

Supplier Management in Halal Food Supply Chain: A Preliminary Case Study

Tatsuya Fujiwara

Economics and Business Administration, Reitaku University, 277-0064 Chiba, Japan

ABSTRACT

Halal food supply chain is unique as it is based on Islamic teachings and hence different from other kinds of supplier management. However, research in this specific field has been scarce, particularly empirical research. Conversely, many empirical researches on conventional supply chain management have focused mainly on supply risks. Therefore, it is important to explore supplier management in halal food supply chains by applying an existing framework of supplier management from other fields. With this in mind, as a preliminary case study, this paper explores supplier management of a small and medium-sized enterprise producing halal foods in Malaysia. The main aim is to identify risk consequences, risk drivers, supply risk sources, and risk mitigating strategies for supplier management in halal food supply chains. Future research needs to include and investigate more cases in which factors such as the size of companies, the capacity and role of halal certification bodies, and the location of operation are operationalized in order to develop the framework discussed in this study

Keywords: Halal certification, halal supply chain, risks, strategies, supplier management

INTRODUCTION

The halal food supply chain is unique as it is based on Islamic teachings (Shariah law), in which Muslims must adhere to concepts of halal (lawful or permitted) and haram (unlawful or prohibited). Compared with

conventional food management systems such as Hazard Analysis and Critical Control Points (HACCP), it is obvious that there are specific requirements for halal food operations, such as no porcine materials, no alcohol and no meat not slaughtered in the Islamic way among others (Bonne & Verbeke, 2008; Lodhi, 2013; Ramalingam et al., 2013; Riaz & Chaudry, 2004). The characteristics of halal food supply chain are described in some researches (Omar & Jaafar, 2011;

ARTICLE INFO

Article history:

Received: 1 March 2017

Accepted: 23 November 2017

E-mail address:

a12024t@reitaku.jp

Saifudin, Othman, & Elias, 2017; Tieman, 2011; Tieman, 2015; Zulfakar, Anuar, & Ab Talib, 2014). Indeed, some concepts of conventional supply chains can be seen in halal food supply chains, but the specific requirements for halal food operations still characterise halal food supply chains (Ab Talib, Hamid, & Zulfakar, 2015). Therefore, it is assumed that supplier management in halal food supply chains is different from supplier management in other supply chains.

However, empirical research into supplier management in halal food supply chains has been scarce, although there are empirical researches related to halal food supply chains such as the halal assurance system (Hassan, Arif, & Sidek, 2014, 2015), halal logistics (Ab Talib, Rubin, & Zhengyi, 2013; Tan, Razali, & Desa, 2012; Tarmizi, Kamarulzaman, Latiff, & Rahman, 2014; Tieman, van der Vorst, & Ghazali, 2012), lean halal supply chain practices (Rahman, Saibani, & Zain, 2013), halal supply chain integration (Ali, Tan, Pawar, & Makhbul, 2014), and halal traceability (Poniman, Purchase, & Sneddon, 2015). Currently, there exists only a conceptual research for supplier management in halal food supply chains (Tieman & Ghazali, 2013) despite it being an important issue. A Japanese company—Ajinomoto—suffered from recall and boycott of its halal certification food products in Indonesia in 2001 since it could not perceive the usage of porcine enzyme in its supplier's operations as a supply risk, which adversely affected the company's reputation (Itou, 2002).

Many empirical researches have focused on supply risks, such as the clarification of a definition of supply risk (Zsidisin, 2003a), the construction of a framework for supply risk (Jüttner, Peck, & Christopher, 2003; Peck, 2005), the development of risk management methods (Harland, Brenchley, & Walker, 2003; Micheli, Cagno, & Zorzini, 2008), the evaluation of supply risk management performance (Hoffmann, Schiele, & Krabbendam, 2013), the classification and comparison of supply risk perceptions (Zsidisin, 2003b; Zsidisin, Wagner, Melnyk, Ragatz, & Burns, 2008), the investigation of risk assessment techniques (Ganguly, 2003; Zsidisin, Ellram, Carter, & Cavinato, 2004; Zsidisin, Panelli, & Upton, 2000), and the description of supplier development (Matook, Lasch, & Tamaschke, 2009). An existing framework based on field data would help the researcher construct a framework of supplier management in halal food supply chains, which would contribute to bridging the gap between conceptual and empirical research in this field. Hence, as a preliminary attempt, this study explores supplier management of a small and medium-sized enterprise (SME) producing halal food products in Malaysia.

METHOD

Framework

This study is a case study to gain an in-depth understanding of the dynamics present within single settings (Eisenhardt, 1989). This research method is frequently used to

study supplier management (Ghadge, Dani, & Kalawsky, 2012). This study's research method is primarily influenced by Yin (1994). Unlike Glaser and Strauss (1967) or Eisenhardt (1989), Yin's (1994) method is premised on theories prior to collection of data.

A framework suggested by Jüttner et al. (2003) is also adopted in this study. This framework can cover risk sources in the entire supply chain risk management, but its main concern is network-related risk sources that are suboptimal interactions between organisations along the supply chain (Jüttner et al., 2003). In the further research, the network-related sources are recategorized into supply risk sources defined as 'the uncertainty associated with supplier activities and in general supplier relationships (Jüttner, 2005, p. 122). Hence,

the framework can be adapted into this study focusing on supply risks. The reason why this study adapted Jüttner et al.'s framework (2003) is because it is regarded as comprehensive and is constructed based on review of literature and interviews with managers responsible in supply chain management from various industries, including the food industry (Jüttner et al., 2003).

The framework consists of three other constructs in addition to risk sources: risk consequences, risk drivers, and risk mitigating strategies. Risk sources can be affected by risk drivers that amplify the level of risks. This then leads to risk consequences. Hence, risk mitigating strategies are considered to prevent risk consequences. That is, the propensity of risk sources and risk drivers to outweigh

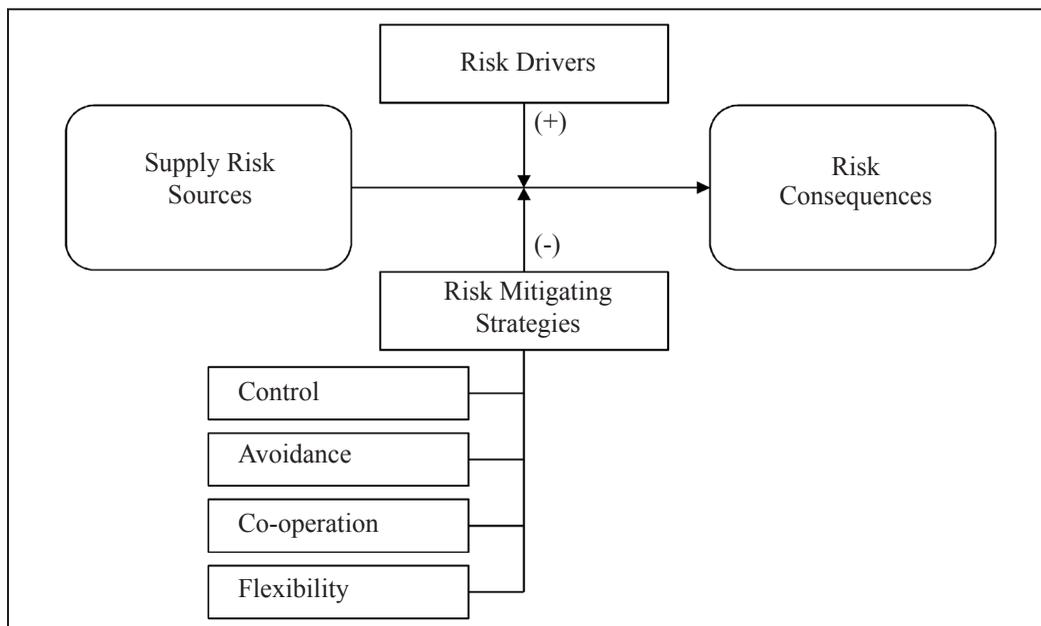


Figure 1. The basic framework of supplier management. Adapted from Jüttner et al. (2003) and Jüttner (2005)

risk mitigating strategies causes adverse risk consequences (Jüttner et al., 2003). The risk mitigating strategies can be classified as control, avoidance, co-operation, and flexibility. Control entails controlling contingencies from risk sources. The examples include vertical integration, increased stockpiling, the use of buffer inventory, and the imposition of contractual requirements on suppliers. Avoidance is to drop specific products, suppliers, or geographical markets, if they are seen to be unreliable. Co-operation is to establish joint agreements to improve visibility and understanding of the supply chain and to share information about risks. Flexibility is

to increase responsiveness by postponement, multiple sourcing, and localised sourcing (Jüttner et al., 2003). Although Jüttner et al. (2003) listed these strategies, they did not address how companies made selections from among them (Manuj & Mentzer, 2008b). The decisions of the strategies depend on the environment of companies. Figure 1 shows this framework, which forms the basis of this study.

Data Collection

The researcher investigated one SME operating in Malaysia with Malaysia halal certification (Company X). In terms of annual turnover, Company X is classified

Table 1
The categories and interview questions

Categories	Questions
Halal assurance system	1. <i>What halal assurance system does your company have?</i>
Supply risk identification	2. <i>What situations does your company consider supply risks?</i> 3. <i>How does your company identify or determine supply risks?</i>
Supply risk assessment	4. <i>What assessment criteria does your company use in selecting suppliers?</i> 5. <i>How does your company determine the supplier assessment criteria?</i> 6. <i>How does your company set priorities of supply risks in assessing suppliers?</i> 7. <i>How does your company assess suppliers?</i> 8. <i>When your company procures animal-based ingredients, do the assessment criteria, the priorities of supply risks, and the assessment method change?</i> 9. <i>When your company procures ingredients from suppliers that do not have Halal certifications, do the assessment criteria, the priorities of supply risks, and the assessment method change?</i> 10. <i>When your company procures ingredients from foreign suppliers, do the assessment criteria, the priorities of supply risks, and the assessment method change?</i>
Supply risk responses	11. <i>If suppliers that your company assessed do not meet your company's assessment criteria, does your company make efforts to improve the suppliers' operations?</i> 12. <i>Does your company have supplier development or training programmes?</i> 13. <i>How does your company monitor suppliers or supply risks?</i>

under small industries with that range from RM300,000 to RM15 million (Department of Islamic Development Malaysia, 2014). As Company X produces its final food products for consumers, it can be a focal company for supplier management in the halal food supply chain.

The researcher interviewed a corporate chief executive (Y) in Company X as the person who has authority with respect to halal food operations. For the interview, the researcher designed questions based on documents related to Malaysia halal certification (Department of Islamic Development Malaysia, 2013; Department of Islamic Development Malaysia, 2014; Department of Standards Malaysia, 2009), and from literature related to supplier management (Matook et al., 2009; Zsidisin, 2003b). Although there is a total of 13 questions, the researcher did not necessarily follow the questions in the interview, because it was a semi-structured interview to flexibly explore the contents. The researcher sent the questions to Y in advance (see Table 1). Before the interview, the researcher collected information from the website of Company X to understand its business outline.

The researcher interviewed Y for 90 minutes on May 26, 2016 for the first time. It was a semi-structured interview. This interview was recorded and the content transcribed. After the first interview, the researcher collected internal documents, such as supplier assessment criteria, and asked Y additional questions through emails. The researcher then wrote a case study

report based on data analysis and sent it to Y. For the second time, the researcher interviewed Y for 60 minutes on July 24, 2016, to allow Y confirm the case study report and ask for additional questions for clarity. For the third time, the researcher interviewed Y for 30 minutes on August 6, 2016, so that Y could confirm the modified case study report.

CASE

This section discusses the supply chain chart, supply risk identification, and supply risk assessment and responses of Company X.

Supply Chain Chart

Company X procures raw plant-based ingredients from foreign countries through three trading companies that do not have Malaysia halal certification for transportation and warehousing. While Company X directly assesses and monitors the trading companies, it is difficult to assess and monitor foreign farmers that supply the raw plant-based ingredients. Therefore, it depends on the trading companies to assess and monitor the foreign farmers. According to Y, the trading companies understand halal requirements in Malaysia because they are Malaysian companies.

Company X procures processed foods from food manufacturers operating in Malaysia through two wholesalers. All the processed foods have Malaysia halal certification. Company X usually procures the same processed foods unless something unexpected happens, such as a dearth of

stocks. It does not assess and monitor the food manufacturers, partly because it procures the processed foods through the wholesalers and partly because the

food manufacturers have Malaysia halal certification.

Figure 2 shows the supply chain chart of Company X.

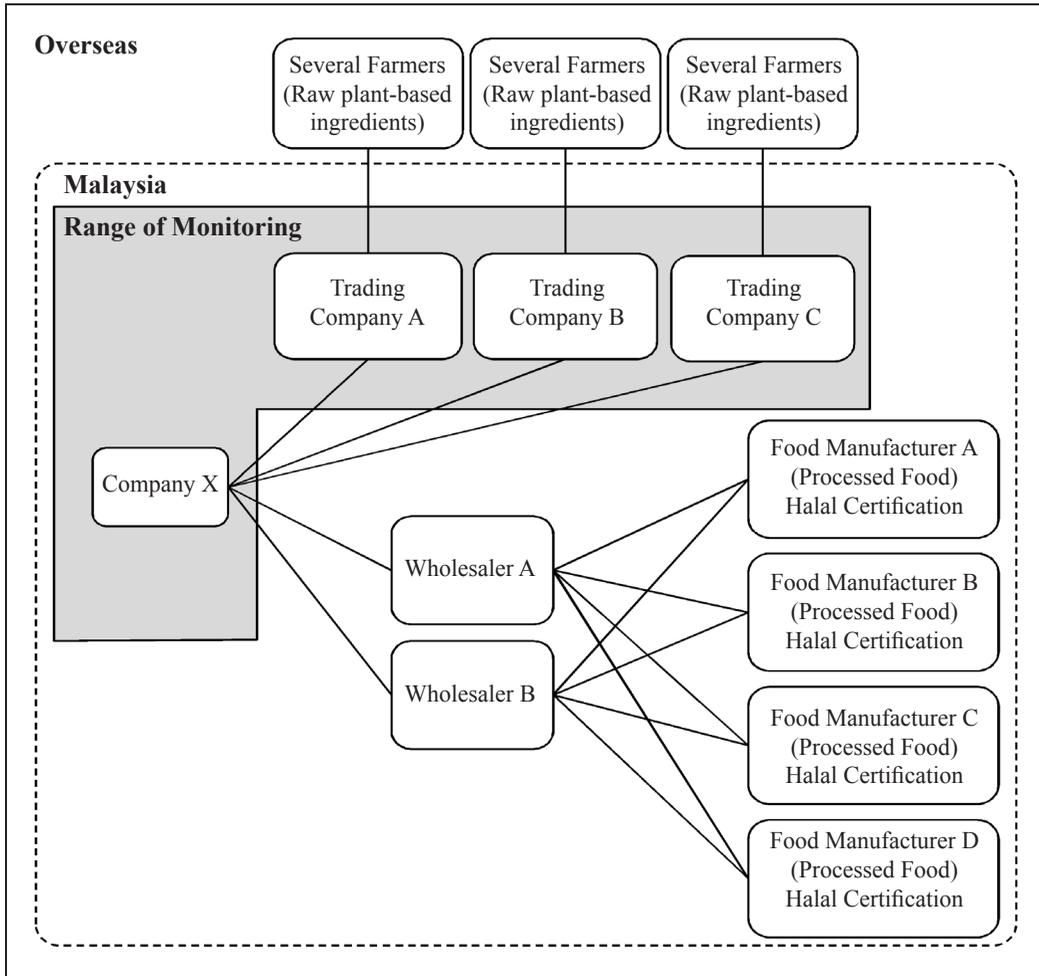


Figure 2. Supply chain chart of Company X

Supply Risk Identification

Company X considers processed foods, animal-based ingredients, and logistics as supply risks.

It has tried to avoid procuring processed foods from foreign countries so that it does not encounter possibilities that processed

foods contain forbidden materials as per the Islamic teachings, such as porcine materials, alcohol, and meat not slaughtered in the Islamic way. Company X can procure processed foods from foreign countries that have halal certifications recognised by the Department of Islamic Development

Malaysia (JAKIM). But in the current situation, in which there are different halal certifications internationally (Blackler, 2015; Lever & Miele, 2012), Company X chooses to conduct self-manufacturing in its own factory to avoid processed foods from foreign countries. Even though Company X procures raw plant-based ingredients from overseas, it is not compulsory for it to have halal certifications. However, it is not always the case that Company X can conduct self-manufacturing for all processed foods. When Company X cannot conduct self-manufacturing for certain products, it procures these from food manufacturers operating in Malaysia with Malaysia halal certification. But Company X is considering whether or not to conduct self-manufacturing for an expensive processed product.

Company X considers that procuring animal-based ingredients that include meat and animal-based derivatives, such as additives, gelatine, and so on and so forth, can be a supply risks. This is because the ingredients are strongly related to the Islamic way of slaughtering, which makes processes to ensure the halalness of products complicated. That is why Company X purposely avoids the use of animal-based ingredients.

Company X also pays attention to operations in logistics for halal food products. It considers manufacturers of final food products need to manage the whole supply chain from ingredients to retailers, including logistical parts. According to Y, this ensures the company's brand is protected and Muslim consumers have the

confidence to buy its products. For this reason, Company X carefully manages logistics of raw plant-based ingredients, particularly operations of warehousing. Compared with warehousing, transportation is more controllable for Company X because delivery persons are usually the same persons.

Supply Risk Assessment and Responses

Company X assesses and monitors the trading companies regularly by using supplier evaluation criteria. The criteria comprise three parts. First, delivery which includes arrival of shipment on time, conforming packaging specifications, and compliance with halal requirements (e.g. halal items are not mixed with non-halal items). Second, quality. It includes quality of information, conditions of quality and quantity, the environment of warehouses, and compliance with halal requirements in warehouses. Third, service. It includes responses to emergencies and invoice accuracy. These criteria are checked on the basis of observations on sites and the number of violations of the requirements. This is conducted every six months, or when the issue occurs.

Based on the above assessment and monitoring, Y frequently makes site visits to the trading companies without notice. Y checks the quality of ingredients, tools, the monitoring, no non-halal items stored together with halal items, no animals roaming around the warehouse where they can come into contact with the materials, no animal blood on the floors, implementation

of pest control, and recorded documents in the scene. These checks are based not only on halal requirements but also on Good Manufacturing Practice (GMP). The site visit for the trading companies is made once a month.

When it is necessary for the practices or competencies of the trading companies to improve, Company X provides the relevant advice. However, Y offers only advice, since Company X could not interfere in their businesses. If a trading company does not accept advice for crucial improvements, Company X will look for another trading company. But in most of the cases, they accept the advice.

DISCUSSION

In this section, the contents of the case are categorised into risk consequences, risks drivers, supply risk sources, and risk mitigating strategies proposed in the basic framework of supplier management.

Risk Consequences

Risk consequences can be dependent on the specific supply chain context and influences the approach to supply risks (Jüttner et al., 2003). Company X pays strong attention to compliance with halal requirements in supplier management. Otherwise, it could lead to violations of halal requirements and invalidation of the halal certification (Department of Islamic Development Malaysia, 2014). Violations of halal requirements and invalidation of the halal certification may cause recall of halal products, reputational damage,

and a boycott by Muslim consumers, as the Ajinomoto issue has demonstrated. Therefore, violations of halal requirements and invalidation of the halal certification can be risk consequences for supplier management.

Risk Drivers

In general, there are several risk drivers that amplify the level of risks in conventional supply chains, such as globalisation, outsourcing, centralisation, lean processes, complex products and service, IT dependence, deficits of information, external threats, and the resources required by growing economies (Jüttner et al., 2003; Pfohl, Kohler, & Thomas, 2010). In the context of halal food supply chains, however, Islamic teachings become a crucial risk driver, which set unique requirements to ensure the halalness of food products. For example, while meat products do not increase supply risks in conventional food supply chains, they do so in halal food supply chains since the meat must not be derived from Haram animals and must come from animals slaughtered in the Islamic way (Department of Standards Malaysia, 2009). Hence, Islamic teachings have become an important and unique risk driver for supplier management in halal food supply chains.

Supply Risk Sources

The case study shows processed foods, animal-based ingredients, and logistics are supply risk sources for Company X based on the classification by Zsidsin (2003b). Zsidsin (2003b) classifies characteristics

of supply risks into three categories: Item, supplier, and market. First, the category of item can be applied to processed foods and animal-based ingredients, which means that products or ingredients themselves become supply risks. As mentioned earlier, processed foods may have forbidden materials in Islam. Also, the issue of Islamic slaughter arises when procuring animal-based ingredients. Therefore, these can cause adverse risk consequences. Second, the category of supplier is related to processed foods and logistics. This category contains supply risks related to quality (Zsidisin, 2003b). That is, it is concerned about suppliers' competencies for quality management of their products. When suppliers produce processed foods, they need to have competencies to meet the halal requirements. In addition, in the case of logistics, it does not directly affect quality problems, but indirectly affects them in that logistics operations need to maintain the halalness and hygiene of products through transportation and warehousing. Third, the market category also influences processed foods from the perspective of the number of qualified suppliers in a market (Zsidisin, 2003b). A focal company in a halal food supply chain needs to select suppliers producing processed foods to meet halal requirements. In order to select proper suppliers, the focal company can look at the supplier's halal certification. However, even if a supplier has halal certification, its halal certification body might not audit the supplier rigorously (Hatanaka & Busch, 2008). It has to be emphasised there are different halal certifications in the world

and there might be suppliers with halal certifications that do not have enough competencies. Furthermore, in the case of Company X, it needs to choose suppliers with the Halal certifications recognised by JAKIM because of the regulation (Minister of Domestic Trade, Cooperative and Consumerism, 2011). As a result, the number of qualified suppliers in the market is limited, which makes the selection of suppliers difficult.

Risk Mitigating Strategies

Four risk mitigating strategies can be seen in the case of Company X: Malaysia halal certification, no animal-based ingredients, self-manufacturing, and continuous assessment and monitoring. These strategies can be classified into risk mitigating strategies in the framework, such as control, avoidance, and co-operation. First, Malaysia halal certification can be categorised as control strategy. As mentioned above, Jüttner et al. (2003) gives examples of the imposition of contractual requirements on suppliers as the strategy to control contingencies from risk sources. It is true that Company X does not directly audit and certify its suppliers but Malaysia halal certification can impose halal requirements on suppliers and prove the suppliers meet the requirements. As JAKIM is reliable enough for Company X, a third-party certification could work to reduce supply risks, as Tanner (2000) asserts. Second, no animal-based ingredients and self-manufacturing can be categorised into an avoidance strategy. No animal-based ingredient means simply

avoiding the ingredients, since they become supply risk sources. Self-manufacturing is adopted by Company X in global sourcing. Company X is not sufficiently confident of processed foods produced by foreign suppliers with halal certifications, since the number of qualified suppliers is limited in the market. That is why Company X conducts self-manufacturing so that it can preclude any supply risks derived from foreign suppliers. Third, continuous assessment and monitoring could be classified into a co-operation strategy. Company X conducts continuous assessment and monitoring of the trade companies when making site visits. In that process, Company X not only assesses and monitors the companies, but gives them advice to improve their operations, which implies joint agreements can be established between Company X and the trade companies. This strategy may also be regarded as a control strategy because

the risk mitigating strategies suggested by Jüttner et al. (2003) are closely related to each other (Manuj & Mentzer, 2008a). The control strategy, however, is implemented in a more unilateral way. If Company X has more authority over the trade companies and rigidly imposes requirements on them, the continuous assessment and monitoring could be the control strategy, such as supplier auditing and certification (Khan & Burnes, 2007). Unlike a third-party certification, the supplier auditing and certification emphasises that a purchasing company audits and certifies suppliers to assure its standards (Smeltzer & Siferd, 1998). But its continuous assessment and monitoring would not reach the level of the supplier auditing and certification because Company X cannot intervene in the companies' businesses to excess, as Y mentioned above.

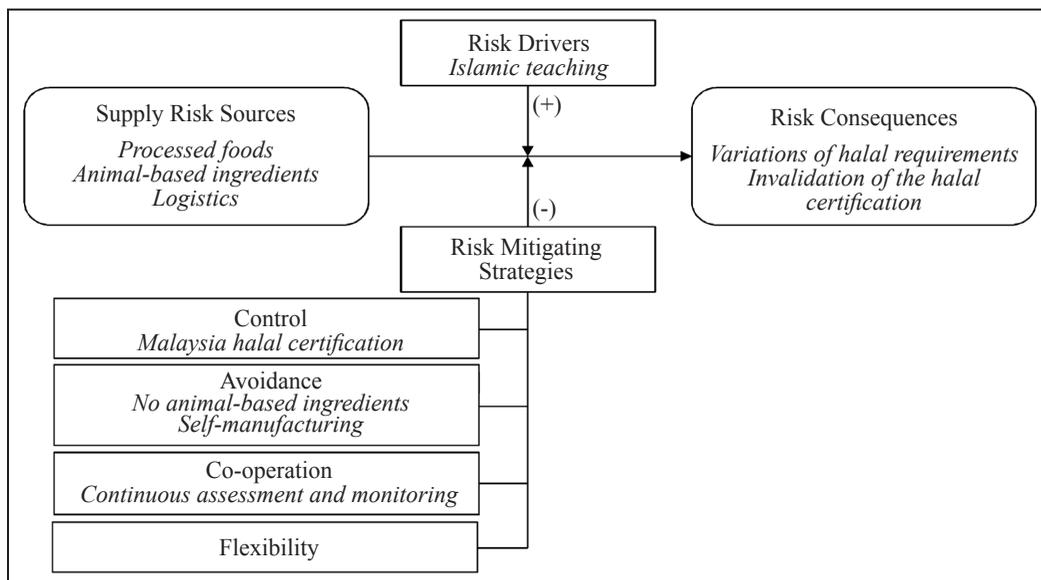


Figure 3. The framework based on the case of Company X

Based on the framework and the discussion, this study constructs the framework for supplier management in halal food supply chains (see Figure 3).

CONCLUSION

This study identified risk consequences, risk drivers, supply risk sources, and risk mitigating strategies for supplier management in halal food supply chains, and then, constructed the framework for it. As Islamic teachings — as the specific risk driver — can amplify the level of supply risks in a halal food supply chain, Company X regarded processed foods, animal-based ingredients, and logistics as supply risk sources leading to violations of halal requirements and invalidation of the halal certification. Therefore, Company X carried out risk mitigating strategies, which were classified as control, avoidance, and co-operation strategies. It was imperative for Company X to manage supply risks not covered by the control risk mitigating strategy, which means how to manage suppliers that do not have Malaysia halal certification. As a result, Company X adopted avoidance and co-operation risk mitigating strategies, such as no animal-based ingredients, self-manufacturing, and continuous assessment and monitoring.

Future research should look at more cases and improve the framework. The researcher, however, should not select cases randomly because the case selection should be designed to compare both similar and different cases so as to clarify the

conditions when a particular phenomenon is to be found or not to be found (Yin, 1994). Therefore, it would be meaningful to consider the following factors in the case selection. First, the size of companies. There is the trade-off between extra costs and the adoption of risk mitigating strategies (Jutter, 2003, 2005). But large companies tend to adopt risk mitigating strategies to improve processes of suppliers (Zsidisin & Ellram, 2003). That is why company size may influence risk mitigating strategies. Second, the ability of halal certification bodies. Latif, Mohamed, Sharifuddin, Abdullah and Ismail (2014) show that Malaysia has the strictest halal certification requirements. In addition, the halal certification system in Malaysia has become committed to urging halal control system in companies (Fischer, 2016). These can affect supplier management in halal food supply chains so that the ability of halal certification bodies may need to be taken into account to select further cases. Third, the location of the countries. When companies produce and sell halal products in Muslim countries, the companies are under more pressure than in non-Muslim countries. If some issues occur, the companies suffer from recall or boycott. Thus, the location of the countries may influence supplier management in halal food supply chains.

For these reasons, future research should investigate cases similar to that of Company X and other cases in which the above factors are operationalised in order to compare them with each other. This would

contribute to developing the framework of supplier management in halal food supply chains.

ACKNOWLEDGEMENTS

This paper is partly based on a research supported by the Kitano Foundation of Lifelong Integrated Education. The author expresses his appreciation to the foundation and the company involved in this study.

REFERENCES

- Ab Talib, M. S., Hamid, A. B. A., & Zulfakar, M. H. (2015). Halal supply chain critical success factors: A literature review. *Journal of Islamic Marketing*, 6(1), 44-71.
- Ab Talib, M. S., Rubin, L., & Zhengyi, V. K. (2013). Qualitative research on critical issues in halal logistics. *Journal of Emerging and Islamic Research*, 1(2), 1-20.
- Ali, M. H., Tan, K. H., Pawar K., & Makhbul, Z. M. (2014). Extenuating food integrity risk through supply chain integration: The case of halal food. *Industrial Engineering & Management Systems*, 13(2), 154-162.
- Blackler, F. B. (2015). Who owns halal? Five international initiatives of halal food regulations. In F. B. Blackler, J. Fischer, & J. Lever, J (Eds.), *Halal matters Islam, politics and markets in global perspective* (pp.192-197). London: Routledge.
- Bonne, K., & Verbeke, W. (2008). Religious values informing halal meat production and the control and delivery of halal credence quality. *Agriculture and Human Values*, 25(1), 35-47.
- Department of Islamic Development Malaysia (2013). *Guidelines for halal assurance management system of Malaysia halal certification*. Putrajaya: Department of Islamic Development Malaysia.
- Department of Islamic Development Malaysia (2014). *Manual procedure for Malaysia halal certification (third revision) 2014*. Putrajaya: Department of Islamic Development Malaysia.
- Department of Standards Malaysia (2009). *MS 1500:2009 halal food—production, preparation, handling and storage—general guidelines (second revision)*. Selangor: Department of Standards Malaysia.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Fischer, J. (2016). Manufacturing halal in Malaysia. *Contemporary Islam*, 10(1), 35-52.
- Ganguly, K. (2003). A case study approach for understanding inbound supply risk assessment. *Decision*, 40(1/2), 85-97.
- Ghadge, A., Dani, S., & Kalawsky, R. (2012). Supply chain risk management: Present and future scope. *The International Journal of Logistics Management*, 23(3), 313-339.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery theory: strategies for qualitative research*. Chicago: Aldine publishing company.
- Hatanaka, M., & Busch, L. (2008). Third-party certification in the global agrifood system: An objective or socially mediated governance mechanism? *Sociologia Ruralis*, 48(1), 73-91.
- Hassan, M. H., Arif, S., & Sidek, S. (2014). Compliance with the internal halal assurance system among food service operators in Melaka. *Sci.Int. (Lahore)*, 26(4), 1553-1556.
- Hassan, M. H., Arif, S., & Sidek, S. (2015). Knowledge and practice for implementing internal assurance system among halal executives. *Asian Social Science*, 11(17), 1911-2025.
- Harland, C., Brenchley, R., & Walker, H. (2003). Risk in supply network. *Journal of Purchasing & Supply Management*, 9, 51-62.

- Hoffmann, P., Schiele, H., & Krabbendam, K. (2013). Uncertainty, supply risk management and their impact on performance. *Journal of Purchasing & Supply Management*, 19, 199-211.
- Itou, F. (2002). Indonesia ni okeru "Ajinomoto halal jiken" [Ajinomoto halal scandal in Indonesia]. *Aoyama Management Review*, 2, 62-17.
- Jüttner, U., Peck, H., & Christopher, M. (2003). Supply chain risk management: Outlining an agenda for future research. *International Journal of Logistics: Research & Applications*, 6(4), 197-210.
- Jüttner, U. (2005). Supply chain risk management understanding the business requirements from a practitioner perspective. *The International Journal of Logistics Management*, 16(1), 120-141.
- Khan, O., & Burnes, B. (2007). Risk and supply chain management: Creating a research agenda. *The International Journal of Logistics Management*, 18(2), 197-216.
- Latif, I. A., Mohamed, Z., Sharifuddin, J., Abdullah, A. M., & Ismail, M. M. (2014). A comparative analysis of global halal certification requirements. *Journal of Food Products Marketing*, 20, 85-101.
- Lever, J., & Miele, M. (2012). The growth of halal meat markets in Europe: An exploration of the supply side theory of religion. *Journal of Rural Studies*, 28, 528-537.
- Lodhi, A. (2013). *Understanding halal food supply chain, third edition*. London: Hfrc UK Limited. Kindle edition.
- Manuj, I., & Mentzer, J. T. (2008a). Global supply chain risk management. *Journal of Business Logistics*, 29(1), 133-155.
- Manuj, I., & Mentzer, J. T. (2008b). Global supply chain risk management strategies. *International Journal of Physical Distribution & Logistics Management*, 38(3), 192-223.
- Matook, S., Lasch, R., & Tamaschke, R. (2009). Supplier development with benchmarking as part of a comprehensive supplier risk management framework. *International Journal of Operations & Production Management*, 29(3), 241-267.
- Micheli, G. J., Cagno, E., & Zorzini, M. (2008). Supply risk management vs supplier selection to manage the supply risk in the EPC supply chain. *Management Research News*, 31(11), 846-866.
- Minister of Domestic Trade, Cooperative and Consumerism (2011). *Trade description (certification and marking of 'halal') order 2011*. Putrajaya: Attorney General's Chambers.
- Omar, E. N., & Jaafar, H. S. (2011, September). Halal supply chain in the food industry-A conceptual model. In *Business, Engineering and Industrial Applications (ISBEIA), 2011 IEEE Symposium on* (pp. 384-389).
- Peck, H. (2005). Drivers of supply chain vulnerability: An integrated framework. *International Journal of Physical Distribution & Logistics Management*, 35(4), 210-232.
- Pfohl, H. C., Kohler, H., & Thomas, D. (2010). State of the art in supply chain risk management research: Empirical and conceptual findings and a roadmap for the implementation in practice. *Logist. Res.*, 2, 33-44.
- Poniman, D., Purchase, S., & Sneddon, J. (2015). Traceability systems in the Western Australia halal food supply chain. *Asia Pacific Journal of Marketing and Logistics*, 27(2), 324-348.
- Rahman, M. M., Saibani, N., & Zain, C. R. C. M. (2013). Lean supply chain practices in the halal food. *International Journal of Lean Six Sigma*, 4(4), 389-408.
- Ramalingam, K., Zzaman, W., Febrianto, N. A., Zakariya, N. S., Abdullah, W. N. W., & Yang, T. A. (2013). Embedding Islamic dietary requirements into HACCP approach. *Food Control*, 34, 607-612.

- Riaz, M. N., & Chaudry, M. M. (2004). *Halal food production*. London: CRC Press.
- Saifudin, A. M., Othman, S. N., & Elias, E. M. (2017). Exploring in setting a model for Islamic supply chain in Malaysia. *International Review of Management and Marketing*, 7(1), 95-102.
- Smeltzer, L. R., & Siferd, S. P. (1998). Proactive supply management: The management of risk. *International Journal of Purchasing and Materials Management*, 34(1), 38-45.
- Tan, M. I. I., Razali, R. N., & Desa, M. I. (2012). Factors influencing ICT adoption in halal transportations: A case study of Malaysian halal logistics service providers. *International Journal of Computer Science Issues*, 9(2), 62-71.
- Tanner, B. (2000). Independent assessment by third-party certification bodies. *Food Control*, 11, 415-417.
- Tarmizi, H. A., Kamarulzaman, N. H., Latiff, I. A., & Rahman, A. A. (2014). Factors influencing readiness towards halal logistics among food-based logistics players in Malaysia. *UMK Procedia*, 1, 42-49.
- Tieman, M. (2011). The application of halal in supply chain management: In-depth interviews. *Journal of Islamic Marketing*, 2(2), 186-195.
- Tieman, M. (2015). Halal clusters. *Journal of Islamic Marketing*, 6(1), 2-21.
- Tieman, M., & Ghazali, M. C. (2013). Principles in halal purchasing. *Journal of Islamic Marketing*, 4(3), 281-293.
- Tieman, M., Van der Vorst, J. G., & Ghazali, M. C. (2012). Principles in halal supply chain management. *Journal of Islamic Marketing*, 3(3), 217-243.
- Yin, R. K. (1994). *Case study research: Design and methods, second edition*. California: Sage.
- Zsidisin, G. A. (2003a). A grounded definition of supply risk. *Journal of Purchasing & Supply Management*, 9, 217-224.
- Zsidisin, G. A. (2003b). Managerial perceptions of supply risk. *Journal of Supply Chain Management*, 39(1), 14-25.
- Zsidisin, G. A., & Ellram, L. M. (2003). An agency theory investigation of supply risk management. *Journal of Supply Chain Management*, 39(3), 15-27.
- Zsidisin, G. A., Ellram, L. M., Carter, J. R., & Cavinato, J. L. (2004). An analysis of supply risk assessment techniques. *International Journal of Physical Distribution & Logistics Management*, 34(5), 397-413.
- Zsidisin, G. A., Panelli, A., & Upton, R. (2000). Purchasing organization involvement in risk assessments, contingency plans, and risk management: An exploratory study. *Supply Chain Management: An International Journal*, 5(4), 187-197.
- Zsidisin, G. A., Wagner, S. M., Melnyk, S. A., Ragatz, G. L., & Burns, L. A. (2008). Supply risk perceptions and practices: An exploratory comparison of German and US supply management professionals. *International Journal of Technology, Policy and Management*, 8(4), 401-419.
- Zulfakar, H. M., Anuar, M. M., & Ab Talib, M. S. (2014). Conceptual framework on halal food supply chain integrity enhancement. *Procidia-Social and Behavioral Sciences*, 121, 58-67.