HALAL CERTIFICATION INTEGRATION OF SUPPLY CHAIN RISK MANAGEMENT IN ICHIPS BANANA MSMES IN SUMENEP

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Abstract

Halal certification is a strategic step for MSMEs to retain consumers and differentiate products from competitors. However, supply chain management must consider product, market, compliance and operational risks, which if not managed properly can undermine consumer confidence. Sumenep Regency has many MSME players with various types of preparations and business scales, one of which is Ichips Banana. This study aims to integrate halal certification with supply chain risk management to improve operational effectiveness and business sustainability. The analysis uses the SCOR method (plan, source, make, deliver, return) and a Likert scale-based SCOR matrix 1-5. The results of Ichips Banana MSME's supply chain performance of 4.40 (high index), shows optimal and helps Ichips Banana MSME to be more competitive and efficient in facing market dynamics. Thus, Ichips Banana MSME anticipates delays in the delivery of raw materials, price fluctuations, and changes in the quality of raw materials from suppliers.

Keywords **:** *Halal Certification, MSMEs, Risk Management, Supply Chain*

INTRODUCTION

The halal industry has great potential to develop in various countries in the world, both as producers and consumers, especially in the food, pharmaceutical, financial, fashion and lifestyle sectors (Suprapti et al., 2023). Halal certification is a strategic step for MSMEs to retain consumers and have differentiating points with competing companies that provide added value to products. Halal certification is the process of obtaining halal certification through several stages of examination that prove the raw materials, production implementation process, and halal assurance system in a company that is in accordance with the standards set by the Assessment Institute for Food, Drugs and Cosmetics of the Indonesian Ulema Council (LPPOM MUI) (Shofiyah & Qadariyah, 2022). Halal certificates can be the branding of a product being sold, branding remains an important element in marketing strategies and company branding continues to evolve along with technological developments. as well as the latest trends (Naufal & Aryanto, 2024). Halal certification not only protects businesses from legal risks, but also helps

increase their credibility and reputation in the eyes of consumers and business partners (Pimienta, 2023). In addition, halal certification has an important role in reducing product risk by ensuring that all raw materials comply with sharia standards. Halal certification also reduces operational risk, which ensures that operations or the process of making products meet sharia standards. By reducing product and operational risks, it will also reduce market risk, which with halal certification will make consumers more confident in MSME products so that they can attract more consumers. The government has launched various legal products to increase the speed of development of Indonesian halal products, among others: Law No.33 of 2014 which requires all products to be halal certified, next is the issuance of PP. No. 31 of 2019 concerning the implementing regulations of Law No. 33 of 2014 concerning the guarantee of halal products as a strengthening of the previous regulation by enforcing the application of halal certification from voluntary status to obligation (mandatory) by providing a period of 5 years from its enactment. Since 2019, halal certification has not been carried out by MUI, but through the Halal Product Guarantee Agency (BPJPH) under the Ministry of Religion. Meanwhile, the latest regulation regarding halal certification is the issuance of PP No.39 of 2021 concerning the implementation of the halal product guarantee sector. The government pays more attention to MSEs by issuing special regulations through the issuance of Minister of Religion Regulation No. 20 of 2021 concerning Halal Certification for MSMEs (Puspita Ningrum, 2022).

The halal food sector is currently a new opportunity to increase economic growth and development. It is said to be a new opportunity because not only countries with a Muslim majority but also Muslim minority countries take part in the development of the halal industry. Therefore, the Indonesian government is also trying to develop the domestic halal food and beverage industry to encourage the growth of the halal industry. It needs an in-depth understanding of the world of the halal industry, it can be enlightened by understanding how the implementation of halal product certification and assurance first (Fuadi et al., 2022). Halal food is growing rapidly because not only Muslims are tempted by halal food but also non-Muslims because halal food is guaranteed in terms of hygiene and health. The invasion of imported food is quite a challenge, especially since Indonesia is a country with a majority Muslim population, other countries will compete to reach consumers in order to gain company profits (Peristiwo, 2019).

Micro, Small and Medium Enterprises (MSMEs) are business activities run by individuals or groups with the aim of improving welfare. MSMES have an important role in national economic development. Meanwhile, according to Farisi et al. (2022)MSMEs are one type of small business that is very instrumental in improving and growing the community's economy. Because the existence of MSMEs is able to survive in any situation to achieve community welfare. The resilience of MSMEs was proven when the 1998 monetary crisis occurred, many large businesses collapsed, but MSMEs survived and even increased.

Supply chain integration plays a role in how MSMEs coordinate with partners so that goods can reach end consumers quickly and at a lower cost. This of course does not necessarily mean that supply chain integration can increase, increasing supply chain integration can be done by improving information technology in MSME business processes (Safitri & Huda, 2022) Supply chain management in the industrial world is currently one of the main focuses of companies in an effort to increase competitive selling power so that they can compete in the era of globalisation (Rozudin & Mahbubah, 2021). Supply chain risk management involves identifying, analysing and mitigating risks that arise in the process of production, distribution and storage of products. Halal certification can add complexity to supply chain management as it must ensure that all processes meet halal standards.

Sumenep district is a developing district related to the type of processing and varying business scale. Sumenep district has many MSME players. Based on data from the Sumenep District Office of Cooperatives, Small and Medium Enterprises, Industry and Trade, in 2024 there are 128 MSMEs that have halal certification where Sumenep Regency has the opportunity and potential to be marketed to the public, especially halal certified products. One of the MSMEs that has been halal certified is the Ichips Banana Banana Chips MSME which is engaged in agribusiness which is innovated by providing flavour variants such as taro, tiramisu, greentea, strawberry and chocolate. Therefore, the purpose of this study is to integrate halal certification with supply chain risk management to improve the effectiveness of business operations and maintain business sustainability.

LITERATURE REVIEW

Risk Management

Risk management is the process of planning, organising, and controlling business activities or businesses that have risks in their implementation (Nur & Manda, 2022). Risk management involves identifying what hazards are involved, determining failures in the system that can cause harm or risk, prioritising hazards that have high potential in handling them (Hadi et al., 2020).. Risk management is an organised method that is systematic and logical to direct, identify, monitor, establish solutions, report risks, and manage the organisation in order to handle risks (As Sajjad et al., 2020). According to Asir et al. (2023) Risk management is an integral component of good management and decision making at every level in an organisation. Risk management is concerned with making decisions that contribute to the achievement of an organisation's goals. With risk management, it can minimise the occurrence of risks that can have a major impact on agencies/companies (Bisma, 2022). The purpose of risk management is to create a level of protection that mitigates vulnerability to threats and potential consequences, thereby

reducing risk to an acceptable level (Muka & Wibowo, 2021). Risk management is also needed in the supply chain so that it is known from the start the risks that can harm the supply chain actors so as to ensure continuity of production and availability of products in the market and fulfil consumer demand for quality at relatively stable prices (Melly et al., 2019).

Supply Chain

The supply chain is one part of the company that is very important and plays a role in determining company performance (Rohaeni & Sutawijaya, 2020). The supply chain is defined as a network of organisations involved, through upstream and downstream relationships, in various processes and activities that produce value in the form of products and services in the hands of end consumers. The supply chain has become an important focus for business organisations to increase competitive advantage (Annisa, 2023). Meanwhile, according to Melinda et al. (2024) supply chain is a concept of implementing an integrated logistics system in business activities, which is a chain of supplying goods from raw materials to finished goods. The supply chain includes not only manufacturers and suppliers, but also warehouse carriers, retailers, and even customers themselves. Based on this explanation, the supply chain has five components in its business flow, namely suppliers, manufacturers, distributors, retailers, and customers. The supply chain includes all functions involved in receiving and fulfilling customer demand (Nadhira et al., 2019).

Micro, Small and Medium Enterprises

Micro, Small and Medium Enterprises (MSMEs) are one of the drivers of the economy in Indonesia. The rapid growth of MSMEs has made entrepreneurs look for ways to compete and survive amid environmental changes (Rianto et al., 2021). According to Janah & Tampubolon (2024), MSMEs have a very important role in driving the economic growth of a country. At Indonesia, the MSME sector has become the backbone of the economy, making a significant contribution to national income and creating jobs for the community. The benefits of MSMEs to the national economy include: creating employment, being the largest contributor to gross domestic product, and being an effective solution to overcome the economic problems of the middle and lower classes (Idayu et al., 2021).

Halal Certification

Halal certificate is a written fatwa from the Indonesian Ulema Council (MUI) which states the halalness of a product in accordance with Islamic law. This halal certificate is a law to obtain permission to include the halal label on product packaging from the authorised government agency (Saputra et al., 2023). Halal is the main requirement for food products for the Muslim community and is a form of consumer protection from a variety of foods that are considered unfit according to Islamic law (Djakfar & Isnaliana,

2021). According to Widyaningsih & Nugroho (2024) halal is used as an indicator of product quality, especially for food and beverages that are widely consumed. Aspects of halalness include staff qualifications, tool sanitation, storage procedures, and product labelling. The concept of halal is not only as simple as about ingredients but also about methods of preparation, slaughter, cleaning, management and other applicable forms of management (Kurniawati & Savitri, 2020).

Halal certification is a process to obtain a halal certificate through several stages of examination to prove that the ingredients, production process, and halal assurance system meet the standards of the Assessment Institute for Food, Drugs and Cosmetics of the Indonesian Ulema Council (LPPOM MUI). The purpose of halal certification is to provide certainty of the halal status of a product as a form of fulfilling consumer rights. Consumer confidence in the halalness of a product will affect the number of consumer purchases of that product (Nurani et al., 2020). According to Nst & Wahyuni (2019) the halal assurance system is a management system that is compiled, implemented and maintained by companies holding halal certificates to maintain the continuity of the halal production process in accordance with the provisions of LPPOM MUI. For this reason, regulations regarding halal product guarantees are very important because most of Indonesia's population is Muslim. This is done by providing protection and guarantee of the halalness of products consumed by the public (Rahmanita et al., 2023). Halal certification is not only about religious aspects, but also an important business strategy in entering an increasingly tight market. Secondly, halal certification can provide confidence to consumers, open wider market access, and help MSMEs differentiate their products in an increasingly competitive market. In addition, with halal certification, MSMEs can fulfil applicable legal requirements, prevent potential legal problems, and maintain their business reputation (Camelia et al., 2024).

Supply Chain Operations Reference (SCOR) Method

Supply Chain Operations Reference (SCOR) is a reference model of supply chain operations. SCOR is a process-based model. SCOR divides supply chain processes into five processes consisting of: (a) Plan (Planning Process), is a process that balances demand and supply to determine the best course of action to meet procurement, production, and delivery requirements. (b) Source is the process of acquiring goods and services to fulfil demand. (c) Make (Production Process) is the process of converting raw materials into products that customers want. (d) Deliver is the process of fulfilling demand for goods and services, which includes order management, transportation, and distribution. (e) Return (Return Process) is the process of returning or receiving product returns for various reasons (Hasibuan et al., 2021). The SCOR method is used to offer options or solutions to problems that occur. The SCOR method of application is within certain limits very flexible and can be customised to meet customer needs. SCOR is a process reference model that combines ideas about process measurement,

benchmarking, and business process reengineering. One of the advantages of using the SCOR method is as follows: 1) it can show the relationship between the company's general goals (tactics and strategies) and overall SCM operations; and 2) SCOR can identify, evaluate, and monitor the performance of SCM performance (Wulandari et al., 2021). The advantage of the Supply Chain Operations Reference (SCOR) model compared to other approaches to Supply Chain is that the SCOR Model directly leads to the measurement of balance in Supply Chain Management, as the Balanced Scorecard measures performance by considering both financial and non-financial factors (Setiawan et al., 2020). The goal in applying the Supply Chain Operation Reference (SCOR) method is to gain a broader understanding of the supply chain, facilitate the process of analysing the performance of the supply chain being carried out to make it easier to get a detailed framework of each supply chain process, so that the process of connecting between activities is more concise (Fathoni et al., 2022).

Previous Research

In previous research conducted by Fathoni et al. (2022) used the SCOR method to measure good SCM performance, because SCOR divides supply chain processes into five core processes, namely plan, source, make, deliver, and return, where these processes have represented all supply chain management activities from upstream to downstream in detail, so as to define and categorise the measurement indicators needed in measuring Supply Chain Management performance. Based on the SCOR method, the calculation of the final performance value of the soybean supply chain in Central Java province is 76.8 out of 100 which is in the 'high' category.

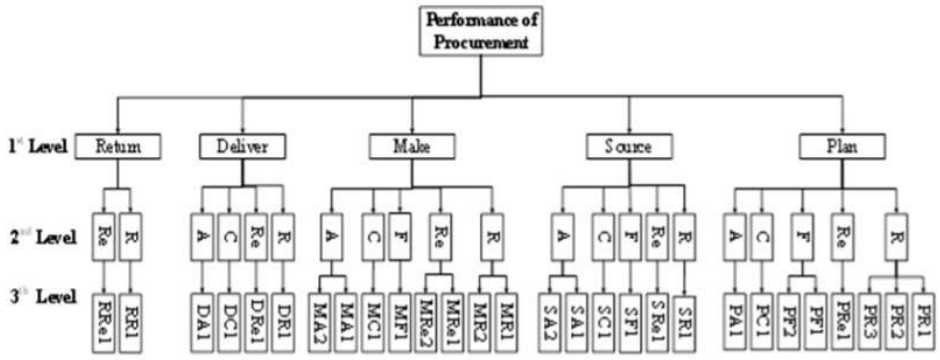
In previous research conducted by Rumahorbo et al. (2021) using the SCOR version 10.0 method according to 5 main processes, namely plan, source, make, For measurement, first weighting is carried out on each criterion, variable, and KPI using AHP, after that a consistency test is carried out, global weighting, then equating the actual value parameters of each KPI with Snorm De Boer normalisation, identifying performance classified as very good, sufficient, and poor with the Traffic Light System (TLS), then measuring the final value of supply chain performance by multiplying the global weight with the Snorm value of each KPI. The results of the design obtained 27 KPIs with 13 variables. Based on this design, the supply chain performance measurement is carried out so that 12 KPIs are classified as very good, 11 KPIs are classified as sufficient, 4 KPIs are classified as poor and the performance is 72.839 which is classified as Good Performance. To optimise performance and increase revenue, it is necessary to improve the 4 poor performances.

RESEARCH METHOD

This research was conducted at Ichips Banana MSME located at Perum Jl. Alam Permai Asri Selatan No.CC 13, Manggeling, Kolor, Sumenep, Sumenep Regency, East Java 69417 which is engaged in food. The type of data used is primary data. Primary data collection is done by means of observation, direct interviews, questionnaires, and documentation to Ichips Banana MSME business owners in Sumenep Regency.

The data analysis technique uses the Supply Chain Operation Referrence (SCOR) method. SCM Performance Analysis based on SCOR approach The steps that can be taken to measure SCM performance are as follows Identify the matrix of each level The performance measurement design is made based on the SCOR model by identifying the matrix (1) Level 1, which is in the form of SCM processes in SCOR. These processes include plan (planning process), source (raw material procurement process), make (production process), deliver (delivery process), and return (return process). (2) Level 2 is a dimension for measuring SCM performance. The dimensions used include Reliability, Responsiveness, Flexibility, Cost, and Asset. (3) Level 3 identifies indicators that affect each process and dimension of the company's SCM. From these three levels, a hierarchy of selection of SCM performance indicators in the company is made based on interviews and filling out indicator questionnaires by the Company owner (Yusri et al., 2023).

Fiture 1. SCOR Hierarchy

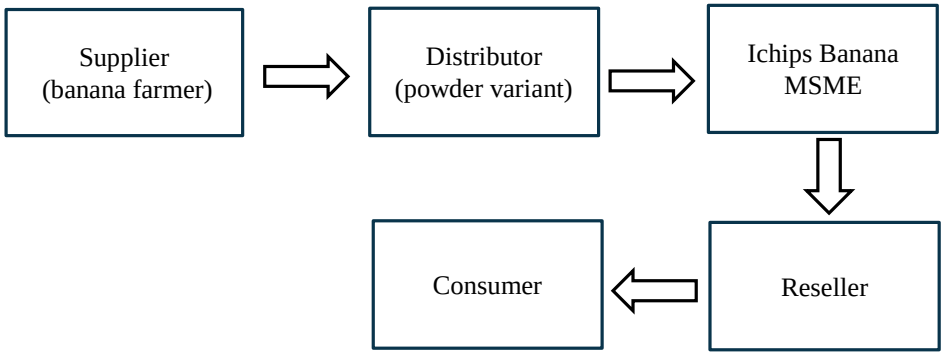


Source: Prasetyaningsih et al. (2020)

At the next stage, the weights from each level, especially at level 3, are summed up for each sub-criteria. In summing up the average, it needs to be grouped based on the attributes related to the sub-criteria, after being grouped, it is divided based on the number of attributes involved. To find out the total average for each attribute, it is necessary to add up each attribute involved and then divide by the number of attributes involved. After that there are performance categories at a value of 1-2.3 said to be a low category, at a value of 2.4-3.7 said to be a medium category, at a value of 3.8-5 said to be a high category.

RESULTS AND DISCUSSION

Ichips Banana MSME was established in 2023, which then grew and has had a halal certificate since 4 January 2024 and BPOM. This MSME has an advantage because there are no competitors with similar products. Ichips Banana products are innovations that do not yet exist in Sumenep, banana chip products that have different flavours from existing MSMEs in Sumenep. Flavour variants that generation z and millennials like chocolate, tiramisu, strawberry, green tea and taro. The pocket-friendly price is IDR 10,000. Sales are not only offline in Sumenep but also online through Shopee, Instagram, WhatsApp and Tiktok. Supply Chain activities at Ichips Banana MSMEs are described in the following figure.



Fiture 2. Ichips Banana MSME Supply Chain Activities

Figure 2 shows the supply chain flow pattern of Ichips Banana MSMEs from upstream to downstream. In general, the process starts from purchasing the main raw material, namely bananas from suppliers, namely banana farmers, then distributors buy powder variants such as chocolate, taro, greentea, tiramisu and strawberry powder. After that, products that have been packaged by Ichips Banana MSMEs will market their merchandise through resellers and the final destination is consumers.

The application of the SCOR method provides a comprehensive observation and measurement consisting of three process levels that contain process details from general to specific details. The first level or level 1 explains the five cores, namely plan, source, make, deliver, and return. Next, level 2, explains the planning and implementation process in material flow. Furthermore, level 3 provides the best method that can improve the performance of the company or organisation. Based on the questionnaire given, the following results were obtained:

Table 1

Criteria (level 1)	Attributes (level 2)	Sub Criteria (level 3)	Code	Likert Score (1, 2, 3, 4, 5)	Total	Everage
Plan (P)	*Reliability*	Customer's suddenly changed order	PR-1	4	8	4
		Lack of raw material stock due to limited market availability	PR-2	4		
	Flexibility/ Agility	Emergence of new competitors in business	PF-1	5	5	5
	Responsivevenesst	Changes in production schedule planning	PRE-1	4	4	4
	Cost	Inappropriate funding budget planning	PC-1	5	5	5
	Total				22	4,50
Source (S)	*Reliability*	Changes in raw material quality	SR-1	4	5	2,5
		Raw materials do not meet halal standards during audit	SR-2	1		
	Responsiveveness	Delayed delivery of raw materials from suppliers	SRE-1	5	5	5

	Cost	Increase in raw material prices	SC-1	5	5	5
	Total				15	4,17
Make (M)	*Reliability*	No product defects at the beginning of production	MR-1	4	17	4,25
		Packaging is not appropriate because there is no standard in packaging	MR-2	4		
		Hygienic equipment during the production process	MR-3	5		
		Production failure	MR-4	4		
	Responsiveveness	Delay in production implementation	MRE-1	5	5	5
	Total				22	4,63
Deliver (D)	*Reliability*	Delay in product delivery	DR-1	4	15	3,75
		Loss of market segment	DRE-1	3		
	Responsiveveness	Product damaged during delivery due to expedition	DRE-2	3		
		Labour shortage in direct marketing	DRE-3	5		
	Cost	Expensive shipping costs	DC-1	5	5	5
	Total				20	4,38

Return (R)	*Reliability*	Consumers lack trust in halal products	RR-1	5	11	3,67
		Product returns due to halal non-compliance	RR-2	1		
		No return of defective products	RR-3	5		
	Cost	No financial loss due to product returns	RC-1	5	5	5
Total					16	4,33
TOTAL OF ALL					95	4,40

Source: Research Data, Processed 2024

The calculation results in Table 1 show that Ichips Banana MSMEs have an average performance value of 4.40 which is at a high index. This is in line with research (Fathoni et al., 2022) which states that based on the SCOR method, the results of the calculation of the final performance value of the soybean supply chain in Central Java province are included in the 'high' category. The highest value is obtained by the make activity of 4.63 and the lowest is the source activity of 4.17. then the plan, make, deliver, and return activities are generally included in the high category.

Make has the highest performance supported by hygienic equipment during production. This is in line with research (Yanti et al., 2023) which states that make has the highest performance value. Within the SCOR framework, the make process at Ichips Banana MSME emphasises three important aspects to ensure quality and smooth production, namely the absence of product defects, hygienic equipment in accordance with halal standards, and the absence of production failures. Every banana chip produced through the production process at Ichips Banana MSME produces a product that is good for consumption and has no defects. This is achieved through a strict quality control system at every stage of production. From the selection of quality banana raw materials to meticulous processing, every step is monitored to ensure that no product is defective or not up to standard. Ichips Banana pays close attention to the cleanliness of the equipment used in the production process. All machines and tools used to process bananas, from cutting, frying, to packaging, are routinely cleaned and kept in hygienic condition in accordance with halal SOP. This aims to prevent contamination and keep the product safe for consumption. By using state-of-the-art equipment and standardised processes, Ichips Banana manages to avoid production failures. Efficient production

processes and equipment that is always in optimal condition make every stage of production run smoothly, without any interruptions or failures that could hamper smooth operations and product quality.

The product packaging process at Ichips Banana is currently still experiencing problems due to the absence of clear standard operating procedures (SOP) in packaging. This leads to inconsistencies in packaging quality, due to the non-uniform selection of packaging materials. In addition, delays in the production process often have an impact on the limited time to complete the packaging perfectly, so that some products are forced to be packaged in conditions that are less neat and do not meet the standards. So it is necessary to immediately develop and implement packaging standards that include the selection of appropriate packaging materials. In addition, to reduce the impact of production delays, companies can improve time management and production flow so that packaging can be done on time and with maintained quality.

The lowest value in source activities is in line with research penelitian (Qisthani & Hidayatuloh, 2021). This is due to changes in the quality of raw materials, delays in the delivery of raw materials from suppliers, and increases in raw material prices. delivery of raw materials from suppliers, and an increase in the price of raw materials. Changes in the quality of banana raw materials occur due to an increase in the number of orders. As such, Ichips Banana MSMEs are forced to source bananas from various suppliers, which can lead to differences in quality between one supply and another due to sudden changes in orders from customers. To maintain the quality of the final product, Ichips Banana MSME needs to work more closely with banana suppliers. The raw materials for making banana chips also often experience delays in delivery from suppliers. This is due to time constraints and the banana supplier's distance. So it needs good time management so that the production process is not disrupted. Ichips Banana MSMEs must ensure that there is careful planning in the procurement of raw materials, such as scheduling the right delivery. The price of raw materials also often increases which causes higher production costs, resulting in less profit. So Ichips Banana MSMEs must look for cheaper raw material suppliers.

Plan, deliver, and return activities are in the high category but less than optimal. This is in line with research (Ishak & Kuswara, 2023) which states that supply chain activities are in the high category, but can be improved again. Plan activities at Ichips Banana MSMEs experience significant challenges despite being in the high category. This is due to several factors, such as sudden changes in orders from customers, which cause uncertainty in production planning. The cause of this order change is due to adding products, this is not a problem because Ichips Banana MSME can handle this. In addition, the limited stock of raw materials is also a problem because the harvest of banana farmers is also uncertain depending on the season. A recommendation from this could be to add suppliers from other regions with the same type of banana. Changes in production schedule planning also affect the smooth running of this activity, which

ultimately hinders the effectiveness and efficiency of optimally planning production needs. This is caused by raw materials that are not ready during production, namely bananas. Recommendations from these problems by ensuring the availability of raw materials and making agreements with banana suppliers with communication so as not to experience delays in banana delivery so that production is in accordance with the schedule planned by Ichips Banana MSMEs. Inappropriate budget planning is also a problem for Ichips Banana MSMEs. The recommendation for this problem is that Ichips Banana MSMEs can carry out financial records so that budget planning funds can be in accordance with the budget plan at the beginning of production (Safrianti & Puspita, 2021).

Deliver activities are in the high category, but also less than optimal. This is caused by delays in product delivery, labour shortages in direct marketing, and expensive shipping costs. This needs to be improved related to delays in product delivery where to improve this, namely by providing information to consumers if there is a delay in delivery, then on labour shortages in direct marketing can provide attractive compensation and incentive offers, promote vacancies on popular social media such as Linkedln, Instagram or social media that are often used by the target market. In the shipping cost solution, choose the right expedition service and compare prices and services from several shipping service providers, such as JNE, TIKI, Pos Indonesia and JNT, then take advantage of discount programmes or saving packages because many shipping services offer discounts or special shipping packages for large shipments or for regular customers (Mardikaningsih, 2021). Return activity is also in the high category, which is caused by consumers' lack of trust in halal products because many consumers do not understand the halal certification process and the importance of halal products. If information about halal supervision and certification is not explained properly by producers, consumers may feel doubtful or uncertain about the halalness of the product. Therefore, producers must include a clear halal logo and on social media must brand the halal logo on the product(Zulfikhar et al., 2020).

CONCLUSION

Based on the research results, it shows that Ichips Banana MSMEs have a supply chain performance with an average value of 4.40, which is in the high category. The production activity (make) obtained the highest score (4.63) supported by the use of hygienic equipment and a strict quality control system. However, there are constraints in the packaging process due to the absence of clear standard operating procedures (SOPs), which leads to inconsistencies in packaging quality. For this reason, it is recommended to develop a more detailed packaging SOP to ensure consistent packaging quality. In terms of raw material procurement (sourcing), it was found that the quality of banana raw materials often varies, as well as delays in delivery and increases in raw material

prices, which affect the smooth running of production. Therefore, efforts should be made to strengthen relationships with suppliers and improve raw material procurement planning to maintain quality and timely delivery. The activities of planning (plan), delivery (deliver), and product return (return) also showed good performance, but still faced some obstacles. Planning activities experienced challenges related to sudden order changes and raw material stock uncertainty. This can be addressed by increasing suppliers and improving communication with banana suppliers to ensure smooth production. Shipping activities are delayed due to labour shortages and high shipping costs, which can be addressed by increasing the workforce and choosing a more efficient and affordable expedition service.

Overall, Ichips Banana MSME has great potential to continue growing, but still needs to make improvements, especially in supply chain management, packaging, and raw material procurement. With the implementation of appropriate improvements, Ichips Banana MSME can improve its operational performance and consumer satisfaction, and strengthen its position in an increasingly competitive market. Halal certification can provide clear standards and guidelines to ensure that all parties in the supply chain comply with halal rules and requirements, thereby reducing the risk of non-compliance and quality issues. The integration of halal certification can assist MSMEs in identifying, managing and mitigating risks by providing a more rigorous framework and quality control. The benefits of this research can provide guidance for MSMEs in supply chain risk management, especially the integration of halal certificates using the SCOR method and also provide recommendations for MSMEs.

ACKNOWLEDGEMENTS

Thanks to LPPM University of Trunojoyo Madura for the opportunity and funding of this research and thanks also to all those who have helped in the implementation of research, especially to the owner of Ichips Banana MSMEs.

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