

# Assessing Barriers to Adopting and Implementing Halal Practices in Logistics Operations

**Dr Abid Haleem<sup>1\*</sup>, Mr Mohd Imran Khan<sup>2</sup>, Mr Shahbaz Khan<sup>2</sup>, Dr Abdul Hafaz Ngah<sup>3</sup>**

<sup>1</sup>Professor of Mechanical Engineering, Faculty of Engineering and Technology, Jamia Millia Islamia, New Delhi-110025, India

<sup>2</sup>Research Scholar, Department of Mechanical Engineering Faculty of Engineering and Technology, Jamia Millia Islamia, New Delhi-110025, India

<sup>3</sup>Senior Lecturer Faculty of Maritime and Business Management, Universiti Malaysia Terengganu Kuala Terengganu, Terengganu, Malaysia

[ahaleem@jmi.ac.in](mailto:ahaleem@jmi.ac.in)

**Abstract:** Due to the increasing demand for Halal products, a need of adopting and implementing Halal Logistics (HL) practices are observed. This paper presents a structural model for barriers to adoption of HL practices with conventional logistics. Halal goods and services are becoming popular in public domain because of the improving disposable income of the masses. Another reason for this emergence as Halal appeals to the consumers who care about the origin of the product, fair trade, sustainability, cleanliness and humane animal husbandry, as Halal products are based on ideas of cleanliness, purity, safety and wholesomeness and set of ethical values. Through this paper, significant barriers to the adoption of HL practices in conventional logistics are identified which are instrumental in delivering consumables with Halal attributes. A structural and hierarchical model of the identified barriers is developed using Interpretive Structural Modelling (ISM) technique. Then, MICMAC analysis has been done to categorise these barriers against their driving and dependence power. We identified that the HL is not mandatory for the issuance of a Halal certificate for Halal manufacturers and this is the primary reason for the lack of demand. The structural model obtained, is in harmony with expert's opinion and literature, this model can help in mitigating these barriers towards effective adoption and implementation of HL practices and ultimately guarantee Halal integrity till consumption. The model so generated can be quite helpful in adopting and implementing HL practices. Through structural and hierarchical model this paper provides a basis for defining the problem faced by practitioner and policy planner involved in incorporating Halal practices in a logistics operation.

**Keywords:** Halal; Halal Logistics; Halal logistics practices; Halal Supply Chain (HSC); Halal Supply Chain Management (HSCM); Interpretive Structural Modelling (ISM); MICMAC.

## 1. Introduction

Products with Halal attributes are no more only a religious matter and not only consumed by Muslims, but it is becoming a symbol of hygiene, safety, wholesome and ethical practices. Thus, Halal is now in the domain of modern business & exchange and is emerging as a new paradigm for assuring quality and affecting way of living by changing people's attitude, tastes and values. Halal word is a 'Quranic' term that deciphers legal, allowed, accepted or permitted whose essence lies in safe consumption. Halal is turning into a worldwide substance in light of improved disposable income of Muslims [1,2] the recognition of Halal products by non-Muslims who are health conscious and care about the environment and the increase in acknowledgement that products labelled as Halal are, safer, healthier, cleaner and tastier.



The concept of Halal does not only consider at the time of manufacturing and but also matters during the point of procuring and consumption of the products. This infers that managing Halal necessitates a supply chain management (SCM) like approach which takes care of product right from the origin till final consumption or disposition. Thus, a strong Halal logistics (HL) system lays down a robust Halal Supply Chain Management policy, which substantiates the commitment and intention of the corporates in establishing an HL practices/HSCM system.

### 1.1 Objectives of the Research

The major objectives of the research undertaken and communicated throughout this paper may be outlined as follows:

- To identify the important barriers to adopting and implementing Halal practices in logistic activities
- To establish contextual relationships among these barriers with the help of expert opinions, group discussion & brainstorming and ultimately develop a hierarchical & structural model using ISM methodology
- To classify the identified barriers using MICMAC and make recommendations

## 2. The concept of Halal Logistics practices

The term logistics can be interpreted as the developing a mechanism control the movement of goods, their handling and storage, and allied information from the source to the point of disposition/consumption with an objective to fulfil the requirement of a customer. Logistics Service Providers (LSPs) act as a medium to maintain the product quality and associated information, till the product reach the designated consumers. Incorporating Halal practices in conventional logistics increases the responsibility of LSPs as products with Halal attributes requires dedicated equipment [3]. All Halal products must be per 'Shariah' which states that products must be 'Halal' as well as 'Toiyyab'; this suggests that product is safe to consume as well possess wholesome characteristics right from the origin till final consumption. Thus, while integrating Halal into logistics operations, the LSPs must assure the consumers that the products during any logistics activity, such as transportation storage or handling, has not breached any Shariah principle [4]. Zailani et al., [5] concluded that HL practices do not degrade the integrity of the Halal product from the source of origin to final consumption during any of its activities. Lodhi [6] maintains that to ensure an efficient & effective practice of HL, that all Halal products must be segregated from other products or substances which can degrade its integrity during key stages in logistics and supply chain activities until it arrives for direct consumption at the final destination.

## 3. Major Barriers to adopting Halal logistics practices

Identifying and overcoming the barriers to adopting HL practices may assure the successful adoption and implementation of HL practices and may help to overcome the major food threats in the modern world. In expert's opinion, idea engineering workshop, extensive literature reviews the important barriers to adoption and implementation of HL practices were identified and enlisted in Table 1.

Table 1: Identification of Major Barriers to adopting Halal Logistics Practices		
Barrier No.	Barrier in Adopting Halal Logistic Practices	References
B-1	Lack of Standardization, Codification and Proper Guidelines for Adopting HL Practices	[3,7]
B-2	Economic Viability of Logistics Services with Halal Practices	[8,9]
	Lack of Government Policies and Support for HL; Weak Enforcement and Lack of a Proper Regulatory Framework for Halal LSPs	[10,11]
B-4	Reluctance of Logistics Service Providers to adopt Halal Practices in their Operations	[1,12]
B-5	Lack of Organizational Culture and Change Management to adopt for HL practices	[13,14]
B-6	Lack of Compatibility and Upgradeability to HL of the existing Logistics	[11]
B-7	Lack of Global Branding of Halal Practices	[15,16]
B-8	Lack of Trained Halal Logisticians and Lack of Capacity Building Programs	[17,18]
B-9	Lack of Robust Information and Communication Technologies Support	[19,2]

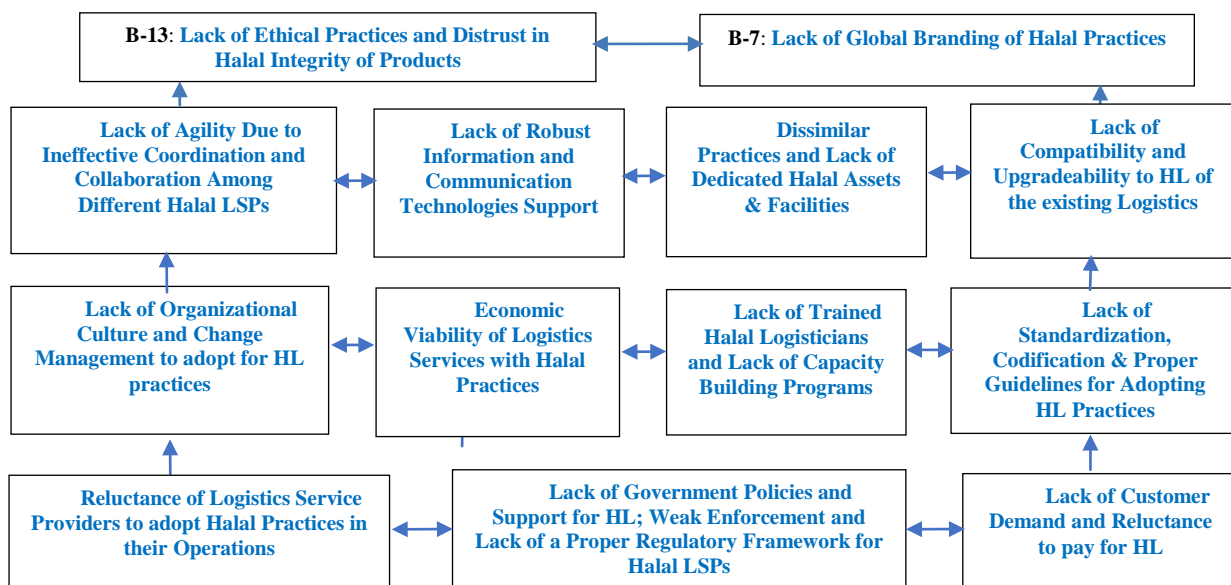
<b>B-10</b>	Lack of Agility due to Ineffective Coordination and Collaboration Among Different Halal LSPs	[19,20]
<b>B-11</b>	Dissimilar Practices and Lack of Dedicated Halal Assets & Facilities	[18,1]
<b>B-12</b>	Lack of Customer Demand and Reluctance to pay for HL	[7,21]
<b>B-13</b>	Lack of Ethical Practices and Distrust in Halal Integrity of Products	[17,22]

#### 4. Solution methodology

As mentioned in above section the objective of this study is to analyse the barriers to adopting and implementing HL practices. In this study, we are developing a hierarchical structural model using ISM. The input to ISM is expert's opinion and the available literature.

##### 4.1 Interpretive Structural Modelling (ISM) Methodology

ISM as a research tool was developed by Warfield [23] and is a well-defined methodology to identify and outline various components categorising a problem. In this research, ISM methodology is adapted from Sushil, [24], Luthra [25], Khan et al., [9] Saurikihia et al., [26] and a structural model is obtained using this methodology which is shown in Figure 1.



#### 4.2 MICMAC Analysis of Barriers to Adoption and Implementation of Halal Logistics Practices

After developing a structural and hierarchical model, MICMAC analysis has been undertaken to classify the barriers by their driving and dependence power (Shown in Figure-2). Here the sum of "1's" in the row (taken from final reachability matrix-Annexure III) for all the corresponding variables give the driving power. Similarly, the sum of "1's" in the columns provide dependence power. The classification as mentioned above is discussed in the coming sub-sections.

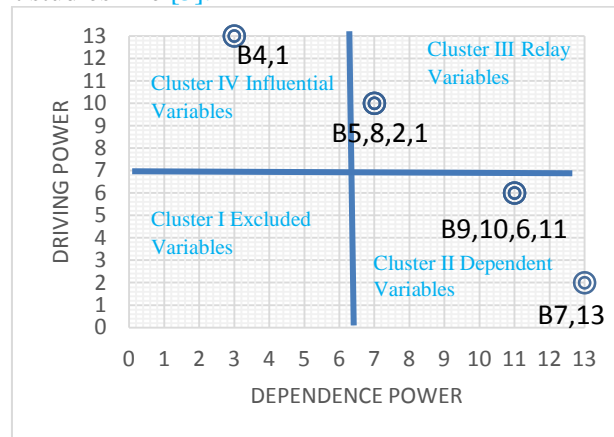
#### 5. Discussion on Results and Findings

Despite increasing market share of the Halal products, LSPs are somewhat reluctant to adopt and implement of HL practices, and specifically in preserving the Halal integrity of a food product.

##### 5.1 Discussion on ISM based model

The structural model developed for barriers in adopting HL practices gave the hierarchical relationship between them. It is observed that 'Reluctance of Logistics Service Providers to adopt Halal Practices in their Operations', 'Lack of Customer Demand & Reluctance to pay for HL' and 'Lack of Government Policies & Support for HL'; 'Weak Enforcement & Lack of a Proper Regulatory Framework for Halal LSPs' are the major barriers to adopting and implementing HL practices in the

conventional logistics. It was found that the HL is not mandatory for the issuance of a Halal certificate for Halal manufacturers is the primary reason for the lack of demand. This conclusion seems to be coherent with other recent studies like [5].



**Figure 2:** Driving and Dependence graph of Barriers to Adopting and Implementing Halal Logistics Practices.

Tieman [19] mentioned that concept of Halal evolved from based on trust towards supply chain approach. In product approach only, origin (whether it is ingredient or slaughtering method) was main concern but in supply chain approach the complete chain, starting from farming to the end product needs to comply Halal standards. Next level of the developed model comprises of 'Lack of Organizational Culture & Change Management to adopt for HL practices', 'Economic Viability of Logistics Services with Halal Practices', 'Lack of Trained Halal Logisticians and Lack of Capacity Building Programs', 'Lack of Trained Halal Logisticians & Lack of Capacity Building Programs' and 'Lack of Standardization, Codification & Proper Guidelines for Adopting HL Practices'. Due to lack of top management and government support, standardisation and codification of HL practices are not done which hinder the mainstreaming of Halal. Leadership provides impetus to the organisational willingness for adopting HL (Talib et al., 2015). This readiness becomes more prominent when it is backed by organisational culture and change management [4]. Also, unavailability of trained logisticians related to the change management in such a way that practitioner doesn't want to change their behaviour and habits towards Halal practices. 'Lack of Agility Due to Ineffective Coordination and Collaboration Among Different Halal LSPs', 'Lack of Robust Information and Communication Technologies Support', 'Lack of Compatibility and Upgradeability to HL of the existing Logistics', 'Dissimilar Practices and Lack of Dedicated Halal Assets & Facilities' falls in to below topmost levels of the model obtained. Packaged Halal goods transported across nations before it consumption, improper collaboration among different LSPs results in loss of integrity of Halal products. Further, ICT enablement of HL will result in better coordination & collaboration and compliance of different Halal LSPs. Another challenge to integrate Halal practices into logistics is that there is no operational consensus in handling, storage and transportation of Halal products. Different LSPs, follow practices as per their convenience. This could be the result of lack of dedicated assets and facilities. Improper coordination and collaboration lead to poor agility in Halal practices, which often caused breaching of Halal integrity. 'Lack of Ethical Practices and Distrust in Halal Integrity of Products' and 'Lack of Global Branding of Halal Practices' falls into the topmost level of the model developed. A poorly designed Halal logistics with poor ethical consideration will lead to distrust in Halal integrity and ultimately will make Halal brand questionable.

## 5.2 Discussion based on MICMAC analysis

The result obtained through MICMAC analysis are represented and discussed in Table: 2

**Table 2: Representing the findings based on MICMAC analysis**

Quadrant	Findings
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<b>Excluded Variables</b>	<ul style="list-style-type: none"> <li>Autonomous variables are those variables which have a low level of dependence and low level of driving power they are shown in the cluster of the excluded variable</li> <li>In this case, no such variables fall into this category. This also shows that model so developed is built with correct variables.</li> </ul>
<b>Dependent Variables</b>	<ul style="list-style-type: none"> <li>Dependent variables are sensitive to the evolution of influent variables and relay variables. They are the output of the system.</li> <li>B-10: Lack of Agility Due to Ineffective Coordination and Collaboration Among Different Halal LSPs</li> <li>B-9: Lack of Robust Information and Communication Technologies Support</li> <li>B-6: Lack of Compatibility and Upgradeability to HL of the existing Logistics</li> <li>B-11: Dissimilar Practices and Lack of Dedicated Halal Assets &amp; Facilities</li> <li>B-13: Lack of Ethical Practices and Distrust in Halal Integrity of Products</li> <li>B-7: Lack of Global Branding of Halal Practices</li> </ul>
<b>Relay Variables</b>	<ul style="list-style-type: none"> <li>Relay Variables represent a high level of driving power and high level of dependence.</li> <li>B-5: Lack of Organizational Culture and Change Management to adopt for HL practices</li> <li>B-2: Economic Viability of Logistics Services with Halal Practices</li> <li>B-8: Lack of Trained Halal Logisticians and Lack of Capacity Building Programs</li> <li>B-1: Lack of Standardization, Codification and Proper Guidelines for Adopting HL Practices</li> </ul>
<b>Influential Variables</b>	<ul style="list-style-type: none"> <li>Variable with high driving and low dependence power are termed as influential variables.</li> <li>B-4: Reluctance of Logistics Service Providers to adopt Halal Practices in their Operations</li> <li>B-12: Lack of Customer Demand and Reluctance to pay for HL</li> <li>B-3: Lack of Government Policies and Support for HL; Weak Enforcement and Lack of a Proper Regulatory Framework for Halal LSPs</li> </ul>

## 6. Managerial Implications of the Research

The findings of the study provide insight to the professionals involved in this area and add value to the body of knowledge. To commercialise and to make logistics with Halal practices economically viable customer needs to be more sensitised towards the requirement of Halal. Other stakeholders, such as Government and top management needs to develop a standardised and codified guideline for Halal practices in the logistics industry, according to which logisticians should be trained, and a robust ICT be implemented as the backbone of the Halal supply chain. However, enforcement of Halal LSPs is a shared responsibility of government and corporate. Anyone not supporting the other may create a situation, where HL practices will not be effectively and responsibly developed. Dedicated warehouse facilities and separate use of handling equipment and operating dedicated transport fleets will eventually affect the overall logistics costs and charges. This hinders more industry players to venture into Halal logistics and eventually poses more risks in the broken Halal supply chain. Additionally, it is negatively impacting the overall development of Halal and Halal logistics business. The identified barriers are inter-related and need to be addressed collectively. Lack of collaboration among various Halal LSPs is due to the reluctance of top management and absence of a codified framework for implementing Halal practices. Mitigation of the identified barriers will lead to the development of a trustable Halal brand.

## 7. Conclusions

Extending Halal practices in logistics is an emerging phenomenon, which is driven by industries interest to assure the Halal integrity of the product till fork. In this study, the concept of HL practices is elaborated, and the major barriers for the adoption of HL practices were identified. Further, a structural and hierarchical model for adoption of these barriers were presented using ISM. In addition, MICMAC analysis is done to classify these barriers against their driving and dependence power.

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