

# The Supply Chain Management Practices on Halal Orientation in Restaurants' Operation within BARMM: A Concurrent Multi-Method Design

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## INTRODUCTION

The halal industry has gained significant global attention and has become an important concern in international business (Rusydia and Mahsar, 2024). The designation "halal" on a product is no longer a sign of duty to Muslims but also a sign of the global need for quality assurance and a way of life for both Muslims and non-Muslims (Khasanah, 2021). The improper use of halal signs, food tainted by pork, and the denial of halal certificates—all of which indicate a lack of respect for the halal religion—are growing which are part of the many concerns in halal industry and a lack of information available on the Halal brand (Ahmad et al., 2019).

Halal orientation is very fundamental in gaining halal certification (Zailani et al., 2019). Businesses would be able to establish appropriate operational strategy to guarantee that all aspects of production from the staffing, materials, and production process, to the storage and transportation, will truly adhere to the halal requirements in production (Talib et al., 2018).

Moreover, supply chain management has the ability to use information effectively when transporting, storing, and warehousing goods (Rizki et al., 2023). The halal supply chain is one of the most crucial elements for Muslims since the product must be halal from the point of origin to the final consumers (Wahyuni et al., 2020). Thus, supply chain management areas such as logistics and warehouse are important to determine how products are distributed and stored.

According to the study of (Ngah et al., 2014), there is still a low acceptance rate for halal warehouses and logistics which results in the numerous problems that would prevent halal producers from utilizing halal warehouses and logistics to operate their products and that more research be done in order to learn more about the acceptance of halal supply chain services. This is supported by (Tumiwa et al., 2023) as they stated that halal logistics plays a crucial role in the process of storing, transporting, and delivering halal products to consumers and it calls for assurances of halal products from the manufacturers all the way to the distributor. However, there has been no process monitoring by the supplier from the beginning to the time it reaches the store.

In the BARMM, halal certification is administered by the Muslim Mindanao Halal Certification Board Inc. (MMHCBI), a private agency. The MMHCBI will assume full responsibility in ensuring that food and non-food products being produced, catered, served, or distributed in the region or elsewhere are Halal-compliant or acceptable for the Muslims to consume (Kuit, 2023)

Thus, this study is important because despite of the growing importance of halal compliance across the entire supply chain, the implementation of halal warehouse and logistics services remain low. Existing studies tend to focus primarily on the production and processing stage; there were limited studies specifically focusing on the supply chain management practices related to halal orientation within the restaurant operations in the context of BARMM. This lack of acceptance has led to operational challenges that hinder halal procedures from being fully implemented throughout the supply chain where insufficient process of monitoring from the point of origin until products reach establishment.

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## Review of Related Literature and studies

This chapter presents the discussion of supply chain management practices such as: logistics and warehouse. Halal orientation will also be discussed in this chapter such as: staffing, materials, production process, storage and transportation. This chapter also includes the discussion of the relationship of the variables.

### The Status of Supply Chain Management

Zainuddin et al., (2019) defined supply chain management as a collection of interdependent businesses that collaborate closely to facilitate the flow of information and goods along the value-added chain of products in order to maximize end customer value at the lowest feasible cost. The administration of halal networks with the goal of maintaining halal integrity from the source of raw materials to the consumer's point of purchase is known as supply chain management (Usman, 2020).

Competition is no longer between businesses but rather between supply chains, and effective supply chain management is being recognized as a potentially useful strategy to gain a competitive edge and boost business performance (Cahyono et al., 2023). Suppliers need to decide on their company's strategy in order to be competitive in the expanding halal market (Muhamed et al., 2022).

Halal supply chain management is a process-oriented approach to managing material flow, information, and money through strategic coordination, cooperation, and stakeholders' collaboration to produce a value that enhances the supply chain's performance by bringing Halal and Thoyyib or food conditions that are safe, hygienic, veterinary, protected from dirty things in the environment, fair sales, and sustainable consumption in all processes from production to consumption (Khan et al., 2021). According to Hasan (2021), to ensure that a product or service is of halal quality, halal supply chain management must be implemented.

The management of the halal supply chain, which includes the storage, transportation, and distribution of halal goods to customers, is crucial to the process. The use of the halal concept in supply chain management has received a lot of interest due to the rising demand for halal products (Muhamed et al., 2022). Halal is the process of using corporate organizations and supply chains that adhere to general sharia principles to manage the movement, storage, handling, and procurement of raw materials, livestock, and semi-finished goods that are both food and non-food, as well as the flow of information and related documentation (Tumiwara et al., 2023).

The integration of business processes and activities known as "halal supply chain management" covers the areas of warehousing, sourcing procedures, transportation, product management, inventory management, and other management ranging from raw materials to products consumed based on Islamic law. Halal food supply chain is getting famous or relevant because of the increasing demand for halal products (Tumiwara et al., 2023).

Omar and Jaafar (2011) stated in their study that the halal supply chain plays a crucial role in guaranteeing that the halal concept is applied not only to the food itself but to the whole supply chain, from the farm to the consumer. The study concluded that the three important aspects in the halal food supply chain that need to be addressed are halal animal feed, appropriate slaughtering, and proper segregation.

There are eight halal dimensions in the supply chain that restaurants use to assess what is halal. These dimensions include the quality that is considered halal, the provenance and purity of the raw materials, the supply quantities that are available, the difficulty of franchising, human resources, laboratory quality verification, and labeling (Usman, 2020).

Halal supply chain management is also defined as the act of acquiring, storing, and procuring goods, both food and non-food, as well as comparable information that is exchanged between parties and includes paperwork that is moved around the company using general sources of sharia law (Hasan, 2021). He further defined Halal supply chain management as a set of guidelines established by individual nations that direct the processing of goods in order to get them to consumers.

The administration of a halal network with the goal of extending the halal integrity from the point of source to the point of customer purchase is another definition of halal supply chain management. To guarantee that the

item is actually halal at the time of sale to customers (Tieman et al., 2012). According to Hassan et al., (2016), halal supply chain management systems are crucial for tackling issues pertaining to the sustainability of halal-related businesses because they can help resolve complex halal issues, especially those involving the relationship between buyers and suppliers in business systems that depend on one another for information integration.

The study of Arshad et al., (2018) suggested that in order to ensure complete halal assurance across the supply chain where risk of contamination and adulteration is avoided, it is necessary for consumers to understand the significance of certification and for manufacturers to commit to it. They further defined Certification as a seal of guarantee that the product is halal not only at the production level but also when it comes to transportation, warehousing, and retailing.

The integration of the enterprise's many functional areas, including manufacturing operations, procurement and logistics, and value-adding efforts within the halal framework, is the focus of the halal supply chain (Hassan et al., 2016).

Supian (2016), asserts that maintaining the integrity of halal food and preventing haram from entering the supply chain are crucial. Halal control activities are essential to building a stable halal food supply chain. Furthermore, while managing halal products across supply chains, manufacturers must develop halal control activities that extend halal integrity from the point of consumption to the source.

Hassan et al., (2016) stated that an integrated network and interaction between buyers and suppliers could make the halal market more competitive in the future. The implementation of Halal Supply Chain Management should benefit from and be accelerated by the newly developed, cost-effective technology. Integrated supply chain management systems that comply with halal standards may be the best option for informing and persuading customers to buy the items.

In order to guarantee that consumers receive halal products, halal supply chain management is important because it oversees the distribution, storage, and management of raw materials, livestock products, and semi-finished supplies for both food and non-food use (Tumiwara et al., 2023).

### **The Status of Supply Chain Management practices in terms of Logistics**

Logistics, which is the integration of a company's order management, inventory, transportation policy, warehousing, material handling, and packaging as integrated throughout a facility network, is the process that adds value by timing and positioning inventory. Logistics is the process of moving and positioning inventory in a supply chain to maximize time, place, and possession benefits while keeping overall costs to a minimum (Tien et al., 2019).

Logistics management is the process of social production. It is conducted in accordance with the laws governing the flow of material entities, the basic principles of management, planning, organization, command, coordination, control, and supervision of the logistics activities, and the application of scientific method so that all logistics activities achieve optimal coordination and cooperation, in order to reduce logistics costs, improve logistics efficiency, and yield economic benefits (Zhang et al., 2014).

The integrity of the supply chain and the halal economy depend heavily on halal logistics (Rizki et al., 2023). There should be a presence of halal in supply chain management particularly in logistics, the halal items might be impacted since the containers used to transport non-halal goods were previously used to transport halal goods. Due to the possibility of cross-contamination during product distribution, the delivery procedure needs to be investigated (Zulfakar et al., 2012).

Ngah et al., (2014) stated that halal logistics service providers establish the halal supply chain in order to fulfill the demand from halal producers and preserve the halal integrity of halal products. If producers do not use halal supply chain services, halal products will not be certified halal. According to the survey, there is still a low acceptance rate for halal warehouses and transportation, respondents also noted that a number of obstacles would prevent halal producers from utilizing halal warehouses and transportation to operate their products. This study

also made the suggestion that more research be done in order to learn more about the acceptance of halal supply chain services.

The core of the halal supply chain model is logistics, which offers the basis for efficient decision-making and supply chain management (Tieman et al., 2012). In accordance with the general principles of Sharia, halal logistics refers to the process of managing the acquisition, transportation, storage, and handling of supplies, spare parts, livestock, semi-finished or finished goods, both food and non-food, and the related information and documentation flow through the organization and supply chain (Rizki et al., 2023).

Logistics service providers are crucial to the functioning of supply chains because they guarantee that the raw materials, packaging, storage, and transportation of halal products are done correctly to prevent contamination with non-halal products (Hasan, 2021). Supported by Tumiwa et al., (2023) when they stated in their study that throughout the whole supply chain, logistics service providers play a critical role in ensuring that the halal items are correctly prepared, packaged, stored, and transported to avoid contamination with non-halal ingredients or products. The likelihood of halal products becoming contaminated with non-halal ingredients increases with the length of the distribution route and the amount of logistics operations performed (Rizki et al., 2023).

Global supply chains facilitate the movement and production of goods and raw materials. Logistics, as part of supply chain, facilitates the products to move through transportation and reach the customer who purchases them inside those supply chains (Peck, Gendron, and Black, 2019).

To maintain halal integrity from producers to consumers, the logistics sector needs a halal system (Rizki et al., 2023). Through correct design of halal rules or Shariah compliant via warehousing, storage, transportation, and handling activities along the supply chain, halal logistics becomes an increasingly vital function in guarding and safeguarding the halal integrity (Mahidin et al, 2017).

As a component of an integrated supply chain, logistics manages pertinent data and plans, executes, and oversees the efficient and effective flow and storage of goods in order to satisfy customer demands. The core of logistics management is the control of information flows inside the organization as well as the distribution flows of goods and raw materials (Aćimović et al., 2022).

The establishment and management of processes for raw material and product delivery both internally and externally belongs within the scope of logistics. In reverse logistics, which is concerned with all operations indicated to recover and recycle materials and products that have already reached the end of their useful lives on the market. By doing so, they can be recovered into the production process, which lowers costs and waste (Machado et al., 2019).

Halal logistics are involved in product and ingredient identification, storage, and organization prior to goods and ingredients reaching customers. The halal product supply chain takes into account not just the product itself, but also the marketing and distribution procedures (Hasan, 2021). The integrity of the supply chain and the halal economy depend heavily on halal logistics (Rizki et al., 2023).

Rizki et al. (2023) concluded that efforts to manage supply chains in vital industries are the foundation of halal in logistics. In order to maintain supply chain cycle integrity, halal products must be kept apart at every stage, including throughout the manufacturing, distribution, and storage phases, as well as during the mixing of ingredients with non-halal ones. The lack of a specific rule is one of the difficulties and issues with halal logistics (Zailani et al., 2017, as cited in Rizki et al., 2023).

The integrity of halal products is the most important component of the halal logistics system, according to (Ashari, 2021 as cited in Rizki et al.,2023). This is achieved by focusing on preventing the contamination of non-halal items through knowledge management and blockchain technology innovation. There are bases in halal logistics such as: direct contact with illegal goods, contamination risk, and Muslim consumers' attitudes. To guarantee the integrity of halal products, these three requirements must be met (Marco et al., 2012 as cited in Hasan, 2021).

The potential for implementing Halal logistics services has expanded due to Muslim customers' growing needs for halal products, particularly in the areas of food and beverage. According to Mahidin et al. (2017), the current logistics needs for the implementation of halal that incorporate the complete method in the supply chains are extremely important. The study of (Nordin et al., 2016, as cited in Rizki et al., 2023), assessed the awareness and knowledge of food and beverage companies regarding halal logistics. It found that the companies still have a low level of understanding of the significance of implementing the halal scheme in the supply chain, and only a small number of companies are well-versed in doing so.

Halal logistics, as part of the halal supply chain, plays a crucial role in the process of storing, transporting, and delivering halal products to consumers (Tumiwa et al., 2023). According to Tumiwa et al. (2023), halal logistics calls for assurances of product halalness from the manufacturers all the way to the distributor, but there hasn't been any process monitoring from the supplier all the way to the store.

### **The Status of Supply Chain Management practices in terms of Warehouse**

Warehouse is a location to retain or store inventory and there are several distinct facets of supply chain operations included in warehousing and it was designed to facilitate efficient product flow (Tien et al. 2019). They further stated that warehouses were frequently viewed as "necessary evils" that increased the cost of the distribution process as the need of strategic storage was not fully recognized at the time. But the study of Rebelo, et al. (2021) argued that competitive advantage can come from warehouses, and by taking a careful look at the space that is currently available, one may be able to improve capacity at a minimal cost.

The function of warehousing is to smooth the process of storing, handling and distributing the product flow between manufacturers and their consumers (Mahidin et al., 2017). They also stated that there are two types of warehousing; production warehouse and distribution warehouse. Basically, the function of warehousing is to smooth the process of storing, handling and distributing the product flow between manufacturers and their consumers. They further stated that it's the businesses' responsibility to guarantee the halal respectability of the inventory network is one of the halal arrangements.

The following steps in the process of receiving goods into the warehouse: receiving and identifying goods, unloading goods from external transport, preparing paperwork for the receipt of goods, repacking the load onto internal transport units, and preparing goods for additional transport. When items are received into the warehouse, they should be fully identified with the following information: product name, manufacturer, batch, quantity of stock, country of origin, manufacturing date, expiration date, serial number, and batch (Kulińska and Giera, 2019).

Warehouse, transportation and terminal operations are the main aspects of Halal logistics that need to be considered (Mahidin et al., 2017). Supported by Zhang and Khan (2017), the organization of the warehouse has a strategic impact on the service quality and supply chain management plan of the company. They further stated that businesses typically design their warehouses to lower costs and boost service levels while expediting the order fulfillment process.

Warehouses are essential to producing, manufacturing, and supply chain operations because they store everything utilized or created in an industry, from raw materials to finished goods; these objectives are met by warehouse management systems (WMS), which are widely utilized. Using lot, batch, and serial numbering, materials can be readily tracked with warehouse management systems (Gawande et al., 2023).

A warehouse must have a sufficient amount of goods in order to maintain a high standard of customer service and to generate revenue for businesses. Problems can happen at any point throughout the storage procedure but with employee self-control during warehouse operations and qualified staff, it can help in mitigating any harmful impacts (Kulińska and Giera, 2019).

Warehouses are essential to the supply chain because they act as an intermediary between manufacturers and the end consumer. Warehouses provide a number of vital tasks in addition to being places to store commodities.

Companies within a range of industries are realizing that operational effectiveness and logistical control in completed goods; warehouses are critical requirements (Larutama et al.2022).

When it comes to warehouse management, modern businesses and distribution centers are filled with knowledge regarding the movement and storage of goods and services (Gawande et al. 2023). The administrative procedure for storing goods in the warehouse is crucial as it has an impact on improving the quality of the business. Document archiving is also crucial to this process since documents serve as proof of receipt of incoming goods. The process begins with receiving goods from production, followed by quality control inspecting the goods, packing the goods, and finally storing them in the warehouse (Octaviani, 2022).

Supply chain management of warehouses is a critical component. The initial step in warehouse management is the process of accepting goods into the warehouse. Avoiding any disruptions at this step is crucial since the receipt of fast-moving goods is a crucial component of the storage process and the supply chain as a whole (Kulińska and Giera, 2019).

For a productive warehouse, efficient shelving systems and effective organization of a warehouse's incoming goods section are also critical components. Poor arrangement of the incoming goods usually results in major problems during the storage phase following it (Ravichandran and Sasi, 2020).

For a logistics system to operate well, information, finished goods, and raw materials must all flow continuously. It is not feasible to continuously transport finished goods or raw materials from the producer to the recipient via distribution channel links in actuality (Figurski and Niepsuj, 2017 as referenced in Kulińska and Giera, 2019). Thus, warehouse management—which refers to the location where moveable products are kept—is essential to every supply chain (Kulińska and Giera, 2019).

Warehouses play a crucial role in supply chains by performing various tasks such as completing and transporting goods to following links, processing production processes to differentiate products, increasing material availability, distributing goods spatially, buffering and leveling imbalances in the flow of goods, storing them, and then transporting them as needed (Jacyna-Gołda, 2015 as cited in Kulińska and Giera, 2019).

There is no doubt that warehouses are essential to the success of supply chain management as a whole. Warehouse operations will have a direct and major impact on prices and customer service; therefore, they must work closely with the other components of the Supply Chain and be employed effectively and efficiently (Khan et al. 2019).

### **The Status of Halal Orientation in the Restaurants' Operation**

Halal Orientation is a strategy that, by examining the current environment, will allow the businesses to concentrate on the critical resources and competencies (Iranmanesh et al., 2015). Halal orientation, as the halal concept can be understood as an initiator that can change people's perceptions of the quality, safety, and health of their surroundings in addition to how they live. Halal orientation is essential to maintaining a product's halal certification (Zailani et al., 2020).

Talib et al. (2010) affirm that halal orientation can help businesses become more innovative as to how they improve their operations and be more competitive in the global food trade. This will allow them to adopt a new business paradigm and, as a result, help a nation enter and dominate the sizable local and global halal food market.

Talib, Kassim, and Zainuddin (2018), stated that the halal orientation has a good effect on time, flexibility, quality, and cost control. Talib et al. (2018) further stated, Pearson (1993) defined orientation in halal as "a question of degree where the degree to which concept dominates the way of thinking in an organization and consequently the decisions get made and the way people do their jobs."

Making decisions about the execution of business strategies that adhere to Shariah Law is one of the components of Halal Orientation. As a result of the global popularity of halal goods and services, Muslim community and

supply chain participants have an obligation to advance the standardization of halal trademarks and certifications in accordance with Shariah law (Elias, Nawi, Pozin, Yaakob, Ahmad, and Mahidin, 2019).

The manufacturing of food and beverages needs to be aware of the halal regulations, which cover quality, safety, and cleanliness throughout the transit and storage processes. In order to maintain competitiveness in the global market for halal food products, a strategic operations strategy, specifically the Halal Orientation, needs to be implemented by Malaysian halal food business firms. Malaysia is a Muslim country, renowned for being the best in the world for halal practices, other Muslim countries can adopt its standards. With this approach, the businesses will be able to concentrate on the critical resources and competencies while taking a look at the current environment (Talib et al., 2010 as cited in Elias et al., 2019).

Furthermore, Halal Orientation is a viable approach that might assist the halal company in truly adhering to the Malaysian Standard (MS) halal criteria, which include MSI 500:2009 (Food and Beverage) and MS2400:2010 (Transportation and Warehousing); (Elias et al., 2019).

An operational approach known as the "Halal Orientation " is used by food manufacturers to apply the halal principle, which calls for long-term decision-making that results in long-term operational performance. In addition to serving as a starting point for the development of company strategy, the Halal Orientation as a form of strategy is a crucial prerequisite for a new, value-driven path in the halal food industry. The Halal Orientation offers a way to apply business direction that can subsequently be shifted for a long-term competitive advantage (Zailani et al., 2015). Zailani et al. (2015) further stated the beneficial effects of integrity, government support, anticipated economic benefits, and halal market demand on halal orientation strategy.

The concept of operation strategy (Slack, Chambers & Johnston 2010; Lowson, 2002; Krawjewski & Ritzman, 1998; Heizer & Render, 2008; Zunirah, 2014 as cited in Talib et al., 2018) and the definitions of Halal Orientation (Zunirah, Suhaiza, Yuserrie, 2010 as cited in Talib et al., 2018) are the two viewpoints on Halal Orientation Strategy. According to Zunirah (2014), as cited further in Talib et al. (2018), the definition of operation strategy is the entire set of choices that mold the long-term capacities of an operation. The operation strategy contributes to the overall strategy by balancing the needs of the market with the viewpoint of the operation resources.

The following points are taken into consideration to conceptualize the Halal Orientation Strategy (HOS) by examining the operation resources from the theory of Resource-Based View (RBV) perspective on Halal Orientation Strategy: The features of resources, which primarily focus on staffing and materials, have a significant impact on how successful halal food firms are in the Halal market. Intangible resources that included halal process information, storage, and transportation, where halal expertise was needed for the processes (Talib et al., 2018).

To guarantee the achievement of halal operations and performance objectives, the organization's management level must be taken into consideration by the Halal Orientation. It guarantees that every action in a halal operation, from the input to the finished product, complies with halal regulations (Talib et al., 2018).

### **The Status of Halal Orientation in terms of Staffing**

Staffing is having a good managerial skill in planning, organizing, mobilizing, and controlling that can lead to achievements of the company's goal (Purwanto et al., 2020). The success of an organization's operations, particularly in terms of production, is significantly influenced by staffing (Talib et al., 2018). In order to guarantee that the products are processed in a halal manner, restaurants must ensure that their staff members are sufficiently trained about providing halal products and are aware of the significance of halal requirements.

Talib et al. (2018) further stated that keeping appropriate records of education, training, abilities, and experience on a regular basis is the most crucial factor. Staffing is a critical factor in determining how well an organization operates in the food business, particularly in terms of production (Talib, Abdul Rahman, Iskandar, and Kasim, 2020).

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## The Status of Halal Orientation in terms of Materials

Materials are the ingredients that constitute the essence of the entire food manufacturing idea (Talib et al., 2018). In order to ensure that the final goods are halal, the ingredients or raw materials used must also be halal or free of even trace amounts of non-halal substances (HDC, 2010 as cited in Talib et al., 2018). For this reason, the halal certification authority or Halal Certification Board Inc. must approve all components or ingredients used in the preparation of a product. Prior to manufacture, any leftover food must be cleaned and free of oil and other materials. All materials and ingredients used in the production of food must receive clearance from the halal certification authorities (Talib et al., 2020).

The halal food product is identified by the compatibility of the manufacturing process, the raw materials used, and the means of transportation from the product's upstream to downstream stages to the customers' hands (Tumiwa et al., 2023). According to Talib et al. (2020), citing HDC (2010), every piece of equipment—including pipes, production lines, conveyors, cooking appliances, utensils, buckets for business results, stoves, ovens, kettles, barrels, and everything else—needs to be well cleaned and free of non-halal elements.

Dag and Gonc (2013) assert that the majority of Muslim nations did not view halal food as a concern. But because of globalization, not all of the food that is consumed in that nation is made there, or even in a nearby nation. Not only must the meal be halal, but so must the source, raw ingredients, tools, and equipment. Supported by Hassan et al. (2016), the quality and specifications of materials sourced from non-Muslim organizations and international non-Muslim countries with varying degrees of halal requirements were identified as the main obstacles.

Materials are a crucial component in the definition of halal products since they guarantee that the finished goods are halal. There must be even trace amounts of non-halal material in any of the ingredients or raw materials, regardless of their size. Only non-halal contaminated instruments and equipment should be used in the production, processing, and cultivation of food (Yama and Mahamud, 2021).

In order to ensure a steady supply of halal materials and other sources, halal needs to forge closer relationships with suppliers and implement a variety of tactics (Supian, 2016).

It is compulsory for the food manufacturer to give information about the product ingredients sources and the halal status to be monitored by Halal authorities (Zainalabidinet al., 2013)

## The Status of Halal Orientation in terms of Production Process

The production process is where inputs begin and conclude with the final product, and it must be kept in halal condition to guarantee that the result is halal (Talib et al., 2018). When companies use different procedures that do not meet the specifications for halal items, it casts doubt on that company's ability to produce halal goods. The production process must be closely scrutinized to guarantee that the products are truly halal, as there may be significant differences between what the companies state as a formal product development approach and what actually occurs (Talib et al., 2020).

Items that have been deemed halal by Islamic law are known as halal items. The process of creating a halal product involves a number of steps, such as obtaining raw materials, processing, storing, packing, selling, and presenting. Sharia law must be followed during the entire production process, including the slaughtering procedure. Furthermore, it is imperative to ensure the smooth functioning and dissemination of halal systems, encompassing storage, packaging, refrigeration, and food preparation (Hasan, 2021).

Ali and Suleiman (2018) affirm that there is an issue with the processing of halal food supply chain management, which involves a number of flaws in the food's supply chain, including material handling, monitoring, and processing. In terms of processing, the study by Novianti et al. (2020) also mentioned how difficult it is to see the traceability of halal food because the food industry's supply chain information is not transparent from upstream to downstream. In contemporary logistics, the supply chain functions as a crucial component between

the actuation process of halal certification, the controlling process of the production process, and the halal monitoring system itself (Yunos et al., 2014 as cited in Rizki, 2023).

Ardiantono et al. (2021) assert that there is a processing issue with Halal Supply Chain Management. The following are issues with the processing category. First, according to Ali and Suleiman (2018), there are a number of flaws in the food supply chain, including in material handling, monitoring, processing, and other areas. The second challenge is interpreting the traceability of halal food because the food industry's supply chain information is unclear from upstream to downstream (Novianti et al., 2020).

Third, halal integrity cannot be discovered in a regular food chain stage (Mei, Soon, Joe, and Regenstein, 2017). Fourth, Najis' chemicals are frequently detected in food preparation tools and equipment (Shafie and Othman 2006 as quoted in Ardiantono et al., 2021). Fifth, if halal food products come into direct contact with non-halal materials (Ibrahim, Kamaruddin, and Shabudin, 2012). Sixth, the integrity aspect of halal food (Zulfakar, Chan, and Jie, 2011). Seventh, while making halal food, non-halal substances are combined (Nakyinsige, Man, and Sazili, 2012). Eighth, there is a concealed danger to the integrity of halal food throughout production, which affects how long halal status will last (Ali, Tan, Pawar and Makhbul, 2014).

In spite of the challenges faced by Halal Supply Chain Management, numerous solutions are also available. The following are solutions in the processing field. First, make use of the farm to implement global supply chain models in order to raise awareness of the importance of halal requirements (Mei, Soon, Joe, and Regenstein, 2017). According to Zulfakar, Chan, and Jie (2011), the second strategy involves strengthening the commitment and trust among stakeholders, maintaining quality assurance, and boosting asset specificity and traceability. Third, identifying non-meat components, blood plasma, and pork in food products (Nakyinsige, Man, and Sazili, 2012). Fourth, improving supply chain visibility and traceability will help to better understand how difficult it is to identify and mitigate risk (Ali, Tan, Pawar, and Makhbul, 2014).

The following are strategies used in the processing areas. The notion of halal integrity can be reached by first tracking and tracing the food product's origins, production process and facilities, ingredient supplier and raw materials, trading system, and—most importantly—making halal as a way of life (Mei et al., 2017).

Zainalabidin et al., (2013) assert that authorities must ensure that food manufacturers adhere to halal regulations in all of their processes. Supported by Musyrifin and Angraini (2019), the government can provide a new draft of the food process towards halal production, which will be decided by the government as regulator and supervisor in implementation. This will help create legal certainty for those who consume the institutions that oversee the food's journey from upstream to downstream.

### **The Status of Halal Orientation in terms of Storage and Transportation**

Storage and transportation are logistics activities that are vital elements throughout the supply chain process (Shah, 2017). To prevent confusion among customers, the halal and non-halal food products must be kept apart. To avoid contamination, food products that are non halal and those that are halal must be stored separately during distribution and transit (Talib et al., 2018). Transportation and terminal operations are two important aspects of Halal food logistics that need to be considered (Mahidin et al., 2017). The mixing of halal and non-halal products in the same container increases the danger of halal integrity during transit (Sham and Wallace, 2017).

Products that are transported or stored that include halal food must be labeled as such and have certified halal emblems and the halal and non-halal food products need to be appropriately segregated to prevent consumer confusion. Food goods that are not halal and those that are halal must be stored separately throughout distribution and transit in order to avoid contamination (Talib et al., 2020)

Halal goods should be washed properly and thoroughly before transport and storage. Therefore, halal as well as non halal items of food must be kept separate during shipping, storage and distribution in order to prevent contamination (Yama and Mahamud, 2021).

Selecting a storage system that closely aligns with the overall needs of the store in which it will be used is a crucial step in identifying the best fit for a certain application. Effective use of space—building height and access aisles—efficient system of stock location and information, employee safety, security and integrity of stock, stock layout for minimum movement, characteristics and nature of products and unit loads held, efficient access to inventory for replenishing, and minimum overall system cost are the primary factors that determine the most appropriate storage system for any application (Khan et al., 2019).

Issues also arise in the storage area. First, the halal food product inside the storage could be exposed by the haram and harmful ingredient (Zainalabidin et al., 2013). Second, the halal products are impacted since the containers that carry them were previously used to carry non-halal goods (Zulfakar et al., 2012). Third, certain products do not comply with Sharia law. As a result, according to Mei et al., (2017), it is regarded as an unclean product and needs to be separated. Fourth, halal and non-halal products need to be handled separately during the material handling process (Talib et al., 2010).

There are also problems encountered in transportation. According to Zulfakar et al., (2012), there should be a thorough examination of the distribution process in order to rule out cross-contamination. Additionally, there are no assets that are explicitly designated for handling halal items (Omar and Jaafar, 2011). Third, there is an increased danger to halal integrity when halal and non-halal products are mixed together in a single container (Sham and Wallace, 2017). Fourth, it can be challenging to monitor and trace the driver's behavior and methods when delivering halal goods (Ab Talib et al., 2013).

Faults in information flow, improper or inadequate staff training, and the deployment of inappropriate organizational structures are the key factors causing disruptions in the storage process (Kulińska and Giera, 2019)

### **Relationship of the variables**

Ali, Iranmanesh, Tan, Zailani, and Omar (2022) verified that supply chain integration—which encompasses internal, supplier, and customer integrations—has a significant effect on the aspects of the integrity of the halal food supply chain, ultimately resulting in the safety and quality of halal food. Supported by Khan et al., (2022) who claimed that managers can help make an organization sustainable over the long run by managing the halal supply chain effectively, which is favorably correlated with the firms' sustainable performance.

With logistical supply networks as part of Supply Chain management and the production process as part of Halal orientation, the study by Michlowicz (2013) indicated that at the input and distribution networks at the output of the system, production and logistics are tightly related. The study of Kabibi (2012) also found that customer satisfaction through effective customer service staffs' performance was significantly influenced by the logistics management.

In terms of cost reduction, timely delivery of transportation-related goods, which is a component of halal orientation, shorter lead times, demand realization, larger market shares, high-quality products, and customer service satisfaction—one of staffing's primary goals—logistics management has the potential to positively influence the performance of businesses (Mwangangi, 2016).

Warehouse management and inventory management have an impact on a warehouse's material handling procedures and storage requirements (Fichtinger et al., 2015). Minor problem with warehouse management operations influences the entire logistics service because the transportation and distribution processes are the extension of the warehouse processes (Dede and Çengel, 2020)

### **Theoretical Framework**

The study is grounded by the following theories: Systems Theory of Bertalanffy (1968), Resource based theory of Barney (1991), Blockchain technology theory of Nakamoto (2008) and Knowledge Management Theory of Drucker (1970).

**Systems Theory.** Also known as general system theory (GST), is a generic theory of systems (Whitchurch and Constantine, 1993). The system is made up of interrelated parts that work together to achieve a goal. It has an

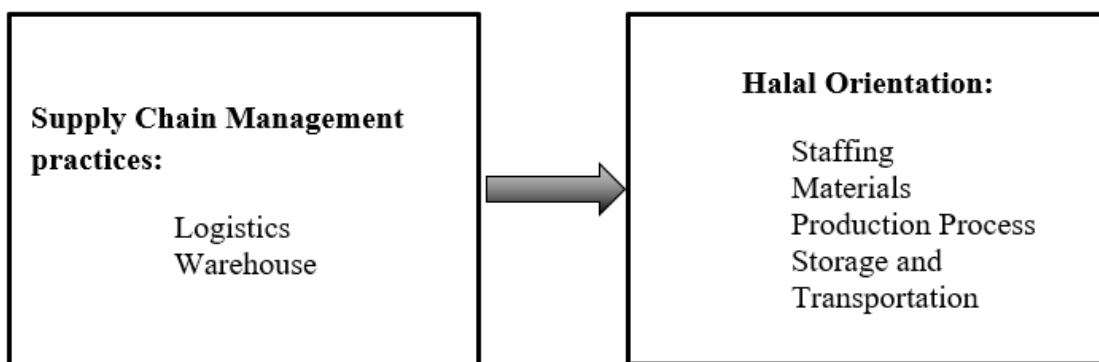
input, process, output, feedback and all operating within environment. This theory is related to the present study because halal orientation can be viewed as an organizational system consisting of interrelated components such as staffing and production processes. Staffing represents the input component, ensuring that qualified and trained personnel implement halal standards. The production process represents the transformation stage, where halal-compliant inputs are converted into final products. The effectiveness of halal orientation depends on the coordination and integration of these components, as weaknesses in one subsystem may affect overall compliance and output quality.

**Resource based theory.** It has been extensively utilized as a framework for management to identify essential resources needed by a company to maintain its competitive advantage (Utami & Alamanos, 2023). This theory is related to the present study because halal orientation can be understood as a strategic outcome derived from the firm’s internal resources and capabilities. Materials represent tangible resources that must be halal-certified and traceable to ensure compliance. Staffing reflects human capital resources, where knowledgeable and trained personnel contribute to effective halal implementation. The production process represents organizational capability, embedding halal standards into operational procedures. When these resources are valuable, rare, inimitable, and non-substitutable, they enhance sustainable competitive advantage and strengthen overall organizational performance.

**Blockchain technology theory.** Due to its promises of data uniformity, responsibility for transactions, transparency of data, and no intermediaries, blockchain technology is being regarded as the next major development in business. The two industries most likely to gain the most from this new technology and will see significant modifications are banking and supply chain management (Cherukupally, 2021). This theory is related to this study because it provides a foundation for understanding how decentralized and immutable digital ledgers enhance supply chain management practices. In logistics, blockchain improves shipment tracking, transparency, and transaction security. In warehouse, it strengthens inventory traceability, segregation control, and audit reliability. By ensuring data integrity and real-time visibility, blockchain enhances trust and operational efficiency across the supply chain network.

**Knowledge Management.** It has a significant impact on how businesses are operated, from its strategy to its goods, and from its processes to the fundamental structure of the business (Ruggles,1998). In this study, Knowledge Management plays a critical role in strengthening halal orientation by ensuring that halal-related knowledge is created, shared, documented, and applied throughout the organization. Effective knowledge management enables staffs to understand and implement halal standards consistently across purchasing, production, storage, and logistics processes. As an intangible organizational resource, halal knowledge contributes to sustainable compliance and enhances overall operational effectiveness.

### Conceptual Framework



**Figure 1. Conceptual Framework of the Study**

Figure 1 presents the conceptual framework of the study, illustrating the relationship between the independent variable and the dependent variable. The framework proposes that the halal orientation of restaurant operations in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) is influenced by Supply Chain Management practices.

In this study, Supply Chain Management practices serve as the independent variable and are represented by logistics and warehouse operations. These practices encompass the coordination of transportation, inventory management, handling procedures, segregation systems, and operational controls within restaurant operations.

The dependent variable is the halal orientation of restaurant operations in BARMM, which is reflected through key operational dimensions: staffing, materials, production process, storage, and transportation. These dimensions represent the extent to which restaurant operations adhere to halal principles in their daily activities and internal processes.

The framework assumes that effective logistics and warehouse practices contribute to stronger halal orientation by promoting proper handling of materials, ensuring compliance in production processes, maintaining segregation and cleanliness in storage, safeguarding transportation integrity, and encouraging staff awareness and discipline in implementing halal standards.

## Synthesis and Research Gap

A review of the existing literature indicates that halal supply chain management and halal orientation are essential and interrelated elements in ensuring the integrity, quality, and compliance of halal products. The operational foundation that enables the effective flow, storage, and handling of commodities while upholding Shariah principles is provided by supply chain management practices, especially logistics and warehouse. On the other hand, halal orientation offers the strategic guidance that regulates organizational procedures, such as staffing, materials, production process, and storage & transportation with halal specifications. When combined, these factors strengthen competitiveness in the growing global halal market, improve consumer trust, and strengthen organizational performance.

The literature highlights the ongoing challenges in the actual application of halal supply chain management, despite these theoretical developments. According to Ngah et.al (2014), halal suppliers are unable to efficiently use these practices due to a number of operational challenges caused by the low adoption rate of halal logistics and warehouses practices. This is supported by Tumiwa et al. (2023), who highlighted that process monitoring from suppliers to final consumers is still lacking, despite the fact that halal logistics is essential to ensuring adequate storage, transportation, and delivery of halal items. These shortcomings lead to inconsistent halal integrity management throughout the supply chain, inefficiencies in logistics and warehouse practices, and contamination risk.

These gaps in the literature have prompted the researcher to examine the interconnected relationship between halal supply chain management practices and halal orientation given that existing studies largely treat these variables separately. Moreover, limited attention has been given to operational level guidelines, particularly in terms of monitoring, traceability and the implementation of halal systems, especially within the BARMM context. Thus, this study seeks to fill these gaps by investigating the impact of supply chain management practices on halal orientation in restaurant operations within BARMM.

## Statement of the Problem

The aim of this study is to investigate the Supply Chain Management practices on Halal Orientation in Restaurants' operation within BARMM. Specifically, the study seeks to answer the following questions

1. What is the status of Supply Chain Management practices of restaurants' operation in BARMM in terms of:
  - (a) logistics; and
  - (b) warehouse
2. What is the status of Halal Orientation in restaurants' operation within BARMM in terms of:
  - (a) staffing;

- (b) materials;
  - (c) production process; and
  - (d) storage and transportation
3. Does Supply Chain Management practices significantly influence Halal Orientation of the restaurants' operation in BARMM?
  4. What are the lived experiences of the participants regarding the Supply Chain Management practices and Halal Orientation in restaurants' operation within BARMM?
  5. What are the social values of the Supply Chain Management practices on Halal Orientation of the restaurants' operation in BARMM?

### **Hypothesis**

Ho1- Supply chain management does not significantly influence halal orientation of the restaurants' operation in BARMM

### **Significance of the Study**

This study is significant as it will offer practical guidance on how Supply chain management practices can be improved to enhance Halal orientation across various stakeholders in the restaurant industry.

For the Restaurant Industry, the study will offer a structured approach to integrating Halal orientation into core Supply chain management practices. By improving these practices, restaurants can ensure consistency in Halal compliance, minimize contamination risks, and standardize quality control. This will not only broaden market reach but also strengthens customer trust, inclusivity, and long-term competitiveness.

For Owners and Managers, the study will serve as a strategic guide for improving decision-making related to supplier selection, procurement policies, logistics coordination, and internal control systems. It will highlight specific ways to align operations with Halal standards, such as implementing traceability systems, conducting supplier audits, and investing in staff training programs. These improvements can reduce operational risks, ensure regulatory compliance, and enhance organizational credibility.

For the people within the business, the study will emphasize capacity-building by identifying the need for continuous training on Halal principles and Supply chain management practices. It provides guidance on how staff can improve handling procedures, prevent cross-contamination, and maintain cleanliness throughout the supply chain. This will contribute to a more competent workforce that could actively support the integrity of Halal operations.

For Suppliers, the study will offer direction on how to align their production, processing, and distribution practices with Halal requirements. It will encourage suppliers to adopt standardized Halal-compliant systems, improve transparency, and establish traceability mechanisms. By doing so, suppliers can strengthen partnerships with restaurants, ensure product reliability, and expand their participation in the growing Halal market.

For Customers, the study will enhance awareness and confidence by demonstrating how improved Supply chain management practices directly affect the authenticity and safety of Halal products. It will empower customers to make informed choices and reinforces their trust in establishments that consistently apply verified Halal processes from sourcing to serving.

For the Academe, the study will contribute to the advancement of knowledge by linking Supply chain management practices with Halal orientation in a practical and measurable way. It will provide a framework that can be used to explore process improvements, develop models, and test strategies that will enhance both operational efficiency and religious compliance.

For the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), the study will provide a basis for developing policies and programs that will support Halal-compliant supply chains. It will identify areas where government intervention can improve infrastructure, certification processes, and capacity-building initiatives, thereby strengthening the region's position as a Halal industry hub.

For the Halal Industry, the study will contribute to the development of more refined guidelines and best practices, particularly in logistics and warehouse. It will support the continuous improvement of Halal standards by emphasizing the importance of end-to-end supply chain integration.

For the Muslim Mindanao Halal Certification Board Inc., the study will offer an evidence-based recommendations for enhancing certification processes, monitoring mechanisms, and evaluation criteria. It can guide the refinement of standards to ensure that certified establishments consistently apply effective Supply chain management practices in maintaining Halal integrity.

For Future Researchers, the study will provide a comprehensive foundation for further investigation into specific Supply chain management dimensions and their direct impact on Halal orientation. It will open opportunities for developing new approaches, testing standardized measures, and exploring sector-specific improvements.

### **Operational Definition of Terms**

For the purpose of clarity and consistency in this study, the following key terms are operationally defined:

**Halal Orientation** – refers to the extent to which restaurant operations systematically implement and adhere to halal principles across all aspects of their supply chain, including staffing, sourcing of materials, production processes, storage, and transportation, in accordance with established halal standards.

**Logistics** – refers to the set of activities involved in the movement and distribution of goods from suppliers perceived by the restaurants, including transportation, handling, and delivery, as a component of supply chain management practices.

**Materials** – refer to the raw ingredients and food inputs utilized by restaurant operations in the preparation and production of menu items offered to customers, with consideration of their halal compliance. It represents compliance dimension in Halal Orientation.

**Production Process** –refers to the series of procedures and practices undertaken by restaurant operations in the preparation, handling, and processing of food products, ensuring adherence to halal requirements throughout the process. It represents compliance dimension in Halal Orientation.

**Social Value**- refers to the perceived non-economic benefits generated by restaurant operations, particularly in promoting halal compliance, ethical practices, and community well-being, which contribute to societal welfare beyond financial gain.

**Staffing**- refers to the management of human resources within restaurant operations, particularly in terms of employees' knowledge, skills, and adherence to halal principles in handling food products and related processes. It represents compliance dimension in Halal Orientation.

**Storage** - refers to the facilities and practices used by restaurant operations to preserve and safeguard raw materials and food products prior to preparation and distribution, ensuring compliance with halal standards. It represents compliance dimension in Halal Orientation.

**Supply Chain Management** - refers to the integrated set of practices employed by restaurant' supplier in managing the flow of goods, information, and processes to final service delivery of their products to the consumer, particularly in relation to logistics and warehousing, to ensure halal orientation. Moreover, supply chain management practices are measured from the perspective of the restaurant.

**Transportation** – refers to the process of moving goods, materials, or finished food products from the restaurant to customers, ensuring that halal integrity is maintained throughout transit. It represents compliance dimension in Halal Orientation.

**Warehouse** – refers to the storage facility utilized by suppliers for holding and managing goods prior to distribution to restaurant operations, serving as a critical component of supply chain management practices.

## METHOD

This chapter presents the discussion of the research design, participants, setting, measures, data collection, data analysis, limitations of the study, and the figures of procedures.

### Design

The study used a concurrent multi-method research design, wherein quantitative and qualitative data were collected simultaneously, analyzed independently, and integrated during the interpretation phase. This design is particularly appropriate for studies that aim to examine both measurable relationships and contextual realities of complex phenomena (Creswell and Plano Clark, 2018)

In this investigation, the design facilitated a comprehensive analysis of how supply chain management practices influence halal orientation among restaurants' operation within BARMM. The integration of numerical data and qualitative insights enabled the researcher to not only test theoretical relationships but also understand the practical dynamics underlying halal compliance.

### Participants

This section will discuss the participants in the quantitative and qualitative phases of the study. Their involvement is essential in producing the data required to enhance the understanding on the study and to fulfill the study's objectives.

#### *Quantitative Strand*

A minimum of 200 restaurants took the survey. Memon et al. (2020) noted in their study that research conducted at the organizational level employing top management (e.g., CEOs, CFOs, HR managers, etc. as respondents) may have a smaller sample size compared to research at the individual level (e.g., employees, clients, etc.). For Pearson Correlation analysis, a minimum of 200 samples are required (Guilford, 1954 as cited in Memon et al., 2020).

#### *Qualitative Strand*

For the qualitative strand, participants were chosen using simple random sampling. It was run by the chairman of the panel through randomizer. A total of 18 participants (10 for In-depth Interview and 8 for FGD). In populations that are consistently selected and homogeneous, simple random sampling serves well. With this method of research, all individuals have an equal chance to take part in the study, and the selection process is entirely random. It guarantees that the population is unbiased, proportional, and equal in probability (Noor et al., 2022).

### Measures

In this section, the researcher will describe the instruments used in gathering the necessary quantitative and qualitative data of this study.

#### *Quantitative Strand*

The quantitative phase used the adapted survey questionnaires from two different studies. There were some modifications of the content from Malaysia perspective to Philippines to align with the local research content.

The survey questionnaire was adapted from the principles in halal supply chain management of Tieman et al. (2012) and from Halal Orientation Strategy of Talib et al., (2018).

### *Qualitative Strand*

The quantitative results served as the basis in the development of the guide questions for the in-depth interviews and focused group discussion for the qualitative strand of the study to further validate the quantitative results. The guide questions were being subjected to the content validity of three experts in the field of research.

### **Data Analysis**

This section will present the process of analyzing the data generated from the quantitative and qualitative strands. Appropriate tools were used to generate valid and reliable results.

### *Quantitative Strand*

The following statistical tools was used to analyze the quantitative data—mean, Standard Deviation, Pearson product-moment correlation, and simple linear regression analysis. The mean is the average of the variables. The study measured the supply chain management practices of the restaurants' operation in terms of halal orientation.

Standard Deviation was used to measure the consistency of the response of the participants. Pearson-r was used to determine the relationship between the independent and dependent variables. Furthermore, the simple linear regression was also used to determine if supply chain management significantly influences halal orientation of the restaurants' operation in BARMM.

### *Qualitative Strand*

In the qualitative strand of the study, the researcher analyzed the data through coding content analysis, thematic analysis, and data reduction. The purpose of thematic analysis is to identify the patterns of meaning across a data set that will provide an answer to the research question to be addressed. Patterns will be identified through a rigorous process of data familiarization, data coding, and theme development and revision.

### **Limitations of the study**

This study examined the influence of supply chain management practices on halal orientation among restaurant operations in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). The respondents of this study were limited to the restaurants in the BARMM with halal labels and halal logos. Despite careful planning and implementation, several limitations were encountered.

First, the study focused only on selected restaurant operations within BARMM; therefore, the findings may not be fully generalizable to restaurants operating in other regions of the Philippines or in different countries where halal supply chain practices may vary due to cultural, regulatory, or operational differences.

Second, the quantitative phase relied on self-reported data obtained through survey questionnaires administered to restaurant owners or managers. As such, the responses may have been influenced by personal perceptions, social desirability bias, or limited knowledge of formal halal supply chain management practices.

Third, the qualitative phase involved a limited number of participants who participated in focus group discussions and in-depth interviews. Although data saturation was achieved with 18 participants, the perspectives gathered may not represent the experiences of all restaurant operators within the region.

Fourth, the study examined selected dimensions of supply chain management practices related to halal orientation. Other factors such as government regulation, halal certification policies, consumer awareness, and technological systems for halal traceability were not extensively explored in this research.

Finally, the concurrent multi- method research design required the collection and analysis of data in two phases. While the qualitative phase was intended to support and explain the quantitative findings, time constraints and

logistical limitations may have influenced the depth of qualitative exploration. Despite these limitations, the study provides valuable insights into supply chain management practices and their influence on halal orientation among restaurant operations in BARMM.

## RESULTS AND DISCUSSION

In this chapter, results are presented based on the study's objectives. The quantitative strand identified various aspects related to supply chain management and halal orientation.

This includes the status of supply chain management in terms of logistics and warehouse and halal orientation in terms of staffing, materials, production process, and storage and transportation. On the other hand, the qualitative strand focused on confirming participants' actual practices regarding supply chain management and halal orientation concerns.

### *Quantitative Results*

**SOP #1.** What is status of Supply Chain Management Practices in terms of a) Logistics and; b) Warehouse?

Table 2 presents the status of supply chain management practices of restaurant suppliers, specifically focusing on logistics and warehouse practices as critical components in ensuring Halal integrity. Overall, the results revealed that the status of Supply chain management practices is "Always evident" with an overall means of 4.58 (SD = 0.726), defined as Excellent, indicating that suppliers have generally institutionalized Halal-compliant practices across their supply chain activities.

### *Results*

#### a.) The Status of Supply Chain Management Practices in terms of Logistics

The logistics-related indicators demonstrate consistently excellent performance, indicating that suppliers prioritize Halal integrity during transportation and distribution processes. Among all logistics indicators, the highest mean was observed in "No mixing of halal and non-halal in transporting livestock" (M = 4.85, SD = 0.526). These results indicate a strong adherence to segregation principles, which are fundamental in Halal supply chain management. This suggests that suppliers have established strict controls to prevent cross-contamination during transit, reflecting a high level of awareness and compliance with Halal logistics standards.

On the other hand, the lowest mean under logistics practices was recorded in "Cleaning of vehicle for delivery before using in every shipment" (M = 4.32, SD = 0.867), although still defined as Excellent and interpreted as "Supply chain management is always evident. This relatively lower score, coupled with a higher standard deviation, suggests some variability in the consistency of cleaning practices among suppliers. This may imply that while segregation is strictly implemented, sanitation protocols in transport vehicles may not be as uniformly enforced, potentially posing risks to Halal integrity if not consistently monitored.

### *Discussion*

The results suggest that restaurant suppliers consistently apply proper supply chain management practices, particularly in logistics operations. The high ratings across indicators indicate that suppliers play a critical role in ensuring that halal integrity is preserved during transportation. These results highlight how seriously suppliers take sanitation, especially when handling halal products. However, among the logistics indicators, cleaning of vehicles before every shipment obtained the lowest mean (M = 4.32, SD = 0.867), although still interpreted as Excellent. This suggests that while cleaning practices are generally implemented, there may be slight inconsistencies in execution across suppliers. This supports the findings of Azmi et al. (2025), who pointed out that clean transport is critical for avoiding contamination and maintaining halal integrity.

In terms of loading operations, the responses reflected very strong efforts by suppliers to ensure strict segregation of halal and non-halal products. The average score for this practice was 4.84 (SD = 0.576), interpreted as Excellent. This indicates that suppliers have well-established controls in place during loading activities to

prevent cross-contamination. This aligns with Talib et al. (2020), who emphasized that physical separation is key to maintaining consumer trust in halal-certified items. Similarly, Lada et al. (2019) stressed that clear segregation in logistics helps avoid contamination risks and supports overall halal compliance within the supply chain.

Transporting livestock also showed the highest level of compliance among logistics practices, particularly in preventing the mixing of halal and non-halal animals ( $M = 4.85$ ,  $SD = 0.526$ ), which is the highest mean recorded in this category. This reflects the strong commitment of suppliers to adhere to halal requirements even in high-risk logistics activities. This finding supports Simbil et al. (2024), who warned that without proper handling during livestock transportation could lead to both physical and biological contamination, thereby compromising halal status.

Another important area is how suppliers handle damaged or compromised halal products during transport. The results show a high level of compliance, with an average mean of 4.77 ( $SD = 0.609$ ) for labeling such products as “REJECTED.” This indicates that suppliers have effective monitoring and control mechanisms in place to ensure that compromised goods are properly identified and managed. As Rahman et al. (2020) mentioned in their study, documentation and labeling play a crucial role in ensuring traceability and compliance in halal logistics.

Overall, these findings demonstrate that restaurant suppliers in BARMM exhibit a high level of commitment to maintaining halal standards in logistics operations, as reflected in the overall excellent ratings. The strong emphasis on segregation practices, particularly in loading and livestock transport, indicates that preventive measures against contamination are well established. This supports the view of Lada et al. (2019), who observed that businesses operating in Muslim-majority regions tend to enforce strict halal practices due to both consumer demand and local policies.

Despite these strong results, the relatively lower mean in vehicle cleaning suggests that suppliers should further strengthen sanitation consistency through standardized procedures and regular monitoring. Continuous staff training and stricter compliance checks remain essential to sustaining high performance. As Anis et al. (2025) highlighted, skilled personnel and frequent inspections are key to maintaining high standards overtime.

#### b.) The Status of Supply Chain Management Practices in terms of Warehouse

Warehouse practices also demonstrate a high level of compliance, indicating that suppliers are committed particularly in maintaining the segregation and proper handling of Halal goods within storage and distribution facilities. The highest mean in this category was “No mixing of halal and non-halal goods in the same storage room” ( $M = 4.80$ ,  $SD = 0.57$ ). These findings reinforce that suppliers have effectively implemented spatial separation strategies within warehouses, ensuring that Halal goods are stored and handled in controlled environments that prevent contamination.

Conversely, the lowest mean was noted in “Putting of labels as ‘REJECTED’ on possible damages, spoilage, breakage, contamination, theft, or tampering” ( $M = 4.10$ ,  $SD = 1.00$ ), defined as Very Good and interpreted as “Supply chain management is oftentimes evident”. This low score, along with relatively higher standard deviation, indicate inconsistencies in non-conformance handling procedures, particularly in labeling and quarantine processes. This suggests that while preventive controls (e.g., segregation) are well established, corrective actions and documentation practices may require strengthening.

#### *Discussion*

These results highlight the strong commitment of restaurant suppliers to halal requirements, particularly in implementing proper warehouse practices such as segregation, storage, and handling of goods. The highest mean was observed in “No mixing of halal and non-halal goods in the same storage room” ( $M = 4.80$ ,  $SD = 0.57$ ), followed closely by “No mixing of halal and non-halal goods in the same carrier” ( $M = 4.77$ ,  $SD = 0.66$ ). These findings indicate that suppliers consistently apply strict segregation measures within warehouse operations to

prevent cross-contamination. This aligns with Rahman et al. (2018), who emphasized that physical segregation and dedicated storage zones are crucial for maintaining halal integrity in the supply chain.

These practices are also consistent with the findings of Vikaliana et al. (2025), who pointed out that proper documentation and effective warehouse procedures play a key role in preventing contamination and ensuring the authenticity of halal products. Indicators such as ensuring halal goods are properly labeled in freight documents ( $M = 4.59, SD = 0.74$ ) and the presence of dedicated Value-Added Logistics (VAL) areas ( $M = 4.54, SD = 0.74$ ) further demonstrate that suppliers are implementing structured systems that support traceability and organized warehouse management. Likewise, Khan et al. (2022) stressed that robust warehouse management contributes significantly to building consumer trust and minimizing risks to halal integrity.

However, there were slightly lower scores—though still falling within the “Very Good” category—for practices such as labeling rejected goods ( $M = 4.10, SD = 1.00$ ) and moving these items to quarantine areas for further inspection ( $M = 4.11, SD = 1.08$ ), which represent the lowest means in the warehouse category. This suggests that while overall warehouse performance is strong, there may be inconsistencies in handling non-conforming or compromised halal products. Such variations may be attributed to gaps in staff training, monitoring systems, or resource availability. This observation echoes Ab Talib et al. (2015), who noted that inconsistent practices and insufficient training can sometimes undermine halal assurance, even in otherwise well-managed warehouse settings.

The importance of effective warehouse management is further reinforced by Tieman (2012), who stressed that careful handling and proper storage conditions are vital for protecting the halal status of goods, particularly those vulnerable to contamination. The strong performance in segregation-related indicators—such as no mixing during unloading and sorting ( $M = 4.75, SD = 0.63$ ) and no mixing during order picking activities ( $M = 4.70, SD = 0.67$ )—reflects that suppliers in BARMM are highly committed to maintaining these standards. This supports the emphasis on halal logistics infrastructure highlighted by Hassan et al. (2016), where systematic warehouse controls are key to ensuring end-to-end halal compliance.

In summary, restaurant suppliers in BARMM demonstrate commendable practices in managing halal warehouse operations, particularly in terms of segregation, storage, and traceability systems. These findings reflect effective implementation of halal-compliant warehouse practices as advocated by Khan et al. (2022) and Tieman (2012). Nonetheless, there still room for improvement in consistently managing protocols for rejected goods and strengthening staff competencies through continuous training, as recommended by Ab Talib et al. (2015) and Vikaliana et al. (2025). Strengthening these areas could help ensure even higher levels of compliance and maintain consumer confidence in halal products.

**Table 2. Status of Supply Chain Management Practices**

Statement	Mean	SD	Definition
<b>Logistics Practices</b>	<b>4.63</b>	<b>0.684</b>	<b>Excellent</b>
Cleaning of vehicle for delivery before using in every shipment	4.32	0.867	Excellent
Cleaning of refrigerated container before using in every shipment	4.38	0.841	Excellent
Loading of container or transport vehicle: • No mixing of halal and non-halal bulk products • No mixing of halal and non-halal products on one pallet/load carrier • No mixing of halal and non-halal products in a refrigerated container	4.84	0.576	Excellent
No mixing of halal and non-halal in transporting livestock	4.85	0.526	Excellent
Ensuring halal products are marked “REJECTED” in case of damage, contamination, spoilage, leakage, theft or tampering	4.77	0.609	Excellent

<b>Warehouse Practices</b>	<b>4.52</b>	<b>0.76</b>	<b>Excellent</b>
Availability of physical inspection during freight and packaging	4.32	0.81	Excellent
Putting of labels as “REJECTED” on possible damages, spoilage, breakage, contamination, theft, or tampering	4.10	1.00	Very Good
Moving of marked “REJECTED” halal goods to quarantine area for further inspection	4.11	1.08	Very Good
No mixing of halal and non-halal goods in the same carrier	4.77	0.66	Excellent
No mixing of halal and non-halal goods in the same storage room	4.80	0.57	Excellent
No mixing of halal and non-halal goods during unloading and sorting of goods from pallet	4.75	0.63	Excellent
Halal goods have dedicated VAL (Value Added Logistics) area or additional distribution and warehousing services such as separate area for packing and labeling	4.54	0.74	Excellent
No mixing of halal and non-halal on equipment used during order picking activities in warehouse	4.70	0.67	Excellent
Ensuring any label stating halal goods is marked on freight documents for halal goods based	4.59	0.74	Excellent
<b>Overall Mean</b>	<b>4.58</b>	<b>0.726</b>	<b>Excellent</b>

**SOP #2.** What is the status of Halal Orientation in Restaurants’ Operation within BARMM in terms of: a.) staffing b.) materials c.) production process; and d.) storage and transportation?

The results in Table 3 indicate that Halal orientation in restaurants’ operations within BARMM is “Always Practiced”, as reflected by the overall mean of 4.53 (SD = 0.722). Across all operational dimensions—staffing, materials, production process, and storage and transportation—restaurants demonstrate a strong commitment to adhering to Halal principles.

*Results*

a.) staffing

As shown in Table 3, all staffing indicators were interpreted as “Always Practiced,” indicating a consistently high level of Halal orientation among restaurant personnel in BARMM. The highest mean was recorded in employee competency in carrying out duties ( $\bar{x} = 4.80$ ), suggesting that restaurants prioritize hiring and maintaining competent staff capable of upholding Halal standards.

In contrast, the lowest mean was observed in adequacy of training in halal food handling ( $\bar{x} = 4.41$ ), although still within the “Always Practiced” range. This indicates that while training is regularly conducted, there may still be room for improvement in enhancing its depth, quality, or effectiveness to further strengthen staff capability in Halal compliance.

*Discussion*

The results explains that restaurants are consistently investing in staff development though trainings are largely informal. These findings might adapt the study of Rahman et al. (2018), who emphasized that proper halal training helps employees prevent contamination risks and ensures adherence to Syari’ah standards.

Overall, these results show a strong commitment among BARMM restaurants to building a competent and well-informed workforce though lack of formal trainings to staff but reinforced it with owner-led or basic entry-level trainings such as basic handling and food safety trainings. This commitment aligns with Lada et al. (2009), who observed that consumers' perceptions of halal compliance are heavily influenced by the knowledge and behavior of employees. It's clear that restaurants in BARMM recognize this connection and are proactively working to maintain high staff competency in order to uphold halal standards.

#### b.) Materials

As shown in Table 3, all indicators under Materials were rated as "Always Practiced," reflecting a strong commitment of restaurants in BARMM to ensure Halal compliance in sourcing and handling materials. The highest mean was recorded in ensuring that all raw materials and ingredients are halal ( $\bar{x} = 4.87$ ), indicating strict adherence to sourcing only Halal-certified inputs. On the other hand, the lowest mean was observed in materials fulfill requirements of MMHCBI or other approved bodies ( $\bar{x} = 4.32$ ), although still interpreted as "Always Practiced." This suggests that while cleanliness is consistently maintained, there remains an opportunity to further strengthen and standardize practices related to fulfillment of requirements by MMHCBI or other Halal certifying bodies.

#### *Discussion*

The results align with Talib et al. (2015), who emphasized that halal authenticity depends greatly on careful ingredient selection and preventing contamination throughout the supply chain. These results suggest that restaurants in BARMM are committed to strict material selection processes, helping to minimize the risk of non-halal contamination. Though in compliance of the requirements by the MMHCBI or other Halal certifying bodies, most of restaurants in BARMM didn't hold formal certification.

The commitment in material selection resonates with Lada et al. (2009), who pointed out that consumer trust in halal food is closely linked to the perceived purity and integrity of its ingredients. However, to further enhance customer trust and business sustainability, restaurants in BARMM should improve areas particularly in adhering to the standards of the Halal certifying bodies. Supported by the insights of Rahman et al. (2018), who highlighted that certifications from recognized bodies provide confidence in halal compliance and help build consumer trust.

#### c.) Production Process

In terms of production process, all practices were likewise interpreted as "Always Practiced," demonstrating that restaurants consistently apply Halal principles in their operational activities. The highest mean was noted in utensils and gadgets are managed to avoid halal and non-halal contamination ( $\bar{x} = 4.64$ ), indicating strong adherence to standardized procedures of sanitation. On the other hand, the lowest mean was recorded in equipment and machines are hygienic and approved by MMHCBI ( $\bar{x} = 4.35$ ). While still interpreted as "Always Practiced," this relatively lower rating may indicate that not all restaurants have their equipment formally evaluated or certified by an official Halal certifying body. This suggests that some establishments may be practicing general hygiene standards but are not yet fully registered with or accredited by Halal certifying authorities, such as MMHCBI, for equipment validation. As a result, there may be gaps in formal certification compliance despite the presence of internal hygiene practices.

#### *Discussion*

The results on production process are supported by Khan et al. (2022), who emphasized that careful control over utensils, equipment, and production tools is crucial for maintaining halal integrity throughout food preparation. This is evident in the present results, where the highest mean was recorded in utensils and gadgets are managed to avoid halal and non-halal contamination ( $\bar{x} = 4.64$ ), indicating that restaurants strongly prioritize contamination prevention through proper handling and segregation of tools.

Similarly, high ratings in implementation of safety systems ( $\bar{x} = 4.62$ ) and adherence to Good Manufacturing Practices (GMP) ( $\bar{x} = 4.52$ ) further demonstrate that restaurants are actively standardizing their production processes and maintaining quality control systems. This aligns with Soon et al. (2017), who highlighted that structured safety and quality systems are essential in strengthening halal assurance and enhancing consumer confidence.

Sanitation practices in both production areas ( $\bar{x} = 4.46$ ) and other parts of the establishment ( $\bar{x} = 4.39$ ) also support the overall findings, indicating consistent compliance with Syari'ah cleanliness requirements. As noted by Talib et al. (2015), cleanliness is not only a regulatory requirement but a core religious obligation in halal food production, reinforcing the importance of these practices in maintaining halal integrity.

However, the lowest mean was observed in equipment and machines are hygienic and approved by MMHCBI ( $\bar{x} = 4.35$ ). Although still interpreted as "Always Practiced," this relatively lower score suggests that some restaurants may not have their equipment formally evaluated or certified by a recognized halal certifying body. This observation is consistent with Ariyadi et al. (2025), who pointed out that halal certification requires not only compliance with hygiene standards but also formal verification and accreditation processes. The gap between internal hygiene practices and formal certification may indicate limitations in registration, resources, or access to certifying bodies.

Overall, these results suggest that restaurants in BARMM have effectively integrated halal principles into their production processes, particularly in areas of contamination control, sanitation, and process standardization. However, the relatively lower emphasis on formal equipment certification highlights the need for stronger alignment between internal practices and external certification requirements to ensure comprehensive halal compliance and sustained consumer trust.

#### d.) Storage and Transportation

Table 3 shows that all halal orientation practices related to Storage and Transportation scored within the "Always Practiced" category. This indicates that restaurants in BARMM are strongly committed to maintaining halal integrity throughout their storage and distribution processes. The highest mean ( $\bar{x} = 4.67$ ) was recorded for maintaining dedicated storage facilities for halal products, highlighting the importance of strict segregation to prevent cross-contamination. On the other hand, the lowest mean was recorded in standard procedures in food preparation fulfill MMHCBI requirements ( $\bar{x} = 4.31$ ), this indicates that while restaurants in BARMM are applying Halal-related procedures, full alignment with the specific standards set by MMHCBI may not always be strictly or uniformly followed.

#### *Discussion*

The findings on storage and transportation are supported by Khan et al. (2019), who emphasized that separate storage infrastructure is essential for ensuring halal authenticity and strengthening consumer trust. This is clearly reflected in the present results, where the highest mean was recorded in maintaining dedicated storage facilities for halal products ( $\bar{x} = 4.67$ ), indicating that restaurants strongly implement segregation practices to prevent cross-contamination and preserve halal integrity.

Similarly, high ratings in dedicated transportation for halal products ( $\bar{x} = 4.62$ ) and specialized infrastructure such as exclusive cold rooms ( $\bar{x} = 4.60$ ) further demonstrate that restaurants are investing in structured logistics systems that support halal compliance. This aligns with Tieman et al. (2012), who highlighted that specialized logistics and infrastructure are critical in safeguarding the halal status of products throughout the supply chain.

In addition, slightly lower scores in maintaining clean and hygienic storage ( $\bar{x} = 4.38$ ) and transportation facilities ( $\bar{x} = 4.37$ ), although still high, indicate the need for sustained attention to sanitation practices. As emphasized by Talib et al. (2015), hygiene is a fundamental requirement in halal compliance, and even minor lapses can affect both product integrity and consumer confidence.

However, the lowest mean was observed in standard procedures in food preparation fulfill MMHCBI requirements ( $\bar{x} = 4.31$ ). Although still interpreted as “Always Practiced,” this relatively lower score suggests that while restaurants generally follow standard procedures, there may be inconsistencies in fully aligning operations with the specific requirements of halal certifying bodies. This supports the argument of Zailani et al. (2019), who stressed that strict adherence to regulatory standards is a key challenge in halal logistics and requires continuous monitoring and enforcement.

Overall, these results suggest that restaurants in BARMM have established strong halal-oriented practices in storage and transportation, particularly in terms of segregation and infrastructure. However, the relatively lower emphasis on strict procedural compliance with MMHCBI standards highlights the need for continuous improvement in aligning operational practices with formal regulatory requirements to ensure comprehensive halal assurance.

**Table 3. Status of Halal Orientation in Restaurants’ Operations within BARMM**

Statement	Mean	SD	Interpretation
<b><i>In terms of Staffing</i></b>	<b>4.63</b>	<b>0.659</b>	<b><i>Always Practiced</i></b>
Employee competency in carrying out duty	4.80	0.479	Always Practiced
Understanding of halal handling procedures	4.78	0.561	Always Practiced
Understanding Islamic requirements in halal food	4.73	0.597	Always Practiced
Employees given training in halal food handling	4.45	0.794	Always Practiced
Adequacy of training in halal food handling	4.41	0.863	Always Practiced
<b><i>In terms of Materials</i></b>	<b>4.52</b>	<b>0.702</b>	<b><i>Always Practiced</i></b>
All raw materials and ingredients are halal	4.87	0.480	Always Practiced
Materials are ensured genuine and free from non-halal contamination	4.75	0.528	Always Practiced
Materials are clean based on Syari’ah requirements	4.43	0.760	Always Practiced
Materials are of quality based on Syari’ah requirements	4.41	0.765	Always Practiced
Materials fulfill requirements of MMHCBI or other approved bodies	4.32	0.861	Always Practiced
Materials come from suppliers with valid halal certification	4.34	0.818	Always Practiced
<b><i>In terms of Production Process</i></b>	<b>4.48</b>	<b>0.764</b>	<b><i>Always Practiced</i></b>
Implementation of safety systems in halal food production	4.62	0.707	Always Practiced
Sanitation and cleanliness of production area comply with Syari’ah requirements	4.46	0.775	Always Practiced
Sanitation and cleanliness of other parts of the establishment comply with Syari’ah	4.39	0.789	Always Practiced
Waste management and disposal comply with current government laws	4.51	0.777	Always Practiced
Equipment and machines are hygienic and approved by MMHCBI	4.35	0.832	Always Practiced

Utensils and gadgets are managed to avoid halal and non-halal contamination	4.64	0.702	Always Practiced
Implementation of Good Manufacturing Practice (GMP)	4.52	0.729	Always Practiced
Standard food operation procedures fulfill Syari'ah requirements	4.36	0.803	Always Practiced
<b><i>In terms of Storage and Transportation</i></b>	<b>4.49</b>	<b>0.763</b>	<b><i>Always Practiced</i></b>
Standard procedures in food operation fulfill MMHCBI requirements	4.31	0.829	Always Practiced
Dedicated storages for halal food products	4.67	0.651	Always Practiced
Dedicated transportation for halal food products	4.62	0.707	Always Practiced
Dedicated infrastructures for halal food products (e.g. cold rooms only for halal)	4.60	0.756	Always Practiced
Clean and hygienic storage facilities fulfilling Syari'ah law or MMHCBI requirements	4.38	0.812	Always Practiced
Clean and hygienic transportation fulfilling Syari'ah law or MMHCBI requirements	4.37	0.823	Always Practiced
<b>Overall Mean</b>	<b>4.53</b>	<b>0.722</b>	<b>Always Practiced</b>

**SOP # 3:** Does supply chain management practices significantly influence halal orientation in Restaurants' operation within BARMM?

**Table 4. Simple Regression Analysis on the Influence of Supply Chain Management practices on Halal Orientation**

Variable	B	Std. Error	Beta (B)	T	Sig.
Constant	.904	.229		3.951	.000
SCM	.791	.050	.749	15.925	.000

Note: Model Summary: R= .749, R<sup>2</sup>= .562, Adjusted R<sup>2</sup>= .559, Std. Error= .36653, Durbin- Watson= 1.995

ANOVA: F (1,198) = 253.593, p < .001

Dependent Variable: Halal Orientation

Regression Equation HO = 0.904 + 0.791 (SCM)

**Table 5. Significance of the Regression Model**

ANOVA

Source	SS	Df	MS	F	Sig
Regression	34.068	1	34.068	253.593	.000
Residual	26.600	198	.134		
Total	60.668	199			

F (1,198) - 253.593, p < .001

## Test of Regression Assumptions

To ensure the validity of the regression model, several assumptions were tested (*Appendix I*). First is the Normality of Residuals. Normality was assessed using: Histogram of standardized residuals and Normal P-P plot. The histogram shows a roughly bell-shaped distribution, while the P-P plot indicates that the points lie close to the diagonal line. This suggests that the residuals are approximately normally distributed, satisfying the normality assumption.

Second is the Homoscedasticity. Homoscedasticity was examined using the scatterplot of standardized residuals versus standardized predicted values. The scatterplot shows that the residuals are randomly dispersed around zero without a clear pattern or funnel shape. This indicates that the assumption of homoscedasticity is satisfied. Third is the Independence of Errors, independence of residuals was assessed using the Durbin-Watson statistic with Durbin-Watson = 1.995. Since the value is within the acceptable range (1.5-2.5), the assumption of independence of errors is satisfied. Lastly, Multicollinearity was also examined (*Appendix I*). Multicollinearity was examined using Tolerance and VIF values, The values of Tolerance and VIF as follow: Tolerance > 0.10 and VIF < 10 which means that there is no multicollinearity issue in the regression model.

## Discussion

The results of the simple linear regression analysis shown in Table 4 revealed that supply chain management (SCM) practices significantly predict halal orientation. The overall regression model was statistically significant,  $F(1, 198) = 253.593, p < .001$ , indicating that SCM practices reliably explain variations in halal orientation. The model yielded a strong positive correlation ( $R = .749$ ), with an  $R^2$  value of .562, suggesting that approximately 56.2% of the variance in halal orientation is explained by SCM practices. The adjusted  $R^2$  of .559 further confirms the stability and robustness of the model.

Examination of the regression coefficients showed that SCM practices have a significant positive effect on halal orientation ( $B = 0.791, SE = 0.050, \beta = .749, t = 15.925, p < .001$ ). This indicates that for every one-unit increase in SCM practices, halal orientation increases by 0.791 units. The constant value ( $B = 0.904, p < .001$ ) represents the baseline level of halal orientation when SCM practices are held constant at zero. Additionally, the Durbin-Watson statistic of 1.995 suggests that there is no issue of autocorrelation in the residuals, supporting the validity of the regression assumptions.

The significance of the regression model was test using ANOVA shown in Table 5. With the result:  $F(1,198) - 253.593, p < .001$ . This means that regression model is statistically significant which indicates that Supply Chain Management practices significantly predict Halal Orientation. Thus, the null hypothesis is rejected.

Base on the test of regression assumptions, the regression analysis demonstrates that Supply Chain Management practices significantly influence Halal Orientation among restaurants. Supply Chain Management explains 56.2% of the variance in Halal Orientation. The regression model is statistically significant. Supply Chain Management has a strong positive effect on Halal Orientation. All regression assumptions (normality, independence, homoscedasticity, and multicollinearity) were satisfied. These results indicate that effective supply chain management practices contribute significantly to the implementation of halal-oriented operations in restaurants.

Overall, the results show that halal orientation is strongly and statistically significantly influenced by supply chain management practices, thereby demonstrating the vital role that efficient supply chain practices play in ensuring and improving halal compliance.

The results of this study demonstrate that halal orientation in restaurant operations is strongly and statistically significantly influenced by supply chain management (SCM) practices. This validates the study's conceptual framework, which states that halal orientation, the dependent variable, is directly influenced by SCM practices, the independent variable. Increased levels of halal orientation are associated with improvements to supply chain management (SCM) practices. This suggests that halal compliance is not only a religious requirement but is also operationalized through well-managed and organized supply chain practices.

Nearly fifty percent of variation in halal orientation may be explained by SCM practices, according to a model's significant explanatory power ( $R^2 = .562$ ). This result confirms Tieman's (2011) claim that halal integrity needs to be maintained across the entire supply chain, from sourcing to final consumer. In the same manner, Zulfakar et al. (2014) emphasized that logistics, transportation, and storage procedures are crucial to halal certification since any errors in these areas might affect the product's halal status. The fundamental concept that SCM procedures are essential to ensuring consistent halal compliance is therefore supported by the current results.

SCM practices are a significant factor of halal orientation, as further shown with the significant standardized coefficient ( $\beta = .749$ ). This is in line with the findings of Talib et al. (2015), who argued that with appropriate segregation, traceability, and monitoring systems, effective halal supply chain management improves organizational capabilities to maintain halal integrity. This implies that SCM procedures, including supplier selection, inventory management, storage, and distribution, serve as crucial techniques for achieving and maintaining halal orientation in terms of the study's framework.

Furthermore, the results support the idea that halal orientation goes beyond labeling and certification. Khan et al. (2019) state that in order to ensure that every step of the supply chain complies with halal requirements, a comprehensive system that combines operational procedures with religious principles is necessary. This perspective is consistent with the conceptual framework of the current study, which views SCM practices as the operational processes that convert halal principles into practical business practices in restaurant operations.

From a contextual perspective, the findings are especially pertinent to restaurant operations in BARMM, where halal compliance is both economically and religiously essential. According to the results, halal orientation may be greatly improved by strengthening SCM practices, such as implementing documented halal procedures, making sure that halal and non-halal commodities are properly separated, and improving monitoring systems. This is supported by Ab Talib and Johan (2012), who pointed out that the efficiency of internal supply chain systems has a significant impact on a business's commitment to halal standards.

In terms of practical implications, the study underscores the need for restaurant operators to adopt a holistic approach to halal management by integrating SCM practices into their daily operations. Policymakers and halal certification bodies may also benefit from focusing on supply chain processes rather than solely on end-product certification. As noted by Tieman et al. (2012), a robust halal supply chain enhances consumer trust and strengthens the credibility of halal certification systems.

Overall, the findings validate the study's conceptual framework by demonstrating that supply chain management practices are a significant predictor of halal orientation. This highlights the importance of SCM as a strategic tool for achieving halal compliance, ensuring product integrity, and sustaining competitiveness in the growing halal industry.

*Qualitative Results*

**SOP # 4.** What are the lived experiences of the participants regarding the supply chain management practices on halal orientation in restaurants' operation within BARMM?

**Table 6. Lived experiences of participants in the supply chain management practices on halal orientation in restaurants' operation within BARMM**

Essential Themes	Core Ideas
Trust- Based Supplier Over Formal Sanitation Verification	Dependence on Long-Term Supplier Relationships
	Supplier reputation becomes an informal assurance used to asses hygiene and halal compliance.
	Visual and Experiential Validation

	Familiarity reduces uncertainty and reinforces positive assumptions.
	Hygiene is assessed based on belief in supplier integrity rather than evidence.
	Cleanliness is assumed rather than consistently validated.
	strict adherence to cleanliness and Syari'ah-compliant sanitation practices
Hands-on Procurement & Direct Control	Personal involvement in sourcing,
	Supplier inspection
	Verification ensures ingredient quality and halal compliance.
Sanitation Awareness & Hygiene Practices	Strict adherence to cleanliness
	Syari'ah-compliant sanitation,
	Preventive handling (cleaning, storage, equipment).
Freshness & Quality Prioritization	Daily purchasing
	Limited stock/ no overstocking
	Preference for fresh and high-quality ingredients to maintain halal integrity
Segregation & Halal-Only Operations.	Separation of raw/cooked items
	Checking ingredients
	Halal labeling, and exclusive halal systems prevent contamination
Absence of Structured and Formal Training Systems, with reliance on Internal and Owner-Led Knowledge Transfer	No Formal Training
	Limited External Training Exposure
	Training on halal practices is largely unstructured and lacks formalization, with minimal engagement from external institutions or certification bodies.
	Knowledge is primarily transmitted through internal mechanisms, often led by owners.
	Training is on Basic Food Handling Practices, Segregation Awareness or entry-point training
Stringent Operational Practices	Restaurants implement rigorous hygiene and sanitation protocols to prevent contamination.
	Certification processes serve as formal checkpoints to ensure compliance and signal halal credibility.
Resource and Supply Constraints	Achieving halal compliance requires careful management of financial and material resources.

	Restaurants face challenges in sourcing halal-certified ingredients, balancing quality with affordability.
Muslim dominated area and Relational Assurance	Brand and Long-standing relationships with suppliers reduce the need for continuous inspection
	Familiar routines and culturally embedded practices strengthen operational consistency.
	Dependable staff play a key role in sustaining daily halal compliance.
Awareness and Partial Compliance with Certification Standards	Restaurants demonstrate knowledge of halal certification requirements.
	Some establishments follow halal standards even without formal registration. Compliance but not registered
Stringent Hygiene and Sanitation Practices	Strong emphasis on cleanliness as a core component of halal assurance.
	Regular maintenance of equipment ensures prevention of contamination.
	Reflects adherence to both food safety and Syari'ah principles.
Verification and Control of Materials and Processes	Active measures are taken to prevent cross-contamination.
	Segregation and proper handling ensure integrity of halal products.
	Demonstrates structured control within daily operations.
Monitoring, Supervision, and Role Accountability	Continuous oversight ensures compliance is consistently maintained.
	Clear assignment of responsibilities strengthens accountability.
	Reflects an internal governance system for halal practices.
Transparency and Trust-Building with Consumers	Open practices enhance customer confidence in halal integrity.
	Trust is built through visible compliance and consistent standards.
	Positions halal assurance as both an operational and reputational strategy.

*Results*

**Trust- Based Supplier Over Formal Sanitation Verification.** Restaurants rely on long-term relationships and supplier credibility as key bases for assessing hygiene and halal compliance. Rather than depending solely on formal verification procedures, restaurants often utilize informal assurance mechanisms, such as familiarity with supplier practices and past experiences, to evaluate cleanliness and product integrity. This shows that restaurant operators largely rely on trust-based assumptions rather than formal verification of supplier hygiene practices.

Salama Restaurant, Rahma Café, Hamad Delights and Amanah Food, four among the 18 participants, shared their experiences that they're already regular customers and have been sourcing for a long time, they can see that it is clean, so they no longer ask whether it is being cleaned. They shared:

With the supplier, we know that they maintain cleanliness because we have been buying from them for almost 10 years (IDI 7); As for the supplier, we can see that it is also clean (IDI 5); For our suppliers, I no longer ask or check if they clean, but I can see that they are clean as well (IDI 4); and We no longer ask the supplier because they are indeed clean, they maintain cleanliness, and there are also inspections conducted here (IDI 1).

Restaurants demonstrate a strong reliance on trusted and certified suppliers, where long-term relationships and supplier credibility play a central role in maintaining consistent halal compliance. Restaurants tend to prioritize suppliers who have a proven track record of adhering to halal standards and proper sanitation, often relying on both formal certification and informal assurance through familiarity and past experience. Ihsan Eatery and Salama Restaurant narrated:

We have a direct chicken supplier. We ask about the product, and the supplier ensures it is of good quality. Their vehicles and storage are personal freezers, and we also ask if they are clean (IDI 6); and for beef, our supplier has been Muslim for almost 20 years, and they are the ones who actually slaughter the animals (IDI 7).

Moreover, restaurant expressed confidence in their suppliers based on long-term relationships, with some indicating that they no longer find the need to inspect or question sanitation practices. Hygiene and cleanliness were often evaluated based on trust in the supplier's integrity rather than through formal verification or evidence. Restaurants tended to assume that products were handled appropriately and maintained in sanitary conditions, relying on long-term relationships and familiarity with the supplier's routines rather than performing systematic checks for each delivery. Mohai Resto and Lupia Meals stated about their supplier that:

With the supplier, we make sure that they maintain cleanliness, especially for those who deliver, since the products are already marinated when they arrive to us and are ready to cook (IDI 9); and for the supplier, in terms of cleanliness, we are aware that they maintain proper cleaning practices (IDI 3).

### *Discussion*

The results are consistent with the study of Tieman (2011) and Zulfakar et al. (2014), that relational trust plays a critical role in maintaining supply chain integrity, particularly when formal certification or verification is limited. From a Systems Theory perspective, this reflects a partial feedback system, where supplier inputs are not always formally evaluated, potentially affecting output reliability. However, under Resource-Based Theory, strong supplier relationships function as valuable intangible resources that sustain operational continuity.

On the other hand, Blockchain Technology can replace informal trust with verified digital trust. Instead of relying to supplier reputation, the suppliers' certification, sanitation records and compliance history, can be stored in a tampered-proof digital ledger. It will allow restaurants to hygiene and halal status through recorded data rather than assumptions. This will also reduce the risk of relying solely on familiarity and long-term relationships.

Furthermore, Blockchain Technology will enable evidence-based validation instead of relying on observation and personal belief. The system will enable the restaurants to upload and stamp dated photographs, certifications, audit reports, and inspection results. This will guarantee that cleanliness and conformity are consistently verified by documented evidence rather than relying solely on perception or experience.

**Hands-on Procurement & Direct Control.** Restaurants demonstrate personal involvement in sourcing, actively engaging in supplier selection and procurement activities. This includes conducting supplier inspections and verifying the condition, quality, and handling of products prior to purchase or acceptance. Salama Restaurant are one of the restaurants who prefers to do hands-on procurement with statements as:

There are suppliers, but they don't deliver it, we pick it up ourselves. For example, for chicken, we have a supplier, and we personally pick it up. Most of our suppliers are also from our fellow Moro community so that we are sure it is clean and halal-certified (FGD 7).

### *Discussion*

The result emphasizes the active involvement of restaurants in sourcing, supplier inspection, and ingredient verification. Such hands-on practices ensure that halal and quality standards are met before materials enter the production process. This directly supports the study's finding that active involvement in procurement and supervision is critical in maintaining product integrity, aligned with Tieman (2011). Within Systems Theory, this represents a strong input control mechanism, ensuring that only verified materials proceed into the system.

In Resource-Based Theory, hands-on procurement reflects a key organizational capability that enhances control over critical resources.

On the other hand, Blockchain Technology will facilitate procurement by enabling end-to-end ingredient tracking. Restaurants can monitor product origins, handling practices, and halal compliance even in the absence of a physical inspection. Through real-time digital verification, this lessens reliance on manual inspection while preserving strict control.

**Sanitation Awareness & Hygiene Practices.** Restaurants demonstrate strict adherence to cleanliness and Syari'ah-compliant sanitation practices, integrating these principles into all stages of food handling and operations. This includes consistent implementation of preventive measures such as regular cleaning, proper storage, and appropriate equipment handling, all of which are designed to minimize contamination risks. Ihsan Eatery and Amanah Food House guaranteed a minimal contamination risks with supporting statements:

Because we are in the food industry, we make sure everything is clean, even during transportation, since it would be a big cost to the business if a customer gets sick because of us (IDI 6); We personally go to the market. We no longer ask the supplier about cleanliness because they are already clean, as they maintain proper cleaning and there is someone who inspects them here (IDI 1).

### *Discussion*

Restaurants demonstrate strong adherence to cleanliness and Syari'ah-compliant sanitation through proper handling, storage, and cleaning procedures. These practices also reflect findings from Talib et al. (2015), emphasizing that hygiene is a fundamental component of halal assurance. In Systems Theory perspective, sanitation is part of the transformation process ensuring safe and compliant outputs. Knowledge Management explains how these practices are consistently applied through shared understanding among staff, even in the absence of formal training systems.

On the other hand, Blockchain Technology can record sanitation procedures like cleaning schedules, storage conditions, and equipment handling. This will guarantee that sanitation procedures that are compliant with Syari'ah are continuously followed by creating an open and transparent hygiene record. Because every activity is recorded and unable to be modified, it increases accountability.

**Freshness & Quality Prioritization.** Restaurants prioritize daily purchasing practices and maintain limited stock levels, deliberately avoiding overstocking to ensure the consistent use of fresh ingredients. By limiting bulk purchases and sourcing ingredients on a regular basis, they can maintain product freshness, prevent spoilage, and preserve halal integrity throughout storage and preparation. Noor Halal Dine certifying in their statement that one of their practices to keep the product fresh is daily marketing and one of preventive measurements to maintain safe products is sealed delivery from supplier. Noor Halal Dine stated:

Marketing is done daily; we want everything to be fresh, so we do not overstock. We personally handle the marketing. Our marketing for raw materials comes from Zamboanga and Manila through slow-boat shipping or sea cargo. We no longer check if it is cleaned, but the packaging is sealed because it is placed in a "styro-foam" box. This is to maintain the safety of the package when it arrives, so it does not spoil, rot, or get accessed by other people (IDI 10).

This approach reflects a strong preference for high-quality and freshly sourced materials, which helps preserve both product quality and halal integrity. By minimizing storage time and ensuring rapid turnover of ingredients, restaurants reduce the risk of spoilage and contamination.

### *Discussion*

The emphasis on daily purchasing and avoiding overstocking ensures that ingredients remain fresh and halal-compliant. Supported by Ardiantono et al., (2021), who asserted that supply chain's works by bringing food conditions to be safe, hygienic, veterinary, protected from dirty things in the environment, fair sales, and sustainable consumption in all processes from production to consumption. Under Resource-Based Theory, high-

quality ingredients are critical tangible resources that enhance both compliance and product value. In Systems Theory, controlling input quality directly influences the effectiveness of the transformation process and final output.

On the other hand, Blockchain Technology will improve freshness monitoring by real-time tracking of goods movement. Restaurants will be able to confirm the dates of product collection, processing, and shipping. This will guarantee that ingredients are fresh and consistent with halal standards while also supporting regular purchasing patterns. Additionally, by enhancing inventory planning and visibility, it will help avoid overstocking.

**Segregation & Halal-Only Operations.** Restaurants implement strict segregation practices, including the separation of raw and cooked items, systematic checking of ingredients, and the use of halal labeling to verify compliance. These measures are reinforced through the adoption of exclusive halal operational systems, ensuring that all processes adhere to halal standards. Collectively, these practices serve as critical control mechanisms to prevent cross-contamination and preserve the integrity of halal food throughout preparation and handling stages. Zalika Kitchen, Lupia Meals and Mohai Resto narrated:

We separate raw and cooked items to make sure there is no contamination (IDI 2); We always check if the ingredients are halal before using them (IDI 3); We rely on halal labels to make sure the products are allowed (IDI 9).

### *Discussion*

Strict segregation of raw and cooked items, halal labeling, and exclusive halal systems demonstrate strong operational discipline. Consistent with Talib et al. (2015), that segregation and ingredient verification are central to preventing contamination. From a Systems Theory perspective, segregation acts as a control mechanism within the process stage, preventing cross-contamination. This also reflects an organizational capability under Resource-Based Theory, strengthening compliance.

**Absence of Structured and Formal Training Systems, with reliance on Internal and Owner-Led Knowledge Transfer.** Training on halal practices in the restaurants is largely informal and unstructured, with little or no engagement from external institutions or certification bodies. Most instruction is conducted in-house, often led by owners or senior staff, and there is limited exposure to formal or partner-led training programs. This reliance on internal knowledge transfer reflects a gap in standardized capacity building, suggesting that while employees are familiar with operational halal practices, there may be inconsistencies in understanding and application due to the absence of structured training mechanisms. Ihsan Eatery and Salama Restaurant explained that one of the reasons for non-compliance with external trainings is the restaurant's size and premiere status. Supporting statements as follows:

There have been no trainings since we were just a small restaurant. I only imparted my own knowledge to them about food handling. No external trainings, because it's only within our restaurant (IDI 6); We are not that established yet, so we have no trainings from other agencies (IDI 7).

In the restaurants, knowledge on halal practices is primarily transmitted through internal mechanisms, with training often led directly by the owners or senior staff. Instruction typically focuses on basic food handling, segregation awareness, and entry-point procedures for new staff, providing foundational understanding of halal compliance. Lupia Meals, Hamad Delights, Mohai Resto, Aila Dines, and Aly Balbacua summarized their actual practices in terms of training their staff. They explained the following:

Regarding food, since we only have one staff member, it is just basic training and daily coaching. So far, there has been no training outside or from another agency. I personally conduct the training because it is basic and our restaurant is still new (IDI 3); They are trained in cleaning and cooking. The training is conducted within our restaurant. No trainings are given outside by another agency (IDI 4); Before becoming regular staff, we had a two-week training, but it was only within our restaurant. We have no trainings in partnership with other agencies (IDI 9).; For us, training is only in-store. It lasts fifteen days to one month, but only within the store. There is

just orientation, and then we check daily whether they follow the procedures or not (FGD 7); Before they can start working here, I really check if they have any prior experience in food handling because in food service we focus more on cleanliness. I train them for about one week (FGD 3).

### *Discussion*

Training practices are largely informal and internally driven, with minimal engagement from external institutions. Halal compliance is often sustained through internal knowledge transfer and value-driven adherence, consistent with Khan et al. (2019), who emphasized the role of organizational culture and religious motivation. From a Knowledge Management perspective, knowledge is shared through experience rather than formal systems. However, in Systems Theory, it indicates that a weakness in the input component (staff capability), may lead to inconsistencies.

**Stringent Operational Practices.** Restaurants implement rigorous hygiene and sanitation protocols to prevent contamination and maintain the integrity of halal food throughout all stages of handling, storage, and preparation. These practices include regular cleaning, proper equipment maintenance, and systematic segregation of ingredients to minimize the risk of cross-contamination. In addition, certification processes serve as formal checkpoints, providing external validation of compliance with halal standards and signaling credibility to consumers. Lupia Meals, Ihsan Eatery, Zalika Kitchen, and Rahman Café narrated their actual practices in terms of materials handling and verification, actual production process, and how storage is practiced.

Some items have halal labels, while others do not, but every item is inspected. After market purchase, they are immediately washed upon arrival at the restaurant. For storage, maintenance is done monthly, but depending on the quantity, sometimes cleaning occurs before the one-month mark (IDI 3); We ensure cleanliness because we handle food. Everything starts with cleanliness (IDI 6) ; Always sanitized, we have a sterilizer so that materials are properly sanitized (IDI 2); We really double-check the products. For raw meat, we check where it comes from and whether it has a halal label. For items without a halal label, we ask, because we do not purchase from unknown establishments (IDI 5).

### *Discussion*

Restaurants implement strict hygiene protocols and follow certification-related processes as checkpoints. This aligned with the study of Usman (2020), that supply chain management is considered as the administration of halal networks with the goal of maintaining halal integrity from the source of raw materials to the consumer's point of purchase. In Systems Theory, these practices strengthen the transformation process and feedback mechanisms. Under Resource-Based Theory, they represent organizational capabilities that enhance reliability and performance.

**Resource and Supply Constraints.** Achieving halal compliance in restaurants requires careful management of financial and material resources, as restaurants must balance the cost, quality, and availability of ingredients. Restaurants often face challenges in sourcing halal-certified products, particularly when suppliers are limited or prices are higher than non-certified alternatives. Despite these constraints, operators prioritize ingredient quality, freshness, and halal integrity, making strategic decisions about procurement, stock levels, and supplier selection to ensure compliance while maintaining operational sustainability. Zalika Kitchen, Ihsan Eatery, Haya Pata House, and Aly Balbacua shared their practices when it comes to sourcing ingredients:

We carefully check the ingredients, and the label must have halal (IDI 2); For the ingredients, if possible, it should have a halal logo because we are a non-pork establishment (IDI 6); For us, I don't just buy from wherever or just because it has a halal label, because I cannot be sure. I prefer to buy and go personally so I can be sure it is clean, and regarding halal, I am certain because I have a trusted supplier who does the slaughtering themselves (IDI 8) and; We only purchase from people we know (FGD 3).

### *Discussion*

The results highlight that restaurants often encounter challenges in sourcing halal-certified ingredients and managing financial constraints, which can affect the consistency of halal implementation. According to Ngah et

al., (2014), the limited availability and low acceptance of halal logistics and warehousing services hinder food establishments from fully adopting halal supply chain practices. This limitation makes it difficult for restaurants to ensure that all ingredients and processes comply with halal standards. Similarly, Tumiwa et al. (2023) emphasized that operational barriers, including supplier reliability, transportation issues, and cost-related constraints, hinder the effectiveness of halal supply chain management. From a Resource-Based Theory perspective, limited access to valuable resources may weaken competitive advantage and compliance capability. In Systems Theory, constraints at the input level can disrupt the entire system, affecting output quality and reliability.

**Muslim dominated area and Relational Assurance.** Restaurants leverage long-standing relationships with suppliers to reduce the need for continuous inspection, as familiarity with supplier practices builds confidence in the quality and halal integrity of ingredients. Familiar routines and culturally embedded operational practices further strengthen consistency in daily operations, ensuring that halal standards are systematically maintained. Additionally, dependable and well-trained staff play a critical role in sustaining compliance, as their reliability and adherence to established procedures ensure that hygiene, segregation, and food handling protocols are consistently applied. Mohai Resto, Salama Restaurant, Amanah Food House, and Rahma Café shared their experiences in sourcing halal materials and their actual process in production:

We base it on the brand. For the supplier, we have a regular contact, and we really ask if it is halal and clean, and we check it ourselves (IDI 9) ; It's surely halal because this is a market in a Muslim area; they check what is offered before selling, and they wouldn't sell anything that isn't halal (IDI 7) ; For packaged goods in the market, there is also a halal label. Most of the people in our area are Muslims as well (IDI 1); First and foremost, the staff who prepare the food must wear gloves, keep their nails clean, and wear masks. For materials such as knives or utensils, they are soaked in hot water. For ingredients and vegetables, aside from soaking, we also check if there are insects (IDI 5).

#### *Discussion*

Operating in a Muslim-majority context reinforces trust-based practices, where shared cultural and religious values reduce the need for strict verification. This aligns with the study's emphasis on relational trust as a complementary mechanism to formal systems, consistent with Zulfakar et al. (2014). In Systems Theory, the external environment significantly influences system behavior. Meanwhile, Resource-Based Theory recognizes cultural alignment and relationships as intangible assets that enhance operational stability.

**Awareness and Partial Compliance with Certification Standards.** Restaurants demonstrate a clear understanding of halal certification requirements, reflecting their knowledge of both religious and operational standards. Interestingly, some establishments adhere to halal practices even without formal registration or certification, ensuring that their processes, ingredient sourcing, and food handling remain compliant. Amanah Food House, Lupia Meals, Haya Pata House shared their insights on registration and certification:

We are not registered there (IDI 1); Yes, we are in line, but we are not yet registered (IDI 3); "We are not registered with MMHCBI or any halal certifying body, but we are sure that we are halal (IDI 8).

#### *Discussion*

Restaurants demonstrate awareness of halal certification requirements but do not always pursue formal registration. This directly reflects the study's identified gap between practiced compliance and formal certification, as also highlighted by Tieman et al. (2012). From a Knowledge Management perspective, awareness exists but is not fully institutionalized. In Systems Theory, this indicates an incomplete feedback loop, where external validation mechanisms are not fully integrated into the system.

**Stringent Hygiene and Sanitation Practices.** Restaurants place a strong emphasis on cleanliness, recognizing it as a core component of halal assurance. Regular maintenance and proper handling of equipment are systematically implemented to prevent contamination and maintain the integrity of ingredients throughout

storage and preparation. Zalika Kitchen, Hamad Delights, Salama Restaurants, Lupia Meals and Rahma Café shared their actual production process and storage activities as follows:

The restaurant is Muslim-owned and all processes are in line with Islam and Shari'ah (IDI 2); Before cooking, it must be washed three times, then wiped or cleaned with a supplication from the Holy Qur'an. We also check the containers and cooking utensils because it is important that even the cookware is clean (IDI 4); Washed, sliced every morning, and placed in the refrigerator. For fish and meat, washed before placing in the refrigerator, and washed again before cooking (IDI 7); Regarding waste, it is thrown away, first bagged and sealed so dogs cannot tear it open. Afterwards, it is collected by the City Government. Utensils are immersed in hot water (IDI 3); After using each utensil, it must be washed immediately and not left around to avoid contamination. For waste, we have segregation, and afterward, it is placed in the proper location provided by the building we rent (IDI 5).

### *Discussion*

The strong emphasis on cleanliness reinforces halal assurance and aligns with both food safety and Syari'ah principles. According to Bonne and Verbeke (2008), halal food preparation is not only concerned with the permissibility of ingredients but also with hygienic handling and processing to ensure product integrity. In addition, Zailani et al. (2010) highlighted that strict cleanliness practices strengthen consumer trust and confidence in halal-certified establishments. Within Systems Theory, these practices ensure that transformation processes consistently produce compliant outputs. Under Resource-Based Theory, they represent operational strengths that enhance reliability and trustworthiness.

**Verification and Control of Materials and Processes.** Restaurants implement active measures to prevent cross-contamination, ensuring that raw and cooked foods, as well as different ingredients, are properly segregated and handled. Lupia Meals, Ihsan Eatery and Aila Dines shared their lived experiences in terms of preparing materials as part of production process:

During preparation, vegetables are washed, and meat is prepared before boiling to make it less hassle. At night, ingredients that can be prepared in advance are readied, but ingredients that cannot be prepared in advance are handled only in the morning (IDI 3) ; In preparation, cleanliness is the key, and raw and cooked products must be separated to prevent contamination (IDI 6) ; For tools used for meat, for example the cutting board, if it's for meat, it should only be used for meat; if it's for vegetables, it should only be used for vegetables (FGD 7).

### *Discussion*

The results show that active verification measures such as proper segregation and thorough ingredient checking are critical in ensuring halal integrity throughout the supply chain. This is supported by Talib et al. (2015), who emphasized that verification processes, including inspection and documentation of ingredients, play a vital role in maintaining compliance with halal standards. Furthermore, Zulfakar et al., (2014) highlighted that structured control mechanisms enhance the reliability of halal assurance systems by ensuring consistency and traceability across operations. From a Systems Theory perspective, this reflects strong monitoring across inputs and processes. In Resource-Based Theory, such control systems are valuable organizational capabilities that reduce risk and enhance performance.

**Monitoring, Supervision, and Role Accountability.** Restaurants employ continuous oversight mechanisms to ensure that halal compliance is consistently maintained throughout all stages of operations. Responsibilities are clearly assigned to specific staff members, which strengthens accountability and ensures that procedures—from ingredient handling to cooking and storage—are properly followed. Rafma Café, Haya Pata House, and Noor Halal Dine narrated the way they operate in actual:

Washed first before cooking, then marinated, and after that we wait for 12 minutes because that is the serving time or cooking time (IDI 5); It must be clean; washed properly before cooking. After washing, cook immediately, no delay. After defrosting, it is cooked right away (IDI 8); Every day, before starting operations, we clean and sterilize the equipment, and before we close, we clean again. The areas must be clean before

closing. In our restaurant, there is an assigned person who collects the garbage. A specific person is assigned to collect the garbage, and there is a drop-point where the garbage collector picks it up daily (IDI 10).

*Discussion*

Continuous supervision and clear role assignment ensure that halal practices are consistently implemented. This is supported by Talib et al., (2015), who emphasized that ongoing supervision and employee accountability contribute to the effectiveness of halal assurance systems by minimizing errors and non-compliance. Additionally, Ali et al., (2017) highlighted that regular monitoring and internal control mechanisms help sustain adherence to halal requirements across daily operations. In Systems Theory, monitoring serves as a feedback mechanism that maintains system stability. Knowledge Management further explains how accountability reinforces proper application of halal knowledge in daily operations.

**Transparency and Trust-Building with Consumers.** Restaurants adopt open operational practices to enhance customer confidence in the halal integrity of their products. By making compliance measures visible—such as proper handling, segregation, and certification—trust is reinforced through consistent adherence to established standards. Haya Pata House shared their lived experiences in their process which enhances customer patronage:

For the utensils, every morning they are boiled or sterilized. In our restaurant, the kitchen is open or visible to the customers, which is an advantage so they are aware of how the food is being processed. Every 2–3 days, there is a scheduled garbage collection from Poblacion, and there is also a place where the restaurant can dispose of waste daily (IDI 7).

*Discussion*

Restaurants build trust through visible compliance and consistent practices, positioning halal assurance as both an operational and reputational strategy. This aligns with the study’s conclusion that internal practices and trust-based mechanisms enhance consumer confidence, but also highlights the need for formal certification to strengthen credibility. According to Bonne and Verbeke (2008), transparency in food preparation and adherence to halal requirements significantly influence consumer confidence and purchasing behavior. This is further supported by Zailani et al. (2010), who found that consistent halal practices enhance the credibility of food establishments and strengthen customer trust. From a Systems Theory perspective, transparency represents system output that generates external feedback. Under Resource-Based Theory, trust and reputation are intangible assets that contribute to long-term competitive advantage.

**SOP #5.** What are the social values of the supply chain management practices on halal orientation in the restaurants’ operation within BARMM?

**Table 7. The social value of the supply chain management practices on halal orientation in restaurants’ operation within BARMM**

Essential Themes	Core Ideas
Cleanliness, open kitchens, and compliance in halal certification enhance customer trust and business sustainability	Customer trust is directly linked to visible Halal compliance and sanitation practices, ensuring loyalty and long-term sustainability.
	Open kitchens, transparent food preparation, and clear demonstration of halal practices reassure customers about product integrity.
	Maintaining rigorous sanitation, segregation, and halal handling routines ensures reliability, reinforcing consumer confidence.
	Proper waste management, regular equipment sterilization, and structured daily routines contribute to long-term operational stability.

	Informing customers through visible processes and certification cues strengthens trust and encourages repeat patronage.
Personal involvement in logistics, operational efficiency and quality control on production process improve organizational performance	Systematic monitoring and accountability improve workflow efficiency and ensure consistent restaurant performance.
	Regular checks on staff performance, food preparation, and hygiene practices maintain operational consistency.
	Structured and personal monitoring helps streamline tasks, reduce delays, and optimize daily operations.
Hygiene and Food Safety in material handling as Core Halal Principles	Hygiene is inseparable from Halal integrity and protects both customer health and business reputation.
	Regular washing, sterilization, and maintenance of utensils and equipment.
	Proper disposal and segregation of waste to prevent contamination.
Religious Understanding and Halal Awareness of staff are essential for Halal Implementation	Awareness and respect for Islamic principles are essential for authentic Halal implementation.
	Knowledge of Islam guides correct segregation of halal and non-halal items, preventing cross-contamination.
	Hiring staff who share the same faith ensures alignment with halal standards and practices.
Staff Competence, Training, and Supervision enhances operational stability and adherence to Halal Standards	Continuous training, reminders, and supervision strengthen compliance and maintain operational stability.
	Regular oversight, including daily checks and reminders, reinforces proper execution of halal practices.
	Weekly meetings and consistent supervision support operational consistency and adherence to halal standards.
Continuous Improvement in operation standardizes Halal practices	Consistent evaluation reinforces customer confidence and long-term competitiveness.
	Certification processes provide guidelines, criteria, and checklists that help standardize halal practices.
	Access to external trainings, even at local or barangay level, is seen as valuable for deepening knowledge and improving halal processes.

*Results*

**Cleanliness, open kitchens, and compliance in halal certification enhance customer trust and business sustainability.** Results reveal that customer trust is highly influenced by visible cleanliness and adherence to Halal standards. Participants emphasized that customers are observant, particularly regarding sanitation and proper food handling. Amanah Food House, Aly Balbacua, Aljeha’s Best, and Rudin Ihawan expressed their thoughts that cleanliness enhances customer trust and business sustainability, with the following statements:

If customers see that the place is not clean and organized, it will really have an impact because no one will come in to eat (IDI 1); Cleanliness, especially in relation to halal, should always be applied (FGD 3); When serving customers, it is really important that everything is clean (FGD 8) ; Before becoming business owners, we were also customers; you wouldn't eat there if you think it's dirty, so you also need to be clean (FGD 1); It has a big impact because when customers come in and see that the place is clean, they will keep coming back (FGD 3).

Halal certification was also perceived as a confidence-building factor. Posting Halal certification in the restaurant reassures Muslim customers and strengthens credibility. Participants noted that when operations are well-managed and visibly compliant with Halal principles, customers are more likely to return. Repeat patronage contributes to sustained business growth and improved brand reputation. Ihsan Eatery, Aly Balbacua, and Haya Pata House confirm with supporting statement as follows:

If you apply for halal certification and post it in the store, Muslim customers will feel more assured (IDI 6) ; For other customers, if there is a halal label, they will really make sure that it is truly halal (FGD 3); Customers also come back when the restaurant's operations are well-managed (IDI8).

Overall, the findings indicate that Halal compliance and cleanliness are not merely religious obligations but strategic components for business sustainability and competitive advantage.

### *Discussion*

The results revealed that certification and cleanliness significantly influence customer trust, loyalty, and restaurant sustainability. This suggests that poor hygiene practices directly affect customer patronage. This supports the study of Arshad et al. (2018) which emphasized that Halal certification serves as a seal of guarantee across production, transportation, warehousing, and retailing. Certification strengthens consumer confidence by assuring that products remain halal throughout the supply chain. Similarly, Hassan et al. (2016) stated that integrated halal supply chain systems help inform and persuade customers to purchase halal products. The present findings align with this, as participants emphasized that visible Halal compliance builds confidence and repeat patronage.

Cahyono et al. (2023) highlighted that effective supply chain management provides competitive advantage and boosts business performance. The results states that Halal compliance is not merely religious adherence but also a competitive strategy that enhances brand image and long-term sustainability.

From a Systems Theory perspective, cleanliness and transparency represent both the process and output stages, where observable practices generate positive feedback from customers. Under Resource-Based Theory, trust and reputation become valuable intangible assets that enhance competitive advantage. Additionally, certification cues and visible compliance address the identified gap between practiced halal implementation and formal recognition, strengthening both credibility and sustainability.

**Personal involvement in logistics, operational efficiency and quality control on production process improve organizational performance.** Participants highlighted that Halal compliance contributes to smoother operations and better-quality control. Practices such as implementing First-In, First-Out (FIFO), personally selecting ingredients, and closely monitoring storage and preparation processes help reduce waste and prevent spoilage. Rahma Café and Ihsan Eatery shared their practice:

First-In, First-Out is a big help to the owner (IDI 6); We use FI\_FO. The containers are labeled with dates so that whatever was purchased first will be cooked first (IDI 5).

Emphasizing that systematic inventory management improves efficiency. Direct involvement in purchasing ensures quality control and minimizes the risk of returning defective or non-compliant products.

The data further reveal that owner accountability plays a crucial role in maintaining operational standards. Active monitoring reduces errors and ensures that Halal guidelines are consistently followed. Thus, Halal compliance strengthens internal processes while improving overall workflow efficiency. Lupia Meals, Amanah Food House, and Aly Balbacua supported with statements as follows:

It is better that we are the ones who personally do the purchasing because we can immediately assess the quality (IDI 3); It will have an effect, as it would be like you are the one ruining your own restaurant (IDI 1); For me, I personally handle it, and there are no other items mixed in—only things like firewood, soft drinks, and meat. I don't transport them through regular commuting because, for example, when you commute, you don't know what other items are being carried in the vehicle (FGD 3)

### *Discussion*

The results align with Zainuddin et al. (2019) who defined supply chain management as collaboration among interdependent businesses to maximize customer value at minimal cost. Practices such as FIFO, direct purchasing, and monitoring reflect systematic supply chain coordination aimed at reducing waste and preventing losses. Additionally, Talib et al. (2018) noted that Halal Orientation positively affects time, flexibility, quality, and cost control.

The restaurants' emphasis on owner involvement, ingredient checking, and monitoring reflects an operational strategy consistent with Halal Orientation principles.

The findings also support Tieman et al. (2012) who stressed that maintaining halal integrity throughout the supply chain ensures product authenticity at the point of sale.

Ali, Tan, and Ismail (2017) stressed the importance of product authenticity in fostering consumer confidence, as it guarantees that the product has not been tampered with at any point in the supply chain. The authors argued that authenticity verification measures, such as certification and traceability systems, act as safeguards against fraud, contamination, or misrepresentation of halal food. Through these mechanisms, product authenticity directly ensures the integrity of halal products by preserving their purity, compliance, and trustworthiness throughout the supply chain.

This is further supported by Ahmad et al. (2025) as they stated that in the context of religious and cultural customs, food authenticity is particularly significant for maintaining customer confidence, public health, and integrity in the market. Thus, operational control and accountability contribute directly to quality assurance and business performance.

On the other hand, in Systems Theory, personal involvement strengthens the control and feedback mechanisms, ensuring that operations remain aligned with halal standards. From a Resource-Based Theory perspective, managerial competence and hands-on oversight are key organizational capabilities that improve efficiency and reliability. This also reflects how internal control systems compensate for limitations in formal structures.

**Hygiene and Food Safety in material handling as Core Halal Principles.** Cleanliness emerged as a central concept consistently associated with Halal practices. Participants strongly linked Halal with sanitation, pest control, waste management, and overall environmental hygiene. Noor Halal Dine explained their statement below, highlighting that cleanliness is integral to Halal integrity.

It really needs to be clean; there is someone assigned to cleaning who ensures sterilization, and cleanliness must also be maintained during cooking (IDI 10)

Improper waste disposal and unsanitary conditions were identified as risks that could drive customers away and negatively impact sales. Maintaining cleanliness also ensures readiness for inspection by authorities such as the Department of Health.

The results demonstrate that hygiene practices are not separate from Halal implementation but are foundational to it. Maintaining sanitation safeguards public health and strengthens the restaurant's credibility. Zalika Kitchen, Rahma Café, Aila Dines shared their opinions about hygiene practices with supporting statement as follows:

It's difficult if there is no proper waste disposal because there will be many flies and mosquitoes (IDI 2); Everything really needs to be maintained and kept active in terms of cleanliness so that we are always ready,

especially when there are visits from the DOH for inspection (IDI 5); And at the waste stage, it shouldn't all go into one bin where everything gets mixed together (FGD 7).

### *Discussion*

Participants strongly associated Halal with cleanliness and sanitation. This finding supports Khan, Haleem, and Khan (2028 as cited in Ardiantono et al., 2021), who defined Halal supply chain management as ensuring Halal and Thoyyib (safe, hygienic, protected from contamination) conditions from production to consumption. Similarly, Hasan (2021) emphasized that Halal supply chain management must be implemented to guarantee halal quality. Clean storage, pest control, and inspection readiness align with this requirement. The findings also correspond with Rizki et al. (2023) who highlighted that halal logistics must prevent contamination during storage and transportation. Thus, hygiene practices observed in the restaurants reflect the broader halal logistics framework described in the literature.

Within Systems Theory, hygiene practices are embedded in the transformation process, ensuring that inputs are handled safely to produce compliant outputs. Under Resource-Based Theory, sanitation routines represent operational capabilities that enhance reliability and trustworthiness. These practices also demonstrate how internal systems sustain halal compliance even in the absence of full formal certification.

**Religious Understanding and Halal Awareness of staff are essential for Halal Implementation.** Religious knowledge plays a vital role in ensuring proper Halal implementation. Participants emphasized that understanding Islamic principles enables correct segregation of Halal and non-Halal items, preventing cross-contamination. Haya Pata House and Noor Halal Dine:

If there is no understanding of Islam, they will surely not separate halal and non-halal items (IDI 8); It is truly a major factor if the staff being hired are also aware of the religion, because in halal, cleanliness is important, so it is easier to enforce on them—they know what is clean and what is not (IDI 10).

Respect for Islamic beliefs guides staff behavior in food preparation and handling. In Muslim-dominated areas, the implementation of Halal practices is perceived as easier due to shared cultural and religious awareness. Lupia Meals, Rahma Café, and Rudin Ihawan agreed that knowledge in Islam religion could enhance halal handling, support statement as follows:

Knowledge of the religion is a major factor (IDI 3); First and foremost is respect for the religion of Islam (IDI 5); For me, when hiring staff, it is important that those who work here share the same religion as I do (FGD 1)

### *Discussion*

These results suggest that Halal compliance is deeply rooted in religious understanding. Awareness and respect for Islamic dietary laws are essential in maintaining authenticity and integrity in food service operations. The study also found out that religious knowledge and respect for Islamic principles are crucial in proper Halal segregation. This supports Talib et al. (2018) who identified staffing and intangible resources (such as halal knowledge) as critical components of Halal Orientation Strategy.

Furthermore, Zailani et al. (2015) explained that Halal Orientation is a strategic direction that shapes decision-making in organizations. Religious awareness among staff ensures that halal regulations guide operational decisions.

The findings also align with Omar and Jaafar (2011) who emphasized that halal integrity must be guaranteed from farm to consumer, including proper segregation. Participants' emphasis on understanding Islam to avoid mixing halal and non-halal items reflects this principle.

From a Knowledge Management perspective, halal knowledge is an intangible resource that is created, shared, and applied within the organization. In Systems Theory, staff awareness represents a critical input component, influencing how effectively halal standards are implemented. This highlights that beyond systems and processes, values and beliefs play a significant role in sustaining compliance.

**Staff Competence, Training, and Supervision enhances operational stability and adherence to Halal Standards.** Staff capability was identified as a significant factor influencing successful Halal implementation. While some participants believed training was unnecessary if staff were already knowledgeable, others emphasized that continuous training improves efficiency and reduces mistakes. Zalika Kitchen and Aly Balcacua stated:

The more trained the staff are, the more their performance improves. (IDI 2); In our place, there are customers who also own restaurants. They said I could bring their staff here so they could see how clean it is. I felt happy because it showed that I had trained them properly (FGD 3).

Daily monitoring, reminders, and weekly meetings were reported as effective reinforcement mechanisms. Managerial oversight ensures that tasks are properly executed, especially when assigned personnel are absent. Lupia Meals, Salama Restaurant, and Malyam EatZ indicate that staff competence, supported by regular supervision and structured training, strengthens compliance and operational consistency:

If they do not work properly, the operations will be affected. Daily reminders and daily monitoring (IDI 3); I personally, as the owner, am the one who monitors (IDI 7); I really do not rely entirely on my staff; I make sure to stay active and involved (FGD 2).

### *Discussion*

The importance of staff competence found in this study is supported by Purwanto et al. (2020), who stated that managerial skills in planning, organizing, and controlling is crucial in achieving organizational goals. Likewise, Talib et al. (2020) emphasized that staff must be adequately trained and aware of halal requirements to guarantee halal production.

The participants' mention of daily monitoring, weekly meetings, and managerial oversight reflects structured staffing strategies consistent with Halal Orientation.

Additionally, Kulińska and Giera (2019) noted that faults in information flow and inadequate staff training cause disruptions in storage processes. This reinforces the study's finding that supervision and reminders are necessary to prevent errors and maintain compliance.

In Systems Theory, training and supervision strengthen both the input (staff capability) and feedback mechanisms, ensuring system stability. From a Knowledge Management perspective, continuous learning and reinforcement help standardize practices across operations. While effective, this theme also reflects the study's identified limitation regarding the lack of structured and formal training systems, suggesting a need for more institutionalized approaches.

**Continuous Improvement in operation standardizes Halal practices.** Participants expressed awareness of the importance of obtaining formal Halal certification. As part of improvement, the certification process, which includes checklists and compliance criteria, serves as a guide for structured implementation.

Some participant mentioned plans to apply for certification and trainings, recognizing its impact on restaurant credibility and customer confidence. Continuous improvement, regular evaluation, and maintaining existing best practices were seen as essential for sustaining standards. Ihsan Eatery, Zalika Kitchen, Aly Balbacua, and Aila Dines indicate that certification is not only enhances external trust but also encourages internal discipline and operational refinement.

The first step is that we will apply, because there are criteria or a checklist that needs to be followed. There should be improvement and awareness that, if possible, we should become halal certified in time (IDI 6); We will continue what is already being practiced, which is the weekly orientation (IDI 2); If there are those willing to train us, it would help increase our knowledge in halal processing (FGD 3); For trainings (from agencies), it would be good if someone could initiate them, even starting at the barangay level (FGD 7).

## Discussion

The results align strongly with Arshad et al. (2018) who described certification as a guarantee that halal status is maintained across production, warehousing, and transportation. Similarly, Elias et al. (2019) explained that Halal Orientation requires strategic decision-making aligned with Shariah law and global halal standards. Applying for certification demonstrates long-term strategic commitment. Moreover, Ali et al. (2022) found that supply chain integration significantly affects halal integrity and food safety. Certification and structured monitoring enhance this integration, improving overall sustainable performance.

From a Systems Theory perspective, continuous improvement represents an effective feedback loop, where evaluation leads to system refinement. Under Resource-Based Theory, access to training and certification enhances organizational capabilities, making them more structured and difficult to replicate.

## SUMMARY, CONCLUSION, AND RECOMMENDATION

This chapter presents the summary of findings, conclusion, and recommendations

### Summary of Findings

The following were the main findings of the study on the supply chain management practices on halal orientation in the restaurants' operation within BARMM:

- a. The supply chain management practices are “*Excellent*” in performing its logistics and warehouse practices with an overall mean of 4.56 (SD= 0.726) interpreted as “*Supply Chain Management is always evident*”, indicating that supply chain management practices are systematically and reliably implemented across the suppliers' operations.
- b. Halal Orientation is “*Always Practiced*” among the Restaurants' operation within BARMM with an overall mean of 4.53 (SD= 0.722) interpreted as “*Halal Orientation is Always Practiced*”. The high rated results explain that Restaurants' practices are aligned with the requirements of the Certifying Bodies and Syari'ah Principles but lack of formal certification.
- c. The study confirms that Supply Chain Management practices significantly influence Halal Orientation in restaurants' operation within BARMM. The overall regression model was statistically significant, with  $F(1,198) = 253.593, p < .001$ . Therefore, the Null Hypothesis is rejected
- d. Based on the lived experiences of participants on supply chain management practices on halal orientation on restaurants' operation within BARMM, fourteen (14) essential themes emerged. For Supply chain management practices, four essential themes emerged: Trust- Based Supplier Over Formal Sanitation Verification, Hands-on Procurement & Direct Control, Sanitation Awareness & Hygiene Practices, and Freshness & Quality Prioritization. For Halal orientation, 10 essential themes emerged: Segregation & Halal-Only Operations, Absence of Structured and Formal Training Systems, with reliance on Internal and Owner-Led Knowledge Transfer, Stringent Operational Practices, Resource and Supply Constraints, Muslim dominated area and Relational Assurance, Awareness and Partial Compliance with Certification Standards, Stringent Hygiene and Sanitation Practices, Verification and Control of Materials and Processes, Monitoring, Supervision, and Role of Accountability ; and Transparency & Trust-Building with Consumers
- e. For the social values, it highlighted six 6 essential themes that demonstrates the social values of the supply chain management practices on halal orientation in restaurants' operation within BARMM such as: (1) Cleanliness, open kitchens, and compliance in halal certification enhance customer trust and business sustainability, (2) Personal involvement in logistics, operational efficiency and quality control on production process improve organizational performance, (3) Hygiene and Food Safety in material handling as Core Halal Principles, (4) Religious Understanding and Halal Awareness of staff are essential for Halal Implementation, (5) Staff Competence, Training, and Supervision enhances operational stability and adherence to Halal Standards and (6) Continuous Improvement in operation standardizes

Halal practices. Overall, the findings indicate that Halal implementation is both a religious obligation and a strategic business practice that strengthens operational performance and customer loyalty.

## Conclusion

This study concludes that restaurants in the BARMM demonstrate a strong commitment to halal-oriented operations, supported by excellent supply chain management practices in logistics and warehouse functions. High levels of compliance in sanitation, segregation, storage, and handling of products reflect the restaurants' consistent application of halal principles across staffing, materials, production, storage, and transportation. The findings further confirm that supply chain management practices significantly influence halal orientation, emerging as a critical determinant in maintaining halal integrity.

The study demonstrates that halal orientation in BARMM restaurants is achieved through a combination of relational trust, direct procurement, strict hygiene, and internal governance. While formal certification and structured training are limited, owners compensate through hands-on management, supplier familiarity, and internal monitoring systems. Freshness, ingredient verification, and segregation practices are central to maintaining halal integrity. Trust-based networks, owner involvement, and transparent operations are essential in sustaining halal compliance while supporting both operational efficiency and consumer confidence.

Moreover, halal compliance significantly influences customer trust and repeats patronage, contributing to business sustainability. Cleanliness and food safety practices are foundational elements of Halal integrity and directly impact customer satisfaction and restaurant reputation. Religious understanding and awareness among staff play a critical role in ensuring proper Halal segregation and preventing cross-contamination. Effective monitoring, supervision, and staff competence are necessary to maintain consistent operational standards. Formal Halal certification strengthens both internal operational discipline and external customer confidence. Halal practices positively contribute to operational efficiency, quality assurance, and overall restaurant performance.

## Recommendations

Based on the findings of the study, the following recommendations are proposed to further strengthen supply chain management practices on halal orientation in the restaurants' operation within BARMM:

- a. Suppliers should continuously sustain their logistics practices to ensure compliance and prevent cross contamination.
- b. Government Agencies responsible for Halal Certification should intensify and expand their information campaigns to encourage more establishments to pursue Halal Certification.
- c. Restaurants should adapt more systematic documentation and labeling protocols to mitigate contamination risk and enhance audit inspections.
- d. Restaurants and suppliers should undergo formal training in halal food handling, sanitation and safety in coordination with appropriate regulatory and certifying bodies.

Restaurant should ensure proper verification of supplier practices such as checking products' cleanliness, authenticity, and compliance in halal to ensure quality standards.

- e. Government Agencies should provide incentives, technical support and recognitions to halal compliant establishments.

## Recommendation for Further Studies

Future studies may explore the following:

1. Longitudinal Study on Compliance Sustainability Research whether Halal compliance practices are maintained over time, identifying factors that promote or hinder long-term adherence.
2. Investigate how viewing Restaurants as interconnected system can improve efficiency, safety, and compliance.
3. Analyze how Halal Certification affects customer trust, satisfaction and purchasing behavior.
4. Study how government-provided incentives, awards, or technical support influence restaurant motivation and adoption of Halal standards.
5. Impact of Halal Training Programs on Restaurant Compliance.

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