

Determine the Factors of Influence the Technological, Organizational, Environmental, Halal Awareness towards Halalan-Toyyiban Risk Management Plan (HTRMP)

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Abstract: Halalantoyyiban issues are really concern by the consumer in Malaysia instead of looking at the halal logo especially foods. Business owner should take a serious action in handle and manage this issues before being happened. HTRMP has been introduce by JAKIM to help in manage the halal and toyyiban supply chain, start from procurement until consumer. The objective is to determine the factors that influence adoption of HTRMP in food industry and halal awareness as a mediator. Thus, to propose a conceptual framework for this study to be applied in the context of technological, organizational, environmental factors. Based on previous and latest research, the factors have positive relationship towards halal standard.

Keywords: TOE framework, HTRMP, Food Industry, Halal Toyyiban Supply Chain Management.

1. Introduction

Halal market demand increasing day by day in the Islamic economic and targeted to reach about RM12.3 trillion by 2021(Global Islamic Economy 2017/18). According to the report, the most leading is the food industry. In Malaysia, about RM 18 billion halal food have export to the other countries. The halal certificates have given to many food industry in Malaysia by JAKIM. Consumer are not worrying anymore about halal food but their next concern after that is maintaining of halal, quality and safety of the food during handling, processing, transporting and storing [1]. JAKIM has introduce Halalan Toyyiban Risk Management Plan (HTRMP) in MS 2400:2010 to help the company to have control and manage their halalness start from the procurement until end user [2]. HTRMP is important in management to control the quality, safety and halal toyyiban of product start from raw material until reach to consumer. According to MS 2400:2010, in the organization there is compulsory having halal authority to manage and control the halal supply chain in the right way. The halal is not just at the logo but also along the supply chain management.

This research is focus on the factors that influencing the HTRMP practices apply in the food industry. Researcher need to found out the determinant factors of HTRMP practices for the industry to run at their management. The research gap is there no widely and discipline used by each consumer on HTRMP. The research before more to halal supply chain management and not include the toyyiban aspect. HTRMP is a new approach for produce halal product through halal toyyiban supply chain, few studies have examined it. Most of the previous research on adoption of halal standard, halal supply chain field and halal warehouse.

Table 1 Significant factors of Halal Standards by[3]and [4]

	Authors	Findings
Technological Factors		
Compatibility	(Tan <i>et al.</i> , 2012a)	Compatibility variables of ICT as the degree to which the adoption is compatible with Halal requirement jobs responsibilities and value system
Perceived Benefits	(Ngah <i>et al.</i> , 2014a)	Perceived benefits were found to have a significant relationship with the intention to adopt Halal

		transportation services
Organizational Factors		
Management Support	Ngah et al. (2010)	Top management attitude positively influencing the adoption of new technology
Organizational Readiness	Ngah et al. (2014a)	Organizational readiness has a positive relationship with the adoption of Halal transportation
Understanding Practices	Alam et al. 2012; Marzuki et al. 2012; Mukherjee & Romi, 2014	Understanding practices halal supply chain can give positive feedback to company.
Expected Business Benefits	Zailani et al. (2015)	Expected business benefits positively affect Halal orientation strategy among Halal food firms
Awareness	Ngah et al. (2014b)	Halal supply chain service providers mentioned that awareness could be a reason why the majority of Halal manufacturers are not adopting Halal supply chain services
Halal Integrity	Zailani et al. (2015)	Halal integrity benefits positively affect Halal orientation strategy among Halal food firms
Environmental Factors		
Government Support	Tan et al. (2012b)	The more the provision of government support, the more likely that Malaysian Halal logistic service provider will adopt innovation in Halal logistic technology
Competitors Pressure	Ngah et al. (2014a)	Competitive pressure was found to be a significant enabler to the adoption of Halal transportation
Consumers Pressure	Ngah et al. (2014a)	Customer pressure had a positive relationship with the intention to adopt Halal transport
Halal Market Demand	Ngah et al. (2014a)	Halal market demand positively affect Halal orientation strategy among Halal food firms

Source: Journal Adoption Factors of Halal Standards: The Malaysian Perspectives

The research from [3] have come out with significant factors of Halal Standards for organization in Malaysian perspectives using Technology-Organizational-Environmental (TOE) Framework. The table 1 above show the factors in TOE framework for Halal Standard.

1.1 Technological, Organizational and Environmental Factors

In 2014, Ngah et al. [5] showed that perceived benefit could be a driver of adoption for next research as they understand the benefit for their business to apply. A research by Ngah, Zainuddin, & Thurasamy, (2017) [6] found that customer pressure, organizational readiness and perceived benefits were influence with intention to adopt halal warehousing services and those factors were recognized as the drivers of adoption. While the barrier of adoption is cost.

Moreover, Azmiet al., (2018) [4] identified halal standards adoption factors in perspective Malaysia's practices whereby technological context contained of compatibility and perceived benefits, organizational context contained of supporting management, halal integrity, halal awareness, expected business benefits and organizational readiness. Meanwhile, in the context of environmental consists of supporting by government, competitor's pressure, consumer's pressure and market orientation. In 2018, Musa et al., [7] make research on adoption of halal food supply chain towards performance of food manufacturing and found that the driver for technology was perceived benefit. Driver for organization was readiness and halal market was the driver for environment context.

Research by Azmi et al., (2018) [4] found that adoption factors of Halal standards for Halal businesses consist of three realms; technological, organizational and environmental. While adoption factors for technological realms contain compatibility and perceived benefits, organizational realms comprise management support, organizational readiness, awareness, understanding, expected business benefits, and Halal integrity. Environmental factors contain five factors which are government support, competitor pressure, consumers' pressure, standards regulation, and Halal market integrity. Based on these finding, this research going to fill the research gap which is on organization adoption in the perspective of management unit.

1.2 Halal Awareness Factors

Consumer awareness from the perspective of halal can be defined as having a special interest in or experience of something and/or being well informed of what occurs at the present time on halal foods, drinks and products [8]. In addition to the growing Muslim population, previous studies have suggested the growing demand for halal food from the Muslim communities is caused by the fact that Muslims are now more aware of the importance of consuming halal food and are conscious of the halal related issues[9].The halal consumers, particularly the Muslims, are now more selective in their food purchase, including checking the ingredients of the foods or drinks, to make sure that it does not contain any doubtful or prohibited items that are not halal. This is supported by [10] study that suggests there is increased awareness of Muslims to uphold the tenets of Islam religion through the means of food consumption. Having halal food is one's part to obey religious obligations and commandments.

An increase in the halal consumers' buying power has also make halal consumers get more demands for foods that are truly halal. A research conducted by [11] indicates that a level of awareness towards halal concept has a positive change on the consumers' intention to purchase halal product both among Muslim and non-muslim. Since the halal food industry covers the farm-to-table operations, therefore unwanted practices which affect to halal food fraud along food supply chain has become a most concern among Muslim consumers. This is because food fraud is a subjective concept, hence objective verification of fraudulent activities and the extent of fraud could be complicated to verify.

Research conducted by [12]found that Muslim in Klang Valley area about 96.9% are concern and aware with halal food fraud issues. Three factors were classified as influential to Muslim consumers' perception towards halal food fraud namely halal logo, labeling and packaging, authorities' exposure and enforcement as well as consumer attitude. The study recommended that Islamic authorities should continuously seek ways to improve and educate consumers towards halal food fraud while the government should further strengthen their important role of enforcing law and penalties to irresponsible industry players. Research by Yaacob et al., (2016) [13] find that risk contamination in halal supply chain is the main concern by consumer nowadays.

2. Conceptual Framework

2.1 Theory and Background

2.1.1 Technology, Organization, Environment

TOE framework is grouping in three structure groups to identify the adoption of innovations; technology context, organizational context, and environmental context for organization [14]. Then Tornatzky and Fleischer (1990) [15] upgrade TOE framework as a set of factors to predict the expectation of technology adoption. The TOE framework can be applied to different types of organizational innovation adoption [16].The technology context refers to both internal and external technologies available to the organization. Organizational context describes the characteristics of the organization, and the environmental context refers to the organization's industry and its competitors, customers and governmental structures [17]. The TOE framework is also consistent with the theory.In this research to determine the factors of influence the adoption of HTRMP and employee the TOE framework to analyze these. TOE factors have influent the willingness to adoption of green practices in Halal logistics [18]

2.1.2 Halal Awareness as Mediator

Theory of mediation take on a range of orientations [19] and approaches [20]. Their function are establishing a framework for cooperative decision making, promoting constructive communication. Providing appropriate evaluations, empowering the parties and ensuring a minimum level of process and outcome fairness [21]. Mediators are assume to be neutral third parties, role involve exercising a changes in authority and power by 1) the nature of mediator power and 2) its exercise of power through knowledge and expertise, through designing and controlling the process through reframing, and through imposing pressure to settle [19].

The research by Ibrahim & Jaafar, (2016)[22] used environment awareness as mediator is his study.This paper identify the factors of technology, organization and environment and influence of the halal awareness as mediator towards HTRMP among food industry in Malaysia. In this research, the HTRMP practices will be analyze in the dimension's factors of technology, organization, environment and halal awareness factors simultaneously. The halal awareness factors put as mediator because of the important element in maintain the halalness of their product [8].

2.2 Proposed Model of HTRMP

In this paper, modified the TOE significant factor from halal standard to be determine for HTRMP and the influence of halal awareness as the mediator. Halal awareness play important role in order to adopt with

many halal standard management for the food industry to increase their quality, safety and halalness[23].

Figure 1 explain the framework of the research. The technology factors consists of compatibility and perceived benefit. The organization factors consists of the management support, organizational readiness, understanding the practices, expected business benefit and halal integrity. The environment factors consist of government support, competitive pressure, consumer pressure, halal market demand and standard regulation. Lastly, halal awareness factor as mediator consist of four constructs in the model which are exposure to halal, religious belief, health related reasons, and the role of halal certification (halal logos or labels) are genuine predictors of Muslims' awareness of halal food and products [8]

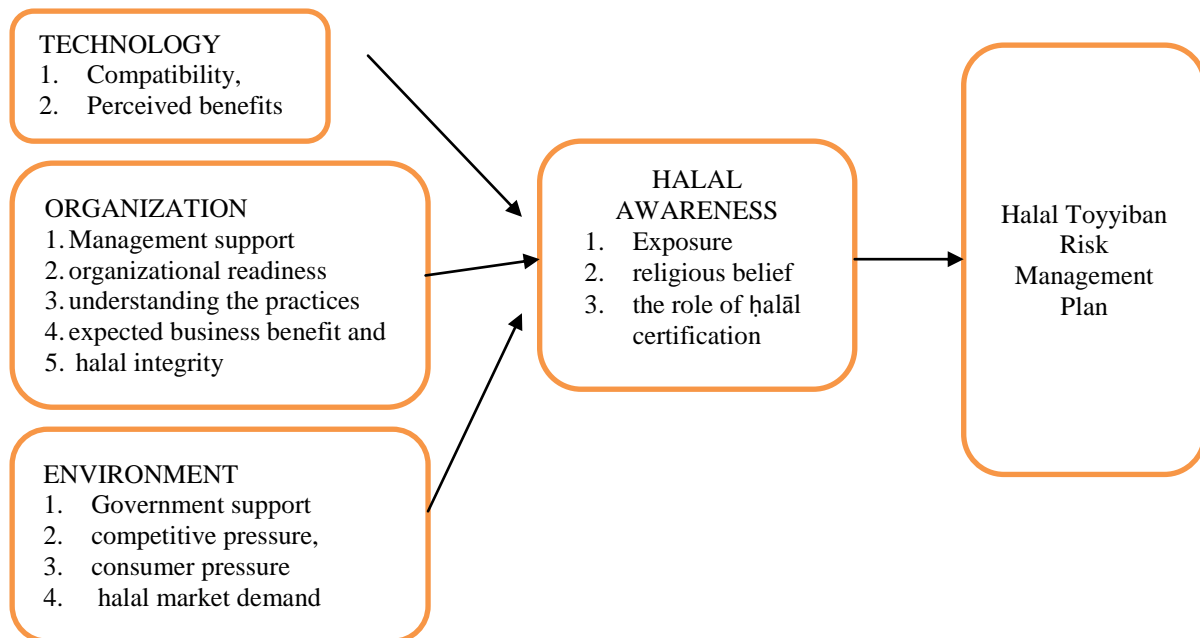


Figure 1 Research Framework of determinant factors in HTRMP and awareness as mediator.

2.3 Target Group

The target group is the food industry in Malaysia. The top managements only can answer this questionnaire and give the information about their company management.

2.3 Filling the Gap

This research goal to fill in the gap is to report the determinant factor of technological, organizational, environmental and halal awareness on adoption of HTRMP among food industry in Malaysia.

3. Discussion and Conclusion

The study focus on halal toyyiban issues in supply chain, emphasize on the management part. Most of halal food industry should aware with the implementation of HTRMP in their business. Research by have come out with the adoption factors of halal standard by the influence of technological, organizational and environmental factors among Malaysia which being used in this study for apply in HTRMP. There are also a few researches finding the important of maintain and control the halal toyyiban aspect in food industry. Saifudin, Othman, & Elias,(2017) [24] finding one stablish of Islamic supply chain for maintaining the halal product and (Yahya *et al.*, 2016) [25] have apply HTRMP on chilled product at warehouse but not using the TOE framework. The main reason is to find out most influent factors of the food industry in Malaysia aware or not with the HTRMP to be applied after get the halal certificate and then need to be renew the certificate. The maintaining of halal, safety and quality of the food product need to be more concern among food industry.

Reference

- [1]. Omar, E. N., Jaafar, H. S., & Osman, M. R. (2013). Halalan Toyayiban Supply Chain of the Food Industry. *Journal of Emerging Economies and Islamic Research*, 1(3), 1–12.
- [2]. Samicho, Z., Farhana, N., Karim, A., Firdaus, A., & Azmi, M. N. (2016). Halalan Toyayiban Elements in Halalan-Toyayiban Risk Management Plan (HTRMP) of Chilled Food Products During Warehousing Activities: A Review. *J. Appl. Environ. Biol. Sci*, 6(11), 103–110. [https://doi.org/6\(11\)103-110](https://doi.org/6(11)103-110), 2016
- [3]. Azmi, F. R., Musa, H., Sihombing, H., & Fam, S. (2018). Adoption Factors of Halal Standards : The Malaysian Perspectives. *Proceedings of the 3rd International Halal Conference (INHAC 2016)*, (September). <https://doi.org/10.1007/978-981-10-7257-4>
- [4]. Azmi, F. R., Abdullah, A., Bakri, M. H., Musa, H., & Jayakrishnan, M. (2018). The adoption of halal food supply chain towards the performance of food manufacturing in Malaysia. *Management Science Letters*, (June), 755–766. <https://doi.org/10.5267/j.msl.2018.5.0010>
- [5]. Ngah, A. H., Zainuddin, Y., & Thurasamy, R. (2014). Adoption of Halal Supply Chain among Malaysian Halal Manufacturers: An Exploratory Study. *Procedia - Social and Behavioral Sciences*, 129, 388–395. <https://doi.org/10.1016/j.sbspro.2014.03.692>
- [6]. Ngah, A. H., Zainuddin, Y., & Thurasamy, R. (2017). Applying the TOE framework in the Halal warehouse adoption study. *Journal of Islamic Accounting and Business Research*, 8(2), 161–181. <https://doi.org/10.1108/JIABR-04-2014-0014>
- [7]. Musa, H., Azmi, F. R., Jayakrishnan, M., Bakri, M. H., & Abdullah, A. (2018). The adoption of halal food supply chain towards the performance of food manufacturing in Malaysia. *Management Science Letters*, 8(2018), 755–766. <https://doi.org/10.5267/j.msl.2018.5.0010>
- [8]. Ambali, A. R., & Bakar, A. N. (2013). Halāl food and products in Malaysia: People’s awareness and policy implications. *Intellectual Discourse*, 21(1)
- [9]. Hashim, A. hanim, & Othman, M. N. (2011). Halal food consumption: A comparative study between Arab Muslims and Non Arab Muslims consumers in Malaysia, (November), 28–30.
- [10]. Ahmad, N. A., Abaidah, T. N. T., & Yahya, M. H. A. (2013). a Study on Halal Food Awareness Among Muslim Customers in Klang. *4Th International Conference on Business and Economic Research Proceeding*, (March), 1073–1087.
- [11]. Aziz, Y. A., & Chok, N. V. (2013). The Role of Halal Awareness, Halal Certification, and Marketing Components in Determining Halal Purchase Intention Among Non-Muslims in Malaysia: A Structural Equation Modeling Approach. *Journal of International Food and Agribusiness Marketing*, 25(1), 1–23.
- [12]. Ruslan, A. A. A., Kamarulzaman, N. H., & Sanny, M. (2018). Muslim consumers’ awareness and perception of Halal food fraud. *International Food Research Journal*, 25(December), S87–S96.
- [13]. Yaacob, T. Z., Jaafar, H. S., & Rahman, F. A. (2016). An Overview of Halal Food Product Contamination Risks During Transportation, 28(3), 3183–3190.
- [14]. De Pietro R, Wiarda E, and Fleischer. M. 1990. The context for change: organization, technology and environment. In: Tornatzky LG, Fleischer M, editors. The process of technological innovation. Lexington (MA): Lexington Books.
- [15]. Tornatzky, L. G., & Fleischer, T. (1990). The Process of Technological Innovation. Lexington: LexingtonBooks.
- [16]. Zhu, K., & Kramer, K. L. (2005). Post-Adoption Variations in Usage and Value of E-Business by Organizations: Cross-Country Evidence from the Retail Industry.
- [17]. Riskin, L. L. “Mediator Orientations, Strategies and Techniques.” *Alternatives*, 1994, 12(9), 111-113
- [18]. Ibrahim, I., Pandiyan, V., Sundram, K., & Normalina, E. (2019). The Determinant Factors of Green Practices Adoption For Logistics Companies in Malaysia . A Case Study of PKT Logistics Group Sdn . Bhd ., 7(January), 13–23.
- [19]. Coyle, M. “Defending the Weak and Fighting Unfairness: Can Mediators Respond to the Challenge?” *Osgoode Hall Law Journal*, 1998, 36,625–666.
- [20]. Boulle, L., and Kelly, K. J. *Mediation: Principles, Process, Practice*, Canadian Edition. Markham, Ont.: Butterworths, Canada, 1998.
- [21]. Gerami, A. (2009). Bridging the Theory and Practice Gap : Mediator Power in Practice. *Conflict Resolution Quarterly*, 26(4), 185–202. <https://doi.org/10.1002/crq.242>
- [22]. Zakaria, Z., Salim, M. R., Ahmad, Z., Haini, F., Ahmad, M., & Kamaludin, M. A. (2015). Trust as a Mediator in Determining Customers Purchase Intention of Halal Frozen Food Article Information. *International Academic Research Journal of Social Science*, 1(2), 283–289.
- [23]. Ibrahim, I., Pandiyan, V., Sundram, K., & Normalina, E. (2019). The Determinant Factors of Green Practices Adoption For Logistics Companies in Malaysia . A Case Study of PKT Logistics Group Sdn .

- Bhd ., 7(January), 13–23.
- [24]. Saifudin, A. M., Othman, S. N., & Elias, E. M. (2017). Critical factors of the new Islamic supply chain model through the lens of descriptive data analysis. *International Journal of Supply Chain Management*, 6(1), 203–208.
- [25]. Yahya, H., Samicho, Z., Firdaus, A., & Nurul, M. (2016). A Review on Application of Halalan-Toyyiban Risk Management Plan (HTRMP) and Frozen Food Chain during Warehousing Activities for Maintaining Halal , Safety , and Quality. *Journal of Applied Enviromental and Biological Sciences*, 6(11), 96–102.

Author Profile



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