

## **Establishing The Principles In Halal Logistics**

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### **ABSTRACT**

This research paper aims to establish the principles of *halal* logistics. This exploratory research paper is based on a large discussion group held in Malaysia to define the scope of *halal* logistics, its principles and foundation for Muslim and non-Muslim countries. *Halal* logistics covers warehousing, transportation and terminal operations. The establishment of these principles serves as a guide for the creation of a global *halal* logistics system; minimising hardship for the *halal* industry; define cross-contamination between *halal* and *haram* and how to avoid it; create an evolution of a complete *halal* value chain and supply chain; and benchmark with existing standards and best practices. For Muslim countries, *halal* logistics is based on avoiding direct contact with *haram*, addressing the risk of contamination, and perception of the Muslim consumer. For non-Muslim countries, *halal* logistics is only based on avoiding direct contact with *haram* and addressing the risk of contamination. Since this paper is an exploratory study, it provides some insights into the minimum and preferred level of *halal* logistics in Muslim and non-Muslim countries. However, quantitative research is needed to confirm this difference in consumer perception between Muslim and non-Muslim countries.

### **Keywords**

*Halal Logistics, Halal Supply Chain Management, Halal Food Supply Chains, Halal*

## **1. INTRODUCTION**

Muslims want assurance that the food they consume is a true manifestation of Islamic principles, plus they should be *toyyib*, meaning wholesome and good (World Halal Forum, 2009; Abdul *et al.*, 2009). Islam teaches Muslims to consume *halal*, the prohibition of *haram* and avoid doubtful things (Al-Qaradawi, 2007). The vulnerability of *halal* food supply chains (Bonne & Verbeke, 2008; Zailani *et al.* 2010); the large size and growth of the *halal* market (Alam & Sayuti, 2011; Solsis, 2010; Bonne *et al.*, 2007); and more stringent requirements in *halal* through regulations (IHI Alliance, 2010; Department of Standards Malaysia, 2010a, 2010b and 2010c) force brand owners to extend *halal* towards the point of consumer purchase. Hence, the logistics of *halal* food is an important discipline to address.

Integrity of *halal* food supply chains is becoming an increasing concern (Zailani *et al.*, 2010; Lam & Alhashmi, 2008). There are a number of reasons why the *halal* industry is increasingly occupied with the integrity of *halal* food chains. First, *halal* integrity issues are more likely to occur than before, because of increasing complexity of supply chains (Lam & Alhashimi, 2008) and focus on cost reduction of the logistics industry (Wilson and Liu, 2010). Second, the complexity of today's supply chain is making integrity issues harder to detect (Zakaria, 2008; Shafie & Othman, 2004; Talib *et al.*, 2008; Abdul *et al.*, 2009). Third, the consequences of *halal* integrity issues in the supply chain have arguably become more costly than before for brand owners and retail chains to repair (Waarden & Dalen, 2010; Zakaria & Abdul-Talib, 2010; New Straits Times, 2005).

*Halal* is a *Quranic* term that means permitted, allowed, lawful or legal. Its opposite is *haram* (forbidden, unlawful or illegal) (Department of Islamic Development Malaysia, 2005; Muhammad *et al.*, 2009; Rosly, 2010). This covers aspects such as behaviour, speech, dress, conduct, manner, and dietary laws. In non-Arabic-speaking countries, the term is most commonly used in the narrower context of just Muslim dietary laws, especially where meat and poultry are concerned. This dichotomy of usage is similar to the Hebrew term "*kosher*". Important principles pertaining to *halal* and *haram* are (Al-Qaradawi, 2007; Hussaini, 1993): the basic fundamental is the permissibility of things; to make lawful and to prohibit is the right of Allah alone; prohibiting the *halal* and permitting the *haram* is against the fundamentals and general principles of the faith; the prohibition of things is due to their impurity and harmfulness; what is *halal* is sufficient, while what is *haram* is superfluous; whatever is leading to *haram* is in itself *haram*; falsely representing the *haram* as *halal* is prohibited; good intentions do not make the *haram* acceptable; doubtful things are to be avoided; the *haram* is prohibited to everyone alike, regardless of the school of thought; and necessity dictates exceptions. *Halal* in relation to food is specified by the *Quran* and the *Sunnah* (Hussaini, 1993; Mohamad, 2005).

*Halal* has clear credence quality characteristics (Andersen, 1994; Bonne & Verbeke, 2008). Credence quality has these characteristics that are not visible and verifiable until they are revealed by experts or other professional services (Cho & Hooker, 2002; Brunso *et al.*, 2002; Lazarova, 2010). This is categorised by Grunert *et al.* (1996) as process-oriented quality. Credence characteristics are to a great extent based on credibility and trust (Lazarova, 2010). With credence goods, there is a need for the buyer to combine the quality claims of the seller with information about the credibility of these claims (Andersen, 1994; Pullman & Dillard, 2010). Quality labelling could be one way of ensuring that the consumer can make a better informed decision about the *halal* status of the product (Juhl *et al.*, 2000). However, the reliability of the quality label and their effectiveness in the consumer decision strongly depend on the type of external audits and their implementation (Jahn *et al.*, 2005). However, there is an industry wide concern on the abuse of *halal* logos and certificates in both Muslim and non-Muslim countries (Shafie & Othman, 2004; Zakaria, 2008; Talib *et al.*, 2008; Zailani *et al.*, 2010; and Waarden & Dalen, 2010).

Although from a *Quranic* point of view the *halal* is clear and the *haram* is clear (Al-Qaradawi, 2007), between the two there are doubtful matters concerning which people do not know whether they are *halal* or *haram* (which should be avoided). This makes *halal* and *haram* complex to define, as *halal* and *haram* are also based on the interpretations of the various Islamic schools of thought, local *fatwas* (religious rulings) and local customs. Second, the heterogeneity of Muslim populations in non-Muslim but also in some Muslim countries, make it difficult to generalize on the *halal* and *haram* matter. Third, it can be argued that *halal* goes through an evolution, from a system based on trust, a system based on an independent auditing and certification of the product, a system where the entire supply chain is being certified, to an entire *halal* value chain (Tieman, 2011). As *halal* is extending throughout the supply chain, the logistics of *halal* products is being questioned by the food industry as well as the logistics industry itself, leading to initiatives to certify logistics operations according to *halal* standards (Abdul *et al.*, 2009; Muhammad *et al.*, 2009; Othman *et al.*, 2009). *Halal* logistics is therefore a new area in supply chain management for which academic research is needed. Innovation in *halal* such as the introduction of *halal* logistics is possible, as long it does not contradict with *shariah* (Islamic law) (Laldin, 2006; Zakaria, 2008; Al-Salem, 2009). Tieman (2011) argues that the foundation of *halal* supply chain management is determined by direct contact with *haram*, risk of contamination and perception of the Muslim consumer. In his model, risk is based on the product characteristics, whereas perception is based on the market requirements, such as Islamic school of thought, local *fatwas* (religious rulings) and local customs. However, how does this apply to the logistics for both Muslim and non-Muslim countries? This research paper presents the results of a large discussion group on the application of *halal* in logistics.

## 2. METHODOLOGY

*Halal* logistics is a new phenomenon, for which the focus group is a common tool used (Ruyter, 1996; Hines, 2000; Stokes & Bergin, 2006; Sekaran, 2007). The focus group has been structured to allow open, in-depth discussions with a group of selected individuals led by the researcher, to explore the application of *halal* in logistics (Walden, 2006). According to the categorisation of Larson *et al.* (2004), a focus group of 33 participants is called a large discussion group, which is an effective instrument to obtain consensus.

The following four steps have been followed (McClelland, 1994; Walden 2006):

### i. Planning

Under the aegis of IHI Alliance, a large discussion group has been coordinated with the incentive to assess and design a *halal* supply chain model (Wall, 2001; Carlock & Perry, 2008; Chambers & Munoz, 2009). The objective of the large discussion group is to build consensus (Larson *et al.*, 2004) on the: 1) scope of *halal* logistics; 2) principles in *halal* logistics; and 3) foundation of *halal* logistics for Muslim and non-Muslim countries.

### ii. Recruiting the participants

IHI Alliance invited based on purposeful selection (Maxwell, 2005) a variety of participants, consisting of leading *shariah* and *halal* experts from Malaysian universities, *halal* standard experts from the Malaysian Government, *halal* experts from the industry (manufacturers, retailers and logistics service providers), and logistics service providers. For a full list of participants please refer to the acknowledgement.

#### iii. Conducting the discussion sessions

The large discussion group session, held on 27 August 2008 in Kuala Lumpur (Malaysia), took one full day. The large discussion group started with a presentation on the topic of *halal* logistics and its importance to familiarise the participants with the topic of *halal* logistics and supply chain management and its importance, to familiarise the participants with this new topic. With the group, 33 persons from the industry, *halal* and *shariah* experts and Government, the morning session focused on achieving consensus on the scope of *halal* logistics and the principles in *halal* logistics. In the afternoon session there was a discussion on five key issues: 1) how to define cross contamination; 2) *halal* should be physically segregated from what; 3) how to segregate; 4) do we have to classify warehouses; 5) as perception is so important, how does the industrial consumer perceive the *halal* warehouse. Finally, a discussion was held on tracking and tracing in *halal* logistics; covering the topics of: 1) the width and depth of tracking & tracing; and 2) recommended technology for tracking & tracing.

#### iv. Analysing and reporting

The large discussion group and consecutive focus group sessions have been voice recorded and transcribed (Kitzinger, 1995; Grudens-Schuck *et al.*, 2004). In line with de Ruyter (1996), Walden (2006) and Chambers and Munoz (2009), ideas have been classified in categories in order to discover patterns or also called themes or perspectives (Grudens-Schuck *et al.*, 2004).

The validity, correctness or credibility of the large discussion group consists of strategies to identify and rule out the threats that you might be wrong (Maxwell, 2005). Prince & Davies (2001) have identified moderator bias as a serious concern in conducting focus groups that can involve the content, the process or participation and the interpretation of the research results. According to Grudens-Schuck *et al.* (2004), the questions have been arranged from general to specific to invite openness and avoid bias. Second, as argued by Prince & Davies (2001), the moderator (the researcher) should be well versed in the topic of *halal* logistics, which has been the case through his experience in Malaysia in *halal* projects as well as his contribution as writer in the *Halal Journal* (Malaysia). As the moderator has spent more than seven years in Malaysia, he is also aware of the Malaysian culture. Wall (2001) argues that the representativeness of the participants is an issue in focus groups. This issue has been anticipated by the researchers in having IHI Alliance, with a global network of *halal* experts, sending out and follow-up the invitation for the large discussion group.

### 3. RESULTS

The large discussion group was conducted to establish consensus on the scope of *halal* logistics, the principles in *halal* logistics and the foundation of *halal* logistics for Muslim and non-Muslim countries. For a proper scoping, both the width and depth of *halal* logistics has been agreed upon. In terms of width it has been agreed upon to cover warehousing, transportation and terminal operations. In terms of depth, the following topics should be addressed in *halal* logistics, namely: definitions, process requirements, procedures, tracking & tracing, cleansing (as corrective measure), packaging and labelling, organisation, and certification. *Halal* logistics has been defined as the process of managing the procurement, movement, storage and handling of materials, parts, livestock, semi-finished or finished inventory both food and non-food, and related information and documentation flows through the organisation and the supply chain in compliance with the general principles of *shariah*.

During the large discussion group five principles of *halal* logistics have been formulated and agreed upon. First, the intention to create a global *halal* logistics system, regardless of the Islamic school of thought, that is *shariah* compliant and sets the best practice for ensuring *halal* integrity throughout the supply chain. The establishment of a *halal* logistics system is an intention to protect the *halal* integrity for the (Muslim) end-consumer. This is by itself already an important measurement for the validity of this action (Laldin, 2006). Second, to minimise hardship for the *halal* industry, which is in line with Al-Qaradawi (2007) and Laldin (2006). During the large discussion group it was mentioned and stressed by multiple participants, that a *halal* logistics system should be fair and practical. Also a *halal* logistics system should not significantly increase the costs of *halal* products, as this would be an important determination for the global acceptance of a *halal* logistics system. One of the participants also mentioned that safety should come first, which for example applies to the loading of vessels and aircrafts. Third, to define contamination between *halal* and *haram* and how to avoid it. A little bit *haram* makes a product non-*halal* (in case of cross contamination) and in case of doubt, the product should be avoided. This is in line with the saying of: “The *halal* is clear and the *haram* is clear. Between the two there are doubtful matters concerning which people do not know whether they are *halal* or *haram*. One who avoids them in order to safeguard his religion and his honor is safe, while if someone engages in a part of the he may be doing something *haram* [...]” (Al-Qaradawi, 2007). The matter of doubt is therefore an important factor to address in logistics. Fourth, to create an evolution of a complete *halal* value chain and supply chain. The integrity of a *halal* product for the consumer (and therefore the *halal* supply chains) is a function of the integrity of the various links in a supply chain (Vorst, 2006). As under conventional *halal* standards only the slaughtering and production is covered, the integrity of the entire *halal* supply chain has not been controlled. Also recognizing the challenge of introducing *halal* logistics in non-Muslim countries, where the *halal* (certified) volumes are much smaller than in Muslim countries, *halal* logistics will need to go through an evolution. It was therefore suggested to

establish a minimum standard (applicable to Non-Muslim countries) and a preferred standard (applicable to Muslim countries and to Non-Muslim countries over time). Fifth, to benchmark with existing *halal* standards, best practices and international standards. At the time of the large discussion group, there were a few existing *halal* standards, such as MS 1500:2004 (Department of Standards Malaysia, 2004), *halal* industry standard from IFANCA (Chaundry *et al.*, 2000) and various other *halal* standards from *halal* certification companies (such as MUIS (2005) and Halalkeur (2003)) and private initiatives (such as the *Halal* Logistics Handbook from the Port of Rotterdam (2005)). There are also other standards that mention *halal*, such as Codex Alimentarius (1997), and food quality & safety standards that cover especially the *toyyib* aspect, such as HACCP, GMP, etc. Existing food quality & safety standards adopted by the industry ensure mainly *toyyib* in the supply chain. As the *halal* aspect has not been covered, this should therefore be addressed by a *halal* logistics system. But certain requirements mentioned in *toyyib* standards, such as traceability, might also need to be detailed in a *halal* logistics system.

In line with Tieman (2011), the large discussion group confirmed three components as the foundation of *halal* logistics, namely: direct contact with *haram*, risk of contamination and perception of the Muslim consumer. Recognising that a supply chain perspective to *halal* is new, therefore it was decided to create a minimum level of compliance, which is addressing direct contact with *haram* as well as the risk of contamination, and a preferred level, which is addressing also perception. The minimum level should be irrespective of the different Islamic schools of thought but not contradicting *shariah*, whereas the preferred level should also address the sensitivity of Muslims: the particular Islamic school of thought, local *fatwas* (religious rulings) and local customs. If possible for Muslim countries, it should be envisioned to meet the preferred level of a *halal* logistics system, whereas for non-Muslim countries a minimum level could be more practical or feasible. Perhaps in time certain non-Muslim countries could achieve the preferred level. For exports the standard applied should match at least the requirements by the importing country.

It has been recognised that *halal* requires a supply chain approach and logistics is critical in ensuring the *halal* integrity for the Muslim consumer. *Halal* logistics requires also a process approach, where processes and procedures have to be clearly documented as proof of a *halal* logistics system. Although a *halal* logistics system should prevent contamination to occur, also corrective measures will need to be defined to limit the risk of contamination of other *halal* cargo as well as to “repair” the perception/sensitivity of the Muslim consumer. This consumer perception should be measured. It has also been agreed that there are different levels of *najis* (filth), which might be more practical for the industry to consider for the level of segregation. For this the MS 1500:2004 would be used as a benchmark. As mentioned by various participants, critical control points in a *halal* warehouse are: (un)loading, labelling/coding, zoning of storage areas, packaging, and consolidation of cargo on pallets/load carriers. Consensus was formed that product characteristics determine the risk of contamination, whereas market requirements determine the sensitivity aspect in the level of segregation. It was agreed by all

participants that the *halal* integrity is confined to a container or transport vehicle. Therefore, it does not matter what is in the container/transport vehicle on top, below, or next to a *halal* container/transport vehicle.

In terms of tracking and tracing, it has been agreed by all to cover only tier 1 customers and suppliers (Lambert *et al.*, 1998; Lammers *et al.*, 2009). This is in line with the EU regulations for food supply chains. The technology for tracking and tracing has not been specified (could even be manual), as it should be open, and not create any unnecessary thresholds for small players without advanced information and communication technology to comply with.

#### 4. CONCLUSION

*Halal* logistics is a new phenomenon, driven by the *halal* industry to extend *halal* from source to the point of consumer purchase, to ensure the integrity of the *halal* product for the end-consumer and export markets. The large discussion group shows that the conventional logistics handling of *halal* products does not provide sufficient assurance for the Muslim consumer in both Muslim and non-Muslim countries.

Key disciplines in *halal* logistics are warehousing, transportation and terminal operations. During the large discussion group the following principles of *halal* logistics were agreed upon: intention to create a global *halal* logistics system; minimise hardship for the *halal* industry; define cross contamination between *halal* and haram and how to avoid it; create an evolution of a complete *halal* value chain and supply chain; benchmark with existing *halal* standards, best practices and international standards. The large discussion group defined that there are two different levels in *halal* logistics, one for Muslim countries (addressing direct contact with *haram*, risk of contamination and perception of the Muslim consumer) and one for non-Muslim countries (addressing only direct contact with *haram* and risk of contamination).

This research shows that the perception of the Muslim consumer (based on the Islamic school of thought, local *fatwas* and local customs) is important to address in a *halal* supply chain, and therefore require more quantitative research to measure and confirm the (role of) consumer perception in Muslim and non-Muslim countries.

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