



## **Effect of Halal Transportation Towards Supply Chain Performance in Halal Food Manufacturing**

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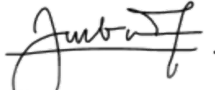
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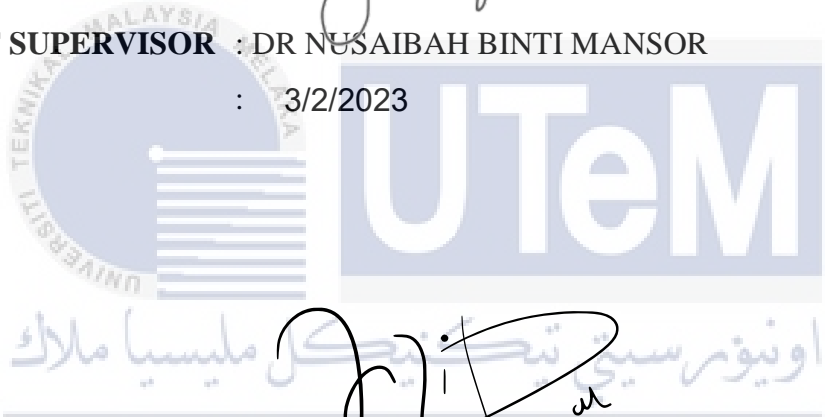
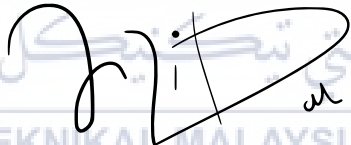
**BACHELOR OF TECHNOLOGY MANAGEMENT (SUPPLY CHAIN AND LOGISTICS MANAGEMENT) WITH HONORS**

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I hereby acknowledge that this **thesis “The Effect of Halal Transportation Towards Supply Chain Performance in Halal Food Manufacturing”** has been accepted as part of fulfillment for the degree of Bachelor of Technology Management (Supply Chain and Logistics Management) With Honors.

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# **Effect of Halal Transportation Toward Supply Chain Performance in Halal Food Manufacturing**

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This thesis is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology Management (Supply Chain and Logistics Management)

With Honors



Faculty of Technology Management and Technopreneurship  
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## DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled “**Effect of Halal Transportation Towards Supply Chain Performance in Halal Food Manufacturing**” is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

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## DEDICATION

Alhamdulillah and praise to Allah. I would like to appreciate the dedication to my beloved family members and siblings especially to my parents Haron Bin Rais and Kartini Binti Baris, who sacrifices a lot of things for me such as in financial and mental support that make me survived until now on my degree studies. Without their support and motivation, I won't go further.

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Thank you very much! Without all of them, it is impossible for me to complete this Final Year Project within this short period time.

## ABSTRACT

This study aims to determine the relationship between the Effect of Halal Transportation Towards Supply Chain Performance in Halal Food Manufacturing. The theory used in this study is Descriptive and Explanatory studies. Not only that, this studies also was conducted by using quantitative method. A survey methodology was used in this study. This research involves the utilization of questionnaire which was administered among 170 employees working in the selected organization. This study was conducted in selected Halal product food company in area of Melaka. Furthermore, the results obtained from respondent of questionnaire survey taken will be analyzed using statistical tool known as Statistical Package for Social Science (SPSS). The relationship between effect of Halal transportation and supply chain performance was analyzed using the Cronbach's Alpha tests. The dominant factor that affects supply chain performance were identified using Multiple Regression analysis. From the result, technological, organizational and economic factors have significant relationship in effecting Halal transportation towards supply chain performance. There are contribution and recommendation from this study research that can be used by the future researcher which also leads to increasing awareness about Halal transportation.

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## ABSTRAK

Kajian ini bertujuan untuk mengetahui hubungan antara Kesan Pengangkutan Halal Terhadap Prestasi Rantaian Bekalan dalam Pembuatan Makanan Halal. Teori yang digunakan dalam kajian ini ialah kajian Deskriptif dan Penerangan. Bukan itu sahaja, kajian ini juga dijalankan dengan menggunakan kaedah kuantitatif. Metodologi tinjauan digunakan dalam kajian ini. Penyelidikan ini melibatkan penggunaan soal selidik yang telah ditadbir di kalangan 170 pekerja yang bekerja di organisasi terpilih. Kajian ini dijalankan di syarikat makanan produk Halal terpilih di kawasan Melaka. Seterusnya, keputusan yang diperoleh daripada responden kajian soal selidik yang diambil akan dianalisis menggunakan alat statistik yang dikenali sebagai Statistical Package for Social Science (SPSS). Hubungan antara kesan pengangkutan Halal dan prestasi rantaian bekalan dianalisis menggunakan ujian Alpha Cronbach. Faktor dominan yang mempengaruhi prestasi rantaian bekalan dikenal pasti menggunakan analisis Regresi Berganda. Hasilnya, faktor teknologi, organisasi dan ekonomi mempunyai hubungan yang signifikan dalam mempengaruhi pengangkutan Halal ke arah prestasi rantaian bekalan. Terdapat sumbangan dan cadangan daripada kajian kajian ini yang boleh digunakan oleh pengkaji akan datang yang juga boleh mendorong kepada peningkatan kesedaran tentang pengangkutan Halal.

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# CHAPTER 1

## INTRODUCTION

Halal transportation in Halal food manufacturing is really important especially for Muslim products manufacturers and producers that applying Islamic concepts which is for preserving Halal integrity in their product to meet the demand for their Muslim's consumers due to the growth of Muslim population in this country that has been continuously increase. The purpose of this research is to determine the effect of Halal transportation towards supply chain performance which is in this chapter one, it is more focusing on the background of the study, statement of the problem, objectives of the study, research question definition of term, and scope and limitation of study.

### 1.0 Background of Study

Since Halal food industry has grown progressively worldwide that also with the increasingly Muslim people, most food producers bringing good aspect such as safety, clean and hygiene to prepare their business products. Muslims seller or producer especially the one who is serving foods for their customer must follow the Shariah Law which is must be Halalan Toyyiban that won't give any doubt to the Muslim consumer. In Malaysia, all of the producer must obtain and apply Halal certification which be a sign for their foods is from Halal products. When it is related to food or any form of products that need Halal processing, the terms of 'Halal', 'Guaranteed Halal' or Muslim Food indicate and defined as a permissible to be consumed by any Muslims consumer which is in this kind of product, it is a must for the products not to be contaminated with any substance or item from animals that are forbidden to Muslims or any substance that considered impure by Islamic law. Not only that, Muslims consumer are one of the huge targeted markets in food companies demand in Malaysia which guarantees the food produced must be complied with Islamic principles (Hosseini, 2019).



Figure 1

### Standard Halal Logo by JAKIM

In Malaysia, the department of Islamic Development Malaysia (JAKIM) has been entrusted to rule any Halal issues related to the production of Halal products. To guarantee the Muslim consumer on the halal products, JAKIM has developed Halal assurance system that known as MS 1500:2009 a general guideline for production, preparation, handling and storage Halal foods. The purpose of developing this system is to ensure that Halal standard also concerned on the issues related to the hygienic, cleanliness and safety on how they processing the food from beginning until the end of production. The Halal transportation of goods or cargo services is a key component of the practice of physical segregation. The terms of “Halal transportation” is used to describe the level of customization and segregation used in the transportation to supply only Halal goods and freight chain services. By separating shipments of Halal and non-Halal commodities such as using different pallets, containers, and refrigerators, a strict Halal segregation strategy would improve a performance of logistics service providers in terms of service quality and flexibility (Noorliza, 2019). Based on the requirements and guideline for Halal transportation, Halal products must be segregated along the chain to ensure the integrity and quality.

The Halal supply chain consist of many functions including in the transportation activities. According to Ngah *et al* (2017), there were many of food manufactures still being reluctant to include Halal transportation services as part of their business operation. The Halalness of food products could be in doubt if the product were not handled aligned to the Syariah’s requirements. Mohamed (2020) said that if Halal products especially foods products were not handled accordingly to the Halal requirements, the Halal quality will be questioned due to the break of chain in the Halal



supply chain activities. By creating the technology, organization and environment (TOE) framework, this study has determined the essential elements that encourages top managers of Halal food manufactures to adopt Halal transportation services. In this research study, researcher was determined what is Halal transportation and what is the relationship between Halal transportation and supply chain performance in the Halal food manufacturing.

### **1.1 Problem Statement**

Food product or any other products that needs to deliver to the Muslim consumer requires certain procedure of Halal requirements which is will ensure the quality of the products that concerning on the ingredients used in the product and how they process it. The process of manufacturing product is including on how they transport the Halal products. According to Ngah *et al* (2017), even though the community understands and knows the importance of Halal transportation, ensuring the integrity of Halal, series of interviews were executed with the Halal transportation provider which is they claimed that the adoption of Halal transportation services among Halal manufactures is still low. Moreover, most of the food producer still reluctant to apply for Halal certification for their products and good as one of the answers is because of the effort and cost they will bear that motivate them not to apply Halal certification in their production processes (Ngah *et al* ,2017).

Halal practices must be considered in the entire supply chain from time to time during the processing of the Halal products. It is a huge responsibility for the Halal productions and foods manufacturers to keep all of the processes are Halal. According to Haleem (2018) which said that Halal transportation among Malaysian Halal food manufactures is still lacking. The contribution of academic were needed to ensure the manufacturer and consumer who applying Halal in their life to understand clearly about the perspective of Halal especially in Halal transportation. Thus, many analyses need to be taken on the perception of producer in the Halal transportation and how it effects supply chain performance in Halal food manufacturing.

## **1.2 Research Objectives**

### **1.2.1 General Objective**

The objectives of this research are to study about the Effect of Halal Transportation Toward Supply Chain Performance in Halal Food Manufacturing.

### **1.2.2 Specific Objectives**

The specific objectives for this research of study are:

- a. To determine Halal transportation adoption factors.
- b. To identify the relationship between the effect of Halal transportation towards supply chain performance.
- c. To analyze the most significant Halal transportation adoption factor.

## **1.3 Research Questions**

In this research study, the research question will be crucial to determine:

- a. What are the Halal transportation adoption factors?
- b. What is the relationship between the effect of Halal transportation towards supply chain performance?
- c. What is the most significant Halal transportation factors?

## **1.4 Scope and Limitations of Study**

This research study is focusing on the effect of Halal transportation towards supply chain performance in Halal food manufacturing. This study will be conducted for among 170 respondents from the employees and employers of Halal food product company in area of Melaka. The selected respondents will be chosen randomly which is after that the respondents will be distributed with questionnaire to answer the related question about this research study.

The limitation of study that existed from this research study is the accuracy of the data from the respondent that will be worried as they were chosen randomly by researcher. The researcher can't pay their attention to all respondent as there are many respondents were taking the questionnaire. Not only that, it will be difficult for the

researcher as the time given during conducting this research study is too short. This study needed to be complete in short period time which is only in 10 months.

### **1.5 Significant of Study**

In this section, the research may give information about Halal transportation. Through this study, the finding may give the understanding on how Halal transportation will affect to supply chain performance in Halal food manufacturing. This research may also give an information on how Halal transportation give impact to the food manufacturing whether it is in positive or negative aspects. By determining the relationship between Halal transportation and supply chain performance, the finding give the awareness of what is Halal transportation and on how to improve the supply chain performance based on the hypothesis of research study.



## 1.6 Definition of term

In this section, they will be definition for some word from this research of the study:

<b>Words</b>	<b>Definitions</b>
Halal	An Arabic word that gives meaning of permissible or lawful
Shariah law	Islamic law which refers from primary sources of Islam, Al-Quran and Sunnah
Halal transportation	One of the Halal supply chain activities which is related to the movement of products that need to follow Halal requirements in its processes.
Supply chain performance	The approach to determine the performance of supply chain system.
Transportation	Movement of product from one location to one another
Supply chain Flexibility	The ability to easily make change on something in the production including the transport capacity and raw material purchase.
Supply chain Responsiveness	The ability of supply chain to respond quickly and positively within the time to the customer's need.
Customer services	Support given by the marketers for the consumer that give value for them
Consumer	It is a buyer or user who bought the product

## 1.6 SUMMARY

In this chapter, the researchers have discussed about the background of study, problem statement of study, research objectives and questions, significance of study, limitation of study and the definition of terms. In the next chapter, the researcher will be carried out the literature review of the study research. There will be broader information about this study research in the next chapter.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 INTRODUCTION

This chapter will discuss about the literature review on the effect of Halal transportation towards supply chain performance in Halal food manufacturing. The concepts gained from this literature were used to explain the conceptual framework and hypothesis for this research. This research was classified into sections which is the definition of term of Halal, Halal transportation and supply chain performance, the effect of Halal transportation in supply chain performance. From all of this research, it will explain in detail how Halal food supply chain works.

#### 2.0 CONCEPT

##### 2.1 Concept of Halal

All knows that one of the populous religions in the world is Muslim population that make sense for all of us need to know what is the concept of Halal. Halal is an Arabic word that give the meaning of permissible, lawful or allowed by Islamic law (Ibn Manzur, 2019). According to the Islamic law and principle from the teaching of Al-Quran and the conduct of Prophet Muhammad in Hadith, Halal were generally means lawful and permissible (Yusuf, 2016). Halal concept especially for foods is define as the process is truly from farm to the table, and it needs nutritious items that has been prepared from permissible ingredient in a clean and hygienic manner and must compliant with the Islamic law (Hanzaee and Ramezani, 2011). There are one of the pieces of evidence from Quranic verses which tell:

O you who believe! Eat of the good things (toyyib) that We have provided you with, and give thanks to Allah if Him it is that you serve. (Al-Baqarah 2: 172)

From these Quranic verses, it is telling that Islam has sets two essential aspects for food consumption which is Halal (permissible) and Toyyib (good quality) (Zalina,2008). This verse explains that Islam ask its believers, all Muslims to find *rizk*

that Halal and Toyyyiban that the foods they eat must be a Halal food and in a clean condition that is not prohibited by Islam with the purpose of avoiding it from ruining their bodies and lives (Omar *et al* and Jaafar, 2011). According to Tieman *et al*, 2011, he believed that Halal status for food product is not only about the ingredients or materials, but the product also can be questioned about the quality of Halal if it is expose to Haram entire the supply chain process such as in storing or transprrtation. The consumption of Halal is certified as a preferred products that fulfil with Shariah requirement and rule to be guarantee as good hygienic, clean, safe to be consume and especially quality. The consumption of Halal also due to the changes of food industry on worldwide (Ab Talib *et al* and Ai Chin, 2018) that causing many global companies such as McDonalds and Nestle certified their products with Halal certification which is applying Halal processing in their production (Fischer *et al*, 2016).

## 2.2 Halal Transportation Adoption

Halal were defined as permissible, lawful or allowed in Islam based on Tieman (2011) and Wilson and Liu (2010). Process of Halal supply chain is applied the same as how conventional supply chain works, but it must embed accordingly toward the principle of Shariah law (Omar, 2013). Halal food supply chain were mentioned by Omar *et al* (2017) that it must comply with shariah law in all activities including warehousing, transportation, sourcing, handling product, inventory management and procurement. The halal status of foods not only depends on the ingredients but contamination can be occurred at the entire supply chain process, it is including in farming, manufacturing, warehousing, transportation and retailing as the effect of contact between Halal and Haram food's products (Iranmanesh, 2019).

The Halal transportation adoption occurs when the organization of the production make a decision to use innovation for the advantage in the production that will make it easy for them to produce more and more product. Halal transportation quite new for some company as it requires the manufacture of product to applying the concept of Halal and make sure that all of the processes of making the product were separated from non-Halal ingredients. According to Ngah *et al* (2014), Halal transportation is concerning to separate the Halal and non-Halal products to make sure and preserve the integrity of the Halal products. Halal transportation is one of the essential activities in

supply chain (Pahim, 2012) as without the adoption of Halal transportation in the production, there will be no Halal products may be moved from manufacturing location. Halal products should not be transport with other non-Halal product such as in same container or pallet or anything else as it damages the Halal quality of the product (Tieman *et al*, 2011). There are differences between Halal transportation services and conventional transportation services which is the Halal transportation service is a service that serve product complying with Halal requirements but for the conventional transportation, it is seeks for the aim to increase the efficiency and reduce the cost in the production (Ngah *et al*, 2014). To keep on maintaining the Halal, the tools and substance used must not be shared with another non-Halal product. Halal providers were certified by the JAKIM based on the MS 2400-1:2010; Halalan Toyyiban Assurance pipeline part 1: Management System Requirements for Transportation of goods and/ or cargo chain services.

## **2.3 Theoretical Background**

### *2.3.1 Technology, Organization and Environment (TOE) framework*

According to Ngah *et al* (2021), the technology, organization and environment (TOE) framework was created by Tornatzky and Fleisher (1990) from the previous models which are including three dimensions: technology, organization and environment. The technology will be explained about the existing technology and to be adopted, for the organization, it will be describing the characteristics or the limitation of adopted technology, while for the environmental factor, it explaining the surrounding context on how the firms conduct their business. The TOE framework in contrast to the majority of other adoption theories and models as it is a general theory that provides several dimensions of impact without outlining which variables should be included in the model (Zhu and Kraemer, 2005). This model enables researcher to insert wide range of others variables for a more thorough analysis of why people choose to accept and adopt the new innovations. The majority of research that use TOE framework, with varied variables depending on the context of their investigation, according to the literature in various fields of study (Ngah *et al*, 2019).

According to the Oliveira and Fraga Martins (2011), the TOE framework is frequently in technology adoption and innovation across the spectrum of technologies,