INHAC 2012, Kuala Lumpur

International Halal Conference, Putra World Trade Centre Kuala Lumpur, Malaysia, 4-5 September 2012

Conceptual Framework on Halal Food Supply Chain Integrity Enhancement

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Abstract

Halal food consumers are now more aware and concern about the integrity of Halal status and also curious about all the activities involved along the supply chain whether the products that they purchased were truly Halal all the way. Even though the issue of Halal integrity have been widely highlighted in the existing Halal industry publications, the factors affecting the integrity of Halal food supply chain is yet to be discussed well in the current publications. This concept paper will discuss factors such as Halal certification, Halal standard, Halal traceability, Halal dedicated assets, trust among supply chain members, commitment of supply chain members; and role of government, in enhancing the integrity of Halal food supply chain in the current complex food trade scenario. It is hoped that this paper will create the proper awareness and better understanding of the importance of protecting the Halal integrity of the food products. Further empirical studies can be carried out to test the relationship between the factors and also uncover other factors that can help in enhancing the Halal integrity.

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Keywords: Halal Food Supply Chain; Halal Integrity; Conceptual Framework

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1. Background of the Study

Halal food products are the main and most recognised components of the Halal industry. It is no longer a niche market whereby it makes up nearly about 16% of the current world food trade. It is no longer viewed as solely religious requirements for the Muslim communities but the non-Muslims have also started to demand for this particular food group due to the perception that Halal foods are much more clean, hygiene and tasty (Abdul Talib, Mohd Ali & Jamaludin 2008; Belkhatir, Bala & Belkhatir 2009).

As the Halal food products are now being produced and originated from all parts of the world, the question of whether the products are actually Halal keep on playing on the mind of the Halal food consumers, especially amongst the Muslim communities. With the complexity of the current world food trade scenario, the Halal food consumers are skeptical on whether the food products are truly produced according to the Halal and Sharia law principles; or, can the food products remained as Halal when it has to go through various interfaces during the travel period?

Their concerns are magnified when most of these Halal food products are produced by non-Muslims countries rather than produced by Muslim countries. For example, it is a true and interesting fact that almost all Halal meat exporters in the world come from non-Muslims countries such as Argentina, Australia, Brazil, Canada, France and New Zealand (Wan Hassan & Awang 2009). Muslim communities around the world are well aware that Halal industry and Islamic matters in these countries are not under the direct jurisdiction of the federal and state government. Therefore, the authenticity and integrity of the Halal food products that came from these non-Muslims countries is questionable.

To cope with the growing demand of Halal food from all over the world, a comprehensive and well managed supply chain management approach need to be adopted to ensure the availability of the Halal food product.

Halal food supply chain involved the process of managing Halal food products from different points of suppliers to different points of buyers/consumers, which involved various different parties, who are located at different places, who may at the same time, involved with managing non-Halal food products, with the purpose of satisfying the needs and requirements of both (Halal and non-Halal) customers.

In Halal food supply chain, the main goal is not only to ensure that satisfaction of the customer is achieved, but also to ensure that the Halal status of the food product remains intact throughout the whole process of the supply chain (Bahrudin, Illyas & Desa 2011). The integrity of the Halal food product must be protected by all means and all necessary steps must be taken by all parties involved in the supply chain to avoid any cross contamination that will lead to product becoming non-Halal, or Haram. The food products must not only be Halal at the supply chain starting point but throughout the supply chain until it reaches its final destination.

The possibility of becoming non-Halal is greater when the food product needs to travel a greater distance whereby a lot of handling points will be involved. These handling points can be the critical control points of which the Halal status of the food products can be breached if the concept of Halal integrity is not fully understood by all parties involved in the supply chain especially those who are involved directly in the operational handling aspect. For example, a batch of Halal slaughtered meat produced in a stringent Halal certified slaughterhouse in Australia can be cross contaminated at any stage of the supply chain during its travel to the its customer location in the Middle East. Without proper understanding of Halal integrity, the workers receiving that particular batch of Halal meat at the port warehouse might accidentally or mistakenly store it inside a transit cold room together with a batch of non Halal slaughtered meat or pork. For some people understanding, it offers no harm or physical contamination if these meats are stored together side by side, but from the point of view of Halal consumer and the general principles of Sharia law, that batch of Halal meat is no longer fit for the consumption of Halal consumers as the integrity of Halal meat has been breached.
At present, there are limited numbers of academic publications discussing the area of Halal food supply chain and Halal integrity, despite an increase in academic publications in the knowledge area of the Halal industry for the past few years. Most of the publications in the current Halal industry focuses on consumer studies particularly in studying the purchasing behaviour of the Muslim consumers by using the Theory of Planned Behaviour and in studying the awareness of consumer towards Halal products (Bonne et al. 2007; Bonne & Verbeke 2008a, 2008b; Wan Omar, Muhammad & Omar 2008; Suddin, Geoffrey Harvey & Hanudin 2009; Golnaz et al. 2010; Alam & Sayuti 2011).

Therefore, it is important to create the proper awareness and better understanding among the parties involved in the Halal food supply chain on the importance of protecting the Halal integrity of the food products. Failure to address this will lead to dissatisfaction of the Halal food consumers and unnecessary wastage of non-consumable Halal food products. Thus the main objectives of this paper are to investigate factors in enhancing the integrity of the Halal food supply chain in the current complex food trade scenario and to provide a conceptual framework on this particular matter.

2. Halal integrity

2.1. Overview of Halal integrity

As mentioned earlier, food products including Halal food products now travelled greater distance and involved a lot of handling before it reaches its final point of consumption. This situation has created uncertainty regarding the authenticity of the Halal status and whether the food products are still remains Halal. Therefore, it is a big challenge for all the parties involved to ensure the integrity of the Halal product is intact throughout the whole supply chain.

Lodhi (2009), Khan (2009) and Tieman (2011) agree that Halal integrity assurance is the key factors in developing a well trusted Halal food supply chain in the current complex and competitive environment. All of these authors also agree that to protect the Halal integrity, complete understanding of the whole Halal food supply chain is required. Variations in the definitions of Halal and the unavailability of single, worldwide Halal standard have made the process of understanding of the Halal food supply chain more complicated. Until then, all the parties involved must be able to use every possible action to protect the integrity of the Halal supply chain.

Questions were raised about who should take the responsibilities of ensuring the protection of Halal integrity in the supply chain. Should it be the responsibilities of the producer? Or should it be the responsibilities of the logistics service providers? The straight and solid answer for these questions is all the parties involved in the Halal food supply chain should bear the responsibilities. Joint actions must be taken in order to ensure the integrity of the Halal status is protected at the highest possible level. Leaving the huge responsibilities to single party alone is enormous and almost impossible.

A single party, such as the food producer, can only take maximum actions to ensure product remain Halal, such as preparing and producing the Halal food according to the Halal standard, while the food product is still within their possession. However, once the food products have left the company's manufacturing plant, it is not possible for the food producer alone to guarantee that the food products can still remain Halal at the consumption point as it is before, when it first left the producer manufacturing plant.

Jaafar et al (2011) has similar opinion on this matter. Their study agrees that the Halal integrity of a particular food product is intact as long as the product is in producer custody. However, once the product moves along the supply chain, the integrity of that product will be the only intact if the next parties in charge have similar understanding and operational practice of handling Halal product. All of the efforts taken by the previous party in safeguarding the Halal integrity status will crumble and thus increasing the possibility of the cross contamination.
This is further supported by the study prepared by Melatu Samsi, Tasnim & Ibrahim (2011). The study stated that full participation of all parties or stakeholders in the Halal supply chain is required in order to achieve the supply chain integrity. The study not only have identified the parties involved directly in the transaction such as the Halal food producers, its suppliers, employees, and customers as the ones who should bear the Halal integrity responsibilities but also have included those indirectly involved such trade associations, NGO and government bodies should have the same role to ensure the product remain Halal from the beginning to end of the supply chain.

2.2. Factors enhancing Halal food supply chain integrity

This section of the paper will look further into the factors that are critical towards enhancing the integrity of the Halal food supply chain. The factors that will be included in this discussion include Halal certification, Halal standard, Halal traceability, Halal dedicated assets, trust among supply chain members, commitment of supply chain members; and the role of government.

2.2.1. Halal certification

Halal-certified product is the main reason behind Muslim buyers purchase Halal food products for everyday consumption. This is because the Halal certified products instil the sense of confidence and trust that the food products that they purchased comply with Sharia Law.

Furthermore, according to Abdul (2008) and Riaz (2004), Halal certification such as Halal logo or certificate of compliance, issued by reputable and licensed agency, shows that the product have sufficiently met Islamic dietary. In addition, Halal certification is also applied for dining outlet, restaurants or cafes, as Muslims will look for Halal certified places to eat. It shows that Halal certification does not only apply to buying groceries and meats but it applies to food service provider as well.

The Muslims will instantly be reassured without any doubt that food product have been prepared in line with Sharia law when the Halal logo or certificates is labelled on a product or displayed at any eating premises. However, Riaz (2004) mentioned that Halal logo or certificates must be authorized and issued by a trustworthy Islamic organization in order to prevent from any fraud, fake and misleading logo or certificates.

2.2.2. Halal standards

Although there is rising demand for Halal food products globally, Halal industry is still lacking in standardized Halal standards, thus causing a slow industrial growth as mentioned by Wan Hassan (2007). Every Muslim countries have their own standards and guidelines that every Halal player need to comply with. Furthermore, some Muslim and non-Muslim countries have various Halal authorities or agencies and this resulted in multiple Halal standards that would cause questionable Halal certifications.

Evans (2011) stated that due to multiple authorities and different Islamic practices, it is difficult for the Halal industry players to have a standard global regulation that can be practiced worldwide. Another issue that will hinder an internationally recognized Halal regulation, according to Abu Omar (2008), is that some Halal players have been previously operating on their country’s own standards thus to have a common recognized Halal standard will be difficult.

Evans (2007) claimed that market need, consumer demand and industry scenario must be re-engineered and realigned in order to achieve standardized Halal certification. He also stated that procedures for Halal certification must not be too strict or too lenient. On one hand, too stringent process will result in Halal industry players to divert away and avoid re-application, thus will raise new issues of
false Halal certification and suspicious Halal auditing. On the other hand, too lenient Halal certification process will lead to the possibility of abusing the procedures and claiming of non-Halal product to be Halal.

2.2.3. Halal Traceability

As the awareness and education of Halal food consumers grew together with the demand of Halal food products, Halal food consumers, like other general food consumers, started to demand more information regarding products that they wanted to purchase. They are not only interested in the availability and the food products choice, but now they wanted to know information such as the activities that happen along the supply chain, assurance on food safety and quality, animal welfare practices and good environmental management (Department of Agriculture 2000; Schulze, Spiller & Theuvsen 2006).

In Halal food industry perspective, traceability can be used to trace the Halal status of a particular food product at every stage of the supply chain. It includes all the information regarding the activities that the Halal food products have went through including activities involved before the production of that particular food product such as origin of the ingredients/animals. By having a traceability system, critical Halal control points can be fully monitored and if the product is suspected to be cross contaminated with non-Halal elements, detailed information can be retrieved so that the cross contamination point can be identified and further action can be taken.

A comprehensive and reliable traceability system in the Halal food supply chain can increase the Halal transparency and strengthen the Halal integrity. At the moment, various publications (Norman, Nasir & Azmi 2008; Norman et al. 2009; Mohd Albakir & Mohd-Mokhtar 2011; Yang & Bao 2011) agree that almost all existing tools to trace the Halal status are unreliable, lack of security, not real time basis and take longer time to race. Existing technology such as Radio Frequency Identification Device (RFID), barcode and Internet can be used and manipulated to develop a reliable tool for Halal traceability.

2.2.4. Halal dedicated assets

The ideal option to protect Halal integrity throughout the supply chain especially during the distribution process is prevent mixing the Halal with the non Halal products. In other words, total physical segregation of which the Halal products will be stored in a different storage space whether in the warehouse, transit place or in the transportation units.

Khan (2009), Lodhi (2009) and Talib (2010) state that adequate and appropriate equipment to handle, store and transport Halal food products will help protect the integrity of the food products as the food products are segregated from other potential non-Halal elements that might cross contaminated it.

In term of transportation activities, the possibility of cross contamination with other non-Halal products can be reduced a minimum level or almost to zero in the situation whereby the Halal food producers have their own transportation fleet and made the delivery themselves to their next buyers. This situation is rarely can be seen in the current supply chain, whereby almost all food producers have outsourced their transportation activities to the third party logistics (3PL) service providers due to cheaper operational cost and the needs to deliver the Halal food products to all parts of the world. Therefore, the responsibilities now fall on to the 3PL service providers to ensure that Halal food products are delivered in a dedicated transportation unit solely to cater the Halal food products. The same scenario applies to the warehousing and packaging activities. For example, in Malaysia, several 3PL service providers, notably Kontena Nasional, MISC Integrated Logistics and Century Logisitcs, have their own dedicated assets to satisfy the demand distribution its clients in the Halal food industry.

However, this practise might not be economically viable if the 3PL service providers only handle minimum numbers of Halal food products consignments in their business. The need for investing in the
new dedicated assets such as transportation fleet and warehouse will incur additional cost which might not be justified in short time period. This scenario might be more prevalent in the non-Muslim countries context. The delivery frequency and the volume of Halal products in these countries might be a small proportion compare to the non-Halal products that are being handled by the 3PL service providers.

Halal dedicated assets can be further extended to include the human workforce which handles the Halal food supply chain on the day to day basis. Jaafar (2011) believes that by creating dedicated team of workers to handle the Halal food products will reduce the possibility of cross contamination to a very minimal level, avoid unnecessary human mistake and thus help to protect the integrity of the Halal supply chain. This dedicated team of workers can be given exclusive training on ways to handle the Halal food products which will cover the different aspects of handling, storage and managing the products.

2.2.5. Trust

According to Pullman & Wu (2012), trust can be defined as the expectation that buyers and sellers will behave in accordance with express or implied commitments. Previous studies have showed that trust play a huge role in influencing consumer purchasing behaviour in the Halal food industry in Canada (Aitelmaalem, Breland & Reynolds-Zayak 2005), Belgium (Bonne & Verbeke 2008) and United Arab Emirates (2005).

Traditional, trust in the Halal food supply chain can be as simple as pure trust (Tieman 2011). Halal consumers willing to purchase Halal food from a Halal supplier or shop based on the trust that Muslims have the religious obligation to sell only Halal products in their daily business activities. There were no need of displaying Halal logo or certificate during that time or even that situation still exist in some of the places.

As the business evolved, trust in the supply chain is now based on the Halal logo or Halal certification (Tieman 2011). In a multicultural society, whereby non-Muslims are involved in selling food products to the large communities which includes the Muslims consumers, and also in the current food trade scenario, whereby majority of the raw materials or ingredients are sourced from all over the world, the best way to inform the consumers that the particular food products are produced according to the Halal guideline and Sharia law principles is to display the Halal logo or certification on the product packaging or at the retail premises.

However, consumers are still sceptical whether the Halal logo or certificates displayed are really genuine. Several cases in Malaysia whereby food traders have been caught displaying fake certificate or self-made Halal logo have tarnished the reputation of Halal industry. These unethical practises have shaken the trust of the Halal consumers.

Therefore, installing trust among all parties involved in the management of Halal food products movement is essential element towards enhancing the integrity status of the Halal food supply chain. Individual firm can have a comprehensive and strict Halal quality assurance system practised in their production department or can have dedicated vehicles to deliver the Halal food products, but all of these efforts will become insignificant if other parties dealing directly with them in the supply chain did not have the trust and confidence that the firm can ensure that the food products are really Halal.

2.2.6. Commitment

Trust and commitment are interrelated. The higher the trust, the higher the willingness of the parties involved to commit for any specific matter, vice versa (Ik-Whan & Taewon 2005). In order to established and strengthen the trust between parties in the supply chain, certain level of commitment must also be shown by the respective parties. According to Lu, Trienekeks & Omta (2006), the level of trust and commitment of the supply chain partners can be visibility seen when both firms are willing to increase their investment on the asset specificity to serve the special needs of their partners.
In the context of Halal food supply chain, commitments such as willingness to provide dedicated assets to cater the Halal clients requests, willingness to apply Halal certification for raw materials/ingredients required by the buyers, and willingness to send the workers to Halal food handling-related training are among the measures that can help enhance the integrity of the Halal food supply chain. By displaying high level of commitment, all parties in the Halal food supply chain can play shared roles together in protecting and ensuring the Halal integrity will be at the highest level.

2.2.7. Role of Government

The government’s role in ensuring Halal food supply chain integrity is very significant. A research done by Melatu Samsi, Tasnim and Ibrahim (2011) identified that government roles in ensuring Halal food supply chain integrity include planning, developing, implementing, regulating, promoting and educating Halal industrial players and Halal consumers. Furthermore, the government’s part covers setting up agencies and monitoring bodies to authorized and regulate any aspects that relate to halal certification, auditing and guidelines. Golan et al. (2004) claims that in order to protect the consumers from unsafe and contaminated foods, halal food traceability must be administered by specific government’s guidelines.

In addition, the role of government should include establishing agencies, collaboration among public agencies and training professional auditors to ensure trustworthy halal food supply chain integrity. For instance, according to Ismail (2011), Department of Syariah Affairs from Ministry of Religious Affairs in Brunei is authorized to handle Halal matters in the country, and is supported by Halal Food Control Division (HFDC). 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.

Realising the potential of the industry and strengthening its position of Halal role model in the Muslim nations, the government of Malaysia have established Halal Industry Development Corporation (HDC) in September 2006 to help promote and develop the Halal industry. This body will help to coordinate and facilitate the Halal activities between the government, businesses and the consumers, and also take necessary steps to ensure the integrity of the Halal industry is well protected. As the Halal industry encompasses various sectors along the value and supply chain, the move to establish such an organization is a bold and commended move to ensure the needs of all the parties involved in the Halal industry is fully understood from the nation and international perspective.

With sufficient involvement from the government, illegal and unethical business practices such as falsifying Halal certificate and selling non-Halal as Halal products can be minimised and controlled. Proper regulation and legislation can be established and enforced so that guilty party can be prosecuted accordingly such as the establishment of Halal Act recently in Malaysia and similar act in some of the states in the United States. This move will help reduce the confusion and increase the confidence level of the parties, especially the consumers of Halal products.

3. Conclusion

Halal integrity is the foundation of the Halal food industry. Protective and preventive measures must be taken to ensure that the Halal food products still remain Halal even though it have travelled greater distance and undergone various handling activities within the supply chain. All parties in the supply chain, downstream and upstream, must take individual and joint responsibilities to protect the Halal food products from being cross contaminated, whether intentionally or unintentionally. It is impossible for any single party to oversee these huge responsibilities. As the demand for Halal food products is expected to grow even bigger in the near future, factors such as Halal certification, Halal standard, Halal traceability,
Halal dedicated assets, trust and commitments between supply chain members, must be given serious attention in order to ensure the needs and well-being of the Halal food consumers can be satisfied and well protected. This study has discussed and developed a preliminary conceptual framework of factors enhancing the integrity of Halal food supply chain. It is hope that this conceptual framework will be beneficial to other researchers in future studies in the Halal industry and Halal food supply chain body of knowledge. Further empirical testing can be carried out in future research to test the relationship between factors that have been stated in this conceptual framework for better understanding.

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