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 & Alhashmi, 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 Qur'anic 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 form 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 address 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 though, 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 najs (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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