

IMPACT OF HALAL SUPPLY CHAIN MANAGEMENT ON THE PRODUCTION PERFORMANCE OF FOOD AND BEVERAGE MSMEs IN CIMAHI CITY

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ABSTRACT

The majority of residents in Cimahi City are Muslim, comprising 94.4% of the population. Muslims, whether as buyers or sellers, must ensure that the food available is halal—from the selection of ingredients and the production process to distribution. This study examines the influence of halal supply chain management (HSCM) on the production performance of micro, small, and medium enterprises (MSMEs) in Cimahi City. The research employs a quantitative approach, collecting data through questionnaires distributed to 179 food and beverage MSME respondents in Cimahi City. Multiple linear regression analysis is used as the analytical tool. The findings indicate that halal SCM in purchasing, manufacturing, and distribution positively affects production performance. Furthermore, all three aspects combined have a significant positive impact on production performance. It can be concluded that food and beverage MSMEs in Cimahi City are highly committed to maintaining halal standards by implementing halal supply chain management—from procuring halal materials through the manufacturing process to food distribution. Recommendations include maintaining production performance by applying halal supply chain management and conducting regular evaluations for food and beverage

MSME operators to ensure product quality and sustain customer trust.

INTRODUCTION

Indonesia has the second-largest Muslim population in the world after Pakistan. This makes Islam the majority religion in Indonesia, implying that the concept of halal is a highly important consideration—ranging from food and services to delivery processes in accordance with Islamic law (Sharia). Halal certification has now become essential to ensure that products comply with these standards, especially food, which must be supervised from the agricultural process to the point of serving, under strict hygiene and health requirements, and using only permitted ingredients (Rahmah, 2019).

Halal certification itself should already be a mandatory requirement for all eateries and MSMEs operating in Cimahi, West Java. According to the Central Statistics Agency of West Java, 543,114 people in Cimahi identify as Muslim, or 94.4% of the city's total population (jabar.bps.go.id, 2024).

This highlights the importance of halal certification for food and beverage MSMEs in Cimahi to meet eligibility standards and comply with the requirements of halal products according to Islamic teachings. The term “halal” refers to what is permissible in Islam but has also become a lifestyle trend among Muslims both in Indonesia and globally. In the past, halal was typically associated only with food. However, today, the concept of halal is applied across various aspects of life, including tourism, fashion, and finance. This trend stems from Muslims' growing awareness of living in accordance with Islamic values. In Indonesia, ten sectors are actively engaged in the halal industry, including food, tourism, fashion, cosmetics, finance, pharmaceuticals, media, wellness, education, and arts and culture.

As of 2023, 86,635 MSME units were registered in Cimahi City, and only 259 MSMEs have been certified halal (bakesbangpol.cimahikota.go.id). This means that 4% of MSMEs in Cimahi hold halal certification, indicating a lack of awareness among business actors regarding compliance with the standardization mandated by Law No. 33 of 2014 (opendata.cimahikota.go.id, 2023).



Figure 1 Number of MSMEs in Cimahi City, 2016–2023

Based on the chart obtained from opendata.jabarprov.go.id, which shows the number of MSMEs in Cimahi City from 2016 to 2023, there were 56,910 MSME units in Cimahi in 2016. This number increased each year, reaching 86,635 units by 2023. The highest annual growth occurred between 2022 and 2023, with an increase of 5,048 MSME units.

The growth of MSMEs in Cimahi is assessed by the government based on their contribution to job creation, resilience in challenging circumstances, and enhanced competitiveness through various development programs. The Cimahi City Government, through the Department of Trade, Cooperatives, MSMEs, and Industry (Disdagkoperin), supports the improvement of MSME performance within the community by organizing bazaars and implementing sustainable development initiatives. Human resource development is prioritized to improve the quality and competitiveness of MSME actors in Cimahi (Source: ppid.cimahikota.go.id).

MSMEs in Cimahi City make a significant contribution to both the local and national economies. Most MSME activities are home-based enterprises that employ a substantial workforce, thereby helping to reduce unemployment. The Cimahi City Government has also launched a program called Bazar Bela Beli UMKM, held at the Cimahi City Government Complex field, which provides MSMEs with a platform to promote their products to the public. With government support, the continuous growth of MSME production is expected. The production performance of MSMEs in Cimahi has shown positive development, supported by an increasing number of MSMEs, their significant economic contribution, and government initiatives like Bazar Bela Beli. This indicates that MSMEs in Cimahi have great potential for continued growth and a substantial impact on regional economic development (ppid.cimahikota.go.id). Production performance issues among MSMEs in Cimahi arise from several key factors, such as limited capital, which hinders the realization of potentially viable business ideas. This is supported by a survey from PricewaterhouseCoopers showing that 74% of MSMEs in Indonesia lack access to financing (katadata.co.id). Another issue is the insufficient quality of human resources and weak HR management, which can hinder production performance. Often, MSME actors may be flexible but lack commitment, ultimately affecting productivity (Lahadalia, 2023). Moreover, a lack of innovation and strategic planning can reduce the competitiveness of MSME performance, with these factors shown to impact MSME operations (Tsatati Rosyada & Elfan Kaukab, 2024).

The implementation of the halal supply chain has a significant impact on production performance, particularly in the food and beverage industry, as compliance with halal standards ensures product quality and builds consumer trust (Fahriani, 2024). The halal supply chain also encourages innovation and enhances competitiveness. By ensuring that every stage of production meets halal standards, MSMEs can expand their market reach and improve profitability (Fahriani, 2024). The adoption of a halal supply chain by MSME actors has been shown to elevate overall performance, as it includes increased operational efficiency and customer satisfaction (Samsiar et al., 2024). Empirically, implementing a halal supply chain has a significant impact on overall production performance, indicating that applying halal principles enhances the efficiency

and effectiveness of supply chains (Muhammad et al., 2023). Overall, the adoption of a halal supply chain not only ensures compliance with Sharia principles but also provides tangible benefits in improving production performance, competitiveness, and operational efficiency for MSMEs.

Although halal supply chain management typically brings substantial benefits to production performance, MSMEs may face several challenges during its implementation, especially in the early stages. These include higher implementation costs compared to conventional supply chain management (Sun Permata et al., 2023) due to the need for additional investments such as certification fees, training, audits, and procuring halal-compliant raw materials. These added expenses can burden MSMEs with limited capital, potentially reducing profits and slowing production processes.

Management complexity also presents a challenge. Halal supply chain implementation requires more intensive coordination among suppliers, distributors, and all parties involved in the production process (Muhamad, 2020). Furthermore, not all regions have easy access to certified halal raw materials, forcing MSME actors to seek more expensive or harder-to-source alternatives, which can reduce production efficiency (Nabil et al., 2023). Finally, many MSME actors lack sufficient knowledge or expertise to implement proper halal supply chain management. Any errors or negligence in this area can erode consumer trust and negatively affect production performance.

Halal supply chain management encompasses more than just the food and beverage production process; it is a comprehensive halal process from upstream to downstream. This includes standardization at every stage of production, from raw material procurement and processing to packaging and distribution throughout the food supply chain. There is a significant distinction between halal supply chain management and conventional supply chain management, namely the halal standardization applied throughout the food supply chain to establish halal integrity in products (Nur Maisaroh et al., 2023).

Performance is a measure of a business's success in achieving its objectives. It is also defined as the extent to which policies, programs, and activities utilize available resources to meet specific goals (Anisah Salsabila Nasution et al., 2023). Performance is closely linked to processes, outcomes, and organizational goals. Production performance, particularly in the food industry, refers to the degree to which a business achieves its production objectives. It involves various aspects such as production quantity and capacity, product quality, cost efficiency, production speed, and product innovation. This approach not only facilitates more efficient management but also promotes MSME sustainability by enhancing product competitiveness in both local and international markets (Fahriani, 2024).

Although there are many MSMEs in Cimahi City, only a few are halal-certified, indicating a gap in the structured and efficient implementation of halal supply chain management. This gap is largely due to the lack of outreach and education regarding halal supply chain management among MSMEs, particularly in Cimahi. As a result, operational implementation especially in the areas of raw material procurement, manufacturing, and halal distribution remains limited. This study seeks to address this gap by offering a more detailed analysis of the impact of halal supply chains on

production performance (Fahrhani, 2024).

The main objective of this research is to obtain data and information related to halal supply chain management and its impact on the performance of food and beverage MSMEs in Cimahi City. The primary aim is to assess respondents' perceptions regarding the implementation of halal supply chain management in MSMEs in Cimahi, and to analyze the influence of halal supply chain components namely halal procurement, halal manufacturing, and halal distribution on the production performance of food and beverage MSMEs in Cimahi. Furthermore, this study seeks to examine the simultaneous impact of halal procurement, halal manufacturing, and halal distribution on the production performance of food and beverage MSMEs in Cimahi.

The following illustrates the relationship between the variables of halal supply chain management and production performance, as outlined in the conceptual framework and depicted in the research paradigm shown in the image below.

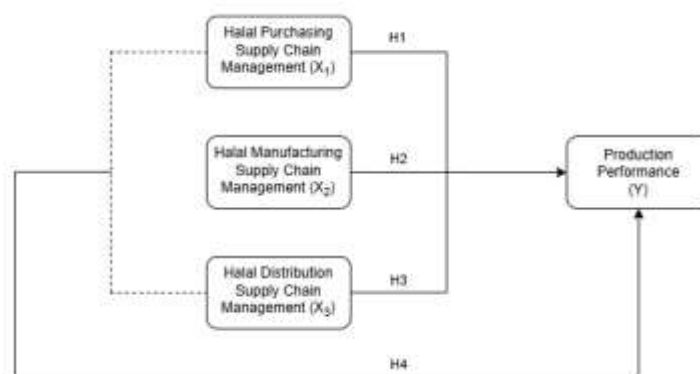


Figure 2 Research Paradigm of the Influence of Halal Supply Chain Management on Production Performance in Cimahi City

Research Hypotheses

H1: Halal Procurement Supply Chain Management has a positive effect on Production Performance.

H2: Halal Manufacturing Supply Chain Management has a positive effect on Production Performance.

H3: Halal Distribution Supply Chain Management has a positive effect on Production Performance.

H4: Halal Procurement, Halal Manufacturing, and Halal Distribution Supply Chain Management have a simultaneous positive effect on Production Performance.

LITERATURE REVIEW

Operation Management

Operations management is defined as the management that encompasses planning, organizing, coordinating, and controlling all activities directly related to goods and services (Pramesti et al., 2023). It involves activities aimed at generating value in the form of goods or services, which include the transformation of inputs into outputs

efficiently and effectively to support the sustainability of a business organization (Cuandra et al., 2022). It can be concluded that operations management is a series of activities that convert goods and services from input into output, with the ultimate goal of ensuring timeliness, quantity, and quality, as well as effective and efficient cost allocation.

Supply Chain Management

Supply chain management (SCM) is defined as a coordinated effort to manage the flow of goods, information, and finances from suppliers to end consumers, aiming to enhance efficiency, productivity, and product quality (Kot et al., 2020). SCM refers to management activities that connect supply and demand both within and across companies from upstream to downstream, involving production, finances, and information flows.

Halal Supply Chain Management

The legal basis for halal products in Indonesia is regulated under Law of the Republic of Indonesia Number 33 of 2014 concerning Halal Product Assurance, Articles 1–68, which require producers, distributors, and retailers to ensure that the products produced, distributed, and sold are halal in accordance with Islamic law.

The Halal Product Assurance Organizing Agency (BPJPH) is the institution responsible for the certification and supervision of halal products. BPJPH refers to Law Number 33 of 2014 and Government Regulation Number 31 of 2019 concerning Halal Food Business Licensing. This institution plays a vital role in certifying halal products such as food, beverages, and pharmaceuticals (Rahmah Maulayati & Najiatun, 2019).

Government Regulation Number 31 of 2019 further elaborates on the requirements and procedures for obtaining halal food business licenses. It contains provisions that business actors must comply with to ensure that their products align with halal principles (Rahmah Maulayati & Najiatun, 2019).

Halal Supply Chain Management is a management system that ensures all activities within the supply chain from production, processing, and distribution to consumption comply with Islamic principles (Nabil et al., 2023). It can be concluded that Halal Supply Chain Management refers to managing the flow of goods and services in accordance with Islamic values. Its purpose is to ensure that the procurement of raw materials, processing, marketing, promotion, and final products all meet halal standards (Liestyana et al., 2024). According to Rohaeni & Sutawidjaya (2020), in general, halal supply chain management consists of four main activities: halal procurement, halal manufacturing, halal distribution, and halal logistics. (Rohaeni & Sutawidjaya, 2020)

Halal Procurement refers to activities focused on ensuring the halal integrity of a product throughout the supply chain. It includes three main indicators: procuring halal raw materials to ensure the ingredients comply with Sharia principles, maintaining the halal integrity of products from start to finish, and identifying halal inputs and resources to confirm compliance with halal standards (Putri et al., 2019).

Halal Manufacturing is an organized and harmonious process for processing materials according to Sharia principles. It involves three indicators: processing materials in accordance with halal requirements to ensure compliance with halal standards,

maintaining an organized and integrated production process to ensure efficiency and Sharia adherence, and implementing halal supervision throughout the production stages to safeguard the halal status of the product (Putri et al., 2019)

Halal Distribution emphasizes the use of packaging that complies with halal principles, where packaging is made from halal and safe materials to protect the product. The indicators include the use of halal packaging materials, safe product distribution, and distribution processes that fully comply with halal standards (Ashari et al., 2021).

Halal Logistics involves managing logistics operations—including procurement, movement, storage, and handling of materials, both food and non-food—according to Sharia principles. The management of halal procurement involves three main aspects: the movement and storage of materials must comply with halal principles, maintaining the integrity of materials from contamination or damage, and handling halal materials with care and in compliance with halal standards to ensure their integrity up to the production stage (Aziz & Zailani, 2016).

Kinerja Produksi

Production performance is a measure of the efficiency and effectiveness of a production process in producing goods that meet expected quality and quantity standards. This performance is assessed based on specific indicators used to evaluate the company's productivity in achieving its production targets (Maryati & M. Khoiri, 2022). Often, performance is measured using human resource performance measurement systems such as the Human Resources Scorecard, which assesses competencies, high-performance work systems (HPWS), and elements such as quality, quantity, task execution, and responsibility (Yuningsih et al., 2020).

Performance is evaluated based on indicators such as productivity, quality, and the quantity of output produced. In the manufacturing industry, effective cost control especially in raw material procurement and labor management can significantly improve overall production performance (Saragi Sitio, 2022). Company performance indicators in halal supply chain management can be measured using the Supply Chain Operations Reference (SCOR) model, which has been adapted to comply with halal principles (Alinudin et al., 2023) According to this model, there are seven production performance indicators: reliability, responsiveness, flexibility, cost efficiency, asset management, and compliance with halal standards.

Reliability refers to the supply chain's ability to consistently and accurately meet customer demand while adhering to halal standard. Responsiveness is the supply chain's speed in responding to customer demands and market changes, while ensuring compliance with halal standards. Flexibility denotes the supply chain's capacity to adapt to changes in demand or market conditions without compromising halal compliance.

Cost Efficiency measures the ability of the supply chain to minimize operational costs while ensuring that all processes adhere to halal standards. Asset Management refers to the effective management of assets and resources used in the halal supply chain. Halal Compliance ensures that all processes in the supply chain comply with applicable halal regulations and standards.

RESEARCH METHOD

The research method employed is a quantitative descriptive approach using multiple linear regression analysis to explain the mathematical relationship between the dependent (output) variable (Y) and the independent (input) variables (X), which consist of three dimensions. The multiple linear regression model assumes a linear relationship between these variables, which can be mathematically expressed through an equation (Nursalam, 2020). Data collection was carried out by distributing questionnaires to respondents, specifically food and beverage MSME actors in Cimahi City. The data obtained were then analyzed using multiple regression analysis with the assistance of SPSS software. The data were collected directly by the researcher through a survey conducted using a Google Form questionnaire link distributed to all MSME actors to answer the research questions.

The respondents in this study were all owners, entrepreneurs, or employees working in food and beverage MSMEs in Cimahi City. Cimahi City itself is divided into three districts: North Cimahi, Central Cimahi, and South Cimahi. According to data from the West Java Central Statistics Agency (BPS) for the year 2023, Cimahi City had a population of 572,519 people. Additionally, there were 86,635 registered MSME units in Cimahi as of 2023. Therefore, the survey and questionnaire were specifically distributed to food and beverage MSMEs in Cimahi City.

The determination of the sample size was based on the Slovin formula with a margin of error of 5% (0.05), resulting in a minimum sample size of 157 respondents. To minimize data bias, the number of respondents was increased to 173. The type of data used in this study is primary data, which refers to data collected directly from the source without any intermediary. The multiple linear regression model used is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

Explanation :

- Y: Dependent variable (the variable to be predicted).
- X_1, X_2, \dots, X_n : Independent variables (factors affecting Y).
- β_0 : Intercept (constant).
- $\beta_1, \beta_2, \dots, \beta_n$: Regression coefficients indicating the influence of each independent variable on the dependent variable.
- ϵ : Error term (residual error).

There are two variables examined in this study: halal supply chain management as the independent variable and production performance as the dependent variable. The production performance variable consists of dimensions such as reliability, responsiveness, flexibility, cost efficiency, operational costs, asset management, and compliance with halal standards. The independent variable in this study is Halal Supply Chain Management, which includes: Halal Procurement Management, with indicators such as the purchase of halal raw materials, halal integrity of the product, and identification of halal inputs and resources. Halal Manufacturing Management, with indicators including processing of materials in accordance with halal requirements, an organized and integrated production process, and the implementation of halal supervision throughout the process. Halal Distribution Management, with indicators

such as the use of halal packaging materials, safe distribution of products, and distribution processes that comply with halal principles.

RESEARCH RESULTS AND DISCUSSION

Descriptive Analysis

Descriptive analysis of the variables is necessary to provide an overview such as the average value (mean), minimum value (min), maximum value (max), and standard deviation of each variable. These variables include halal procurement supply chain management (X_1), halal manufacturing supply chain management (X_2), halal distribution supply chain management (X_3), and production performance (Y_1).

Table 1 Descriptive Analysis

Descriptive Statistics					
Variabel	N	Minimum	Maximum	Mean	Std. Deviation
Halal Procurement Supply Chain Management	180	3,00	15,00	11,9222	2,66669
Halal Manufacturing Supply Chain Management	180	3,00	15,00	11,9722	2,62014
Halal Distribution Supply Chain Management	180	3,00	15,00	11,8778	2,62914
Production Performance	180	16,00	80,00	63,4444	13,46596
Valid N (listwise)	180				

The following presents the results of the descriptive analysis.

The results of the descriptive analysis indicate that the three aspects of halal supply chain management procurement, manufacturing, and distribution—are perceived as fairly good by the respondents. This is reflected in the high average scores for each variable, although there remains some variation in the assessments.

In the aspect of halal procurement supply chain management (X_1), the average score obtained was 11.92 out of a maximum of 15, indicating that the majority of respondents believe the procurement processes in the supply chain comply with halal principles. However, a standard deviation of 2.67 suggests some variation in the respondents' perceptions. This means that while the overall assessment is positive, there

are still some respondents who feel that the implementation of halal procurement is not yet fully optimal.

Meanwhile, halal manufacturing supply chain management (X2) received the highest average score, at 11.97. This indicates that the production or processing aspect of the supply chain is considered the most consistent and reliable in applying halal principles. The slightly lower standard deviation of 2.6 also reinforces the notion that respondents' perceptions of this aspect are more uniform compared to the others.

For the aspect of halal distribution supply chain management (X3), the average score was slightly lower at 11.88. Although the difference is not significant, this could signal that distribution remains a point that requires more attention to maintain halal integrity. The standard deviation of 2.6 similarly indicates a level of variation in views, comparable to that found in the procurement aspect.

Overall, these three variables demonstrate that the implementation of halal supply chain management is at a reasonably good level. Nevertheless, there is still room for improvement, particularly in maintaining consistency throughout the entire process—from procurement to distribution. This is crucial to sustain consumer trust in halal products and to ensure that halal standards are uniformly applied across all operational lines.

Table 2 Multiple Linear Regression Analysis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,457	0,830		2,961	0,003
	Halal Procurement Supply Chain Management	1,944	0,253	0,386	7,681	0,000
	Halal Manufacturing Supply Chain Management	1,962	0,196	0,382	10,011	0,000
	Halal Distribution Supply Chain Management	1,207	0,254	0,236	4,748	0,000

a. Dependent Variable: Production Performance

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

$$\begin{aligned} Y &= 2.457 + 1.944X_1 + 1.962X_2 + 1.207X_3 \\ &= 7.570 \end{aligned}$$

Based on the results of the regression equation, the relationship between the independent variables and the dependent variable can be interpreted as follows:

The constant value of 2.457 indicates that if all independent variables—halal purchasing supply chain management, halal manufacturing, and halal distribution (X_1 , X_2 , and X_3)—are equal to zero, the baseline value of the dependent variable, production performance (Y), would be 2.457. In other words, this is the fixed value of Y when none of the three factors contribute to it.

The regression coefficient for variable X_1 (halal purchasing supply chain management) is 1.944. This positive value means that improvements in the procurement of halal raw materials, maintaining product halal integrity, and identifying halal inputs and resources would lead to an increase in production performance by 1.944 units, assuming the other variables remain constant. Thus, the better the implementation of halal purchasing management based on these indicators, the greater its positive impact on production performance.

The regression coefficient for variable X_2 (halal manufacturing supply chain management) is 1.962, also indicating a positive influence. This implies that processing materials in accordance with halal standards, maintaining an organized and integrated production process, and implementing halal oversight throughout production significantly contribute to production performance. Enhancing halal manufacturing practices has a tangible effect on the output measured by production performance.

Variable X_3 (halal distribution supply chain management) has a coefficient of 1.207, which also reflects a positive relationship. Although its contribution is smaller compared to X_1 and X_2 , halal distribution—based on indicators such as the use of halal-compliant packaging, secure distribution of products, and adherence to halal distribution principles—still significantly influences production performance. This suggests that halal distribution remains a critical component of the overall halal supply chain system.

Overall, the regression results demonstrate that halal supply chain management in purchasing, manufacturing, and distribution all have a positive relationship with production performance. The combined influence of these three components results in a final predicted value of 7.570, indicating that each aspect of halal supply chain management significantly impacts the enhancement of production performance.

Validity Test

The validity test was conducted using Pearson Correlation by comparing the calculated r -value (r_h) to the critical value from the r -table (r_t) to determine whether the data are valid. The r -table value is determined by a 5% significance level based on the sample size. In this case, with 179 data points, the r -table value at a 5% significance level is 0.147.

Table 3 Validity Test

Validity Test (Pearson Correlation)					
	Variable	Pearson Correlation	Sig. (2-tailed)	N	Description
1	Halal Procurement Supply Chain Management	0,97	0	179	Valid
2	Halal Manufacturing Supply Chain Management	0,962	0	179	Valid
3	Halal Distribution Supply Chain Management	0,963	0	179	Valid
4	Production Performance	1	0	179	Valid

The validity test was conducted using the Pearson Correlation method. Based on Table 4.2, the criterion for data validity is that the calculated r-value (r count) must be greater than the r-table value. With a sample size of $N = 179$ and a significance level of 0.05 (2-tailed), the r-table value is approximately 0.147. A significance value (Sig. 2-tailed) less than 0.05 indicates a statistically significant relationship.

From the table, it can be observed that the Pearson Correlation (r) values for hypotheses H1, H2, H3, and H4 concerning the variables of Halal Purchasing Supply Chain Management, Halal Manufacturing, and Halal Distribution in relation to Production Performance are 0.9. Since $0.9 > 0.147$, the hypothesis is considered valid. Additionally, the significance value (Sig. 2-tailed) is 0.000, which is less than 0.05, indicating a statistically significant relationship.

Based on these results, all variables exhibit Pearson Correlation values greater than 0.9 and significance levels less than 0.01, suggesting that all items possess a very high degree of validity. The questionnaire instruments used to measure halal purchasing supply chain management, halal manufacturing, halal distribution, and production performance in this study are proven to be valid, as they meet the validity criteria—correlation values well above the r-table value (0.147) and significance values below 0.05.

Reliability Test

The following presents the statistical data table generated using SPSS software for conducting the reliability test.

Reliability Statistics

Cronbach's Alpha	N of Items
.731	4

Figure 3 Reliability Statistics

Based on the data above, there are four variables being tested, including both independent and dependent variables, with a Cronbach's Alpha value of 0.731. According to the calculation, if the Cronbach's Alpha value is greater than 0.70, the data is considered reliable. If the value is less than 0.70, the data is considered unreliable.

Table 4 Reliability Test

	Variable	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	Halal Procurement Supply Chain Management	0,972	0,65
2	Halal Manufacturing Supply Chain Management	0,961	0,656
3	Halal Distribution Supply Chain Management	0,966	0,654
4	Production Performance	0,985	0,979

Reliability testing aims to measure the internal consistency of the research instrument. The method used is Cronbach's Alpha, with the following interpretation criteria:

- $\alpha \geq 0.9$: Very reliable.
- $0.8 \leq \alpha < 0.9$: Reliable.
- $0.7 \leq \alpha < 0.8$: Moderately reliable.
- $0.6 \leq \alpha < 0.7$: Acceptable (reasonably adequate).
- $\alpha < 0.6$: Unreliable.

Based on Table 4 (Reliability Test), it can be concluded that all variables have a Corrected Item-Total Correlation value greater than 0.5, indicating that each item shows a strong correlation with the total scale.

The Cronbach's Alpha if Item Deleted values for the three independent variables halal supply chain management range between 0.650 and 0.656, which still falls within the acceptable category. Meanwhile, the dependent variable (Production Performance) shows a Cronbach's Alpha value of 0.979, indicating that this variable is highly reliable.

Overall, the variables in this study can be considered reliable. Although the Cronbach's Alpha values for all independent variables (halal supply chain) are slightly below 0.7, they are still acceptable due to the very high item-total correlation values (greater than 0.96).

Significance Testing of Parameters

Table 5 R-Square

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.985 ^a	.970	.970	2.26127

a. Predictors: (Constant), Manajemen Rantai Pasok Distribusi Halal, Manajemen Rantai Pasok Manufaktur Halal, Manajemen Rantai Pasok Pembelian Halal

Based on the results of the regression analysis, the Adjusted R Square value of 0.970 indicates that the halal supply chain management variables—which include halal purchasing management, halal manufacturing management, and halal distribution management—simultaneously explain 97% of the variation in production performance. This suggests that the regression model used possesses a very high degree of accuracy in predicting production performance based on these three key components of the halal supply chain.

Table 6 Regression Coefficient

Table of Regression Coefficients					
Variable	B	Std. Error	Beta	t	Sig.
(Constant)	2.457	0.830	—	2.961	0.003
Halal Procurement Supply Chain Management	1.944	0.253	0.386	7.681	0.000
Halal Manufacturing Supply Chain Management	1.962	0.196	0.382	10.011	0.000

Halal Distribution Supply Chain Management	1.207	0.254	0.236	4.748	0.000
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Therefore, the better the implementation of halal supply chain management by the enterprise, the higher the production performance achieved. These findings underscore the importance of integrating and applying halal principles throughout the entire supply chain process in order to achieve optimal production efficiency and effectiveness. The remaining 3% is attributed to other factors outside the scope of this study.

Partial Test or T-Test, with a focus on the significance (Sig.) table, is used to determine the effect of each independent variable on the dependent variable. The regression analysis is considered fit if the significance value (Sig.) is less than 0.05, indicating a statistically significant influence. However, if the Sig. value is exactly 0.05, further comparison is required to determine whether the independent variable has a meaningful impact on the dependent variable.

Table 7 Partial Test (T-Test)

Variable	Coefficient	Significance (p-value)	Conclusion
Halal Procurement Supply Chain Management (X1)	1.944	< 0.05 (assumed significant)	H1 accepted
Halal Manufacturing Supply Chain Management (X2)	1.962	< 0.05	H2 accepted
Halal Distribution Supply Chain Management (X3)	1.207	< 0.05	H3 accepted

Halal supply chain management in procurement, with a regression coefficient of 1.944; halal manufacturing, with a regression coefficient of 1.962; and halal distribution, with a regression coefficient of 1.207—all have a significant positive partial effect on production performance. The highest regression coefficient is found in halal manufacturing supply chain management, indicating that this aspect exerts the greatest influence. All variables have significance values (p-values) of less than 0.05 and positive regression coefficients. It can therefore be concluded that hypotheses H1, H2, H3, and H4 are accepted, as all components of halal supply chain management have a significant positive effect on production performance.

Table 8 Simultaneous Test Table (F-Test)

Simultaneous Test Table					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	29.300.063	3	9.766.688	1.910.048	0.000
Residual	894.831	175	5.113	—	—
Total	30.194.894	178	—	—	—

The simultaneous test (F-test) in regression analysis is considered valid (FIT) if the significance value (Sig.) is less than 0.05. Based on the table above, the significance value is 0.000, which is less than 0.05. Therefore, it can be concluded that the independent variables have a significant simultaneous (collective) effect on the dependent variable. The F-test is used to determine whether the independent variables collectively have a significant effect on the dependent variable. The hypotheses are as follows:

- **H₀:** There is no simultaneous effect of Supply Chain Management (Halal Procurement, Halal Manufacturing, Halal Distribution) on Production Performance.
- **H₁:** There is a simultaneous effect of Supply Chain Management (Halal Procurement, Halal Manufacturing, Halal Distribution) on Production Performance.

The testing criteria state that if the Sig. value is less than 0.05, then H₀ is rejected and H₁ is accepted, indicating a significant simultaneous effect.

Based on Table 4.8 of the Simultaneous Test, it can be concluded that the significance value is $0.000 < 0.05$. Therefore, H₀ is rejected and H₁ is accepted, meaning that Halal Supply Chain Management in Procurement, Manufacturing, and Distribution has a significant and positive simultaneous effect on Production Performance.

CONCLUSION

Based on the research findings and the discussion regarding the influence of halal supply chain management on production performance, it can be concluded that the average score, or mean, is 4 out of 5. This indicates that, on average, respondents agreed with the statements provided. Furthermore, all coefficients for the independent variables (X), namely Halal Supply Chain Management, are positive, with the highest coefficient being for X₂ (Halal Manufacturing Supply Chain Management) at 1.962. Since all regression analysis results are positive, it can be concluded that all hypotheses regarding the influence of Halal Supply Chain Management on Production Performance in MSMEs

in Cimahi City show a positive effect.

A reliability test using Cronbach's Alpha indicated that the data is reliable. The validity test using Pearson Correlation confirmed the validity of the instruments. Partial significance testing (t-test) showed that hypotheses H1, H2, H3, and H4 were accepted. Lastly, the simultaneous significance test (F-test) demonstrated that Halal Supply Chain Management has a positive and significant simultaneous effect on production performance. Therefore, it can be concluded that MSMEs in Cimahi, particularly food and beverage MSMEs, show strong concern for maintaining halal standards in their products by implementing halal supply chain management—from sourcing halal materials, to manufacturing processes, to product distribution.

Thus, the following conclusions can be drawn that, H1: Halal Procurement Supply Chain Management has a positive effect on Production Performance. This is proven valid and significant, with a regression coefficient of 1.944 (positive), a validity test result of $0.970 > 0.147$ (highly reliable), a reliability score of 0.65 (acceptable), and significance testing (t-test and F-test) showing p-values < 0.05 . Therefore, H_0 is rejected and H_1 is accepted, indicating a significant simultaneous effect.

H2: Halal Manufacturing Supply Chain Management has a positive effect on Production Performance. This is validated with a regression coefficient of 1.962 (positive), a validity test result of $0.962 > 0.147$ (highly reliable), a reliability score of 0.656 (acceptable), and p-values < 0.05 in significance testing. Thus, H_0 is rejected and H_2 is accepted, indicating a significant effect.

H3: Halal Distribution Supply Chain Management has a positive effect on Production Performance. This is confirmed valid and significant with a regression coefficient of 1.207 (positive), a validity score of $0.963 > 0.147$ (highly reliable), a reliability score of 0.656 (acceptable), and significance testing yielding p-values < 0.05 . Hence, H_0 is rejected and H_3 is accepted.

H4: The combined influence of Halal Procurement, Manufacturing, and Distribution Supply Chain Management has a positive simultaneous effect on Production Performance. This hypothesis is validated and accepted, confirming that all components of halal supply chain management contribute positively to improving production performance.

To maintain the integrity of halal certification for a brand or product, MSMEs are encouraged to obtain official halal certification from the Halal Product Assurance Organizing Agency (BPJPH), so that consumers can feel more confident in purchasing food and beverage products. Furthermore, brands that have already obtained halal certification from BPJPH are advised to consistently uphold halal standards throughout all stages—procurement, manufacturing, and distribution. To sustain production performance through halal supply chain management, MSME operators should regularly conduct evaluations to ensure product quality and maintain consumer trust.

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