

Halal Logistics and Supply Chain Linkage Potential across the Thai-Malaysia Border as a driver of IMT-GT Economic Development

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Abstract

In the Indonesia-Malaysia-Thailand Triangle (IMT-GT) program, the five southern border provinces of Thailand, the four northern states of Malaysia and the two northern provinces of Indonesia are expected to become a hub for Halal products in Asia. The main purpose of this article is to provide possible halal logistics developments for the IMT-GT in the border. This exploratory research paper uses a semi-structured indepth interview to obtain the perceptions of Halal businessmen about the requirements for establishing Halal hub.

According to the result of the study, The demystifying halal logistics hub and its potential was politics, red tapes, high cost /uneven ROI – dedicated investments, differing interpretations – non standardization, fragmentation and consumer's perception.

Keywords: Halal Logistics and Supply Chain, IMT-GT, Economic Development

Introduction

IMT-GT economic development three sides zone was initiated in 1993 and an objective of establishing and promoting international economic cooperation in the three countries (Indonesia, Malaysia and Thailand) economic resources together to drive maximum benefit in promoting the value of investment and production base together and the development of associated infrastructure, particular transport to reduce transport costs between the three countries. Within the IMT-GT countries, Thailand in particular has a logistical advantage over neighboring countries because it's borders are shared with Laos, Cambodia, Malaysia, Myanmar and near Southern China. Besides this, Halal products can be shipped from the Gulf of Thailand and the Andaman Sea to Middle Eastern countries and Europe. Halal products and services are fast gaining

worldwide recognition as a new benchmark for safety and quality assurance. Many of the proponents of the Halal value proposition are low profile local players who have dared to venture into the global market. Table 1 shows top 10 export market of Thailand in Muslim countries and Indonesia is the largest importer of the halal products from Thailand.

Table 1 Top 10 export market of Thailand in Muslim countries

Unit: Million US\$

	Countries		Value Exported		Expanding Rate			Proportion
		2009	2010	2011 (Jan.-Mar.)	Year 08/09	Year 09/10	2011 (Jan.– Mar.)	(%)
1	Indonesia	572.81	873.26	506.54	-16.58	65.45	24.75	30.12
2	Malaysia	411.75	541.23	186.66	-46.66	31.45	45.44	11.1
3	Nigeria	586.64	649.70	150.1	-7.99	10.75	70.13	8.92
4	Iraq	203.36	259.41	115.69	-41.59	27.56	208.62	6.88
5	Iran	50.69	90.40	109.6	-56.05	78.32	580.82	6.52
6	Bangladesh	47.59	108.75	70.36	16.58	128.54	81.59	4.18
7	UAE	177.56	166.32	59.59	-15.25	-6.33	57.67	3.54
8	Saudi Arabia	234.18	195.26	52.61	1.69	-16.62	1.66	3.13
9	Ivory Coast	303.21	334.74	50.67	18.75	10.4	-14.05	3.01
10	Benin	338.76	236.58	40.26	-16.31	-29.28	-65.25	2.39
11	Others	1,271.	1,305.91	339.85	-18.18	2.68	2.51	21
	Total	4,260.	4,764.56	1,681.93	-18.07	11.82	28.31	100

Source: Ministry of Commerce

For exporting of halal products to Indonesia from Thailand have to flow through Penang port and in the near future Pakbara port, Satun province have already approved budget from central government is approaching to central government for approving and developing as a gateway to Indonesia, Middle East and Europe. In the future, Southern Thailand have prepared to serve halal transportation that needed to cooperate with Malaysia and Indonesia as a Muslim countries in Southeast Asia as costing for them to invest in transport facilities. As an IMT-GT (Indonesia, Malaysia and Thailand) can be a Halal hub for ASEAN if economics' cooperation among countries raised up to enhance income distribution and solving unemployment problem in this region. Malaysia's plays a central role for trade flows in the IMT-GT. Malaysia has bold plans to set up business and halal logistics centers on the border with southern Thailand. The proposed hub

would import products and materials from Thailand to produce halal foods certified by Malaysia to sell to Malaysian consumers and export to halal market.

Consequently, the IMT-GT region can be expected to become a hub for halal products in ASEAN in the not too distant future with a proper infrastructural development. Thailand and Malaysia will be the halal logistics hub of the region. For example, the development of customs offices along borders ready to serve this region must be improved for future regional growth of halal products and services. The main purpose of this research is to provide possible Halal logistics hub in southern border of Thailand for the IMT-GT based on empirical data gathered and exploratory approach.

Literature review

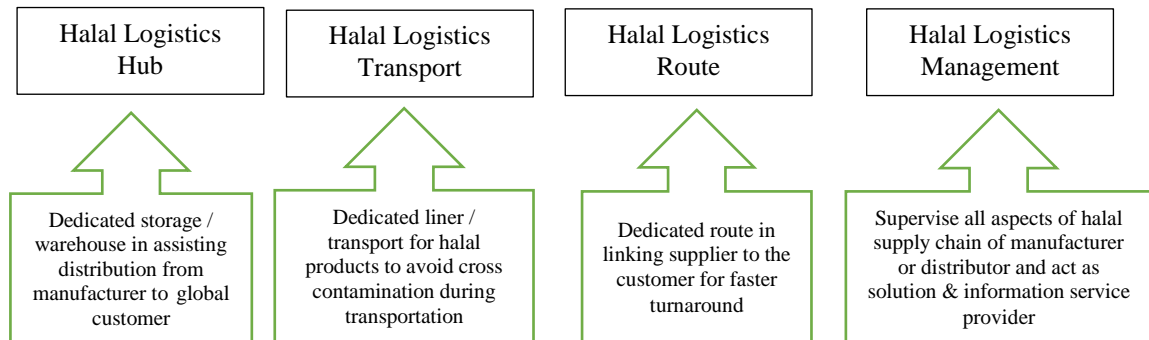
Halal Products: Best Opportunities for Thailand and Malaysia

The Muslim consumer market was estimated market size \$2.1 trillion and growing, for Halal food value more than \$661 billion and more than 60% of Halal opportunity is approximately in Asia 63.2%. Halal is important to the Muslim consumer and means more than just food; Halal cosmetics value \$13 billion, Halal travel value for \$100 billion, and Muslim fashion value for \$96 billion. Global Muslim population is 780 million. Muslims are under the age of 25, they look confidently to the future and driven by pride in who they are, and by their reach for success in all they do. They are fully engaged with the world, but are defining their own place in it. The core Muslim values like purity, honesty, humility, discipline, togetherness, and image-consciousness. The values Muslim consumers ask for appeal to wider audiences too besides products, brand etc., but also the transportation of Halal products and services.

Halal logistics for IMT-GT

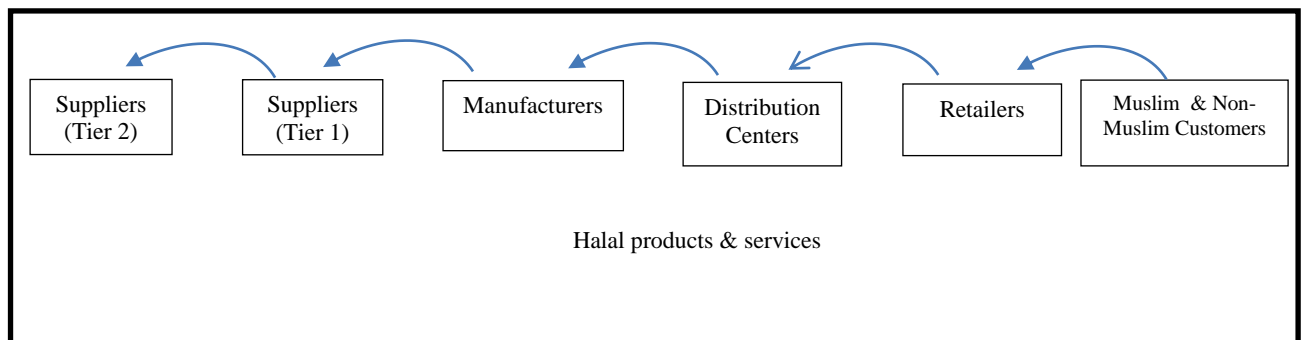
Halal logistics is the process of managing the procurement, movement, storage and handling materials, parts livestock and (semi) finished inventory both food and non-food (and related information & documentation flows) throughout the supply chain in accordance to a halal standard to ensure avoid cross contamination, avoid making mistakes, ensure consistency with shariah and expectations of Muslim consumer. The main objective of Halal Logistics is to ensure the Halal Integrity of Halal products for the end-consumer. Halal Logistics can be defined as: "The Command & Control of goods flows in a value system in such as way that the Halal integrity is secured throughout the supply chain.

Areas of Halal logistics



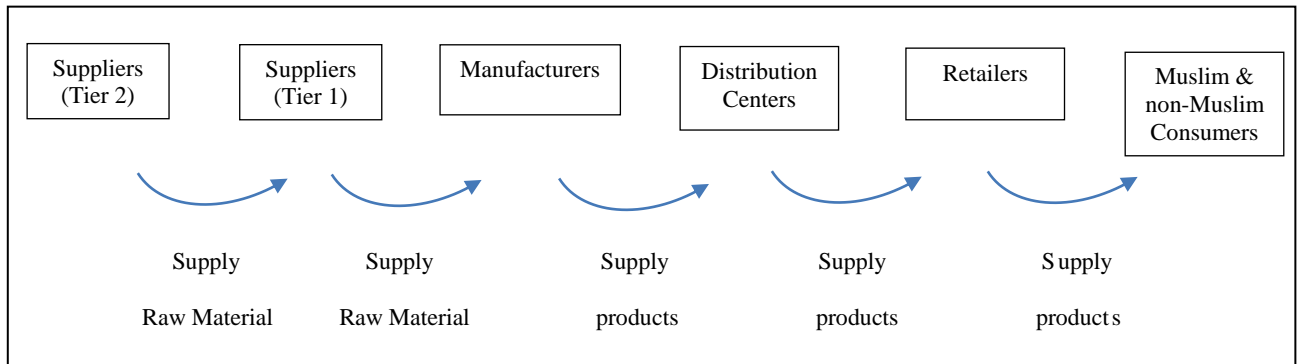
Supply chain for halal products and services under IMT-GT

Demand Chain

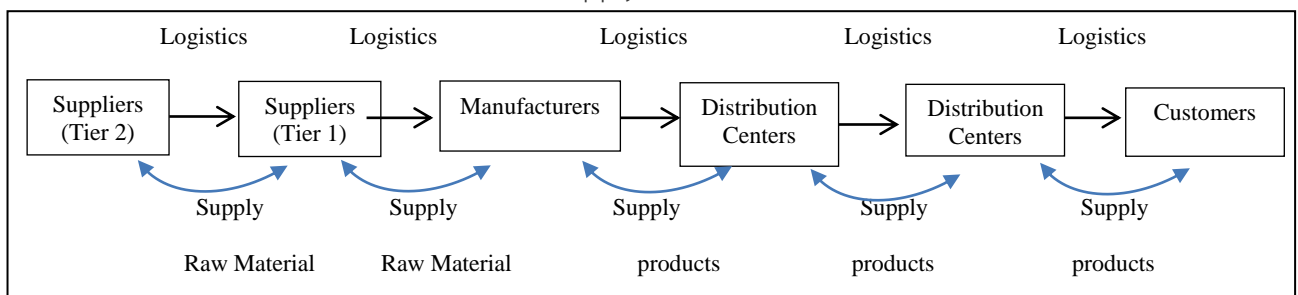


Halal demanded from Muslim consumers, but non-Muslim can also consume, demand is always happened before supply. Halal demand chain is a demanding of Halal products of Muslim as Shariah law. This demanding is passing through retailers, distribution centers, manufacturers and suppliers or from farm to spoon. Muslim and non-Muslim consumers come to retailers and ask for Halal products and services, retailers increased demand from distribution centers and distribution centers order from manufacturers to produce Halal products that separated from non-Halal products. For manufacturers demand more raw material from supplier (tier 1) and supplier (tier 2) from farms. Halal demand chain can be trace from farm to spoon. When Halal demand occurred Halal supply should be responding, starting from raw material to manufactured and change to finished products and then transport to distribution centers to distribute to retails for Muslim and non-Muslim consumers as an end consumers.

Supply Chain



Supply Chain



Halal Supply Chain Integrity

Halal is more and more a complete range of product offering in supermarkets chains worldwide, as well as in 5-star hotels and restaurants and fast food chains, airline meals, school dinners, military and even prison rations. A labeling things ‘Islamic’ or ‘halal’ *is not enough*, transportation must engage on integrity, and must work hard to build and maintain trust. *How to leverage on GMP, HACCP, Toyibbaat, and logistic in the Halal market?* We should not limit ourselves. Halal friendly products are suitable for non-muslims as well. An establish *trust* to consumer must feel comfortable that the products are really ‘safe to eat’ and not ‘probably safe to eat’ or not harmful covering from farm to fork. For halal services, not only foods must also safe to people. The general principle concerning food according to Islamic teachings is that everything is halal except impurity (or mixed with impurity), harmful and intoxicant. Halal products, services, and *Halal logistics must be follow the Islamic or Shariah law*, where products must be separated from non-halal products along the whole supply chain., whether by water, air, or land to prevent cross contamination with substances considered Haram. In addition Halal products must comply with GMP and HACCP standards and be produced and cared for under the principles of Toyyib.

Research Methodology

This study comprises two methods: extensive literature reviews were obtained from leading databases and the articles recorded matches or related with the keywords and semi structure in-depth interviews. In addition helped the researcher to understand a process from the points of view of participants and discover their in-depth insights. A total of 30 in-depth personal interviews consist of SMEs entrepreneurs in halal industry. Informants were recruited from SMEs entrepreneurs in Halal exhibitions held in Thailand and Malaysia

Result

This study analyzed the possible Halal logistics hub settings in southern border of Thailand for the IMT-GT by using empirical evidence shown table 2 – table 7.

Table 2 Estimation of trade value flow through Dan Nok, Amphor Sadoa, Songkla provinces in 2008 – 2014

Unit: million baht

Customs	2008	2009	2010	2011	2012	2013	2014
Dan nok	244,381	293,258	351,910	422,292	506,750	620,587	706,877

Source: Estimated by Bank of Thailand, Southern branch

IMT-GT economic hubs can be determined based on their local economic activity as well as based on export/import trade value and volume. These preliminary criteria can help in the identification of potential IMT-GT economic hubs (see table 2).

Table 3 Statistic vehicles inbound through Dan Nok during October 2014

Month	Motorcycles		Cars		Trucks		Total
	Thai Motorcycle	Foreign Motorcycle	Thai cars	Foreign cars	Have goods	No goods	(Vehicles)
October	48	696	85	17,416	4,777	6,818	29,840
November	1	319	41	16,229	5,049	6,351	27,990
December	-	447	49	19,447	4,528	6,069	30,540
January	1	355	93	19,085	4,352	5,756	29,642
February	-	354	33	14,981	3,950	5,992	25,310
March	1	295	90	17,615	5,693	6,031	29,725
April	4	976	121	17,676	5,811	6,286	30,874
May	-	235	58	16,262	4,373	7,284	28,212
June	1	218	44	16,637	4,846	6,827	28,573
July	-	534	57	15,434	6,964	7,310	30,299

Month	Motorcycles		Cars		Trucks		Total
	Thai Motorcycle	Foreign Motorcycle	Thai cars	Foreign cars	Have goods	No goods	(Vehicles)
August	2	419	76	15,972	6,795	6,817	30,081
September	51	270	44	16,392	6,987	6,749	30,493
Total	109	5,118	791	203,146	64,125	78,290	351,579

Source: Department of Provincial Transportation, Songkhla province

Halal logistics are not concluded only the flow of Halal products but the flow of people and vehicles as in tourism sector must also be considered and provided facilities. Each year there were several trucks and tourist bus got accident on the way from Hat-yai to Dan Nok because of the road and traffic condition. Southern Thailand needed more improve on transportation facilities to facilitate people not only IMT-GT countries but also ASEAN as well.

Table 4 Estimated of number of vehicles outbound Dan Nok year of 2008– 2014

Unit: Vehicles

Year	Motorcycles	Trucks	Total
2008	463,680	307,079	770,758
2009	528,595	322,433	851,028
2010	602,599	338,554	941,153
2011	686,963	355,482	1,042,445
2012	783,137	373,256	1,156,393
2013	802,588	380,682	1,183,270
2014	875,260	398,431	1,273,691

Source: Estimated by Bank of Thailand, Southern branch

The increasing of Motorcycles and Trucks of each year caused not only heavy traffic jam but also accidents among both countries' vehicles. Since some part of the road were not in the good condition and fast driving.

In April 2013, Thailand welcomed 1,659,021 international tourists, a slight increase of 6.87% over the same month last year. Most of the regions recorded growth except the Americas (-0.34%, 81,338) and Oceania (-7.72%, 79,856). The data on tourist arrivals for April indicated a car bomb in Hat Yai on 31 March 2012 stripped arrivals from Malaysia, usually Thailand's top source market. Trips from Malaysia were down 20%, although overall arrivals to Thailand improved slightly by almost 7%. The ministry's statistics reported that Malaysian tourists, the country's largest market dipped 22.18% to

162,360 and arrivals through overland border checkpoints, Sadao and Padang Besar, plunged 38.25% and 30% respectively. However, Halal services are becoming more concerned among Thai tourist industry such as spa, medical, hotel and restaurant, banking & finance, insurance that had already serving to Muslim and non-Muslim customers as a whole supply chain for Halal products and services under IMT- GT

Table 5 Top 10 tourist arrivals to Thailand during April, 2014

Country	Arrivals	Change (%)
China	196,192	+42.12
Malaysia	162,360	-22.18
Russia	106,055	+20.01
Japan	103,657	+16.62
Korea	79,783	+14.21
India	79,130	+10.2
Laos	73,552	+10.22
United Kingdom	73,402	+47.9
Australia	71,558	-7.75
United States	56,184	-2.53

Source: Thailand's Tourism Statistics (17/05/2014)

In economic and social development of IMT-GT strategy is majoring concentrate on trade facilities and investment promotion both internal and external of IMT-GT countries which consist of ; 1) trade facilities and investment across border, 2) provide economic and industry zoning near border for promotion of production activities and Industry Real Estate in northern part and 3) CIQS procedure to facilitate including documentary (may be including all transportation facilities) 4) establish wholesale and distribution center nearby border for trade and investment facilities.



Picture 5 Yala, Narathiwat, and Pattani economic corridor connecting with Northern Malaysia as Halal Hub

Five southern border provinces, five state of north Malaysia and north provinces of Indonesia can be a halal hub of ASIAN if people in this region more awareness on halal integrity especially southern Thailand consumers that they were still less understanding of halal. Pattani province which is very well known as “Al Fatoni” to Arab countries for a long Muslim history that can be salable to halal products and services in this region to Muslim countries. The problem is which collaborative IMT-GT strategies to move forward this region becoming a halal hub of ASEAN.

From table 6 found that there are not much products that must concerned on halal integrity or halal transportation to prevent from cross contamination and trust except foods which is mainly Thailand exported or shipped through Songkla port more than Penang port. But in a short future, ASEAN connectivity will linkage to any flow of any products and services from farm to fork but not only IMT-GT countries.

Table 6 Southern Thailand and Northern Malaysia economics corridor as halal hub

Five southern Border provinces	Economics sector	Five northern states of Malaysia	Economics sector
Pattani	Halal industry	Kedah	Transportation
Yala	Rubber/fruits	Perak	Electronic industry
Narathivat	Coconut/goat/lamb	Kelantan	Woods/tourism
Satun	Rubber/tourism/goat/lamb	Peris	Tourism
Songkla	Rubber/sea foods/trade and investment	Penang	Tourism/services/trade and investment

Source: Distribution Center of Halal Products & Services research paper, 2013 by Pairat Watcharapun

So, the facilitation of transportation facilities of IMT-GT countries must linkage and should concerned more on ASEAN as well. Halal products and services should not limit to Muslim consumers only but non-Muslim can also consumed. Both countries economics corridor as Halal hub of ASEAN may not too far to reach if IMT-GT countries can collaborate strategies to facilitate each section under IMT-GT policies. IMT-GT, the linkages between Southern Thailand and North Malaysia is quite well developed and the various corridors that links both countries can be considered as a logistics corridor, almost ready to be a full-fledged economic corridor with the various industrial development projects that are currently being put into place. However there are still some important issues that need to be resolved, in particular those issues that are related to the current existing institutional framework. Transport rules and regulations should be relaxed in order to promote efficient cross-border logistics and transportation. This can be carried out by abolishing transportation quota between Thailand and Malaysia, particularly on perishable goods, and eliminating required upload and download practices at the cross-border areas, through mutual recognition of road vehicle registration, transport operating license, vehicle inspection certificates as well as vehicle insurance across the border. Direct linkage between southern Thailand and Sumatra are non-existent or has to be done via Penang or Port Klang in Malaysia. From a logistics development perspective the challenge will be on how to increase the logistics integration of Sumatra within the existing integrated logistics linkages between Thailand and Malaysia. This can only be done if intra IMT-GT trade is supported and facilitated. It is important not to forget that logistics is a derived demand that supports local, border, regional and international trade.

From Halal market research of Halal Institution, Prince of Songkla University found that Malaysia SMEs entrepreneurs required to have a distribution centers for halal products and services in southern Thailand provinces by specified certain provinces ranking from more to less as follow.

Table 7 Distribution Centres required by Malaysia entrepreneurs in five southern border provinces, Thailand

Ranking	Provinces	Percentage
1	Yala	90.5
2	Pattani	85.7
3	Narathivat	81.0
4	Songkla	81.0
5	Satun	71.4
6	Phuket	57.1

Source: Distribution Center of Halal Products & Services research paper, 2013 Pairat Watcharapun

Pattani province is one of the well known region as 'Al Fatoni' to Arab countries, this probably the most interesting point to salable halal products and services and promote a halal foods real estate industry there throughout ASEAN but there is no securities there. Yala provinces which is also have a high potential to have a distribution center because of most convenience as a gate way of halal products and services or halal hub of IMT-GT countries.

Conclusions and Discussion

Halal logistic and supply chain is to prevent from the cross contamination of Halal products from non-halal products. However, Thailand is a non-Muslim country and becoming 'Kitchen of the World' has to trust to Muslim countries to produce Halal foods and Halal Supply Chain from farm to spoon. The scale of the global halal market is food products about 61%, Pharmaceuticals 26%, Cosmetic 11%, and Other 2% with an increasing of rapidly Muslim population by year of 2030 will exceed ¼ of global population. So, to trustworthiness in the Muslim world is very important for Southern Thailand Border to establish Halal Products Distribution Center at Dannok in order to fulfill the Muslim market in this region which is the largest of Muslim population in the world with approximately for more than 200 million people. However, the Distribution Center should be established and separated from Non-Halal products and services in order to prevent a cross contamination such as Halal vehicles, Rolling pallets, Insulate containers, Vibration resistant pallets for offering high quality distribution services in difference Halal warehouses. Halal products and services are not produced for Muslim only but also for all mankind which will worth to invest for a return on investment. Not only five southern border provinces will get a benefit from Halal products and services distribution but non-Muslim people and countries in this region will also get benefit from this practice. The separation of customhouse for border crossing and trading between Halal and Non-Halal products and services will reduce traffic jam at Dannok customhouse. Dannok customhouse should be crossing border for tourists and Halal and Non-Halal products and services especially foods only and Prakob customhouse will be crossing border for rubber sheets and latex mainly. The separation among rubber products and non-rubber products will be also solve some traffic obstacle and bottleneck of customhouse. However, demystifying Halal logistics and its potential was politics, red tapes, high cost /uneven ROI – dedicated investments, differing interpretations – non standardization, fragmentation and consumer's perception.

References

- Bruil, R.R. (2010). Halal logistics and the impact of consumer perceptions. Master thesis, University of Twente, Netherlands.
- Elahe, F., Suhaiza, Z., Mohammad, I. & Kanagi K. (2016). Drivers of consumers' willingness to pay for halal logistics. *British Food Journal*, 118(2), 464-479.
- Mahdi, B. & Maryam, A. (2013). Establishing a Global Halal Hub: In-Depth Interviews. *International Journal of Academic Research in Business and Social Sciences*, 3(10), 169-181.
- Mohamed, S. & Hamid. A. B (2014). Halal logistics in Malaysia: a SWOT analysis *Journal of Islamic Marketing*, 5(3), 322-343.
- Mohamed, S. & Hamid. A. B (2015). Halal supply chain critical success factors: a literature review. *Journal of Islamic Marketing*, 6 (1), 44-71.
- Pairat Watcharapun. (2010). Development Channel halal products in Ningxia province of China to develop investment and export enterprises, community groups and SMEs in the three southern border provinces of Thailand. Research Grant from The National Research Council of Thailand.
- Syed Omar & Mohd Zahrain. (2012). Positioning the Halal Food Industry: The Case of Malaysia. *NIDA Case Research Journal*, 4 (2), 157 – 174.