

# Halal Awareness, HR Practices, and Performance of Halal-Certified MSMEs in East Java

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## ABSTRACT

**Objective:** This study aims to examine the effect of halal awareness and human resource practices on MSME performance, with innovative work behavior as a mediating variable and regulation as a moderating variable in halal-certified food and beverage MSMEs in East Java. **Method:** This study used a quantitative approach with a survey method. Data were collected through structured questionnaires distributed to 384 halal-certified food and beverage MSME actors in Surabaya, Gresik, and Sidoarjo. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS. **Results:** The findings show that halal awareness and human resource practices have positive and significant effects on MSME performance and innovative work behavior. Innovative work behavior also has a positive and significant effect on MSME performance and mediates the relationship between halal awareness, human resource practices, and MSME performance. In addition, regulation strengthens the effect of halal awareness and human resource practices on MSME performance. **Novelty:** This study offers a comprehensive model by integrating halal awareness, human resource practices, innovative work behavior, and regulation in explaining MSME performance. The novelty lies in positioning innovative work behavior as a transformation mechanism and regulation as an external strengthening factor in halal-certified MSMEs.

## INTRODUCTION

Food and beverage (F&B) MSMEs play a strategic role in the economy, particularly in developing countries. Post-COVID-19 pandemic, this sector continues to grow, but also faces global competition, demands for quality, food safety, hygiene, business sustainability, and product ethical value, including halal certification. Consumer awareness of healthy, hygienic, and ethically based products is increasing, making halal certification a crucial factor in building MSME trust and competitiveness (Katuk et al., 2021). Indonesia, as the country with the largest Muslim population, approximately 87% of the 278 million population, has significant potential for developing the halal industry, particularly in the food and beverage sector (BPS, 2023). Halal is no longer merely understood as a religious necessity but also as a socio-economic standard and a strategy for strengthening MSME competitiveness (KNEKS, 2023). Halal certification is also positively perceived by non-Muslim consumers because it is associated with stricter and more hygienic production processes (Oemar et al., 2023). However, according to 2023 data from the Indonesian Ulema Council (LPPOM MUI), of the approximately 64 million MSMEs in Indonesia, only around 1 million hold halal certifications. This situation indicates that halal awareness among MSMEs still needs to be strengthened so that halal certification becomes not merely an administrative obligation but also a strategy for improving quality, reputation, productivity, profitability, and business performance.

In addition to halal-related demands, Indonesian MSMEs also face accelerated digital transformation in the post-pandemic period. Government data show that around 27 million MSMEs had adopted digital technology in 2024, with a national target of 30

million MSMEs entering the digital ecosystem (Kominfo, 2024). However, many MSMEs still struggle with limited digital literacy, resources, and capability to use digital platforms effectively. Bank Indonesia also emphasizes that MSMEs need to strengthen social media presence, e-commerce utilization, digital payment channels, and digital literacy to expand markets and improve competitiveness (Bank Indonesia, 2024). Therefore, halal-certified F&B MSMEs do not only need halal compliance, but also human resource practices and innovative work behavior that enable them to adapt to digital marketing, changing consumer behavior, and increasingly competitive post-pandemic markets.

MSME performance is a crucial aspect because it reflects not only revenue growth but also productivity, market expansion, operational efficiency, customer satisfaction, business reputation, sustainability, innovation, and long-term competitiveness. MSMEs that focus on improving performance are more resilient to economic shocks and more adaptive to changes in consumer demand (Boohene et al., 2020; Fan et al., 2021). The performance of MSMEs also contributes to the creation of added value, operational efficiency, business sustainability, strengthening the national industrial structure, job creation, and more inclusive economic integration (Dejardin et al., 2023; Hussain et al., 2020; Ng et al., 2020; Srhoj et al., 2021). Conversely, MSMEs that do not adopt halal principles and innovation tend to stagnate because they are unable to meet the demands of the modern market, which increasingly emphasizes value, ethics, and product quality (Dejardin et al., 2023; Kulathunga et al., 2020; Srhoj et al., 2021). Despite this, many MSMEs still face limited managerial capacity, low human resource quality, and a weak understanding of effective and sustainable business practices (Domi et al., 2020; Meekaewkunchorn et al., 2021). Therefore, halal certification needs to be supported by adequate managerial practices and human resources to have a significant impact on business performance.

Human resource practices are a crucial factor in improving the performance of halal MSMEs because they strengthen competencies, motivation, and a work environment that supports innovative work behavior (Bos-Nehles, 2023; Nor et al., 2021). In this study, HR practices are explained through the AMO approach, which stands for Ability, Motivation, and Opportunity. Low technical workforce skills are associated with low productivity and operational efficiency (Alkhalaf & Al-Tabbaa, 2024; Cai et al., 2020), low motivation hinders the implementation of ethical values and innovation (Osolase et al., 2023), while inclusive and collaborative work opportunities encourage the generation of creative ideas in small and medium-sized businesses (Ali et al., 2023). Weak implementation of AMO hinders the integration of halal values with modern management, thus weakening product innovation, operational efficiency, and MSME competitiveness (Abbas, 2023; Dimple & Tripathi, 2024). Suboptimal HR practices also hinder the development of Innovative Work Behavior (IWB), even though IWB serves as a link between HR practices and improved organizational performance, particularly in small and medium-sized businesses in the F&B sector (Akram et al., 2020; Gameda & Lee, 2020). This relationship is also influenced by government regulations, particularly those related to employment, training, and halal certification (Azizi et al., 2021; Ferreira et al., 2020; Khan et al., 2020). Halal regulation through the BPJPH still requires procedural simplification and capacity building support to avoid becoming an administrative burden for MSMEs (Ameis et al., 2020; Prieto & Pérez-Santana, 2014). Thus, AMO-based HR practices need to be

strengthened so that MSMEs have a competent, motivated workforce and have the opportunity to develop, so they are able to form innovative work behaviors that support the implementation of halal principles in a sustainable manner (Maan et al., 2020; Otaye-Ebede et al., 2020; Vamvaka et al., 2020).

Theoretically, this research is based on the Resource-Based View (RBV), which emphasizes that an organization's competitive advantage is built through valuable, rare, difficult-to-imitate, and irreplaceable internal resources (Barney, 1991). In the context of halal MSMEs, halal awareness and halal certification can be positioned as strategic resources because they reflect sharia compliance, quality, safety, credibility, reputation, and market differentiation (Darmalaksana, 2023; Oemar et al., 2023; Wannasupchue et al., 2023). A derivative of RBV, namely Strategic Human Resource Management (SHRM), emphasizes the importance of HR management as a strategic asset aligned with organizational strategy (Al-Ayed, 2019; Allui & Sahni, 2016; Hamadamin & Atan, 2019; Hossain et al., 2025), while AMO-based HR practices are believed to be able to encourage innovative work behavior and strengthen MSME performance (Zheng et al., 2006). However, the influence of halal awareness and HR practices on MSME performance is also influenced by regulations (Fauzi et al., 2024; Karyani et al., 2024). These can be strengthened through MSME-friendly policies, simplified procedures, and mentoring, but can also hinder them by creating excessive administrative burdens (Muneeza & Mustapha, 2021; Nusran et al., 2023). Previous research is still limited in explaining the mechanisms through which halal awareness and HR practices transform into superior performance (Anggriani et al., 2024; Bux et al., 2022; Tayob, 2020). Although both variables are generally associated with MSME performance, their effects may not always be direct or consistent because halal awareness and HR practices do not automatically improve profitability, productivity, or market expansion without innovation-oriented practices. This gap indicates the need for a mechanism that explains how internal resources are converted into business outcomes. Therefore, IWB is needed as a mediating variable reflecting proactive behavior in generating, promoting, and implementing new ideas (Abubakar et al., 2019; Azeem et al., 2021; Bouncken et al., 2021; Tie et al., 2020; Zhang & Chen, 2024), while regulation is positioned as a moderating variable that may strengthen these relationships through certification clarity, training support, incentives, and regulatory enforcement.

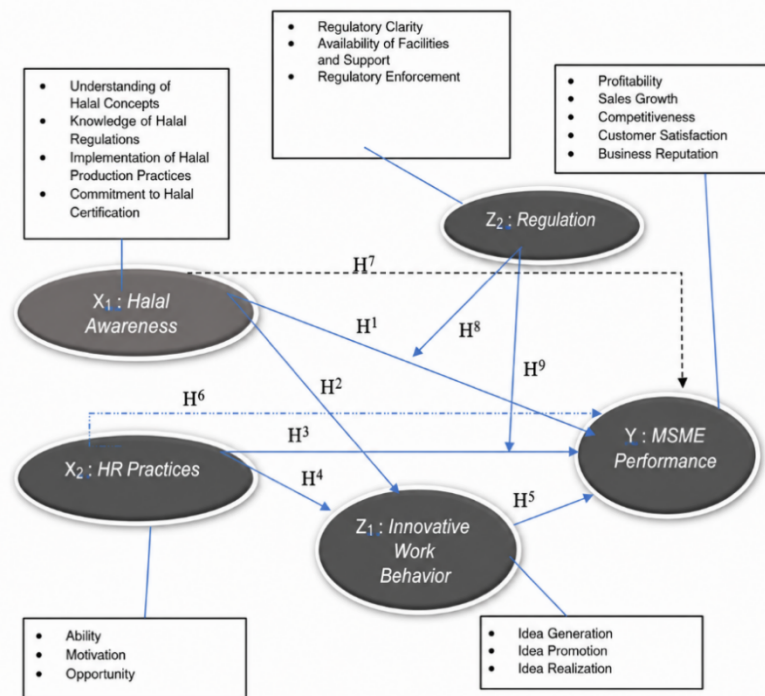
The integration of halal awareness, HR practices, IWB, and regulations is crucial because halal awareness shapes ethical and spiritual commitment, while HR practices drive productivity, engagement, and collaboration (Abed, 2021; Corrales-Estrada et al., 2021; Durst & Zieba, 2020). Halal awareness requires strengthening employee capabilities, spiritual-ethical motivation, and opportunities for participation in the halal system (Blanka, 2019; Cai et al., 2019), which can be realized through halal training, an Islamic value-based work culture, a participatory system, and meaningful employee engagement (Malik & Lenka, 2019; Mansour, 2023; Naqshbandi et al., 2024; Thneibat & Sweis, 2023). This integration can build a productive and sustainable halal ecosystem and strengthen the competitiveness of MSMEs based on values, ethics, and product quality (Bhatti et al., 2021; Li et al., 2022; Anwar et al., 2020; Goyal & Patwardhan, 2021). IWB also serves as a driving force for organizations in facing business complexities and bridging organizational culture with competitive business output (Li et al., 2022; Rahi, 2023; Al-Tit, 2020; Mehralian et al., 2022; Sokolov & Zavyalova, 2022). In F&B MSMEs, IWB is

evident in creativity, experimentation, product or service development, technology adaptation, operational efficiency, and improved business performance (Banmairuroy et al., 2022; Kwon & Kim, 2020; Maan et al., 2020; Abubakar et al., 2019; Bouncken et al., 2021; Tie et al., 2020; Otaye-Ebede et al., 2020). Regulation as a moderating variable also plays a role through licensing, halal certification, food safety, employment, certification subsidies, community training, fiscal incentives, certainty of standards, access to technology, and support for business development (Achmad et al., 2023; Graafland & Bovenberg, 2020; Mishra et al., 2022; Yu & Xiao, 2022; Chung & Pak, 2021; van Berkel et al., 2022; Culver et al., 2020; Tie et al., 2020; Zhang & Chen, 2024; Akshay & Abraham, 2022; Mathlouthi, 2024; Ru et al., 2024; Shukla et al., 2023). The novelty of this study lies in three aspects. First, it integrates halal awareness, AMO-based HR practices, innovative work behavior, and regulation into one model to explain MSME performance. Second, it positions innovative work behavior as a mediating mechanism that transforms halal values and HR capability into business performance. Third, it examines regulation as a moderating factor in the specific context of halal-certified F&B MSMEs in East Java. Thus, the originality of this study lies not only in the integration of variables, but also in explaining how internal resources and external regulatory support jointly strengthen MSME performance.

## **Research Conceptual Framework**

### ***Conceptual Framework***

The conceptual framework of this study is built on the Resource-Based View (RBV) and Strategic Human Resource Management (SHRM), which explains that competitive advantage can be created through strategic internal resource management, including halal awareness as an intangible resource that reflects religious values, integrity, credibility, quality, reputation, and market legitimacy (Barney, 1991; Botoeva, 2020; Sucipto et al., 2022; Sudarsono et al., 2024). Strategic HR practices based on AMO, namely Ability, Motivation, and Opportunity, are also seen as being able to improve organizational competitiveness and performance by strengthening capabilities, motivation, and opportunities for participation (Al-Ayed, 2019; Allui & Sahni, 2016; Hossain et al., 2025; Zheng et al., 2006; Hamadamin & Atan, 2019). This study places Innovative Work Behavior (IWB) as a mediating variable because halal awareness and HR practices do not always directly improve performance without an intermediary mechanism, while IWB is able to transform internal resources into product innovation, services, work processes, and MSME competitiveness (Al-Ayed, 2019; Allui & Sahni, 2016; Hamadamin & Atan, 2019; B., 1892; Prieto & Pérez-Santana, 2014; Salessi & Etchevers, 2020; Azeem et al., 2021; Parnitvitidkun et al., 2024). In addition, regulations are placed as moderating variables because halal certification policies, training, mentoring, and incentives can strengthen the relationship between variables, while complicated and burdensome regulations can weaken it (Choi & Miguet, 2007; Graafland & Bovenberg, 2020; Ran et al., 2025; Widodo et al., 2024).



**Figure 1.** Research conceptual framework

### Hypothesis Development

Based on the research model, halal awareness and AMO-based HR practices are assumed to influence MSME performance and Innovative Work Behavior (IWB), because both can strengthen consumer trust, business reputation, productivity, efficiency, product quality, and innovative behavior (Ahmad & Daud, 2020; Alsharif et al., 2021; Yadnya Nusantara et al., 2022; Bux et al., 2022; Haleem et al., 2020; Nusran et al., 2023; Anak Agung Ketut et al., 2025; Fitri & Anindya, 2024; Islam et al., 2024; Sucipto et al., 2022; Sudarsono et al., 2024; Zailani et al., 2021; Arokodare & Asikhia, 2020; Elali, 2021; Li et al., 2022; Syed & Kramar, 2017; Boxall & Purcell, 2021; Malik et al., 2024; Hussain et al., 2020; Ali et al., 2020; Prieto & Pérez-Santana, 2014; Al-Tit, 2020; Jiang et al., 2021; Alkhalaf & Al-Tabbaa, 2024; Naqshbandi et al., 2024). Therefore, the proposed hypotheses are:  $H^1$ : Halal awareness influences MSME performance.  $H^2$ : Halal awareness influences IWB.  $H^3$ : HR practices influence MSME performance.  $H^4$ : HR practices influence IWB.

Furthermore, IWB is assumed to influence MSME performance while mediating the influence of halal awareness and HR practices on performance, because innovation can improve products, processes, efficiency, added value, reputation, and market differentiation (Elali, 2021; Irena and Lusy, 2023; Kusa et al., 2021; M. Anwar & Li, 2021; Santoro et al., 2020; Srhoj et al., 2021; Fitri and Anindya, 2024; Frisa et al., 2023; Hossain & Ali, 2020; Bos-Nehles et al., 2020; Hussain et al., 2021). Regulation is also assumed to moderate the relationship between halal awareness and HR practices on MSME performance, because supportive regulations can strengthen production standards, training, incentives, and competitiveness, while bureaucratic regulations can hinder them (Meylana et al., 2026; Tieman, 2011; Nawati et al., 2019; Hasibuan et al., 2026; Paauwe & Boon, 2021; Raza et al., 2023; Widiyanti & Dewi, 2021; Zulfiqar et al., 2024; Handayani et al., 2022). Thus, the proposed hypotheses are:  $H^5$ : IWB influences MSME performance.

H6: IWB mediates the effect of halal awareness on MSME performance. H7: IWB mediates the effect of HR practices on MSME performance. H8: Regulation moderates the effect of halal awareness on MSME performance. H9: Regulation moderates the influence of HR practices on MSME performance.

## RESEARCH METHOD

This study uses a quantitative approach based on positivism to examine the causal relationship between halal awareness, human resource practices, innovative work behavior, regulations, and MSME performance. The research model positions halal awareness and HR practices as independent variables, MSME performance as the dependent variable, innovative work behavior as the mediating variable, and regulations as the moderating variable. Data were collected through a structured questionnaire survey of halal-certified MSMEs in the food and beverage (F&B) sector in East Java. The study locations included Surabaya, Gresik, and Sidoarjo, with the subjects being MSMEs members of the APMMJ, an association of food and beverage producers fostered by the East Java Cooperatives and SMEs Office.

The study population consisted of 586 halal-certified F&B MSMEs in Surabaya, Gresik, and Sidoarjo. MSMEs were identified based on Indonesian MSME criteria and records from the relevant association or local government office. The sample was selected using purposive/judgment sampling, with criteria including active F&B MSMEs, halal-certified, located in the three study areas, and registered with APMMJ or MSME development programs. Respondents were mainly owners or managers directly involved in daily operations; when unavailable, an authorized employee with sufficient business knowledge completed the questionnaire. Using the Slovin formula with a 3% margin of error, 384 respondents were selected proportionally: 180 from Surabaya, 77 from Gresik, and 127 from Sidoarjo.

**Table 1. Proportional sample distribution of MSMEs**

Location	Number of MSMEs	Sample Size	Percentage
Surabaya	275	180	46.9%
Gresik	117	77	20.0%
Sidoarjo	194	127	33.1%
<b>Total</b>	<b>586</b>	<b>384</b>	<b>100%</b>

Variable measurements were conducted using a 1-5 Likert scale, ranging from “strongly disagree” to “strongly agree.” Halal awareness was measured through understanding of the halal concept, knowledge of halal regulations, implementation of halal production practices, and commitment to halal certification (Oemar et al., 2023). Human resource practices were measured using the AMO approach, which includes ability, motivation, and opportunity (Demo et al., 2012; Gardner, T. M., 2011; Bos-Nehles et al., 2023; Jiang et al., 2012; Prieto & Pérez-Santana, 2014). Innovative work behavior was measured through idea generation, idea promotion, and idea realization (Janssen, 1892). Regulation was measured through regulatory clarity, availability of facilities and support, and regulatory enforcement (Graafland & Bovenberg, 2020; Widodo et al., 2024). Meanwhile, MSME performance is measured through profitability, sales growth,

competitiveness, customer satisfaction, and business reputation (Alves & Lourenço, 2022; Collins et al., 2021; Damayanti et al., 2023; Kaplan & Norton, 2005).

The questionnaire items were adapted from previously validated instruments relevant to each construct. The items were adjusted to the context of halal-certified F&B MSMEs and translated into Indonesian to ensure respondent understanding. Before full distribution, the questionnaire was reviewed for content clarity and pilot-tested on a small group of MSME actors. Feedback from the pilot test was used to refine wording, item clarity, and contextual suitability. This process was conducted to strengthen construct validity and ensure that the instruments were appropriate for the research context.

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS. The analysis stages included evaluating the measurement model (outer model) through convergent validity, discriminant validity, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE). The structural model (inner model) was then evaluated using path coefficients, t-statistics, p-values, R-square, Q-square, and mediation and moderation testing through bootstrapping. To address potential common method variance (CMV), full collinearity VIF was also assessed because all variables were measured using self-reported questionnaires from the same respondents. The model met the criteria if the loading factor was greater than 0.70, AVE was greater than 0.50, Cronbach's Alpha and Composite Reliability were greater than 0.70, full collinearity VIF was below 3.3, and the effect was significant when the t-statistic was greater than 1.96 or the p-value was less than 0.05 (Hair et al., 2020; Hair et al., 2024; Hayes, 2022; Kock, 2015).

## RESULTS AND DISCUSSION

### Results

#### *Overview of the Research Site*

This research was conducted on halal-certified food and beverage (F&B) MSMEs in East Java, specifically Surabaya, Gresik, and Sidoarjo. These three regions were selected because they have active F&B MSME development, broad market access, support from the local government and APMMJ, and business characteristics relevant to the research. Surabaya represents a competitive metropolitan culinary market, Gresik reflects an industrial area with local community-based MSMEs, while Sidoarjo shows a center for F&B MSMEs that are developing through logistical support and business development. In general, MSMEs in these three regions have demonstrated halal awareness, simple human resource practices, and innovative work behavior through the selection of halal raw materials, hygienic production processes, division of tasks, product innovation, packaging, and digital marketing.



**Figure 2.** Observations of halal-certified f&b MSMEs in East Java

### *Description of Respondent Characteristics*

The respondents in this study consisted of 384 halal-certified MSMEs (F&B) in the food and beverage (F&B) sector across Surabaya, Gresik, and Sidoarjo. Based on their characteristics, the respondents were predominantly male (203) (52.9%), 154 (40.1%) were in the 25–34 age group, and 184 (47.9%) were high school/vocational school graduates. In terms of business, most respondents had been running their businesses for less than a year (156 MSMEs) (40.6%), 306 MSMEs (79.7%) did not have complete business legality, 231 MSMEs (60.2%) had never received government or private sector support, and 323 MSMEs (84.1%) had 1–3 employees. In addition, the majority of respondents considered the halal label important and very important, namely 259 respondents (67.4%), which shows that the halal aspect has become a major concern in the management of F&B MSMEs.

**Table 2. Summary of respondent characteristics**

Characteristics	Dominant Category	Frequency	Percentage
Gender	Male	203	52.9%
Age	25–34 years	154	40.1%
Last education	Senior High School/Vocational High School	184	47.9%
Business age	< 1 year	156	40.6%
Business legality	No business legality	306	79.7%
Support document	Did not receive support	231	60.2%
Number of employees	1–3 employees	323	84.1%
Perception of halal label	Very important	153	39.8%

### *Descriptive Analysis of Research Variables*

Descriptive analysis was conducted to determine the trends in respondents' responses to five research variables: halal awareness, human resource practices, innovative work behavior, regulations, and MSME performance. Scores were categorized based on the average value, with five categories: very good, good, fair, poor, and very poor.

**Table 3. Descriptive analysis of research variables**

No	Variable	Mean Score	Category
1	X1: Halal Awareness	3.306	Fairly Good
2	X2: Human Resource Practices	3.007	Fairly Good
3	Z1: Innovative Work Behavior	3.446	Good
4	Z2: Regulation	3.476	Good
5	Y: MSME Performance	3.229	Fairly Good

Based on Table 3, the regulation variable obtained the highest average score of 3.476 and is included in the good category, followed by innovative work behavior with 3.446, also in the good category. Meanwhile, halal awareness with 3.306, MSME performance with 3.229, and human resource practices with 3.007 are in the fairly good category. These findings indicate that halal-certified F&B MSMEs in East Java have responded quite positively to all research variables, although strengthening is still needed, especially in HR practices, business performance, and the implementation of halal awareness.

**Structural Equation Modeling (SEM) PLS Analysis**

Data analysis was conducted using SEM-PLS to test the measurement model (outer model) and structural model (inner model). At the outer model stage, convergent validity, discriminant validity, and construct reliability were tested. The test results showed that all indicators had factor loading values above 0.70, AVE values above 0.50, and Cronbach's Alpha and Composite Reliability values above 0.70. Thus, all indicators were declared valid and reliable in measuring the research constructs.

**Table 4.** Results of Convergent Validity and Construct Reliability

Variabel	Rentang Loading Factor	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	AVE
X1: Halal Awareness	0.899–0.931	0.970	0.971	0.975	0.847
X2: Human Resource Practices	0.899–0.937	0.963	0.968	0.970	0.843
Y: MSME Performance	0.817–0.931	0.969	0.970	0.973	0.781
Z1: Innovative Work Behavior	0.820–0.909	0.947	0.951	0.957	0.760
Z2: Regulation	0.899–0.917	0.956	0.958	0.965	0.820

Furthermore, discriminant validity was tested using the Fornell-Larcker Criterion, HTMT, and cross-loading. The test results showed that each construct had a higher AVE root value compared to the correlation between constructs, the HTMT value was within the required limits, and the cross-loading value of each indicator was higher in its original construct compared to other constructs. This indicates that each construct in the model has good discriminant validity.

At the inner model stage, the analysis results show that the model without moderating interactions produces an R-square value of 0.293 for the MSME performance variable and 0.161 for the innovative work behavior variable. After regulation is included as a moderating variable, the R-square value for MSME performance increases to 0.382. This increase indicates that regulation is able to strengthen the model's ability to explain variations in MSME performance. In addition, the PLSpredict results show a Q<sup>2</sup>predict value greater than 0, thus the model has predictive relevance. The model fit evaluation also shows that the model has met the good fit criteria, with SRMR values below 0.08–0.10 and NFI above 0.90.

**Table 5.** Results of R-square, PLSpredict, and Model Fit

<b>Analysis</b>	<b>Model</b>	<b>Construct/Indicator</b>	<b>Value</b>	<b>Decision</b>
R-square	Without moderation interaction	MSME Performance	0.293	Weak
R-square	Without moderation interaction	Innovative Work Behavior	0.161	Weak
R-square	With moderation interaction	MSME Performance	0.382	Weak
R-square	With moderation interaction	Innovative Work Behavior	0.161	Weak
Q <sup>2</sup> predict	Without moderation interaction	MSME Performance	0.155	Predictive relevance
Q <sup>2</sup> predict	Without moderation interaction	Innovative Work Behavior	0.151	Predictive relevance
Q <sup>2</sup> predict	With moderation interaction	MSME Performance	0.258	Predictive relevance
Q <sup>2</sup> predict	With moderation interaction	Innovative Work Behavior	0.151	Predictive relevance
SRMR	Without moderation interaction	Estimated model	0.036	Good Fit
NFI	Without moderation interaction	Estimated model	0.907	Good Fit
SRMR	With moderation interaction	Estimated model	0.050	Good Fit
NFI	With moderation interaction	Estimated model	0.901	Good Fit

### **Research Findings**

The research findings indicate that all proposed hypotheses are accepted. Halal awareness and human resource practices have been shown to positively influence MSME performance and innovative work behavior. Furthermore, innovative work behavior has been shown to positively influence MSME performance and mediate the influence of halal awareness and human resource practices on MSME performance. Regulation has also been shown to act as a moderating variable, strengthening the influence of halal awareness and human resource practices on MSME performance.

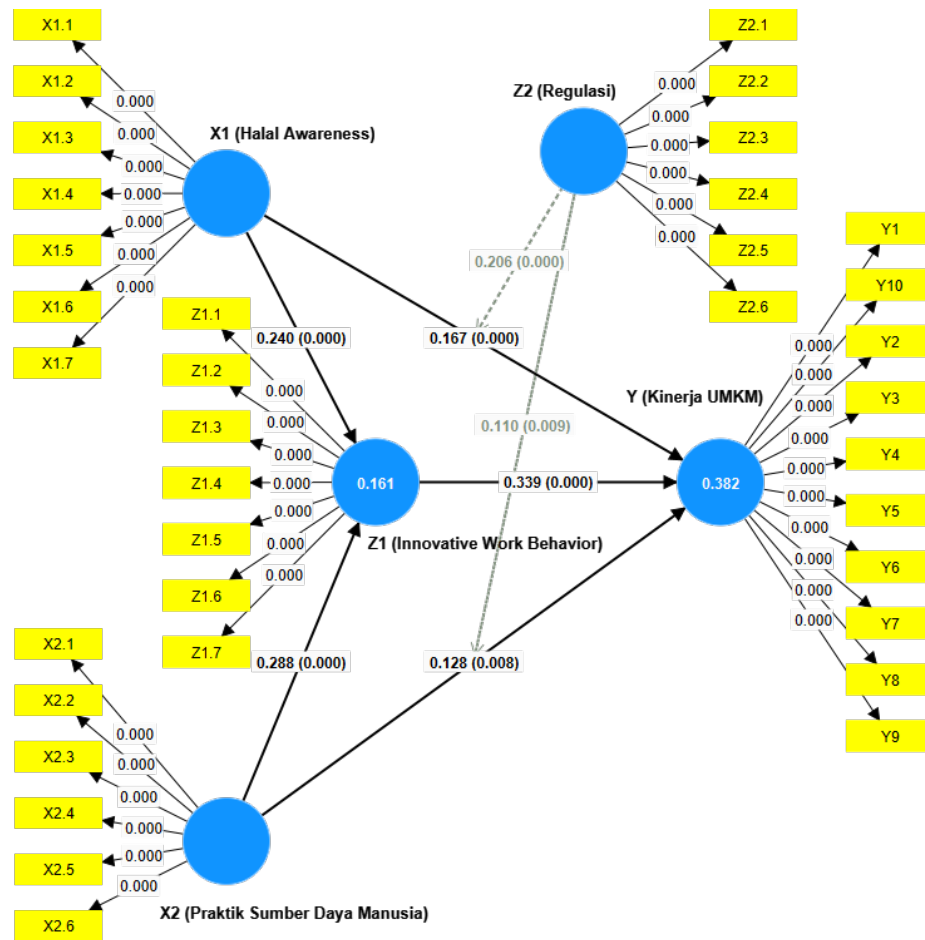


Figure 3. Empirical Testing Model

Table 6. Summary of hypothesis testing results

Hypothesis	Path	Path Coefficient	t-statistics	p-values	Decision
H1	Halal Awareness, MSME Performance	0.167	3.709	0.000	Accepted
H2	Halal Awareness, Innovative Work Behavior	0.240	4.907	0.000	Accepted
H3	Human Resource Practices, MSME Performance	0.128	2.633	0.008	Accepted
H4	Human Resource Practices, Innovative Work Behavior	0.288	6.027	0.000	Accepted
H5	Innovative Work Behavior, MSME Performance	0.339	7.728	0.000	Accepted
H6	Halal Awareness, Innovative Work Behavior, MSME Performance	0.081	4.288	0.000	Accepted
H7	Human Resource Practices, Innovative Work Behavior, MSME Performance	0.098	4.847	0.000	Accepted
H8	Regulation and Halal Awareness, MSME Performance	0.206	4.296	0.000	Accepted

Hypothesis	Path	Path Coefficient	t-statistics	p-values	Decision
H9	Regulation and Human Resource Practices, MSME Performance	0.110	2.631	0.009	Accepted

## Discussion

The research results show that halal awareness has a positive and significant impact on MSME performance. This finding confirms that business actors' awareness of halal principles serves not only as a form of religious obedience but also as a strategic resource capable of enhancing consumer trust, business reputation, product differentiation, and competitiveness. From a Resource-Based View (RBV) perspective, halal awareness can be understood as a valuable and difficult-to-imitate intangible asset because it is embedded in the integrity, credibility, and commitment of business actors to guaranteeing halal products (Barney, 1991). These results align with those of Ahmad & Daud (2020) and Alsharif et al. (2021), who assert that compliance with halal standards can strengthen business effectiveness and market trust. Although some MSMEs still face legal and administrative limitations, halal awareness remains a moral and strategic asset that contributes to improved business performance.

Halal awareness has also been shown to positively influence innovative work behavior. This means that the higher the awareness of MSMEs regarding halal principles, the greater the incentive to innovate in raw materials, production processes, packaging, and marketing. Halal awareness encourages business actors to seek creative solutions to ensure products comply with halal principles while also meeting market needs. This finding supports Anak Agung Ketut et al. (2025) and Fitri and Anindya (2024), who explain that halal standards can trigger adaptive innovation in MSMEs. Thus, halal awareness goes beyond normative understanding and evolves into a driver of innovative behavior in business management.

Human resource practices have a positive and significant impact on MSME performance. These results indicate that human resource management through increased capabilities, motivation, and opportunities for participation can strengthen productivity, efficiency, service quality, and customer satisfaction. Within the Strategic Human Resource Management (SHRM) framework, HR practices are a crucial instrument for aligning individual competencies with organizational goals. This finding aligns with Bello-Pintado & Garcés-Galdeano (2019), Syed & Kramar (2017), and Li et al. (2022), who emphasize that coordinated HR practices can improve organizational performance. However, because most respondents are micro-enterprises with a limited workforce, the most relevant HR practices are not complex formal systems, but rather simple management patterns based on division of tasks, trust, motivation, and direct involvement.

HR practices have also been shown to positively influence innovative work behavior. This suggests that ability, motivation, and opportunities to participate are important prerequisites for innovative behavior in MSMEs. Training, incentives, employee involvement, and a space to express ideas can encourage both business owners and employees to create new solutions in products, work processes, and marketing. These findings support Prieto & Pérez-Santana (2014), Raza et al. (2021), and Tseng & Chiu (2020), who explain that strategic HR practices can create a work environment conducive to innovation. In the context of F&B MSMEs in East Java, a lean business structure

actually allows for faster communication, more flexible decision-making, and easier implementation of ideas.

Innovative work behavior also mediates the influence of HR practices on MSME performance. This means that HR practices improve performance more effectively when they are translated into practical innovation. In halal-certified F&B MSMEs, employee competence, motivation, and participation encourage business actors to improve products, packaging, services, production efficiency, and digital marketing. Thus, innovation becomes the practical mechanism that converts internal capabilities into better business outcomes. These results align with Prieto & Pérez-Santana (2014) and Raza et al. (2021), who stated that innovative behavior is a crucial link between HR practices and organizational effectiveness.

The research results also show that innovative work behavior mediates the effect of halal awareness on MSME performance. This means that halal awareness will have a stronger impact on performance if translated into innovative behavior. Businesses that understand halal principles are encouraged to improve raw materials, production processes, packaging, and service quality, thus impacting reputation, consumer trust, and business competitiveness. This finding supports the work of Anak Agung Ketut et al. (2025), Fitri and Anindya (2024), and Frisa et al. (2023), who emphasize the importance of innovation in transforming awareness and compliance into more tangible performance outcomes. Therefore, halal awareness should not be understood simply as a value but should be realized through operational innovation.

Innovative work behavior also mediates the influence of HR practices on MSME performance. This finding suggests that HR practices not only have a direct impact on performance but also work through increased innovative behavior. HR practices that enhance competence, motivation, and participation will encourage individuals to generate new ideas, improve work processes, and create added value for the business. These results align with Prieto & Pérez-Santana (2014) and Raza et al. (2021), who stated that innovative behavior is a crucial link between HR practices and organizational effectiveness. In the context of MSMEs, this mediating role is crucial because resource limitations can be offset through creativity, flexibility, and adaptability of business actors.

These findings are also consistent with MSME studies in other developing and emerging economies, which show that internal capabilities alone are insufficient without innovation and external support. Similar to MSMEs in countries such as Malaysia, Thailand, and other emerging markets, halal-certified F&B MSMEs in Indonesia face resource limitations, informal management practices, and increasing pressure to adopt digital marketing and innovation. However, the Indonesian context is distinctive because halal awareness, certification requirements, and government regulation strongly shape business legitimacy and competitiveness. Theoretically, this study extends the Resource-Based View by showing that halal awareness and HR practices become strategic resources only when transformed into innovative work behavior. It also supports a dynamic capability perspective, because MSMEs must continuously adapt their halal practices, human resources, and innovation activities to changing market, digital, and regulatory conditions.

Regulations have also been shown to moderate the influence of HR practices on MSME performance. This means that HR practices contribute more strongly to performance when supported by policies related to training, mentoring, access to information, incentives, and business protection. In the context of F&B MSMEs in East Java, where many businesses operate with small teams and informal management

systems, supportive regulations help improve workforce capacity and align daily work practices with halal standards and market needs. This finding reinforces the views of Graafland and Bovenberg (2020), Widodo et al. (2024), and Hasibuan et al. (2026), that regulatory support can strengthen the effectiveness of an organization's internal resources. Overall, this study confirms that halal MSME performance is shaped by the interaction between halal awareness, HR practices, innovative work behavior, and regulatory support within the Indonesian MSME environment.

## CONCLUSION

**Fundamental Finding:** This study shows that the competitiveness of halal-certified F&B MSMEs is strengthened through the integration of halal awareness, HR practices, innovative work behavior, and regulatory support. Halal awareness builds trust and legitimacy, while HR practices improve capability, motivation, and participation. These resources become more valuable when translated into innovation in products, processes, services, and market responsiveness. **Implication:** The findings imply that MSMEs should not view halal certification only as compliance, but as a strategic resource for competitiveness. Government and related institutions should provide practical support through halal-based business mentoring, innovation incubation, digital marketing training, digital payment assistance, and partnerships with technology providers. These programs can help MSMEs translate halal awareness, HR capability, and innovative work behavior into stronger market access and sustainable business performance. **Limitation:** This study is limited to halal-certified food and beverage MSMEs in East Java, particularly in Surabaya, Gresik, and Sidoarjo. Therefore, the findings may not fully represent MSMEs in other regions or different halal industry sectors. This study also uses a cross-sectional design and questionnaire-based data, which may limit the ability to capture changes in innovation behavior and business performance over time. **Future Research:** Future research should apply longitudinal designs to examine how halal awareness, HR practices, innovative work behavior, and regulation influence MSME performance over time. Comparative studies across regions, industries, or countries are also recommended to determine whether the findings are specific to halal-certified F&B MSMEs in Indonesia or applicable to broader MSME contexts. Further studies may also include digital literacy, organizational learning, technological readiness, market orientation, and access to finance to provide deeper insight into MSME digital transformation and innovation-driven competitiveness.

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