

Transaction Halal Supply Chain Management (HSCMT) in the Digital Economy Era An Opportunity and a Challenge In Indonesia

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Abstract

Halal supply chain management is a necessity considering the halal industry in the digital economy era has become a necessity. This paper aims to describe halal supply chain management as a solution to meet the needs of the global halal industry. This research method uses descriptive qualitative with data sources derived from literature studies originating from reputable journals with content analysis. The research findings can be concluded that halal supply chain management needs to be used as an alternative in meeting the needs of the global community who want halal food, sharia finance, halal tourism, halal passion, media and sharia tourism, cosmetics and other halal medicines to be supplied in a modern way following technological changes. innovation.

Keywords: Transactions, Halal Supply Chain, Digital Economy.

Introduction

In order to save on supply chains in Indonesia, industrial companies need to take the right steps in managing logistics (Zekos, 2021), because logistics is an important part of TSCMH (Niemsakul et al., 2018). For this reason, TSCMH must be integrated between suppliers and customers, competitors and even other stakeholders even though they are not directly involved (Haque & Islam, 2018). In Indonesia, which is predominantly Muslim, the halal supply chain is of course very much needed. Therefore, it is necessary to integrate all existing business networks, so that companies can save costs and can increase revenue from broad market access (Lahane et al., 2020). Broad market access must be accompanied by security guarantees of logistics transportation by the government (Kitchot et al., 2020), especially in developing countries (Sánchez-Flores et al., 2020) so that TSCMH can connect from one place to another and smoothly (Haleem, 2020), so that it needs to be well integrated between the environment, economy, logistics transportation, operations, and organization (Kazancoglu et al., 2018) so that the transportation costs are not too expensive.

The importance of halal certification for companies can expedite the supply chain (SCO) (Muhamed et al., 2020). Because of this, it is very important for the halal supply chain (HSC) in the midst of globalization (Haleem et al., 2021) in increasing halal transactions through blockchain-based digital money (Billah, 2019; Fernando & Saravannan, 2021; Shuib, 2021). So in the digital era besides halal transactions with blockchain technology it will make it easier and very transparent for the operation of the halal supply chain (HSC) (Tieman & Williams, 2019; Rejeb, 2018). Thus, in the era of digital industry 4.0,

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halal supply chain transactions (TSCH) can be integrated with the blockchain (Aslam et al., 2021). Ismail et al. (2021) term the governance model of halal supply chain transactions as HSCMT (Halal Supply Chain Management Transactions) with other facilities such as FinTech or Blockchain. However, HSCMT is still not effective due to lack of understanding (Khan et al., 2021) both ethically and technically and operationally (Islam et al., 2021).

Literature Review

1. Transaction Halal Supply Chain Management (HSCMT)

In simple terms "halal" is defined as something that is permitted (not prohibited by shari'ah (Q.S. Al-Maidah, 5: 4-5; Q.S. An-Nahl, 16: 114-115). Meanwhile, halal products are a necessity not only for Muslims but all mankind (Q.S. Al-Baqarah, 2: 168). According to Arfidhila (2020) in his research stated that especially in Indonesia, there are two uses of halal products, namely 1) certification, and 2) labeling. While the supply chain is a networking system of companies together in producing (product flow) and distributing it (information flow) to consumers (financial flow). (Risyaldi et al., 2021)

According to Pangaribuan (2020) that if a product, for example halal food is certified or has a halal label, it is actually part of effective communication, and facilitates the supply chain to consumers. Especially in the digital era, the industrial sector has experienced intense competition so that every company needs to improve its competitiveness. Analia (2021) explains that one of the efforts to increase competitiveness is effectiveness in carrying out a supply chain from upstream to downstream, starting with selecting suppliers to direct distribution activities to consumers.

Indonesia's potential for halal supply chain transactions is the largest in the world along with the quantity of its population who are Muslims (Ridwan et al., 2019). If in Malaysia there is a halal authority through the Malaysian Islamic Development Department (Lestari and Azwar, 2019), then in Indonesia there is the Halal Product Assurance Organizing Body (BPJPH) which is at the Indonesian Ministry of Religion (www.halal.go.id). According to Islam (2021) empirically that halal certification of a company's product can expedite the halal supply chain.

However, that does not mean that every product labeled halal has been "certainly" halal. According to Vikaliana et al. (2021) and Wahyuni et al. (2021) in his research emphasized that because it is easy for the halal label logo on each product to be misused, it is necessary to digitize it with the blockchain platform as a tool for visitability and quality assurance and food safety. Annisa (2019) agrees that this is also a process of socializing the halal value chain for every production, distribution, and up to consumption. As can be seen from the circulation of the supply chain to the hands of the following consumers:

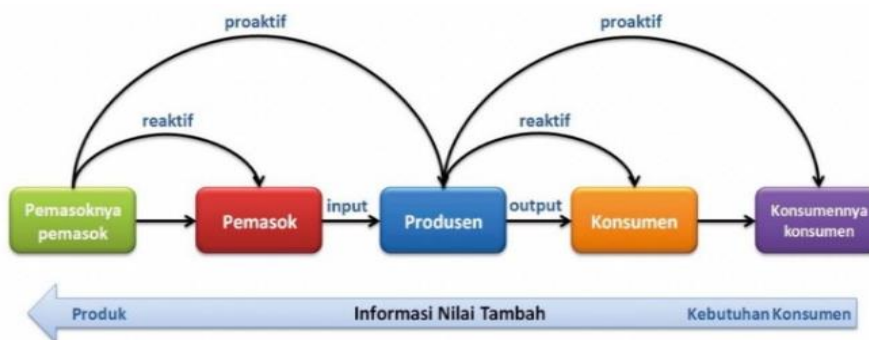


Figure 1 Supply Chain Cycle

Source: UNU Purwokerto (2020)

Siklus rantai pasok yang begitu efektif menjadikannya Indonesia harus menseriusi kegiatan tersebut guna mempercepat rantai pasokan industri halal. Menurut Global State Islamic Economy (2018-2019) bahwa meskipun diurutan ke-10 dalam industri halal global yang mencakup penilaian makanan halal, keuangan syariah, wisata halal, busana muslim, media dan rekreasi halal, hingga kosmetik dan obat-obatan halal. Adapun mata rantai siklus rantai pasok dapat dilihat pada gambar 2 berikut ini:

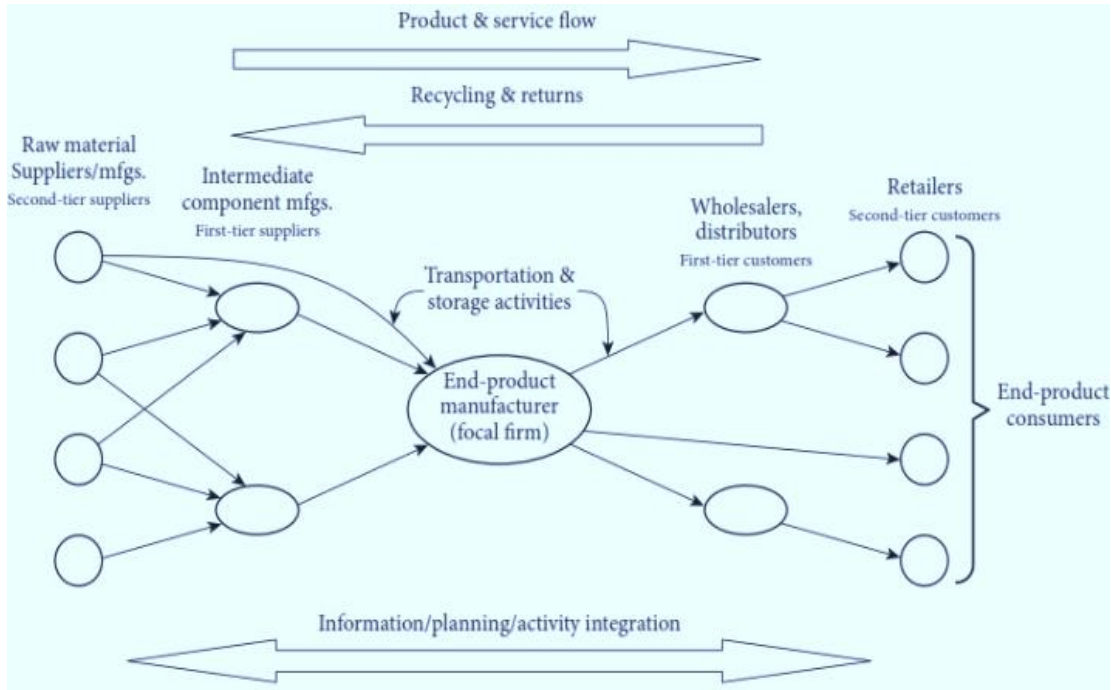


Figure 2 Supply Chain in General

Source: Wisner et al. (2019)

Thus, the halal supply chain management transaction (HSCMT) referred to here is how activities by effectively utilizing resources for the supply chain starting from raw materials to the final product in the hands of consumers need to guarantee halalness and food safety in the supply chain. (UNU Purwokerto, 2020), such as; halal food, sharia finance, halal tourism, muslim pashion, sharia media and tourism, halal cosmetics and medicines and others.

2. Logistics Transportation

In order to achieve the goal of halal supply chain management transactions from producers to consumers so that supply is maintained, the existence of logistics and transportation is very necessary. For example, Perum Bulog, which is mandated by the government to be able to control and at the same time guarantee the existence of rice in Indonesia, must be able to develop technology-based logistics starting from resource planning, warehouse management systems, transportation management systems, intelligent transportation systems, and information security with models 1) System-Cyber-Physical (CPS). (Bantacut, 2018)

Because of that, not only Bulog but the government itself, and of course all producers need to develop modern logistics management. For the government must provide quality transportation facilities and other regulations that support a safe supply chain. According to Hidayat et al. (2017) that Indonesia, which has a large area from Sabang to Merauke, crosses islands, seas and land so that food insecurity is unavoidable. Therefore, the government needs to have a food logistics system by mapping the initial location determination to the delivery point and effective commodity distribution center.

Perdana and Soemardjito (2017) in their research emphasized that an effective and efficient supply chain network in various commodities needed by society is the main key to the logistics system. Saragih et al. (2020) offers an effective and efficient supply chain by increasing rail transportation activities. Nonetheless, the challenge of the logistics system in Indonesia in this digital era is experiencing changes in distribution patterns, handling processes, facilities and equipment, business processes, and network changes so that it is necessary to adapt to ICT through the use of the Transportation Management System (TMS), Electronic Data Interchange (EDI), and other digital platform adaptations.

According to Zamroni et al. (2021) in addition to using rail transportation modes if long distances between regions, modes of transportation such as air transportation (airplanes), land transportation (for example, motorbikes, cars, trucks, and the like), as well as sea transportation for between islands between countries need to be optimized with various conditions that must be obeyed. Dharmawati et al. (2020) specifically states that the many modes of transportation need to be integrated in real terms for efficiency and effectiveness in smooth operation and especially for savings in logistics costs which are low, timely, and of good quality. This can be seen in the following image:



Figure 3 Supply chain cycle through logistics

Source: 1st Meeting Lecture Material (2021)

From the picture above it can be seen how the order is still in the warehouse (logistics) then with the mode of transportation the order (material/material) can be delivered safely to the consumer. This is a simple supply chain network cycle.

3. Integration Model of Halal Supply Chain and Digital Platform

In the digital era of Industry 4.0 where competition has changed from between products and industries to competition between logistics networks and supply chains. According to Dwiatmoko (2018) that a logistics process is actually in order to optimize production factors, such as cost, time, and quality. Marpaung et al. (2021) in their research found that logistics distribution depends on transportation managers, so companies are required to carefully calculate load factors, mileage and time management, and road restrictions using logistics modes of transportation so they can serve their commodity chain partners well.

According to Ashari (2021) the benefits of the era of innovation technology with the FinTech platform, and blockchain can be integrated into halal products in the context of visitability to prevent misuse of halal labels and their certification. This is because

Blockchain technology is able to develop a halal logistics system and its derivatives such as halal product quality, financial performance, and transparency of information about halal products to sales. Suwanto and Gunawan (2021) are even more enthusiastic that with the integration of halal supply chain management and Blockchain technology they are able to ensure 1) halal procurement, 2) halal manufacturing (management), 3) halal distribution, and 4) halal logistics (supply chain) properly.

Fauzi et al. (2019) in their research findings underlined that to determine halal standardization of a product besides being able to use a manufacturing model, the use of Blockchain technology will make it easier and speed up the workings of processing the halal product. According to Fathi et al. (2019) when researching the food industry in West Java stated that the ease of assessing whether Brownies products are halal or not will be very easy if the design of a halal supply chain management system (SCMH) can integrate with technology. From some of the research findings above, it can be concluded that in order to save and increase the efficiency and effectiveness of logistics in commodity supply chains, such as halal food, integration with current technology is needed (Hidayata et al., 2017). Especially with halal supply products to increase the competitiveness and sustainability of halal commodity logistics in the future. To accelerate halal certification and labeling with various commodity products and increase competitiveness, of course it must be handled professionally, precisely, transparently, and visitability, the use of renewable technology is a necessity as a dynamic adaptation to halal supply chain management in Indonesia.

4. Factors that influence

In general, when you want to do something, you need something else. Even in the case of halal supply chain management (HSCMT) transactions, especially in the digital era, it certainly requires resources in the form of manpower (HR), methods, materials, machines and money. According to Amar (2021) that the management of these resources is an important factor in the success of HSCMT. Likewise, Maelissa et al. (2021) in examining the factors affecting construction industry activity in the Covid-19 era emphasized that in addition to methods, labor, materials, machinery and money were the factors of regional restrictions (PSBB), work strikes and uncertainty that dominated supply chain activities, so there is a need for proper and fast efforts.

The resource factors can be explained as follows:

a. Man or HR

The importance of human resources in increasing competitiveness in the global era is undeniable. Saifuddin (2019) in his research on tourism business development through BUMDes states that management staff who rely on competent human resources are urgently needed. Moreover, if you want to create developments in this sector, the supply chain can run well. To develop halal tourism, for example, human resources are needed who are able to manage supply chains based on information technology and online media.

Likewise, Sengkey et al. (2020) who examined the supply chain of fresh raw fish to Minahasa fishermen. He regretted the meticulous and prolonged distribution of the supply chain, coupled with mediocre and traditional human resources, the fishermen on Nain Island had not been able to improve their welfare, due to low competitiveness and competence plus the fish supply chain network that was too long.

Based on the two findings above, it can be concluded that the existence of human resources is very important in increasing competitiveness in the supply chain management of the halal industry. The need in the world, especially in a Muslim-majority country, for the halal industry is urgently needed. But it's not as simple as one would like, there needs to be superior HR competence capable of making strategies and planning so that halal supply chain management (HSCMT) transactions can be competitive not only

in the national community, but also in the global community to become suppliers as well as consumers.

b. method

In addition to the need for human resources in the framework of creating halal supply chain management (HSCMT) transactions which certainly contain risks. To reduce the possibility of a risk occurring in HSCMT, an appropriate treatment method is needed. According to Huseini (2018) in an article entitled "Designing a Risk Mitigation Strategy in Business Processes at PT. Benua Multi Guna Using the House of Risk (HOR) Method" agreed that for a smooth supply chain flow in a business requires a correct and effective method. One effective method for reducing supply chain risk is the HOR method. The advantage of the HOR method is that it is able to handle and reduce the possibility of sources of risk occurring in the company's supply chain.

Likewise, Barliansah (2019) stipulates that in order to increase competitiveness in the tourism sector, an effective supply chain is needed to produce TSCM performance. One of the right methods is to use fuzzy logic. Fuzzy logic is a method that has the advantage of being widely accepted by various parties, and is more suitable for input that can be accepted by humans. He confirmed this in his research on the tourism supply chain in the city of Bandung. Halal supply chain management transactions, if you want to increase and be competitive, need good strategy and planning, so that the right method is also needed.

c. Material

Halal supply chain management transactions require good materials/materials that do not contain prohibited elements. Moreover, in the framework of halal labeling and certification, the ingredients of a product must be clear based on laboratory results. So, the raw materials/materials of a halal industrial product must avoid materials that are forbidden, such as pork and dogs (Q.S. Al-Maidah, 5: 3).

According to Rodhl et al. (2021) in "Strengthening Networking Through The Optimal Supply Chain Management to The Halal Product (Frozen Food)" states that frozen product materials must also be halal certified, if they want to be marketed. In addition, the availability of raw materials and guarantees of raw materials must be shariah-compliant, such as the method of slaughtering, processing and distributing animals. And this is very important, because business entities in the supply chain network consisting of suppliers, manufacturers, distributors (Adhiningrat, 2018), and retailers must be free from prohibited elements so that new materials that eventually become products can be utilized by consumers. This is an important element in halal supply chain management (HSCMT) transactions.

d. Machine

In the context of machining in halal supply chain management transactions, what is meant is how savings in this activity can make machines efficient in reading and connecting big data with one click. According to Hermawan et al. (2021) in the digitalization era, supply chain networks are easier to access, especially when services are connected to Web applications. In the era of machine technology, of course, fast and precise work is urgently needed, especially since the halal supply chain can be immediately distributed to consumers.

Zainuddin et al. (2021) in research on local culinary business actors, where Garut dodol is processed manually takes approximately 8 hours, it is less effective when it is associated with global market competitiveness. Therefore, efforts to use digital machines need serious consideration for these culinary practitioners.

e. Money

In any context let alone business development, money is an important ingredient to make it happen. Rahman et al. (2018) in their research emphasized that the development of any business, including the halal business, requires a supply chain strategy. At least, there are three important things in order to improve supply chain management, namely 1) campaign quality, 2) business management, and 3) cost (money) control.

Not that money is everything. Money is only used as financing in all forms of transactions, especially those related to the development of the halal supply chain, money is needed, but to finance operations there needs to be cost savings, especially in the private sector (Saidan et al., 2021). Efforts to improve the performance of the halal industry, supply chain management must respond quickly, effectively and efficiently to changes.

According to Maddeppungeng (2017) at least supply chain management needs to combine SCM such as materials, finance and information, increase competitiveness with price, cost and quality, as well as the performance of the halal industry in the form of internal, external and market governance. So, the supply chain in the halal industry can be developed in addition to halal-certified raw materials as well as financial elements as business development capital can be taken into account.

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Conclusion

The conclusion resulting from the explanation above is that halal supply chain management transactions or abbreviated as HSCMT is a logistics distribution activity from raw materials to the final product in the hands of consumers, all of these activities are in accordance with sharia values, especially halal and good. Halal industrial products, such as halal food, sharia finance, halal tourism, halal pashion, sharia media and tourism, cosmetics and other halal medicines can be supplied in a modern way following changes in innovative technology. The integration of HSCMT with technology in the Industry 4.0 era (Aziz et al., 2023a) is part of adaptation to conditions and situations that require competitive advantage in both resources, both manpower (HR), materials, methods, machines, and money. These five resources can support HSCMT activities so that local and global market needs can be met. However, it is necessary to pay attention to the logistical elements in the framework of a smooth supply chain, especially the government must provide transportation modes that guarantee the continuity of the supply chain without having to convolve, complicated and long bureaucracy (Aziz et al., 2023b).

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