

Halal Supply Chain Ecosystem in Malaysian context

Mohammad Abdullah Abu Sayed¹, Chowdhury, M Rezaul Karim^{2*}, Hafiz Muhammad Zia-Ul-Haq³, Md. Uzir Hossain Uzir³, Md. Nurul Islam Siddique⁴, Saharuddin Abdul Hamid²

¹Research Scholar, FCT Nova, Industrial Engineering, Portugal;

²Faculty of Maritime Studies, Universiti Malaysia Terengganu, Malaysia;

³Faculty of Business Economics and Social Development, Universiti Malaysia Terengganu, Malaysia;

⁴Faculty Of Ocean Engineering Technology & Informatics, Universiti Malaysia Terengganu, Malaysia;

*Corresponding author email: captchowdhury@sinbadmaritime.com

Abstract: Global demand for Halal food is growing and currently about a quarter of world food trade with a value of annual Halal food trade about 2 trillion USD by 2020. During last few decades researches on Halal food began with demand side of market economy showing customer need & satisfaction issues, gradually researchers turned to supply side of Halal food industry exploring Halal integrity issues which has revealed that transportation & transiting has higher risk than manufacturing while determining Halal integrity of Halal products. Halal supply chain eco system along with all stakeholders have emerged as new freight service industry which is preferred by customers due to its perceived cleaner-safer & hygienic services. In current COVID 19 pandemic context causing global GDP shrinkage and trade wars across countries will adversely impact this Halal supply chain industry indicating need for rethinking on efficiency, competitiveness and sustainability of this emerging industry. Halal supply chain services are eco-friendly, preferred by customer and produces higher gross social welfare, but those benefits come along with a higher production cost compared to ordinary supply chain services. Hence policy incentives besides other sustainability strategies would be necessary for growth considerations of Halal supply chain ecosystem. This, theory adaptation category conceptual paper endeavors to analyze Halal integrity and sustainability nexus of freight forwarding services in an emerging Halal supply chain ecosystem in Malaysian context.

Key words/ Phrases: Halal Integrity Assurance, Halal Industry Sustainability Dimensions, Critical zone in Halal Food Product Cycle

Introduction: Muslim consumers' demand for halal food, beverage, medicine and other consumable products has created room for halal manufacturing and halal freight services. Several conceptual papers of different types have helped evolution of halal manufacturing and halal logistic literature featuring an

emerging halal industry, with particular attention towards a Halal Supply Chain. Research revealed that Halal supply chain of food & beverage industry has significant effects on Halal Integrity Assurance (Mohamed, Abdul Rahim, and Ma'aram 2020).

In a conceptual topology paper (Ngah et al., 2013) through distinguishing, differentiating, dimensionalizing and categorizing halal transportation and transit services has contributed towards adopting Halal Supply Chain concepts. Another conceptual paper of model type titled "Conceptual Framework on Halal Food Supply Chain Integrity Enhancement" underwrote to build a conceptual model explaining how elements of Halal supply chain process lead to particular outcome for confirmation of Halal integrity (Zulfakar, Anuar & Talib, 2012).

By combining customer satisfaction issues with Halal integrity in an earlier conceptual paper of theory synthesis type, authors have contributed towards conceptualizing the idea of Halal transport industry theme (Bahruddin, Illyas & Desa, 2011).

Now here in this theory adaptation type conceptual paper, by using halal freight system as domain theory concept, and introducing few articulated sustainability variants as method theory concepts for adaptation of novel Halal Supply Chain Echo System (HSCES) as a sustainable industry concept.

Research Design Elements: Among the conceptual papers there are four most common types namely theory synthesis, theory adaptation, topology and model (Jaakkola, 2020). While explaining "Research Design" as a decision process, it was said that research design would include, how theories are linked? to achieve what goals, to resolve what questions by deploying which appropriate resources and methods (Flick, 2018, p. 102). It was observed that like empirical papers having data and analysis parameters as core of research design, conceptual papers also have a focal phenomenon or concept, and supplementary literature stream or theories to enhance primary concept by adding value and eliminating inconsistencies within it (Hirschheim, 2008). The focal concept is also known as "Domain theory" and the supplementary concept known as "Method theory". Making the chain of evidence visible and easy to grasp is important for any conceptual paper, where structure is most significant determinant to show how easy is to follow chain of argumentation in a given conceptual paper (Jaakkola, 2020). In theory adaptation paper by revisiting extant knowledge (domain theory) and by introducing alternative frames of reference (method theory) a novel perspective of an existing concept is proposed (MacInnis, 2011). Hence for the purpose of this article, we have identified Halal Integrated freight service as focal phenomenon and sustainability dimensions as method considerations to propose

a novel Halal Supply Chain Echo System as sustainable halal industry theme, and basic research design would include following elements: -

1. Halal integrated freight service as Research Phenomenon,
2. Sustainability dimensions as Method theory for variant consideration,
3. Construction of Novel concept for a sustainable halal industry theme.

Necessity of Halal Logistic within Halal Manufacturing Industry: The largest constituent of Halal industry is Halal food, which is no more a niche market comprising about a quarter of world food trade with current estimated value of 2 trillion USD annually (2020). Manufacturers have the responsibilities throughout the supply chain by coordinating the supply chain through third-party logistics service providers' services (Naumov and Kholeva 2017). Discovery of challenges and syntheses of themes for making freight transport sustainable are critical for sustainable society (Abbasi and Nilsson 2012). It is claimed that, besides Muslims now a days non-Muslims have started demanding for halal food due to the perception that halal foods are more clean, hygienic, hazard-free and non-toxic (Talib, Ali & Jamaludin, 2008; Belkhatir, Bala & Belkhatir 2009). In Halal food supply chain, the goal is not only to ensure customer satisfaction but also to retain Halal integrity throughout whole process of supply chain (Bahrudin, Ilyas & Desa, 2011). World food statistics prepared by Times Intelligence shows that Top ten Halal food consumer countries and top ten Halal food producing countries are not same, hence supply chain matters between Halal food producers and Halal food consumers. Jaafar et al (2011) argued that Halal integrity of a food product remains intact as long the product is in custody of producer. Expressed and implied commitments of buyers and sellers that defines expectations and behaviors of both parties are known as trust (Pullman & Wu, 2012). Studies in various countries showed that trust plays important role in influencing consumer purchasing behavior in Halal food industry in United Arab Emirates (2005), Belgium (Bonne & Verbeke 2008) and Canada (Aitelmaalem, Breland & Reynolds-Zayak, 2005). Hence for trustworthiness Halal food manufacturing industry must collaborate with Halal supply chain as an emerging industry, both for Halal integrity and customer satisfaction of Halal consumers. Following figure shows the unavoidable link of Halal Supply Chain in a Halal food cycle from Halal producer to halal consumers.

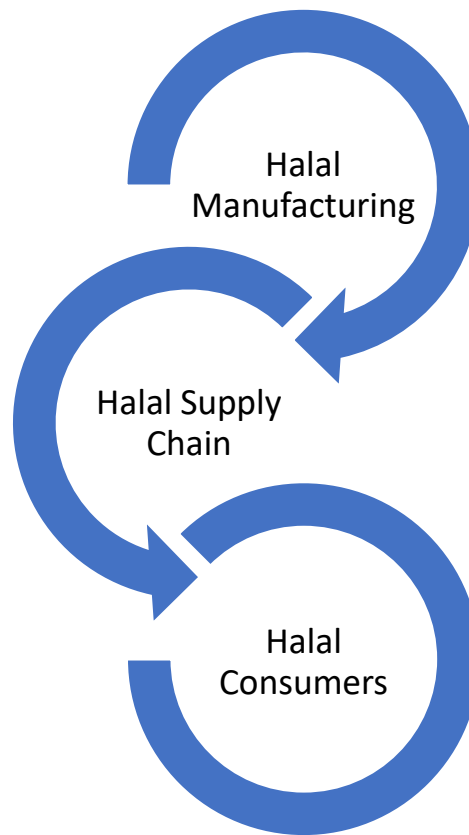


Figure 1: Halal Supply chain within Halal Food Cycle

Interaction of Participants within Freight Forwarding System: Freight forwarding functions cover the full range of operations and delivery services from producer until consumer (Shanova, Popova & Gorev, 2011). Supply chain integration has a direct impact on the following four main dimensions of halal

integrity: raw materials integrity; production integrity; service integrity; and information integrity (Ali et al., 2014). In order to understand the stakeholders of Halal Freight services, we need to understand first the participants in a general freight forwarding scenario. Following figure prepared based on, Analysis of the interaction of participants in freight forwarding system (Popovych, Shyriaieva, and Selivanova 2016), how a freight forwarding company is connected to all other participants within Freight industry.

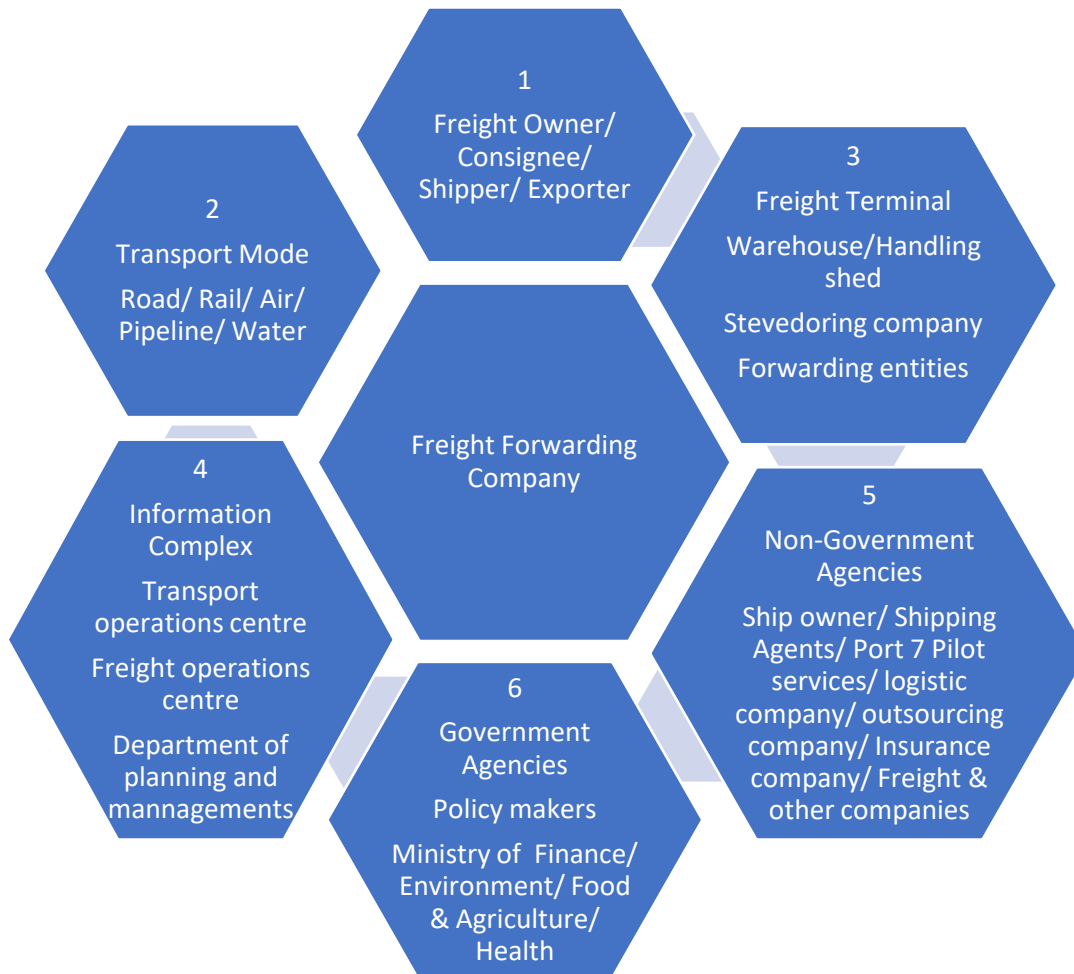


Figure 2: Positioning a freight forwarding company in Supply Chain System

Critical zone in Halal Food Product cycle: Adoption of Halal logistic is most significant strategy that influence the manufacturers' effort to safeguard halal integrity (Yunan, Ali, and Alam 2020). Consensus has been achieved in the segregation of halal supply chains in terms of designated halal transport, storage and halal compliant terminals, for Muslim (majority) countries, whereas in non-Muslim (majority) countries greater leniency is possible (Tieman et al., 2020). Elements of supply chain services could be classified as follows (Shyriaieva & Selivanova, 2014):

- 1) Chartering and Transportation services
- 2) Loading and Unloading of cargo
- 3) Warehousing and freight handling
- 4) Specialized arrangements and Equipment services
- 5) Registration, Documentation, Reception and Delivery of Goods

- 6) Logistic Information services
- 7) Custom services
- 8) Cargo Insurance
- 9) Payment and Financial services
- 10) Networks, Platforms, software & Apps services
- 11) Consulting, Outsourcing and other Forwarding services etc.

Lodhi (2009), Khan (2009) and Tieman (2011) agree that Halal integrity assurance is the key factor in building a trusted Halal food supply chain in current competitive and complex environment. Hence it is essential for us to view Halal freight forwarding in the context of Halal food product life cycle, for understanding “Grey areas” or “Critical zone” while building a Halal supply chain service maintaining Halal integrity and meeting customer expectation. Grossly when a Halal food product moves beyond the manufacturers’ yard and prior arrival at distributor’s jurisdiction during the periods of transport and transit remains in grey areas having higher risk of Halal integrity breach, need to be identified as critical zone for Halal integrity of Halal food product life cycle, Following figure depicts this in simple manner, where manufacturing and distribution are low risk Blue zones but in between transit period is high risk red zone for potential breach of Halal integrity:

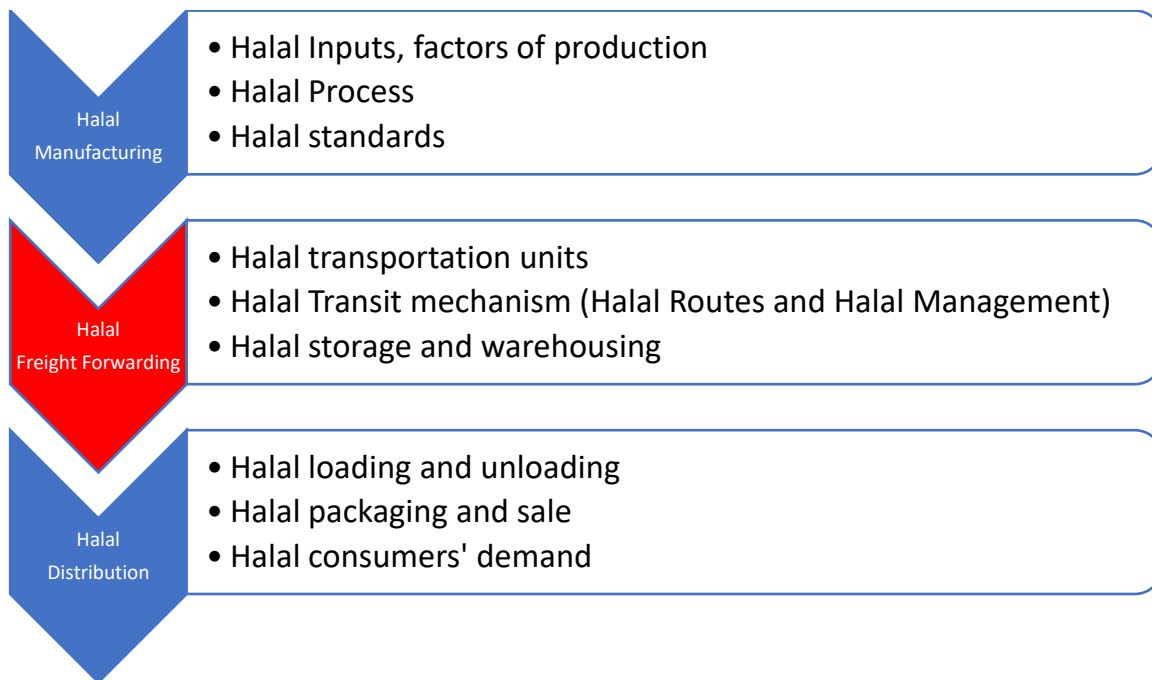


Figure 3: Critical zone in life cycle of a Halal food product for Halal integrity

Halal Integrity Framework in HSCE: Research shows an association between global ethics, environmental purchasing, sustainable packaging, moral responsibility, Halal supply chain management and Halal sustainable supply chain performance (Amer et.al., 2018). Research explained that full participation of all stakeholders or parties involved in the Halal supply chain is necessary in order to achieve Halal supply chain integrity (Melatu, Samsi, Tasnim & Ibrahim, 2011). Here the stakeholders are identified as both company, agent, logistic provider, employees, consultants, auditors, government authorities, NGOs, religious bodies, certification & monitoring bodies, associations and the Halal consumers. Halal certified products instill the sense of confidence and trust that purchased product comply with Sharia Law (Zulfakar, Anuar, and Talib 2014). According to Riaz (2004) and Abdul (2008), Halal logo indicates that the product meets Islamic dietary requirements and must be authorized and issued by a reputable Islamic organization to prevent any fraud, fraudulent, or misleading logo or certificate. Lack of Halal standards causing a slow Halal industry growth (Wan Hassan, 2007). Evans (2007) noted that Halal standards to be moderate instead of being too strict or too lenient to prevent fraudulent actions. Evans (2011) reiterated the need of one international Halal standard for global acceptability and smooth operations. A comprehensive traceability system could increase the Halal transparency and strengthen Halal integrity (Zulfakar et al., 2014), many researchers agrees that presently used technology may not be adequate to ensure reliability, traceability, security and real time monitoring of Halal integrity (Norman, Nasir & Azmi, 2008; Yang & Bao, 2011). Researchers also identified the need of dedicated assets, utensils and handling equipment for Halal integrity assurance (Khan, 2009; Lodhi, 2009; Talib, 2010). The creation of a dedicated team of workers to handle Halal commodities, according to Jaafar (2011), will help to safeguard the integrity of the Halal supply chain by reducing the risk of cross-contamination to a minimum and preventing unnecessary human mistake. According to Pullman & Wu (2012), trust is the expectations that, buyers and sellers would behave in accordance with express or implied commitments. As the business evolved, trust in the supply chain is now based on the Halal logo or Halal certification (Tieman, 2011). According to the findings of a study, the government plays a number of roles in the process of ensuring the integrity of the Halal food supply chain. These roles include planning, developing, and implementing, as well as regulating, promoting, and educating Halal industrial players and Halal consumers (Melatu, Tasnim & Ibrahim, 2011). Ismail (2011) noted that Department of Syariah Affairs from Ministry of Religious Affairs in Brunei is authorized to handle Halal matters in country, and is supported by Halal Food Control Division (HFCD). In Malaysia, Department of Islamic Development

Malaysia (JAKIM), a governing body from the support of multiple government agencies, is responsible for Halal certification matters in Malaysia. With sufficient backing from the government (Zulfakar et al., 2014). In order to overcome the issues and challenges, practitioners and academicians together with the policymakers must standardize all the requirements, such as the

acts, rules and regulations, and so on, as the efforts to make it successful (Selim, Zailani, and Aziz 2018). Following figure depicts the components of Halal supply chain eco system's stakeholders, operating components, process and policy framework etc. based on Zulfakar & Talib (2014) research on Halal integrity frameworks:

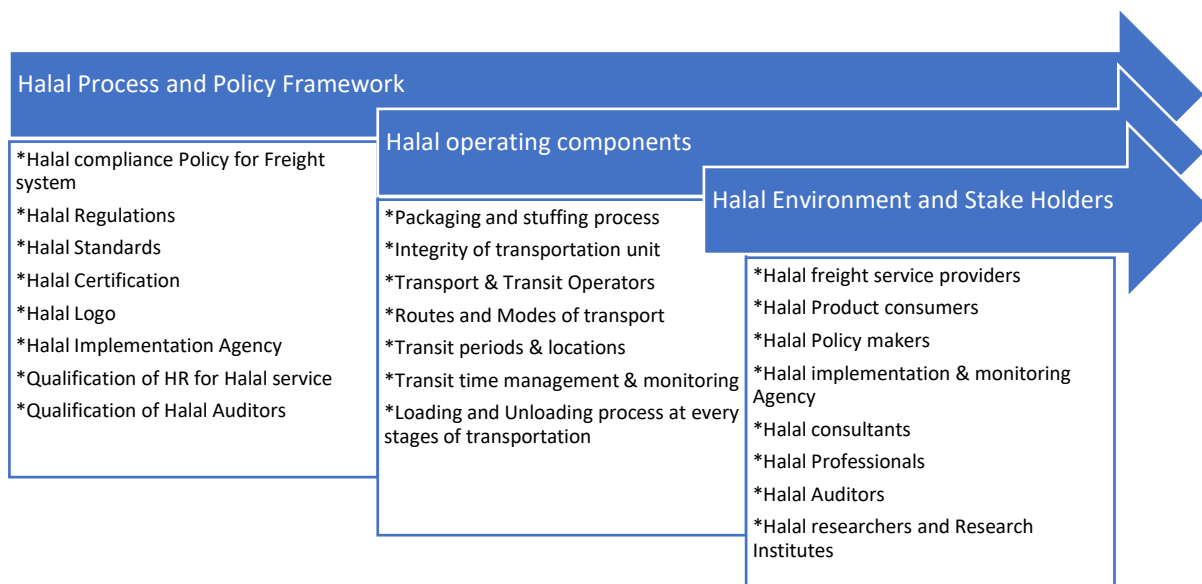


Figure 4: Halal supply chain integrity framework (Zulfakar & Talib, 2014)

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