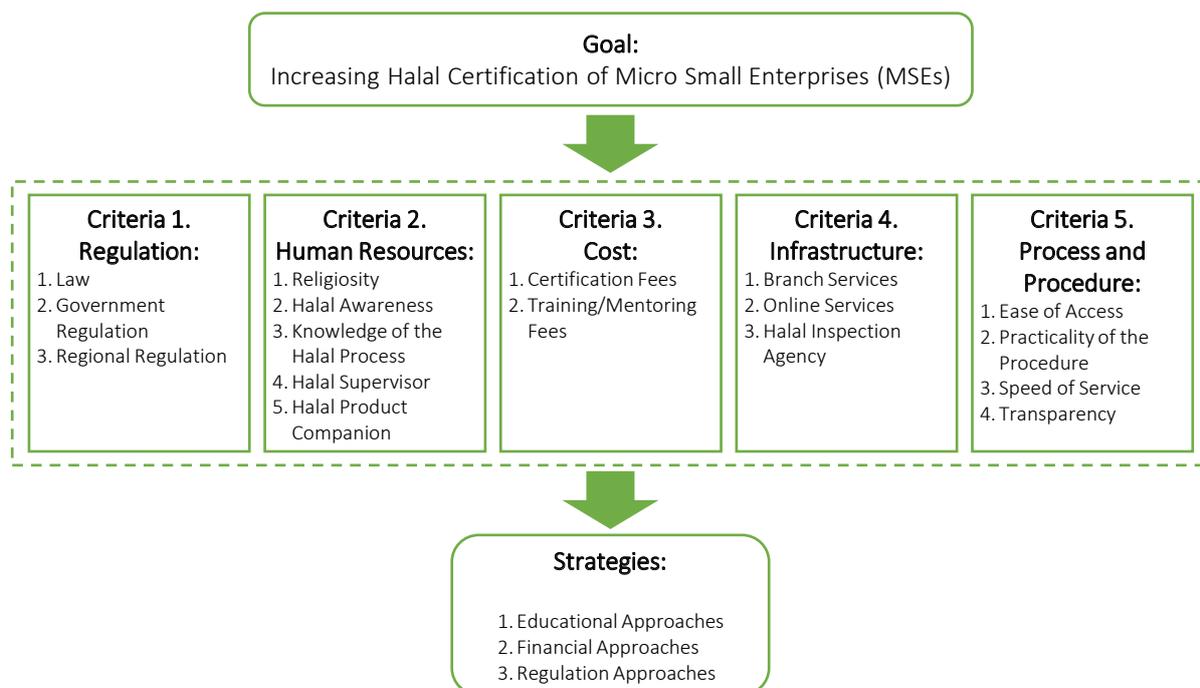


Figure 1. ANP model to determine significant factors for increasing halal certification among MSEs

Table 2. Normalized data processing

No.	Dimension	Variables	GEOMEAN	
			Normalized by Cluster	Limiting
1	Goal	Increasing Halal Certification of MSEs	0	0
2	Criteria 1	R1. Law	0.51	0.05
3		R2. Government Regulation	0.22	0.02
4		R3. Regional Regulation	0.19	0.02
5	Criteria 2	HR1. Religiosity	0.04	0.00
6		HR2. Halal Agedness	0.22	0.02
7		HR3. Knowledge of the Halal Processes	0.24	0.02
8		HR4. Halal Supervisor	0.14	0.01
9		HR5. Halal Product Companion (PPH)	0.20	0.02
10	Criteria 3	C1. Certification Fees	0.68	0.07
11		C2. Training/Mentoring Fees	0.23	0.02
12	Criteria 4	I1. Branch Services	0.18	0.02
13		I2. Online Service	0.37	0.04
14		I3. Halal Inspection Agency (LPH)	0.25	0.02
15	Criteria 5	P1. Ease of Access	0.22	0.02
16		P2. Practicality of the Procedure	0.16	0.02
17		P3. Speed of Service	0.25	0.02
18		P4. Transparency	0.20	0.02
19	Alternative	1. Financial Approaches	0.36	0.18
20		2. Educational Approaches	0.37	0.19
21		3. Regulatory Approaches	0.24	0.12

latory processes was deemed the most restrictive, particularly in terms of the time and cost associated with meeting the necessary requirements. Respondent 4 emphasized the lack of clear guidelines and the perceived difficulty in complying with national and international halal standards, which mirrors findings in the literature on certification complexities (Johan & Schebesta, 2022; Saima et al., 2024).

In addition to regulatory barriers, Respondent 3 identified human resources as a limiting factor, highlighting the need for more educational resources and training for MSEs. While financial and regulatory challenges are more frequently cited, capacity-building initiatives are critical for empowering MSEs to understand the certification process and implement the necessary operational changes. This reflects Rahmanita et al. (2023), who argue that without adequate training and guidance, many MSEs struggle to adopt halal practices despite their willingness to comply.

The geometric mean (GEOMEAN) provides a consolidated view of the collective opinions of all respondents, offering an aggregated perspective on which strategies should be prioritized. The GEOMEAN results reinforce the importance of fi-

ancial support and regulatory reform, with these two dimensions consistently ranked as top priorities across all respondents.

The highest GEOMEAN value is associated with the certification fees variable under Criteria 3 (Figure 2). With a GEOMEAN of 0.675, this result highlights the substantial consensus among experts that certification fees represent a significant barrier to halal certification for MSMEs. This aligns with the broader understanding that financial constraints, particularly upfront certification costs, are a primary challenge for smaller enterprises. The prominence of this variable suggests that financial policies, such as subsidies or fee waivers, should be a focal point in efforts to expand halal certification.

Certification fees are the top-ranked variable, which indicates that alleviating the financial burden on MSMEs is not just an operational concern but a critical strategic necessity. This finding emphasizes the need for regulatory and financial reforms that directly address these costs to increase the accessibility of halal certification.

Several variables under different criteria show moderate GEOMEAN values, such as the law under Criteria 1 with a GEOMEAN of 0.513. This

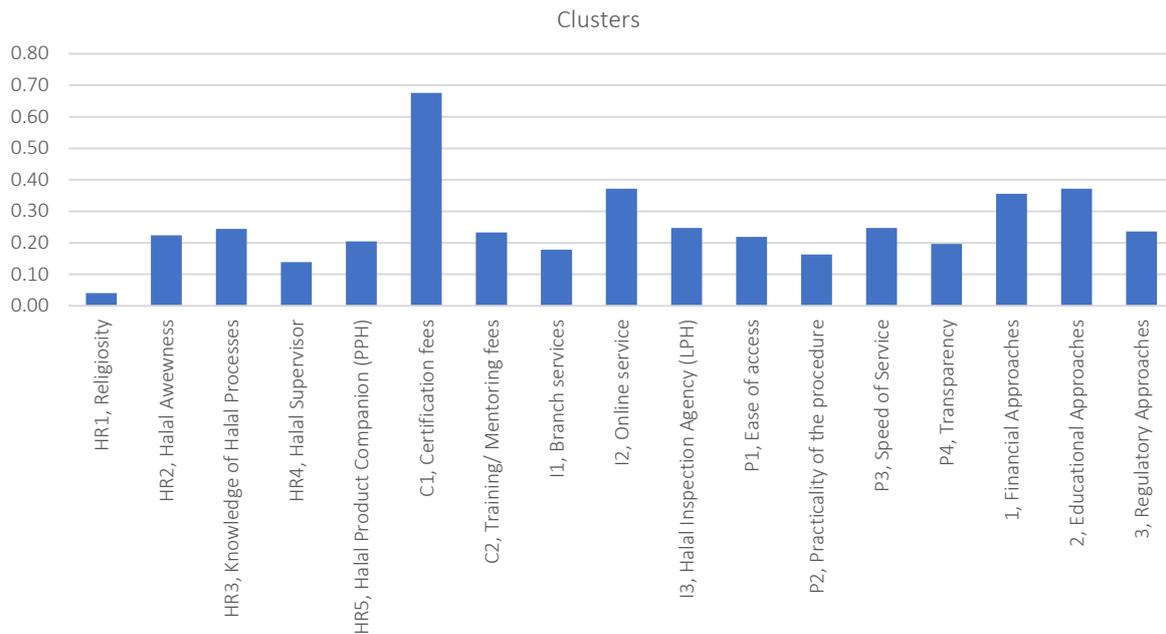


Figure 2. Cluster priorities

suggests that regulatory frameworks and legal provisions are crucial but not as highly prioritized as financial concerns. However, the moderate weight still highlights that regulatory complexities must be addressed to streamline the certification process for MSMEs.

Similarly, free halal certification under the alternatives dimension, with a GEOMEAN of 0.355, also garnered significant attention. This reflects that while stakeholders may support the concept of subsidized or free halal certification, the consensus is lower compared to direct financial concerns like certification fees. However, the value still underscores that financial support mechanisms – whether through fee reductions or subsidies – are seen as valuable components in encouraging MSMEs to pursue certification.

At the lower end of the priority spectrum, variables like religiosity under Criteria 2 have a notably lower GEOMEAN value (0.040). This suggests that while religiosity is a factor in the decision-making process, it is not seen as a major driver for MSMEs seeking halal certification. The focus is more on practical, financial, and regulatory barriers rather than religious motivations. This is an important insight, as it shifts the discussion away from ideological factors and toward pragmatic solutions that address MSMEs' immediate operational needs.

Branch services under Criteria 4 also show a relatively low GEOMEAN (0.177). This indicates that while the availability of branch services for certification might be relevant, it is not perceived as a critical factor compared to financial or legal concerns. The emphasis remains on the broader systemic challenges faced by MSMEs in obtaining certification rather than logistical issues related to service delivery.

The ANP model calculated the normalized weights for various dimensions based on expert responses, identifying educational approaches, financial approaches, and regulation approaches as the most influential strategies. The overall goal, increasing halal certification for MSEs, received varying emphasis across respondents, but the educational approaches dimension consistently emerged as a priority. One of the key barriers preventing many MSEs from pursuing halal certification is the lack of understanding of the certification process. Many small business owners are unaware of the detailed steps required to obtain halal certification, including regulatory compliance, documentation requirements, and the operational changes needed to meet certification standards (Adila & Rahmi, 2024; Nur Anisa, 2022; Syarifuddin & Abdullah, 2022). Education programs focused on halal literacy can bridge this knowledge gap, helping MSEs comprehend the value of certification

and the specific procedures involved, from applying for certification to maintaining compliance through periodic audits.

For MSEs, the halal certification process can appear daunting due to its perceived complexity. The involvement of multiple regulatory bodies, detailed documentation, and rigorous compliance checks can discourage businesses from pursuing certification, especially if they are unfamiliar with the legal and technical requirements. Providing structured educational resources, such as workshops, manuals, and online courses, can demystify these processes, breaking them down into manageable steps. When MSEs understand the procedure better, they are more likely to see certification as an achievable goal rather than a bureaucratic obstacle.

In addition to understanding the process, MSEs also need to build internal capacities to meet the operational requirements of halal certification. This may include changes in sourcing, production methods, and hygiene standards. Capacity-building initiatives that incorporate both theoretical knowledge and practical guidance can help MSEs develop the necessary skills and infrastructure for compliance. For example, training programs that focus on implementing halal production practices, handling documentation, and preparing for audits can significantly increase the readiness of small businesses for certification.

The primary motivation for obtaining halal certification is the potential for market expansion. Certified halal products are not only sought after in Muslim-majority countries but also in non-Muslim markets where halal certification is recognized as a marker of quality and safety (Anggarkasih & Resma, 2022; Saima et al., 2024). By improving literacy on the benefits of halal certification, education programs can help MSEs understand how certification can serve as a competitive advantage, opening up new market opportunities and enabling them to cater to the growing global demand for halal products.

Governments and halal certification bodies are increasingly recognizing the importance of supporting MSEs in their certification efforts. Literacy initiatives that are aligned with government policies

can ensure that MSEs take full advantage of available resources, including financial subsidies, technical assistance, and simplified certification processes. Educational programs can also serve as a channel for informing MSEs about these supports, making the certification process more accessible and less financially burdensome.

Figure 2 also shows that respondents assigned second higher weights to financial considerations, indicating that the affordability of certification fees is critical for MSEs to pursue halal certification. This finding is consistent with prior studies that identify financial barriers as a significant hindrance for MSEs in developing countries (Dawam et al., 2023; Rahmanita et al., 2023). MSEs often lack the capital required to cover the upfront certification fees and ongoing compliance costs, making financial support mechanisms a crucial component of any strategy aimed at expanding halal certification.

While knowledge and understanding are crucial, financial support is essential for helping MSEs afford the costs associated with halal certification. These costs can include application fees, auditing expenses, investments in infrastructure, and operational adjustments to meet halal standards (Pratikto et al., 2023; Saima et al., 2024). Many MSEs operate on tight budgets, and without external financial assistance, they may struggle to cover these costs, no matter how well they understand the process.

Financial support programs can take several forms, including government subsidies, grants, or low-interest loans. These initiatives help reduce the financial burden on MSEs, making halal certification more accessible. For example, providing subsidies to cover the cost of halal audits or offering financial incentives for operational improvements can encourage more businesses to pursue certification. Studies have shown that MSEs with access to financial resources are significantly more likely to obtain and maintain halal certification (Salsabila, 2022).

Furthermore, financial literacy programs should be part of the educational approach, ensuring that MSEs can effectively manage and allocate resources toward certification efforts. By coupling financial assistance with education, MSEs can be better

equipped to understand how to sustain halal certification over the long term.

Similarly, regulatory support was weighted heavily by Respondent 2 and Respondent 5, who pointed to the complexity and inconsistency of certification regulations as key obstacles. This finding

aligns with Rahmanita et al. (2023) and Simbolon and Hidayat (2021), who highlight the bureaucratic challenges faced by small enterprises in navigating multi-agency halal certification processes. Streamlining these processes and improving regulatory transparency could significantly reduce the burden on MSEs.

CONCLUSION

This study aimed to analyze and prioritize the barriers and strategies for obtaining halal certification among micro and small enterprises (MSEs) in Indonesia to enhance their participation in the halal market. Using the analytic network process (ANP), the study identified financial constraints, regulatory complexities, and limited awareness as primary obstacles that hinder MSEs from achieving halal certification. The prioritized strategies include financial support mechanisms, regulatory simplification, and targeted educational programs to improve halal literacy among MSEs.

The findings suggest that policymakers must focus on reducing certification costs, simplifying regulatory procedures, and providing accessible educational resources to increase MSE engagement in the halal certification process. Implementing these strategies would create a more supportive environment for MSEs, empowering them to compete in both domestic and international halal markets. This approach offers a pathway to greater inclusivity in the halal economy, benefiting the broader market and enhancing MSE contributions to economic growth.

This study contributes valuable insights into the strategic priorities for advancing halal certification accessibility, empowering MSEs to take full advantage of the expanding global halal economy. Further research could extend these findings to other Muslim-majority countries, offering broader implications for the global halal industry.

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