

## 1. Introduction

Halal is the Arabic word meaning “permissible” according to Shariah law in the teachings of Islam [1]. Foods produced in accordance with this teaching are defined as “halal foods.” Haram means “forbidden” according to Shariah law. A certification system, which is named “halal certification,” has been established to ensure that foods are produced according to halal. Similar to general foods, halal foods have a series of supply processes, from food production to processing, storage, distribution, sales and consumption. However, all stages in the food supply chain, through raw materials, processing, packaging, and distribution, should be certified by regulations based on Islamic teaching.

The halal certification system has the concept of “from farm to fork” as shown in Fig. 1. A company gains certification by satisfying halal food regulations from a halal certification organization. Currently, there are nine certification organizations in Japan [2]. The six organizations have mutual certification from the Malaysian Government’s Certification Organization (JAKIM). The three organizations have not received mutual certification from JAKIM; therefore, they have local halal authentication.

Halal foods are safe and reliable for Muslim people, but they have not been widely available in Japan. Food integrity is important not only for Muslim people but also for all consumers in Japan. However, there are few studies on supply chain integration and its relation to consumer awareness in Japan. The aim of this chapter is to investigate supply chain integration of halal foods in Japan by interview survey of Japanese companies handling halal foods in Japan.

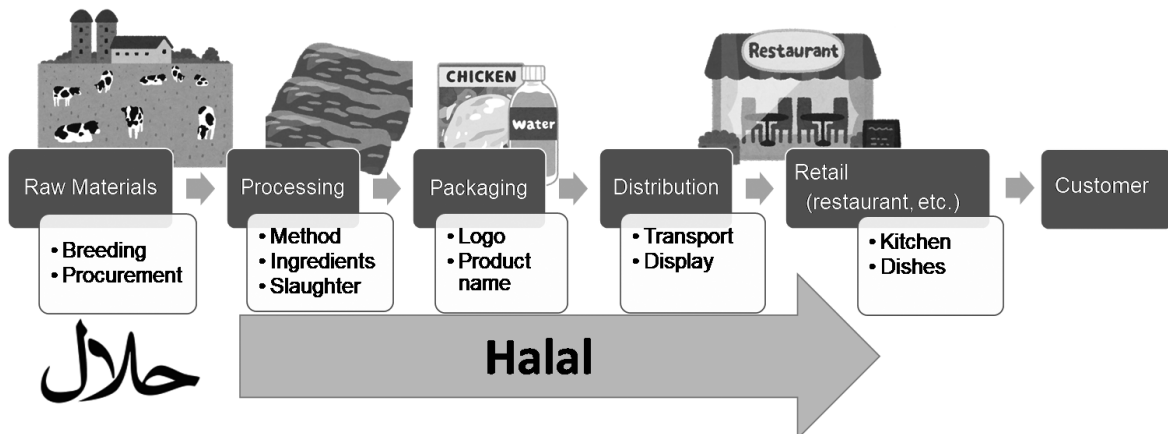


Figure 1. Concept of “from farm to fork” for halal certification.

## 2. Related Works

Tan et al. [3] proposed a framework of the halal food supply chain. They established a conceptual model for investigating the relationship between the supply chain integration and halal food supply chain integrity in the Malaysian context. Their results indicated that internal integration and strategy had a positive influence on halal food supply chain integrity. Strategic cooperation and strategy had a positive influence on halal food supply chain integrity. Strategic cooperation

tion should be undertaken with suppliers on the quality and safety of raw materials for halal foods. Ali et al. [4] also investigated the impact of external integration on compliance with halal standards, as an example of product integrity within the food industry. Their study extended existing research on food integrity to examine not only food quality and safety, but also the food supply chain from production, procurement, and distribution for Malaysian halal foods. They found a clear influence on customer integration in two aspects: product quality and cost, but no definite impact on supplier integration. Saidon et al. [5] investigated supply chain integration of Japanese foods and beverage companies in Malaysia. They proposed a short and succinct supply chain regardless of the size of the company. The Japanese companies had short and concise supply chains and procured raw materials from farms in Malaysia to enhance time efficiency. Most companies had not signed contracts with suppliers, indicating that they had established a long-term relationship with suppliers based on mutual agreements.

In addition to halal foods, the safety and reliability of all supplied foods have been important for all the stakeholders world-wide. That is the concept of “food integrity.” Ali et al. [6] proposed how halal food integrity of focal companies could be improved through supply chain integration from a Malaysian perspective. They discussed halal integrity management and supply chain relationship by using the arc of integration theory. Frohlich and Westbrook [7] suggested two types of supply chain integration: the forward physical flows of deliveries and the backward coordination of data from customers to suppliers. They graphically illustrated both types as the arc of integration. For halal food integrity of focal companies in Malaysia, Ali et al. [6] provided evidence for four hypotheses concerning the applicability of supply chain integration for halal foods. For example, the focal companies’ adoption of a more extensive supply chain integration strategy influenced the quality of halal foods.

Food integrity depends considerably on consumer awareness to halal foods. Gonlaz et al. [8] conducted a questionnaire survey of non-Muslim consumers in Malaysia. They investigated the factors relating recognition and attitudes of consumers to halal foods and suggested that non-Muslim consumers understood halal foods, principle of halal, and slaughter. Bonne et al. [9] studied determinant factors of consumption of halal meat for Muslim consumers who immigrated from north Africa to France. They indicated that the selection of halal meat depended on identity as Muslim, academic background, consumption of halal meat, influence of other Muslim, and recognition control of halal meat. These studies indicated that consumer awareness of halal foods depended on individuals because food integrity was partly regarded as a psychological process in individuals with their beliefs. Thus, cross-cultural understandings are important for food diversity with co-prosperity in the society.

### 3. Supply Chain Integration of Halal Foods in Japan

#### 3.1 Interview survey of 20 companies handling halal products in Japan

Compared with the general foods in Japan, there are a few companies handling halal products in the Japanese market. However, these companies have made efforts to offer safe and reliable foods to Muslim and other consumers in Japan under insufficient environment of halal food

Table 1 Overview of 20 companies.

Manufacturer (MNF)		
MNF1	Homebred chicken	Halal Certification
MNF2	Food service	Halal Certification
MNF3	Curry with rice	Halal Certification
MNF4	Fishery products	Halal Certification
MNF5	Seasoning	Halal Certification
MNF6	Game	Halal Certification
MNF7	Fishery & processed foods	Muslim Friendly
MNF8	Seasoning	Muslim Friendly
MNF9	Frozen & ready foods	Muslim Friendly
MNF10	Food service	Muslim Friendly
MNF11	Organic vegetables	None
Retailer (RTL)		
RTL1	Certified Foods	Muslim Friendly
RTL2	Certified Foods	Muslim Friendly
RTL3	Certified Foods	Muslim Friendly
RTL4	Certified Foods	Muslim Friendly
RTL5	Certified Foods	Muslim Friendly
Restaurant (RST)		
RST1	Café	Halal Certification
RST2	Restaurant Service	Halal Certification
RST3	Tendon	Muslim Friendly
RST4	Ramen noodle	Muslim Friendly

supply chain. Their strategies of supply chain integration have been possessed as implicit knowledge in the companies. Therefore, a qualitative research is required to identify the relevant dimensions [10]. Ali et al. [6] investigated halal food integrity in Malaysia through in-depth interviews from the viewpoint of supply chain integration. In this chapter, we prepared an interview survey with a questionnaire based on that of Ali et al. [6] to a Japanese context.

We conducted this survey of 20 companies handling halal products in Japan. They were classified by business categories (manufactures, retailers, and restaurants) and by their policy of halal certification or Muslim friendly. Table 1 shows the overview of 20 companies.

## 3.2 Results of interview survey

### 3.2.1 Halal certification policy

The six manufacturers and two restaurants adopted halal certification policy. MNF1, which provided homebred chickens from breeding to processing, had obtained halal certification in Japan. Based on the feed safety law in Japan, homebred chickens were bred by using vegetable-only feeds. Muslim employees engaged in slaughter and processing of homebred chicken through an Islamic method using carbon dioxide anesthesia. They had an internal system similar to ISO 22000 (Food Safety Management System) to address halal food integrity. They disclosed all information on the halal process, including the breeding and processing of chicken. They considered homebred chickens to be well-known as halal foods in Japan. Furthermore, they suggested menus to restaurants and details on how to display processed chicken to retailers to ensure halal foods.

MNF2 provided bread and frozen foods for contract food service, inflight meals, hotels and restaurants. They had obtained halal certification in Japan to their central kitchen. They paid attention to hygiene standards for handling raw materials based on ISO 9001 (Quality Management Systems), and their manufacturing line in the central kitchen was halal-certified. In distribution, they partly used private containers to deliver halal foods. They also gave restaurants and retailers an instruction on dealing with storing methods of halal foods.

A curry-restaurant group of MNF3 had opened halal curry shops in addition to non-halal curry restaurants. They had obtained halal certification in Japan. All the raw materials for the curry sauce (beef, chicken, vegetables, spices, etc.) were procured in Indonesia. Curry sauce was also made and packaged there, and it was imported to Japan. Information on ingredients and halal certification of the curry sauce was disclosed on the company's website.

The local café, RST1, had a local halal certification in Japan. Most of the raw materials (beef, vegetables, etc.) were obtained with a halal certification, and the others were cooked according to a Muslim friendly policy. The manager directly procured halal food materials from a manufacturer to prevent the delivery of halal food with non-halal products.

### 3.2.2 Muslim friendly policy

The four manufacturers, five retailers, and two restaurants adopted Muslim friendly policy, so that they considered the cost and benefit of halal certification. MNF7 provided fishery and processed foods such as Satsuma-age (deep-fried fish cakes) did not obtain halal certification. However, they established a brand by disclosure of food information. The consumers including Muslim people could eat Satsuma-age as a safe and reliable food by checking information through the website and social media. To achieve Muslim friendly policy, they checked that lard and alcohol were not used in raw materials at procurement. They did not use pesticides or chemical seasonings. The production line of Muslim friendly foods was separated from lines for non-halal products. They had an internal system and SOP (Standard Operating Procedure) for other companies. They also had an opportunity to communicate the provision of products with retailers and restaurants.

MNF8, which mainly provided roux and spices for curries and stews, used only halal-certified pepper made in Indonesia. They did not use animal raw materials to provide roux for curry, as part of their Muslim friendly policy. They had a traceability system for the material lots. They had also established a consultation counter and a website for information on their halal products.

MNF9, which mainly provided frozen and ready foods, had not obtained halal certification. But based on a Muslim friendly policy, alcohol was not used in processing. To prevent contamination with non-halal foods, they manufactured frozen foods for Muslim in the early morning before processing non-halal foods. Ingredients in English and pictograms were displayed for all consumers.

The Japanese Tendon (a bowl of rice topped with tempura) restaurant RST3 had not obtained halal certification, but they used halal-certified raw materials such as seafood, chicken, and vegetables. They paid attention to supplier selection and procurement of raw materials. Information such as the ingredients of Tendon was disclosed social media.

All the retailers adopted Muslim friendly policy because they handled food products for all consumers. They pursued to procure some halal-certified foods and display them apart from non-halal materials as much as possible.

#### 4. Summary

Food integrity is important for all consumers in Japan. In this chapter, the fundamentals of halal and halal foods were outlined and the survey results of Japanese companies handling halal foods in Japan were reported. These companies including manufactures, retailers, and restaurants adopted either halal certification or Muslim friendly policy to follow diverse consumer needs. However, such strategies depend on consumer awareness of halal foods. The next chapter introduces the survey results of consumer awareness of Muslim people stayed in Japan.

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