

DEVELOPING *HALAL* FOOD SUPPLY CHAIN INTEGRITY MODEL IN LOGISTICS INDUSTRY

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Abstract

***Purpose** –This conceptual paper aims to have a review on research proposal title: Developing Halal Food Supply Chain Integrity Model in Logistics Industry. The movement of goods and services starting from farm to consumer is reviewed to be critically vulnerable to the hazards of food safety contamination and cross-contamination with non-halal materials or products. It has become among the pioneer attention of Halal Development Corporation (HDC) that a Halal Standard on global logistics based on ‘farm to fork’ concept is required to ensure halal integrity is uphold throughout the food supply chain. This has further triggered the rising interest in halal food supply chain integrity. Hence, developing Halal food SC integrity model is crucial as a benchmark and perhaps as role model in the logistics industry.*

Keywords: Halal Food, global logistics, integrity model, safety contamination

1. Introduction

The demand for *Halal* food is increasing due to the promotion toward positioning Malaysia to be the World *Halal* Hub through MALTRADE. Malaysian government had established *Halal* Industry Development Corporation (HDC) to assist *halal* industry players and initiated the *halal* infrastructure such-as *Halal* Park which are currently 21 park set-up in Malaysia. The Global *Halal* Development Corporation (GHDC) with relevant government

authorities also offered *Halal* food SC consultation, to enhance their knowledge and skill in marketing *Halal* food products locally or globally. Platforms are set to bring together *Halal* Food SC players thru joint supply chain development by the Global *Halal* Development Corporation (GHDC) with many government authorities. The reciprocal relationship could benefited *Halal* food SC in assuring *Halal* integrity is uphold during the product flow from origin to consumer for business sustainability.

The critical issue as reported by Consumers Association of Penang (CAP) in its book of *Halal* Haram, published in 2006, many LSPs are found not to disaggregate the *Halal* products from non-*Halal* products. In addition Malaysia too encounter challenges with the trading countries which use different guidelines and rules of HSC, thus Malaysia *Halal* Certification bodies need to have uniformity to ensure *Halal* Supply Chain Integrity. JAKIM (2012) reported, there is only one company certified with JAKIM *Halal* Certification on its warehousing services (MAHA, 2012). Simultaneously, *Halal* Development Corporation (HDC) has reported on its website that there is only one logistics company which had provided *Halal* Logistics services in compliance with JAKIM and Malaysia Standard for *Halal* Logistics (MS 2400) (HDC, 2012). This has further triggered rising interest in *Halal* food supply chain management, both from the academic and corporate perspective. The integrity of *Halal* food can only be protected by ensuring that no direct contact with non-*Halal* products throughout the whole supply chain. Contaminated *Halal* food will eventually lead to wastage and increase in supply chain cost as the food no longer consumable by the consumers. Hence, the *Halal* food SC player's roles is crucial in ensuring *Halal* integrity from origin to consumer.

1.1 Problem Statement

The flow of *Halal* food SC is critically vulnerable to hazards of food safety contamination & cross-contamination with non-*halal* materials or products. Upholding the *Halal* integrity is the key factors in *Halal* food industry especially with the sizeable and growing Muslim population. However, the biggest challenges in developing the *Halal* food SC integrity model is currently there is in-adequate study. The *Halal* integrity model is crucial as the growing economic development in Muslim countries. In-addition the emergence of potential *Halal* markets in the world especially China and India, as important to determine sustainability in *Halal* food industry.

1.2 Research Question

- 1.2.1 What is the current *Halal* integrity model used by *Halal* food SC players in Malaysia?
- 1.2.2 What are the current challenges in ensuring *Halal* integrity among the *Halal* food SC in logistics industry?
- 1.2.3 How do *Halal* food SC players handle the *Halal* integrity challenges?
- 1.2.4 What are the current challenges in ensuring *Halal* integrity among the *Halal* food SC in logistics industry?
- 1.2.5 Who is responsible for ensuring *Halal* integrity along the SC network?

1.2.6 What are the triple bottom line consequence of sustainability from implementation of *Halal* integrity along the *Halal* food SC?

1.3 Research Objectives

General objective

To have an overview of the challenges & impact of *Halal* integrity toward sustainability in the Food SC.

Specific Objectives

1. To study the current *Halal* food supply chain integrity model in the logistics industry.
2. To investigate the challenges in ensuring (uphold) *Halal* integrity among the food supply chain players.
3. To develop *Halal* Food Supply Chain Integrity Model in the logistics industry for sustainability.

1.4 Significance of the Study

1. The *Halal* Food SC Integrity Model from this study could be used as an indicator to uphold *halal* quality assurance for business sustainability.
2. The study could increase “Trust” & “Commitment” to uphold *Halal* Integrity among the Food SC players
3. The study will provide a role-model, information & further enhancement for future research and information for policy makers in the future.

2. Literature Review

In Malaysia, *Halal* is under the authority and jurisdiction of the Department of Islamic Development Malaysia (JAKIM), a government agency under the Religious Division, Prime Minister’s Department Malaysia, and *Halal* Industry Development Corporation (HDC) under the purview of Ministry of International Trade and Industry (MITI).

As reported by Malaysia Investment Development Authority (MIDA, 2012), the Global *Halal* food industry worth USD2.1 trillion annually, demand for Syariah compliance in handling & storage of *Halal* product is increasing due to Muslim Population growth (3Billion -2010) and popularity of *Halal* food among non-Muslim in-addition the perception *Halal* foods are cleaner, healthier and tastier.

In realizing the large potential of *Halal* business and continuous unique position and strength of *Halal* product demand, the Malaysian government had established *Halal* Industry Development Corporation (HDC) in 2006 to spearhead and coordinate *Halal* industry. Currently there are 21 *Halal* parks in Malaysia to assist the *Halal* industry player to market their product or services locally or globally.



Source: HDC

2.1 Halal Supply Chain Management (SCM)

Halal Definition

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 like, 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).



Segmentation of *Halal* Product and Services –
Source: HDC

Supply Chain Management (SCM) – definition

“Supply chain management (SCM) encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.”

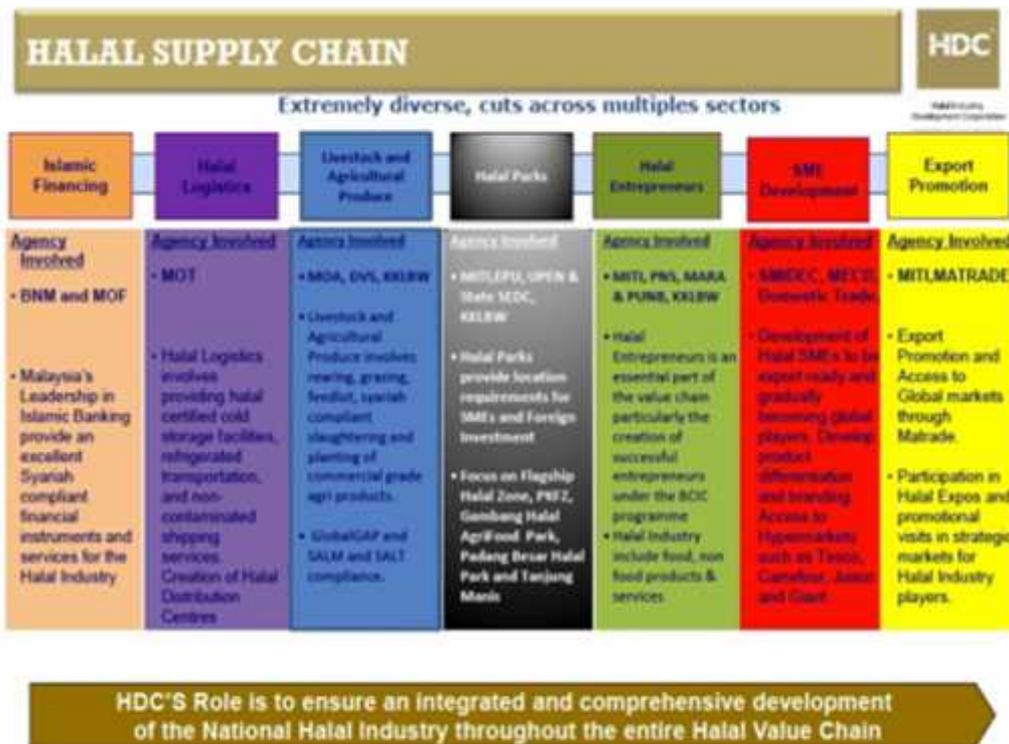
Council of Supply Chain Professionals



An overview of Supply Chain Management actors

Halal Supply Chain – Definition

Halal SC is the management of a Halal network with the objective to extend the Halal integrity from source to the point of consumer purchase (Source: Malaysia Standard).



Developing Halal Food Supply Chain Integrity Model in the Logistics Industry

Source : HDC 2012 ¹⁰

Logistics Management

“Logistics Management is that **part of Supply Chain Management** that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers’ requirements.” *Council of Supply Chain Professionals*

Halal Logistics definition is a process of planning, implementing and managing the efficient, seamless flow and storage of: *Halal* Certified products (Raw materials, semi-finished or finished good) from the origin to the final consumption ensuring full Syariah compliance (Source: Mariam 2012).



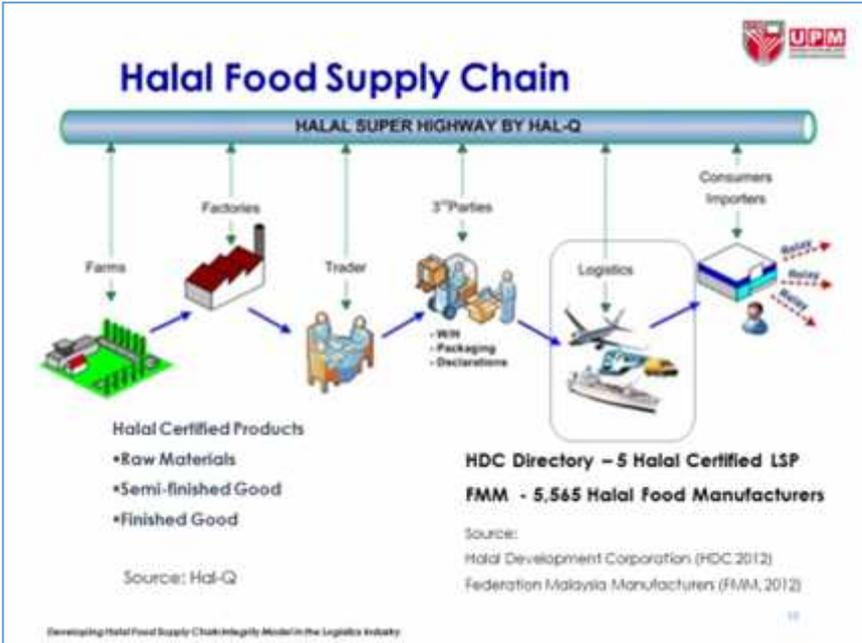
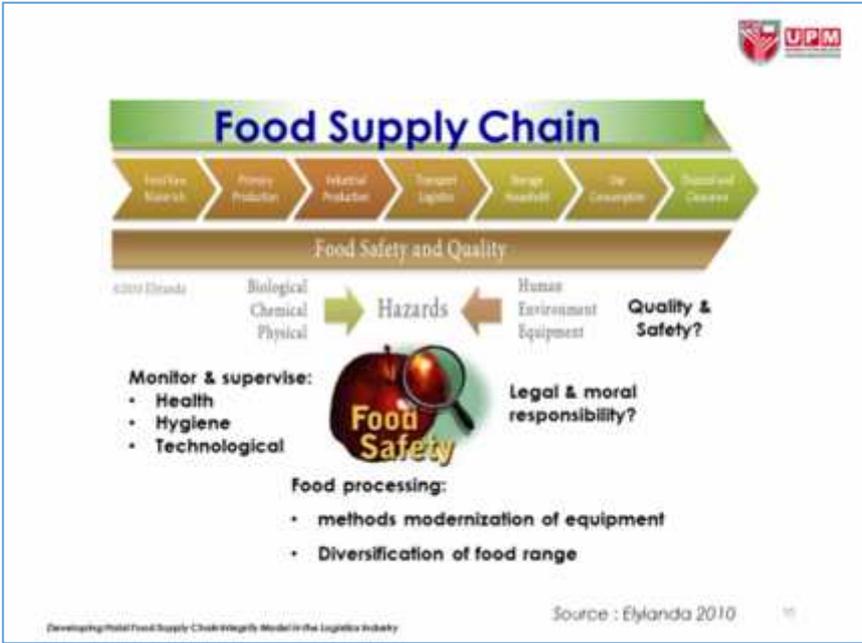
Logistics Service Provider (LSP)

A company that provides management over the flow of goods and materials between points of origin to end-use destination. The provider will often handle shipping inventory, warehousing, packaging and security functions for shipments (source: business dictionary)

The logistics service provider handling the *Halal* certified products should also be registered with JAKIM using Malaysia *Halal* Logistics Standard: MS2400-1-2010 Distribution, MS2400-2-2010 Warehousing and MS2400-3-2010 Retailing.

Halal Food Supply Chain

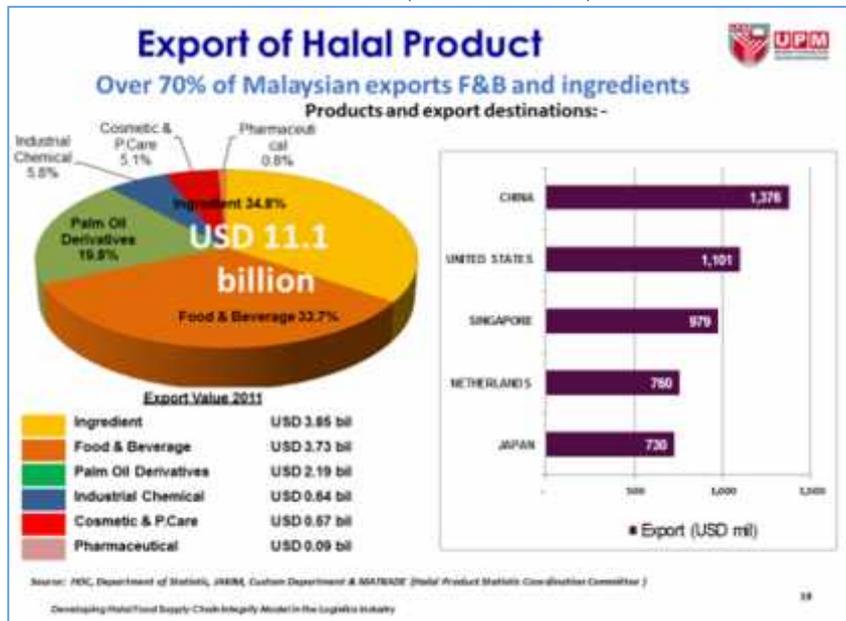
Currently, in HDC directory there are only five (5) company certified as Halal LSP compare to five thousand five hundred and sixty-five only (5.565) Halal food manufacturer (FMM2012). Therefore, the need to increase awareness to the LSP on halal is also prerequisite to support the Halal food SC players.



The above is the characteristics of Food SC and flow of *Halal* food SC from origin to consumer using *Halal* Super Highway. Below is the demonstration of *Halal* Superhighway link with Global SC.



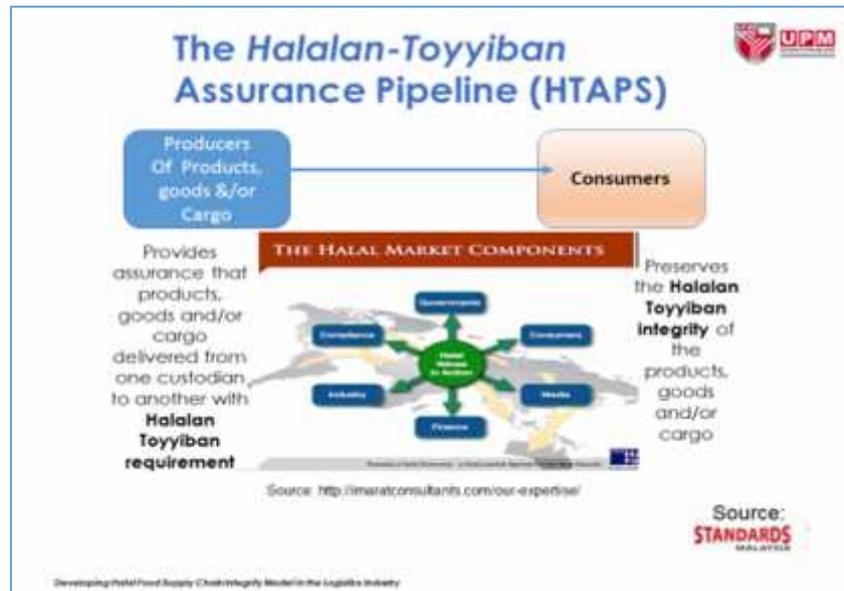
Malaysia export 70% of *Halal* product of F&B and ingredients amounting of USD11.1billion contribute to 33.7% (Source: HDC)



Halal Integrity

As mentioned by Zulfakar 2012, whether the Halal integrity of the food products can really be guaranteed and can the food products remain Halal, throughout the whole supply chain process in the present food trade scenario.

The Halalan-Toyyiban Assurance Pipeline (HTAPS)



Halal food SC players should abide with the HTAPS Principle, understand the HTAP Product Handling Process Flow, HTAP : 3 Component standards and also compulsory to follow all HTAPS Compliance. The International Halal Integrity Alliance (“IHI Alliance”) was formed on May 2006 in the inaugural World Halal Forum (May 2006) by Malaysian former Prime Minister Y.A.B. Dato’ Seri Abdullah Ahmad Badawi as Chairman of the Organization of Islamic Conference (OIC).

Literature review on Halal food SC Integrity description.

Year	Author	Title	Halal Integrity in Food Supply Chain Description
2009	IHIAS	International Halal Integrity (IHI) Alliance	Halal Certification & Halal Standard Food safety management systems; designed to ensure safe food supply chains worldwide. Incorporates existing industry food standards such as Hazards Analysis Critical Control Point (HACCP) and Good manufacturing Practice (GMP) required by both government & industry.
2012	Tieman	Principles in Halal Supply Chain Management	The Halal SC Model can be an important instrument to design & manage Halal food SC in extending Halal Integrity from source to point of consumer purchase.
2012	Zulfakar, Anuar, M: & Talib, S	Conceptual Framework on Halal Food Supply Chain Integrity Enhancement	Big challenge for all the parties involved to ensure the integrity of the Halal product is intact throughout the whole supply chain. To protect Halal integrity, complete understanding of the whole Halal food SC is required.
2012	Zulfakar, Jie F, & Chan C	Halal Food Supply Chain Integrity: From A Literature Review To A Conceptual Framework	The limited numbers of publication in the research theme of Halal supply chain & Halal integrity show that there is a significantly huge gap in the body of knowledge. Halal Integrity – One (1) Journal Paper only. 28

Developing Halal Food Supply Chain Integrity Model in the Logistics Industry

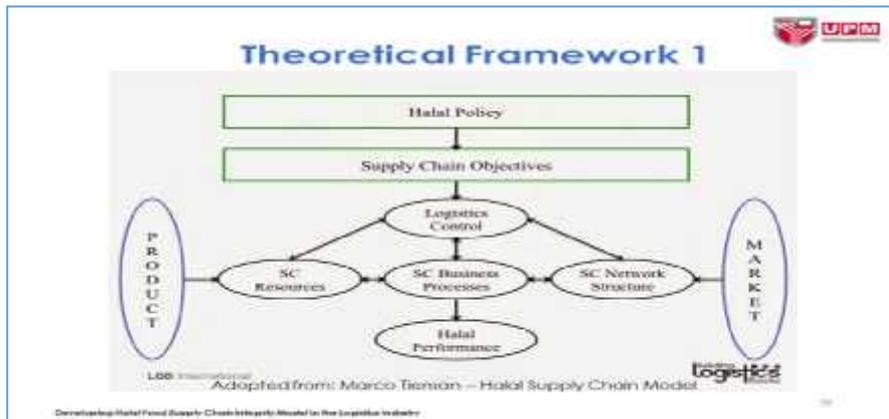
Year	Author	Title	Halal Integrity in Food Supply Chain Description
2013	Bohari, AM; Cheng WH & Fuad, N	The competitiveness of halal food industry in Malaysia: A SWOT ICT analysis	Malaysia is a leader in the halal food benchmarking. The positive outlook on Malaysia's competitive edge in the halal food industry is echoed by subsequent measures taken by the government. Conception of the Halal Master Plan addressing issues of certification sector development, Halal integrity, implementation, timeframes & responsibilities.
2012	HDC	Business Opportunities in Halal Industry	Over 70% of Malaysia exports F&B and ingredients. Halal superhighway link with the global supply chain. Strong competitive advantage in terms of project location & potential markets that give lucrative returns.
2009	Muhammad, Nik; Isa, F & Kifli, B	Positioning Malaysia as Halal-Hub: Integration Role of Supply chain Strategy and Halal Assurance System	As competitive free trade environment, which dominates the world eco, it's crucial for global Halal industry players to ensure that Halal food products and services find their own strength & capitalize n their market niche.
2013	Talib, MS; Rubin, L; & Vincent K	Qualitative Research on Critical Issues in Halal Logistics	Presently there is no standardized Halal guidelines because different countries & certification authorities applies different practices. In order for Halal logistics to be successfully implemented & ensuring Halal integrity throughout the logistics network, a one-size-fits-all rules are needed. 29

Developing Halal Food Supply Chain Integrity Model in the Logistics Industry

In this research proposal study, the author adopted two (2) theoretical framework and combine both to design a new Conceptual framework for developing Halal food SC integrity model in the logistics industry.

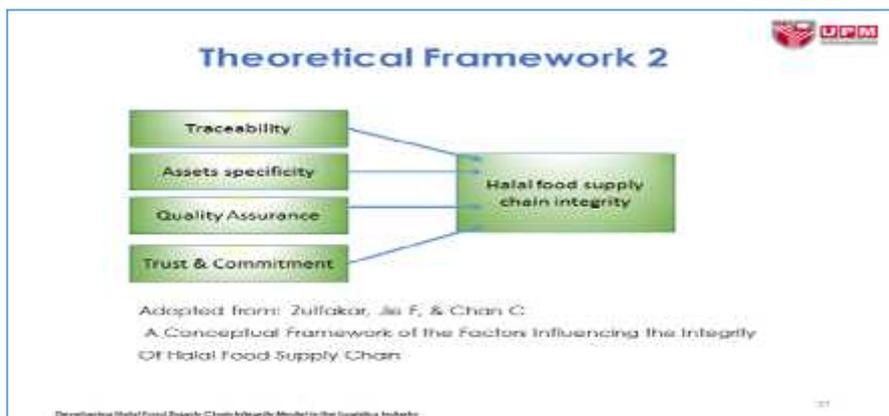
As mentioned by Tieman 2013, *Halal* supply chains (= **halal supply chain performance**) need to be EFFECTIVE (addressing process quality as well as minimize waste), EFFICIENT (low cost and high utilization of dedicated assets) and ROBUST

(little halal rejects and high availability of halal assets). An optimal halal supply chain should have a strategic fit between corporate strategy, halal policy, supply chain objectives and the logistics parameters as well as an alignment between product characteristics & market requirements and the logistics parameters. **Although this is not an easy process it is important to get started, step-by-step, in professionalizing your halal supply chain.**

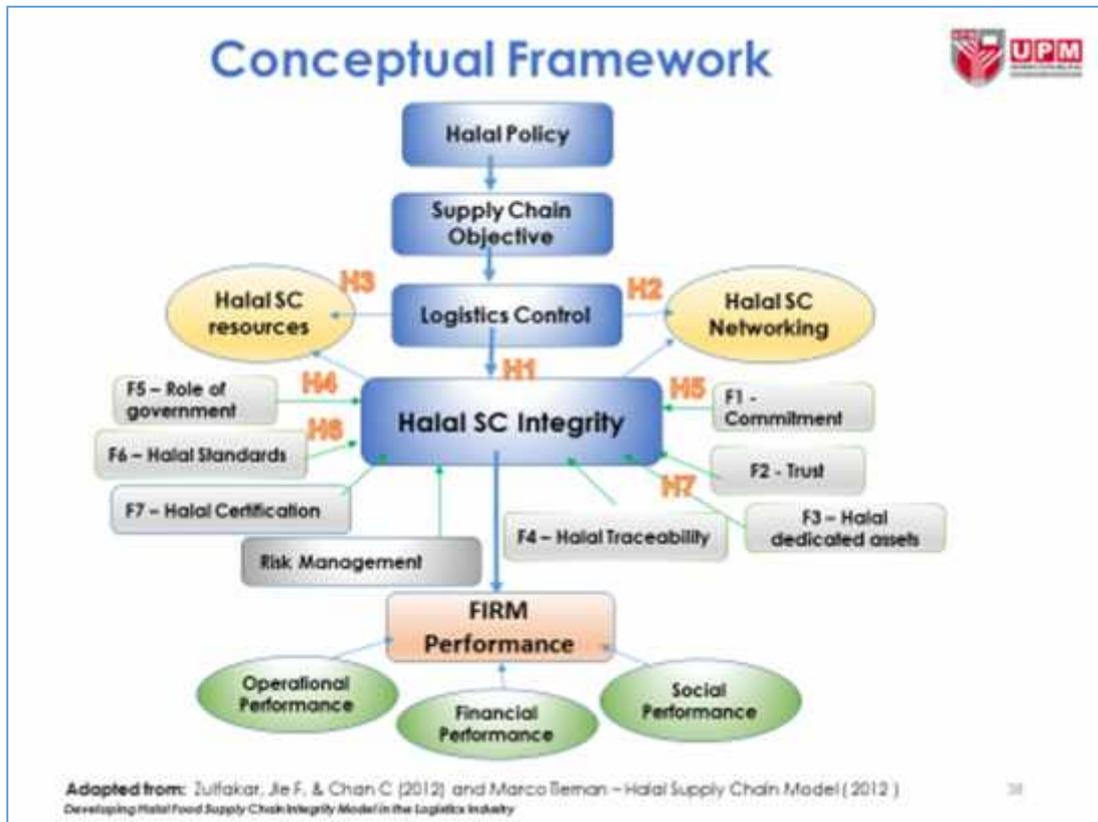


Framework 1

Theoretical



Theoretical Framework 2



Author conceptual framework.

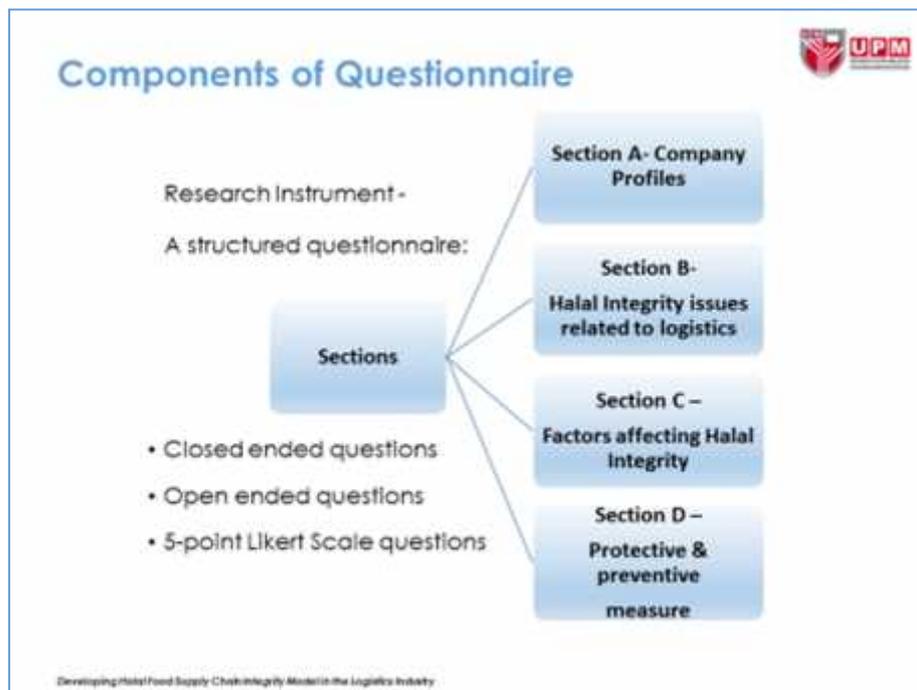
Hypotheses

- H1 – The better the **logistics control** the greater to uphold of Halal food SC Integrity.
- H2 – The greater integration of **Halal food SC networking** the greater Halal Integrity.
- H3 - The higher awareness of **Halal Food SC resources** influence Halal Integrity commitment.
- H4 - The more supportive **role of government** the more Halal food SC player involvement.
- H5 - The **commitment** of Halal food SC player could strengthen Halal Integrity assurance among Halal food SC player.
- H6 – The better standardization of **Halal Standard** could encourage higher Halal Integrity among Halal food SC player.
- H7 – The more reliable **Halal traceability** system the more strengthen the Halal integrity among Halal food SC player.

4. Methodology

Methodology are by mixed-method where the qualitative and quantitative approach are used later triangulation will be conducted upon data collection. Targeted respondents are related person who are the Halal food SC players where sample size approximately 20% from the 5,565 population of the Halal food manufacturers as source from Federation of Malaysian Manufacturers and also listed in SSM and HDC. Sampling frame using

Systematic Random Sampling (stratified). Qualitative approach are through focus group or Case study. Quantitative approach are through survey from questionnaires as listed below:-



Data collection are from Pilot study (to verify questionnaire), E-mail, postal or Face-to-face interviews. Descriptive Analysis is to determine the characteristics of Halal food SC Integrity in the logistics industry. Factor Analysis is to identify factors that influence Halal food SC integrity in logistics industry. Pearson's Correlation to identify the relationship between independent variables and dependent variable. In-addition the following will also be introduced: Structural equation modelling, Content analysis, Logistics regression and Cluster Analysis.

Expected Result

According To Tieman 2012, There Is No Effective Control Of Halal Food Chains And The Availability And Access To The Required Diverse Range Of Halal Foods Is Not Well Secured. Muslim Countries Need To Expand Their Role In The Halal Food Value Chain. This Should Be Done Through (1) Invest In Relieving Critical Bottlenecks; (2) Establish Halal Parks; (3) Develop A Halal Supply Chain Orchestrator; And (4) Better Protect Halal In Non-Muslim Countries.

The **Halal Food Sc Integrity Model** Is Hoped To Improve The Complexity Network And Encourage Commitment Of Halal Sc In Positioning Malaysia As World Halal Hub. Strengthen Trust Among The Halal Food Sc Networking In The Logistics Industry That Will Resulted To **Sustainability In Business Relationship**. Build More **Professional In Halal Sc & Boost Economics** In Halal Food Sc Through Effectiveness Of Halal Integrity Among The Sc Stakeholders.

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