



External Integration and Halal Assurance System Integrity for Achieving the Performance: Based on The Structural Contingency Theory Approach

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ABSTRACT

Based on the Structural Contingency Theory, which examines external and internal factors influencing business strategies within the extent of the Halal Food Supply Chain (HFSC), the role of the Halal Assurance System as a variable that can mediate the influence of supplier, customer integration and regulator integration on the Halal MSMEs' performance. This study used 195 of samples Halal MSME proprietors in Malang Regency with a quantitative methodology, with data evaluated by SEM-PLS. The study's findings prove that supplier and customer integration have an impact to the MSMEs' performance. However, regulator integration only significantly impacts MSME performance. The Halal Assurance System owned by halal MSMEs can mediate the influence between supplier and customer integration on the performance of MSMEs. However, the Halal Assurance System owned by halal MSMEs does not significantly mediate the influence of the integration of regulators on the MSMEs' performance. Effective supplier and customer integration management yields advantages that enhance performance via the Halal Assurance System

INTRODUCTION

The halal industry, all-inclusive, has ended up being one of the fastest-growing businesses (Nurrachmi, 2018). According to the Thomson Reuters report, the SGIE (State of the Global Islamic Economy) appears that investing in the worldwide halal nourishment and way of life business came to \$ 2.02 trillion in 2020 and is anticipated to proceed to develop to \$ 3.37 trillion in 2030, so the halal showcase is right now encountering a drift (Soon et al., 2017).

The development of the Muslim populace in Indonesia in 2020 is evaluated at around 87.296% of the number of Muslims which amounts to 229,620,000, which comes to 1.9 billion. This shows that Indonesia distributes halal items within the world's nourishment segment. The Indonesian government ensures and gives for halal items, as shown by the issuance of Law Number 33 of 2014 concerning Halal Item Ensure, which affirms that labels of halal certification are upheld for every product, required, and now not intentional (Ahyar, 2019). As became the President of the Republic of Indonesia's vision that Indonesia will accomplish the World Halal Center in 2024, which emphasizes that halal certification is one of the entrances for Indonesian Micro, Small, and Medium Enterprises (MSMEs) to have a competitive advantage within worldwide advertising to realize (www.kneks.go.id).

However, the high request for halal items is confronted with the reality that the number of items in Indonesia, particularly among MSMEs within the nourishment industry that are halal certified, is still as it were 20% (Aziz et al., 2021). The conclusion of an experimental ponder on halal MSMEs in Indonesia conducted by Soriana Imaningsih and Sihite (2022) concluded that the status of MSMEs in Jakarta embracing halal certification still needs to be higher. Komariah et al. (2022) appear that promoting execution in Halal MSMEs in Bekasi is low. Fransiska (2020) states that the execution of halal MSMEs in North Sumatra Territory still needs to be improved. Azam & Abdullah (2020) prove that the halal industry in Indonesia has yet to develop optimally.

Based on previous empirical phenomena and results, conducting a further study on generating the performance of halal MSMEs are engaging. As stated to Bahiti (2008), MSMEs need to acknowledge that assets to maximize execution and create pay. Concurring to Prisca (2016), MSME performance is the result of assessing a organization's work accomplished by an individual or bunch by partitioning exercises within the shape of errands and parts in a certain period with built-up measures.

Concurring with the Structural Contingency Theory, the organizational structure and strategy actualized by a company's internal is a reaction to its external environment. When the external environment changes, the company as a maker must react by creating, selecting, and actualizing fitting procedures, not as it were on inner auxiliary characteristics but moreover with integration with its external environment (Flynn et al., 2010; Huo, 2012; Spieske & Birkel, 2021). The strategy for moving forward the execution of halal MSMEs can be carried out through the part of external integration, which includes cooperation with various parties, including suppliers, customers, and regulators, to create a system

that supports performance in the form of operational efficiency and improves the quality of halal products for MSMEs (Tan et al., 2017; Flynn et al., 2016).

Supplier integration is the process by which a company collaborates with parties who provide raw materials to produce goods or services (Handayani et al., 2022) by building coordination related to raw material inventory management decisions, planning, and predicting resource flows (Fujiwara & Ismail, 2018). The implementation of a comprehensive supplier integration approach can have an impact on performance achievement in the form of increased productivity (Ali et al., 2021), cost reduction, product quality improvement (Handayani et al., 2022; Zulfakar et al., 2023), as well as innovations that provide sustainable competitive advantage (MH et al., 2022; Zulfakar et al., 2023). Different results were shown by Ali et al. (2014) and Spink & Mayer (2011), who highlighted the debate on the intricate nature of the supply chain, which causes a trade-off between cost and quality so that supplier integration has not significantly influenced the halal MSMEs' performance.

Another aspect that can affect to moving forward the performance of MSMEs is customer integration, which is considered an imperative component of external supply chain integration because it is the process of a company understanding customer needs and desires, which is followed up by adjusting internal activities to meet those needs and desires (Omar & Rahman, 2018; Rejeb et al., 2021). Giyanti and Indrasari (2021) argue that realizing customer integration can increase customer loyalty and satisfaction. The investigation results conducted by Puspaningtyas and Sucipto (2021) and Tan et al. (2017) proved that customer integration influences the execution of MSMEs. Diverse comes about were appeared by the think about by Tollin (2002) and Enkel et al. (2005) that numerous companies fall flat to coordinated clients in their item improvement handle due to customers' thoughts of the dangers inborn in their integration with producers as well as expanded coordination costs and reasons for firmness (A. Ali et al., 2017; Zulfakar et al., 2023).

Another factor that influences the improvement of the halal MSME's performance is the integration of regulators, in this case, the government through the Halal Certification Agency (BPJPH) and the Indonesian Ulema Council (MUI), which is tasked with verifying halal certificates, as well as overseeing the deployment of the Halal Product Guarantee Law in Indonesia (Arifin et al., 2020). The integration of halal regulators, namely the government, in the halal food supply chain intends to ensure sustainable development and growth of the industry by simplifying and providing convenience for producers to increase consumer trust and satisfaction (Yusaini H. et al., 2016), which then influences on improving the MSMEs' performance (Zainuddin et al., 2020; Zulfakar et al., 2023). Different findings are shown by a study conducted by Masood (2022), Yalçın (2017), and Spiegel et al. (2012), which describe the obstacles and problems felt by MSMEs in the form of a lack of transparency and information regarding halal certification so that a conducive regulatory integration between the government and MSMEs has not been established.

Based on several previous research results presented above, there is still a gap that opens up a gap to re-examine the influence of supplier, customer, and regulator integration on the performance with the Halal Assurance System as a mediator. The reason that the basis, according to the Structural Contingency Theory (SCT) approach of the Halal Assurance System is employed as an internal resource owned by MSMEs is that when external integration is managed effectively, it will build internal structural capabilities that contribute to improving performance through well-implemented halal assurance system (Flynn et al., 2010; Huo, 2012; Spieske & Birkel, 2021).

Halal Assurance System is comprehensive standards that cover the whole supply chain for halal, from procurement raw materials to the delivery of completed goods (Rachman, 2019), namely including requirements for halal slaughter, transportation, storage, and labeling, as well as the implementation of a robust quality management system that must be following Islamic law at the same time fulfill a reliable and consistent halal certification process, thereby increasing consumer assurance in the authenticity of halal goods (Sri et al., 2021).

To improve performance, MSMEs in Malang Raya must understand the strategic role of HAS in external integration. With recognized halal certification, MSMEs can more easily establish cooperation with various external parties, such as suppliers, customers, and regulators. This shows that HAS is focused on the end product and the entire value chain involved in halal products.

This study answers the challenges halal MSMEs face in Malang Raya in facing the dynamics of the ever-changing global market. The primary importance of this research is found in its ability to explain how external integration, including integration with suppliers, customers, and regulators, can impact the Halal MSMEs' performance. Utilizing the theory of Structural Contingency, this study provides a new viewpoint for comprehending the connection between external and internal elements for achieving optimal performance.

Furthermore, this research also identifies the role of the Halal Assurance System as an essential mediating variable in the context of internal integrity. In this framework, the Halal Assurance System functions as a tool to ensure compliance with halal standards and as a link that strengthens integration between various related parties, including suppliers, customers, and the government. This contributes to improving halal MSMEs' performance, operational effectiveness, and competitiveness. So, this study not only fills the gap in academic literacy but also offers relevant practical implications for policymakers and industry players. In an era where the halal industry is growing, this understanding is crucial to formulate policies that support halal MSMEs in Indonesia, especially in Malang Raya.

LITERATURE REVIEW

Structural Contingency Theory (SCT)

Structural Contingency Theory is a framework that explains how an entity's organizational structure and performance are influenced by different external and internal conditions (Flynn et al., 2010; Spieske & Birkel, 2021). In the context of halal Micro, Small, and Medium Enterprises (MSMEs) in Malang Raya, this theory is relevant to analyzing external integration's influence on performance achievement (Huo, 2012). The basis of this theory is that the best way to manage an organization depends on the specific context faced by the organization, including the external environment (Spieske & Birkel, 2021). Organizations operating in complex and dynamic environments must adapt their managerial and operational structures to adapt more to market changes and consumer needs (Flynn et al., 2010). This is where external integration, whether with suppliers, customers, or regulators, becomes the key to improving performance (Spieske & Birkel, 2021).

Strong integration with suppliers enables halal MSMEs to obtain quality raw materials that comply with halal standards, while good relationships with customers help in understanding changing preferences and demands (Tan et al., 2017). In addition, support from the government through policies that support halal MSMEs can create a more conducive business climate (Flynn et al., 2016). By understanding structural contingency theory, halal MSME managers can be wiser in designing synergistic strategies, focusing on internal aspects, and paying attention to external integration as an essential element to achieve the expected performance.

Performance

Performance is the outcome or assessment of the work completed by an individual or group using predetermined criteria and a division of responsibilities over a predetermined amount of time, which can be measured through various indicators, such as revenue growth, market share, and customer satisfaction, all of which contribute to the generating value for stakeholders (K. Ratnawati & Yuana, 2023). Hafeez et al. (2013) explain the performance indicators of MSMEs in terms of financial and market performance. Karadag (2017) explains that financial, innovation, production, and market indicators measure performance.

One of the key factors influencing the halal MSMEs' performance is their ability to meet the established halal standards, which are accompanied by an effective halal assurance system (Widiastuti et al., 2020; Wirakurnia & Nuanmark, 2021). Compliance with halal standards ensures that products meet sharia criteria and creates trust in consumers, thereby increasing loyalty and market share (Purwanti, 2023; Wirakurnia & Nuanmark, 2021).

Supplier Integration

Supplier integration is the activity of coordinating and collaborating with key suppliers that provides a company with broad insight into planning and forecasting, product design processes, and the flow of physical resources to meet its customers' goals and needs following supplier capability (Khan et al., 2022; Kristiana et al., 2020). According to research studies by Ali (2021) and Tan (2017) concerning the halal supply chain, the indicators for measuring supplier

integration consist of (1) trust in the level of religiosity of suppliers as the basis for selecting the main supplier, (2) establishing good communication with the leading supplier, (3) strategic partnerships, (4) stable procurement planning, and (5) supplier participation during the product development process.

Previous study results highlight the critical role supplier integration which plays in improving food integrity (M. H. Ali, Iranmanesh, et al., 2022; Zulfakar et al., 2023), and making a significant contribution to operational performance, especially product quality (N. Zainuddin et al., 2020), especially realizing good supply chain transparency and visibility (M. H. Ali, Zhan, et al., 2017; M. H. Ali, Zhan, et al., 2022). Based on the flow of thought and the relationship between the variables that have been conveyed, this study's initial hypothesis is:

H1: Supplier integration significantly affects Performance
Customer Integration

Customer integration is company activities that strategically connect and unify all customer-related activity functions, from marketing, sales, and service to technical support (N. Zainuddin et al., 2020) so that companies can meet customer needs and desires through consistent interactions across all communication channels and contact points (Omar & Rahman, 2018; Rejeb et al., 2021). Companies are working hard to integrate their systems and strategies to deliver a cohesive and continuous customer experience (MH Ali, Iranmanesh, et al., 2022; Giyanti & Indrasari, 2021). Based on research conducted by Ali (2021) and Tan (2017), customer integration in MSMEs is generally measured by the following indicators: (1) availability of an intensive communication network with main customers, (2) a fast ordering system for main customers, (3) information facilities about the market from primary customers, (4) follow-up from customer satisfaction survey results.

Several previous researchers have proved the importance of customer integration and that it had a direct effect on the achievement of quality performance, such as product quality and quality cost (MH Ali, Iranmanesh, et al., 2022; Giyanti & Indrasari, 2021), especially related to product development (Iranmanesh et.al., 2019 & Premanandh, 2013) which can increase consumer confidence (Flynn et al., 2010; Tan et al., 2017). So, the following hypothesis is prepared:

H2: Customer integration significantly affects Performance
Regulator Integration

Regulatory integration includes corporate activities with the government through the role of the Halal Certification Agency (BPJPH) and the Indonesian Ulema Council (MUI), which are tasked with verifying halal certificates, as well as overseeing the monitoring implementation of the Halal Product Guarantee Law in Indonesia (Arifin et al., 2020), which oversees the implementation of a supply chain system for halal that guarantees the halal aspects of food, including guarantees that products circulating in the market adhere to the established halal requirements following Islamic law (Bergeaud-blackler et al., 2016; Giyanti & Indrasari, 2021). Research conducted by Tan (2017) and Haleem et al. (2020) measured the integration of halal regulators, especially in halal MSMEs, using the following indicators: (1) support of government to hold the socialization, (2) support of government about infrastructure

development, (3) inspections and audits executed by the Guarantee Agency for Halal, (4) optimal halal certification issuance mechanisms, and (5) research and development executed by the Guarantee Agency for Halal.

The role of the government in the halal food supply chain aims to provide ease of implementation of halal logistics for producers by reducing bureaucratic complexity, so that there is sustainable growth and development of the halal industry (Yusaini H. et al., 2016), so that it can increase consumer trust and satisfaction and improve performance (Kamila, 2021; Sulistyono Prabowo, 2016). According to this explanation, the research hypothesis is prepared:

H3: Regulator integration has a significant effect on performance Halal Assurance System (HAS) Integrity

The Halal Assurance System (HAS) Integrity is a comprehensive standard that whole supply chain for halal, from procurement raw materials to the delivery of complete goods (Rachman, 2019), namely including requirements for halal slaughter, transportation, storage, and labeling, as well as the implementation of a robust quality management system that must be by Islamic law at the same time fulfill a reliable and consistent halal certification process, thereby increasing consumer assurance on the authenticity of halal goods (Sri et al., 2021).

Halal Assurance Systems (HAS) serves as a quality assurance mechanism that integrates halal principles into every aspect of the business process (Adiarni & Fortunella, 2018), thus covering several vital elements, such as risk management, documentation, training, and audits. By implementing this system, MSMEs can reduce the possibility of violations of halal principles, which can result in a loss of consumer trust and reduced competitiveness in the market. In an effort to improve performance, halal MSMEs need to understand the strategic role of HAS, with recognized halal certification, MSMEs can more easily collaborate with various external parties, such as suppliers, customers, and regulators. This shows that HAS is not only focused on the final product, but also on the entire value chain involved in the provision of halal products.

HAS 23000-1 is a guideline and requirement for Halal Certification for General Processing Industries, the Food, Drug, and Cosmetics Assessment Institute by the Indonesian Ulema Council (LPPOM MUI) which states that there are 11 criteria in the Halal Assurance System, namely: (1) Halal Policy, (2) Halal Management Team; (3) Training and Education; (4) Material; (5) Production Facilities; (6) Products; (7) Written Procedures for Critical Activities; (8) Traceability; (9) Handling of Products That Do Not Meet the Criteria; (10) Internal Audit, and (11) Management Review.

So based on this thought, some hypotheses are prepared as follows:

H4: The Halal Assurance System integrity has a significant effect on the performance

H5: The Halal Assurance System's integrity mediates supplier integration's impact on performance.

H6: The Halal Assurance System's integrity mediates customer integration's impact on performance.

H7: The integrity of the Halal Assurance System mediates the impact of regulatory integration on performance.

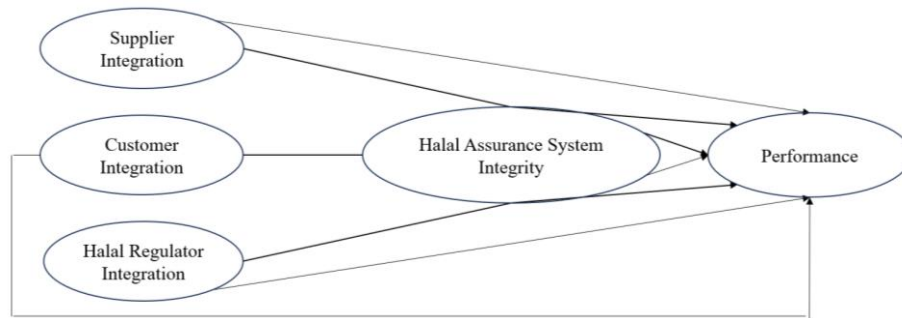


Figure 1. Conceptual Framework

METHODOLOGY

Data collection was conducted in collaboration with Diskoperindag in 3 areas of Malang City, Malang Regency, and Batu City by distributing structured questionnaires to MSMEs that meet purposive criteria including having halal certification, operating for more than one year, totaling 195 MSMEs. The research instruments and operational variables are as follows:

Table 1. Definition of Research Variables

Variables	Indicators	Sources	
Supplier Integration	X1.1	Selection of primary suppliers based on trust in their level of religiosity	Flynn et al. (2016); Tan et al., (2017), Ali (2021)
	X1.2	Establish communication with critical suppliers about the production quality development process.	
	X1.3	Strategic partnership relationships with key suppliers.	
	X1.4	Establish stable procurement planning with key suppliers to maintain quality standards.	
	X1.5	Supplier involvement in the product development process.	
Customer Integration	X2.1	Building intense communication with key customers through information networks.	Wong et al. (2011), Flynn et al. (2016),Tan et al. (2017), Ali (2021)
	X2.2	Establishment of a quick ordering system for critical customers.	
	X2.3	There are means of information about the market from major customers.	
	X2.4	The results of the customer satisfaction survey are followed up.	
Regulator Integration	X3.1	The government supports the dissemination of the halal assurance system and halal certification.	Tan et al. (2017), Haleem et al. (2020)
	X3.2	The government supports the halal industry by developing appropriate infrastructure.	
	X3.3	The halal assurance agency competently performs inspections, audits, evaluations, and corrections.	
	X3.4	The mechanism for issuing halal certification by the Halal Guarantee Agency is optimal.	
	X3.5	The halal guarantee agency constantly researches and develops to determine the halalness of new products/materials and processes.	
Halal Assurance System (HAS)	Y1.1	The halal policy is understood by all stakeholders.	LPPOM MUI (2020),Tan et al., (2017), Haleem et al. (2020)
	Y1.2	MSMEs have an internal halal management team.	
	Y1.3	MSMEs routinely participate in training and education about halal.	
	Y1.4	The raw materials and all components that make up the product used can be guaranteed to have halal integrity.	
	Y1.5	The products produced can maintain halal integrity.	
	Y1.6	Production procedures and facilities have considered quality management that maintains halal integrity.	
	Y1.7	There are written procedures for critical activities to ensure the halalness of processes and products.	
	Y1.8	Traceability can ensure the halal integrity of materials, processes, and products.	
	Y1.9	Handling of products that do not meet halal integrity criteria.	
	Y1.10	Internal audit process to ensure halal integrity.	
	Y1.11	The management review system for the halal integrity assurance verification process is effective and sustainable.	
Performance	Y2.1	Financial performance.	Giyanti & Indrasari (2020).Ratnawati et al. (2022),Ali (2021), Wong et al. (2011), Haleem et al. (2020)
	Y2.2	Marketing performance.	
	Y2.3	Product performance.	

Source: Processed Data (2024)

Measurement of variables with a 1-5 Likert Scale (Strongly Disagree - Strongly Agree). Modeling analysis using SEM-PLS structural equations with smart PLS 4. After several requirements are met type of fit index so that the model is said to be feasible, then direct path analysis hypothesis testing is executed by finding out how significant the relationship of the influence between variables and the significance of the path coefficient for the indirect path obtained from the bootstrapping process (Darwin & Umam, 2020; Ringle et al., 2014).

RESULT

Respondent Characteristics

The demographic characteristics of respondents in the study are shown below:

Table 2. Respondent Profile

Respondent Profile		Frequency	Percentage (%)
Gender	Male	41	21.0
	Female	154	79.0
Education	Junior High School	35	17.9
	Senior High School	107	54.9
	Diploma	12	5.6
	Undergraduate	38	19.5
	Post Graduate	3	1.5
Region	Malang City	55	28.2
	Malang District	80	41.0
	Stone City	60	30.8
Certification	2018	12	6.2
	2019	28	14.4
	2020	12	6.2
	2021	88	45.1
	2022	55	28.2
Income	< Rp. 50,000,000	134	68.7
	Rp. 51,000,000 - Rp. 100,000,000	43	22.1
	Rp. 101,000,000 - Rp. 200,000,000	4	2.1
	Rp. 200,000,000 - Rp. 300,000,000	8	4.1
	> Rp. 300,000,000	6	3.1
Number of Employees	1-4 people	163	83.6
	5-19 people	29	14.9
	20-99 people	3	1.5

Source: Processed Data (2024)

Outer Model Measurement Model Evaluation

1) Convergent Validity and Discriminant Validity Test

The test of convergent validity can be observed through the loading factor value (λ) of each indicator and the value Average Variance Extracted (AVE) (Haryono & Wardoyo, 2012). Testing of discriminant validity for reflective indicators is evaluated using the cross-loading, with the ability to explain higher indicator correlations compared to the correlations of other latent variable indicators. (Sarstedt et al., 2021). The outcomes of the convergent and discriminant validity tests are in the form of loading factor values, AVE, Cronbach Alpha, and Composite Reliability shown in Table 3 below:

Table 3. Results of Convergent Validity Test and Discriminant Validity Test

Variable/Item	Loading factor	AVE	Cronbach's Alpha	Composite Reliability
X1 (Supplier integration)		0.743	0.914	0.935
X1.1	0.855			
X1.2	0.859			
X1.3	0.859			
X1.4	0.885			
X1.5	0.851			
X2 (Customer integration)		0.766	0.898	0.929
X2.1	0.893			
X2.2	0.867			
X2.3	0.855			
X2.4	0.886			
X3 (Halal regulator integration)		0.604	0.839	0.884
X3.1	0.831			
X3.2	0.751			
X3.3	0.773			
X3.4	0.786			
X3.5	0.742			
Y1 (Integrity of halal assurance system)		0.567	0.924	0.935
Y1.1	0.749			
Y1.2	0.733			
Y1.3	0.732			
Y1.4	0.804			
Y1.5	0.756			
Y1.6	0.738			
Y1.7	0.758			
Y1.8	0.730			
Y1.9	0.765			
Y1.10	0.733			
Y1.11	0.781			
Y2 (Performance)		0.651	0.732	0.848
Y2.1	0.803			
Y2.2	0.820			
Y2.3	0.798			

Source: Processed Data (2024)

Table 3 shows that the indicators that form the variables supplied integration, customer integration, regulator integration, Halal assurance Systems, and performance of MSMEs have a factor loading (FL) value greater than 0.7 so that all indicators can be declared valid.

The Cronbach's Alpha value of each variable is above > 0.7 , hence it could be stated that all variables used are reliable. If the composite reliability figure of each variable is more significant than > 0.7 , which indicate that these variables are included in the category of high-reliability. Discriminant validity employing the AVE figure displays that each variable has a more significant than > 0.5 .

Table 4. Fornell Larcker Results Table

	X1 (Supplier Integration)	X2 (Customer Integration)	X3 (Halal Regulator Integration)	Y1 (Integrity of Halal Assurance System)	Y2 (Performance)
X1 (Supplier Integration)	0.862				
X2 (Customer Integration)	0.058	0.875			
X3 (Halal Regulator Integration)	0.029	-0.035	0.777		
Y1 (Integrity of Halal Assurance System)	0.372	0.388	0.034	0.753	
Y2 (Performance)	0.262	0.274	0.089	0.377	0.807

Source: Processed Data (2024)

According to the table above, all the roots of AVE (Fornell-Larcker Criterion) of each construct are more significant than its correlation with other variables. All variables with numbers against variables are more significant than the correlation with other variables, so they are valid.

Structural Model Evaluation Results

Figure 2 below displays the test results obtained with Structural Equation Modeling Partial Least Square (SEM-PLS):

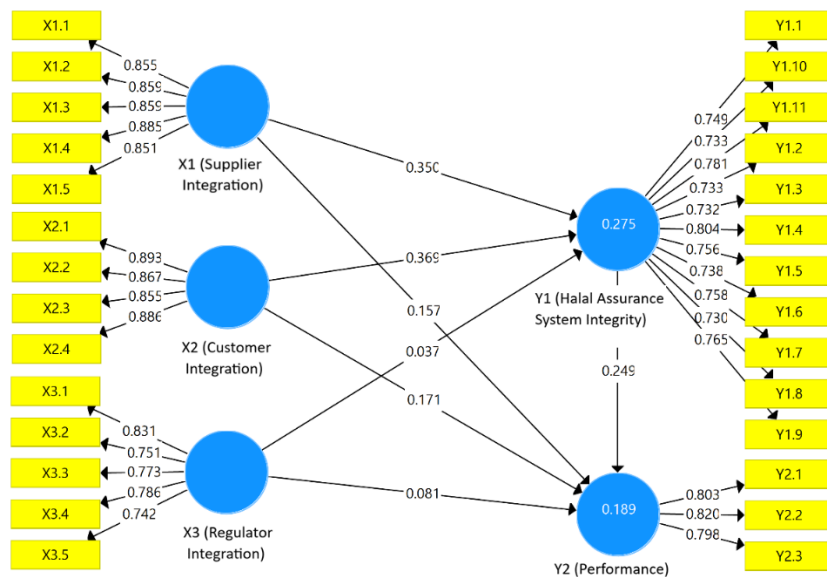


Figure 2. The Goodness of Fit Model Test Outcome

Based on the image above, the structural model equation is obtained:

$$Y1 = 0.350 X1 + 0.369 X2 + 0.037 X3 + ei1; R2 = 0.275 \dots\dots\dots (1)$$

$$Y2 = 0.157 X1 + 0.171 X2 + 0.081 X3 + 0.249 Y1 + ei2; R2 = 0.189 \dots\dots\dots (2)$$

Where: X1: Supplier integration
 X2: Customer integration
 X3: Integration of halal regulators
 Y1: Integrity of the halal assurance system
 Y2: Performance
 ei: residual

Furthermore, the tests carried out to measure the inner model consist of the determination coefficient using R square, predictive relevance with Q square, and the Goodness of Fit Index (GoF) as follows:

Table 5. Table of Determination Coefficient Results

Influence	R Square
X1, X2, X3→Y1	0.275
X1, X2, X3, Y1→Y2	0.189

Source: Processed Data (2023)

The formula measures the total data diversity that the model can explain:

$$Q^2 = 1 - [(1 - R1^2) \times (1 - R2^2)]$$

$$.Q^2 = 1 - [(1 - 0.275) \times (1 - 0.189)] = 0.412 \dots\dots\dots (3)$$

The coefficient of determination (R-square) obtained from model 1, namely the influence of variables X1 (Supplier integration), X2 (Customer integration), and X3 (Halal regulator integration) on variable Y1 (Integrity of the halal assurance system) is 0.275 or 27.5%. Moreover, in model 2, namely, the influence of variables X1 (Supplier integration), X2 (Customer integration), X3 (Halal regulator integration), and Y1 (Integrity of the halal assurance system) on variable Y2 (Performance) is 0.189 or 18.9%. Meanwhile, the Q square calculation results indicate that the diversity of data that the model can explain is 0.412 or 41.2%, which the model can explain, so the model is included in the excellent model category (> 0).

Hypothesis Testing Results

Testing the hypothesis of direct and indirect influence is shown in Table 6 below:

Table 6. Table of Results of Influence with T-Statistics

Influence	Path coefficient	T statistics	p-values	Information	Decision
DIRECT INFLUENCE					
X1→Y2	0.157	2,545	0.011	Significant	H1 accepted
X2→Y2	0.171	3,564	0.000	Significant	H2 accepted
X3→Y2	0.081	1.315	0.189	Not significant	H3 rejected
Y1→Y2	0.249	3.243	0.001	Significant	H4 accepted
INDIRECT INFLUENCE					
X1→Y1→Y2	0.087	2,969	0.003	Significant	H5 accepted
X2→Y1→Y2	0.092	3,097	0.002	Significant	H6 accepted
X3→Y1→Y2	0.009	0.565	0.572	Not significant	H7 rejected

Source: Processed Data (2024)

The influence of direct pathways on Supplier Integration (X1) on performance (Y2), Customer Integration (X2) on performance (Y2), and the influence of Halal Assurance System (Y1) on performance (Y2) yielded a result of $Cr > 1.96$ with a $p <$ value of 0.050, so that the hypothesis that Supplier Integration, Customer Integration and Halal Assurance System directly have a significant effect on performance can be accepted. While the integrity of the Regulator (X3) on the performance (Y2) gives a Cr value of 1.315 (< 1.96), p -value = 0.189, the Regulator Integration hypothesis has a significant influence on the rejected performance.

Based on the test results on mediation pathways one and mediation 2, the coefficient shows a critical value of $Cr > 1.96$ with a p -value smaller than α (< 0.050), so that the Supplier Integration variable (X1) and the Customer Integration variable (X2) mediated through the Halal Assurance System (Y1) can significantly affect performance (Y2), with the form of mediation being partial mediation, because the direct influence of X1 and X2 on Y1 is significant. Meanwhile, the test results in mediation path 3, the coefficient shows that the Regulator Integration variable (X3) controlled by the Halal Assurance System (Y1) is not able to affect the performance (Y2), which shows a critical value ($0.565 < 1.96$), and the p -value is greater than α ($0.572 > 0.050$).

DISCUSSION

The Influence of Supplier Integration on MSME Performance

The analysis's findings led to the conclusion that halal MSMEs have good supplier integration, which is indicated by their ability to build stable procurement planning with key suppliers to maintain quality standards so that it can aid in enhancing the halal MSME's performance through performance as indicated by an increase in performance of halal MSMEs in Malang Raya. Data analysis shows that MSMEs that successfully build close relationships with suppliers can reduce production costs and improve the quality of raw materials. This is appropriate with the Structural Contingency Theory, which emphasizes that organizational configuration can affect performance through interactions with external elements. The findings of this research are also to the opinions expressed by Kristiana et al. (2020) and Khan et al. (2022), which explain that supplier integration enables forecasting and planning, process product design to run more effectively and efficiently together with suppliers in order to accomplish the needs and goals of its customers. Utilizing supplier capabilities, thus causing loyal customers, as indicated by increased market share and marketing performance. The results of this research also support previous empirical results by MH Ali, Iranmanesh, et al. (2022) and Zulfakar et al. (2023) that good supplier integration will be able to make a significant contribution in improving the efficiency and effectiveness of the supply chain, as well as improve the performance and the company's strategic goals (Huo, 2012; Tan et al., 2017; N. Zainuddin et al., 2020). The results of this study are also support to previous results by MH Ali, Iranmanesh et al. (2022), and Handayani et al. (2022), proving that supplier integration impacts performance.

The Influence of Customer Integration on MSME Performance

It was determined from the analysis's findings that halal MSMEs have good customer integration, which is indicated by the existence of building intensive communication with key customers through information networks available, which can contribute to improving the performance through marketing performance as indicated by an increase in the market share of MSME Halal Malang Raya customers. Customer integration is crucial in improving performance which is defined as an effort to build and maintain strong relationships between MSMEs and their customer base.

By being attentive to customer input and feedback, halal MSMEs can improve the quality of their services and products. Initiatives to involve customers in the product design process can also strengthen their emotional connection with the brand, contributing to increased sales and overall business performance. In this process, customer integration improves the economic performance of MSMEs and creates social value and a better reputation in the community. The findings of this research are the opinion expressed by Adrian (2023), MH Ali, Zhan, et al. (2022), and Zulfakar et al. (2023) that close relationships between customers and producers can increase the accuracy of demand information can impact company performance (Tan et al., 2017). The findings of this research also support previous research results by Ali et al. (2017), Tan et al. (2017), Ghobakhloo & Tang (2015), and Puspaningtyas & Sucipto (2021), which concludes that customer integration affects MSME performance including quality performance, product quality and cost of quality.

The Influence of Regulator Integration on MSME Performance

The analysis concluded that halal MSMEs have regulatory integration as indicated by government support in the form of implementation. Socialization of the halal assurance system and halal certification cannot contribute to improving marketing performance. The main challenge halal MSMEs face is understanding and complying with regulations that often change. Therefore, synergy between the government and MSMEs must be built to ensure that business actors receive accurate and up-to-date information related to applicable policies. This is where the role of regulators is essential in facilitating communication between the government and business actors in the halal sector, considering the complexity and diversity of aspects that MSMEs must pay attention to. The findings of this study do not support previous empirical studies by The Last Supper (2021) and Creation & Hatamar (2023), which state that government integration plays a role in performance improvement for business actors.

The Influence of Halal Assurance System on MSME Performance

The analysis findings stated that it was concluded that halal MSMEs have a good Halal Assurance System, which is shown by the fact that the raw materials and all components of the product used can be guaranteed to have halal integrity, which can contribute to improving MSME performance through marketing performance as indicated by an increase in the market share of Halal Malang Raya MSME customers. The findings of this research strengthen the opinion put forward by (2017) and Puspaningtyas & Sucipto (2021), which concluded that the halal assurance system could improve company efficiency performance.

Halal Assurance System Mediates the Influence of Supplier Integration on MSME Performance

The analysis results state that the Halal Assurance System can mediate the influence of supplier integration on performance. This finding means that halal MSMEs with good supplier integration as demonstrated by being able to build stable procurement planning with key suppliers to maintain quality standards, can contribute to the improvement of the Assurance System through raw materials and all components of the product used can be guaranteed to have halal integrity. The contribution of supplier integration to the Halal Assurance System has an impact on generating the performance of through improving the marketing performance.

The importance of HAS in external integration is seen from its ability to align various interests between MSMEs and their business partners. When MSMEs establish relationships with suppliers, implementing HAS can encourage suppliers to meet the established quality and halal standards. This study's findings align with Structural Contingency Theory, which states that organizational configuration can influence performance through interactions with external elements. The concept of development put forward by Saunila et al. (2014) stated that the MSME sector operates in an uncertain environment; developing a Halal Assurance System is critical to a successful business, and one of the efforts made to improve the Halal Assurance System is the integration of its suppliers. These findings also strengthen the study by Wirakurnia & Nuanmark (2021) and Hussain et al. (2021), which found that supplier integration components significantly impact the Halal Assurance System. These findings also strengthen the research of Puspaningtyas & Sucipto (2021), and Sri Ayu Parwati (2021) that the Halal Assurance System is a mediation that strengthens the influence of supplier integration on performance. With halal certification, MSMEs can more easily cooperate with various external parties, including suppliers. This shows that HAS is not only focused on the final product but also on the entire value chain involved in providing halal products, which explains that developing competitive strategies together with suppliers enables companies to fulfill their objectives and essential role in improving the integrity of the halal food assurance system to achieve improved performance.

Halal Assurance System Mediates the Influence of Customer Integration on UMKM Performance

The hypothesis testing results demonstrate that the Halal Assurance System can mediate the impact of customer integration and MSME performance. This indicates that Malang Raya's halal-certified MSMEs have strong customer integration as indicated by having been established building intensive communication with key customers through information networks which can contribute to the Halal Assurance System through handling raw materials and all components used in the product have been confirmed to have halal integrity. The contribution of customer integration to the Halal Assurance System has an impact on increased performance by increasing the market share of Halal MSME customers in Malang Raya. When MSMEs implement HAS well, they can take advantage of the competitive advantage gained from the legitimacy of halal products. This will attract more customers and expand market reach.

Furthermore, data and feedback obtained through this halal assurance system can be integrated into the strategic decision-making process so that MSMEs can make the necessary adjustments to improve performance. In this case, HAS functions not only as a quality control tool but also as a strategic marketing tool. HAS acts as a link that strengthens these elements; MSMEs can more effectively respond to market demand and increase their competitiveness, which ultimately contributes to better performance.

The study's findings support Yuliani et al. (2020) show that customer integration is a critical factor influencing the Halal Assurance System so that MSMEs can carry out business operations by complying with Islamic principles regarding halal assurance rules more effectively and successfully. These findings also strengthen research Puspaningtyas & Sucipto (2021), and Sri Ayu Parwati (2021), the impact of customer integration on performance is strengthened through the mediation of the Halal Assurance System. Developing competitive strategies is, therefore, necessary because HAS not only concentrates on the end product but also on the whole value chain involved in producing halal products together with customers, enables companies to fulfill their goals and essential roles, which can improve the integrity of the halal food assurance system which can improve the performance of MSMEs.

Halal Assurance System Cannot Mediate the Influence of Integration on MSME Performance

The findings of this study indicate that all halal MSMEs, which have regulatory integration as indicated by government support in the form of implementation-socialization of the halal assurance system and halal certification, cannot contribute and improve performance. The results' findings do not support previous Tan et al. (2017) state that government integration plays a role in performance improvement for business actors. The main challenge faced by halal MSMEs is understanding and complying with regulations that often change and have yet to be socialized massively throughout the Malang Raya area. Conducive regulatory integration between the government and MSMEs has yet to be established. Therefore, synergy between the government and MSMEs must be built to ensure that Halal MSMEs can receive accurate and up-to-date information on applicable halal certification policies. Thus, strengthening the integration of regulators/government still needs to be improved by conducting continuous evaluations so that existing policies are genuinely relevant and can support the implementation of a conducive Halal Assurance System and achieve the best performance for halal MSMEs.

CONCLUSION AND RECOMMENDATION

Conclusion

This study examines how external integration affects the performance of halal MSMEs, with a specifically emphasis on the function of the Halal Assurance System (HAS) in structural contingency theory. Furthermore to highlighting the halal assurance system's critical role in accomplishing these objectives, the study's findings offer empirical evidence of the significance of external integration – mainly supplier and customer integration – for the success of halal MSMEs. The Halal Assurance System, owned by the owners of halal MSME businesses, can mediate the relationship between supplier integration and customer integration and the performance. Synergistic supplier and customer integration can significantly impact the performance of MSMEs. The Halal Assurance System is a link to foster advantageous connections between halal MSMEs and other stakeholders and ensures that products adhere to halal requirements.

According to the research findings, this study's findings can enrich the body of knowledge and references about the Structural Contingency Theory (SCT), which is used in halal MSMEs to achieve high performance. The development, selection, and implementation of strategies by halal MSMEs as producers are necessary to preserve conformity with their external environment and internal structural characteristics when the external environment changes. When supplier and customer integration is handled properly, it will produce a special capabilities that enhance the performance of MSMEs through the Halal Assurance System. Thus, effective supplier and customer integration supporting the Halal Assurance System can achieve high business performance. Utilization of supplier integration through quality procurement planning stability, customer integration realized with intense communication with key customers, and the Halal Assurance System realized in the assurance of halal integrity of raw materials and all product components.

Recommendation

For halal UMKM owners in Malang Raya regarding integration, regulators must actively follow developments regarding the latest research results from BPPOM regarding the halalness of products or materials and new processes. The findings of this study confirm the need to improve the role of regulators or government in supporting halal MSMEs so that government policies can encourage standardization and certification of halal products so that they can help MSMEs increase credibility in the eyes of consumers, as well as opening up opportunities for broader market access. The study results also show that uncertainty in regulations reduces the motivation of MSMEs to innovate and invest in the development of halal products. The study results also emphasize the importance of a systematic and holistic approach in developing halal MSMEs in Malang Raya, considering market dynamics and the complex interrelationships between various factors influencing success. Suggestions for further researchers include using mixed methods, longitudinal studies, and interdisciplinary collaboration between economics, society, and technology for studies that have not been touched on in this study, including sociocultural

factors, local wisdom and social norms, and technology in order to improve the performance of halal MSMEs.

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