

HALAL SUPPLY CHAIN ANALYSIS AND AFFECTING FACTORS: A STUDY ON THE TOFU AND TEMPE INDUSTRY

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Abstract: Halal food as the final product has become an absolute choice for the Muslims to be consumed, but the supply chain of halal or halal logistics, will be a further consideration in kosher foods. Halal food is a final product that should be initiated by a halal production process and the provision of halal raw materials, including the delivery process. This research is located in East Java with a population of 23 tempe and tofu industries registered in the directory of the Ministry of Industry of the Republic of Indonesia. The Sampling technique by using non-probability sampling method with saturated sampling technique. The methods of collecting data using surveys, interviews and observations. The data analysis method is carried out by a SWOT analysis. The result of this study shows that the quality of the product can compete between enterprises with similar companies; The company needs to carry out good raw material inventory management because the main raw materials have experienced significant price changes; The product quality have to be managed, especially the raw materials by purchasing strategy in relatively cheap conditions.

Keywords: Halal Supply Chain, SWOT Analysis, Tofu and Tempe

1. Background

Indonesia is faced with the momentum of the ASEAN Economic Community (AEC) which began in 2015 which gave rise to the free flow of trade in goods, services, capital and investment. This condition should be an opportunity for the Indonesian people both domestically and abroad to become a strong marketer because it has the advantage of having the largest population in Southeast Asia. Data from the CIA (Central Intelligence Agency) shows that Indonesia is a country that has the largest Muslim population in the world (Desilver and Masci, 2017). In the country itself, the followers of Islam reached 87.2%. This of course shows that Indonesia is a potential market for halal needs such as fashion, cosmetics, pharmaceuticals, and halal travel, especially halal products in the form of halal food as the final product which is an absolute choice for consumers.

Halal is not only about food. For a product or service to be considered halal, they must follow Sharia principles which state that the product or service (Syazwan et al., 2014): does not contain any non-halal parts or products from animals or haram products or animals that are not slaughtered in the name of Allah and sharia methods; does not contain any material that is considered unclean (haram); safe and harmless; not prepared, processed or produced using tools or equipment that are contaminated or shared with non-Halal or unclean; have ingredients or by-products that do not contain human parts; during the manufacturing, preparation, packaging, storage or distribution process, the product must be physically separated from the Haram product.

A fairly comprehensive literature study on the success factors of the halal supply chain has been identified, including government support, dedicated assets, information technology, HRM (human resource management), collaborative relationship, halal certification, halal traceability (Rahman, Zailani and Musa, 2017). Supply chain business processes which include halal control and assurance activities identified in terms of transportation, warehousing, terminal operations, and cleaning, are very important things in realizing a halal supply chain (Tieman, Vorst and Ghazali, 2012).

A design of a business process performance measurement model that has integrated halal values in retail companies in Indonesia has been carried out using SCOR because it can measure supply chain performance objectively and in detail based on existing data and can identify where improvements are needed (Kusrini,

Qurtubi and Fathoni, 2018). All companies who have or are already implementing halal supply chain, is as organization with an open system, therefore, certainly will interact with its environment. All organizations, both large and small, must be able to adapt through certain mechanisms to changes inside and outside the organization, especially the environment outside the organization, because the external environment is a source of energy/strength as well as a source of uncertainty for the organization, so that the organization can continues.

One of the external environmental factors that affect an organization's policy is government support (government support) (Waziri et al., 2015). The external environment influences its management and strategy (Mason, 2007). It is further stated that companies that are more succesful in uncertain environment that are radical, fast and may even disrupt the strategies that have been set. Thus, the strategy made must be democratic, bottom-up processes and structures in organics form, self-organizing, and adaptive. This means that the company is more decentralized. On the other hand, companies that are more successful in a stable environment will use more formal and traditional (mechanistic and centralized) management and strategic planning activities.

Design organization in the form of centralization/ decentralization able to decrease/ increase the company's success in managing their environment. Management efforts to make the organization more flexible and responsive has resulted in a tendency end - the end is towards decentralized decision making at the level of the low manager, because it is closer to the action and usually they have knowledge that is more detail about the problems faced than top managers (Robbins and Judge, 2013). However, a study shows different results where decentralization is not proven to moderate the influence of the external environment on organizational performance (Witjaksono and Rahmadyanti, 2014) .

One of the industrial sectors that has become a national priority is the food and beverage industry. In the Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI) 2011-2025 in the Java Economic Corridor, the main economic activities are focused on food and beverages, textiles, and transportation equipment. In addition, there are also aspirations to develop the main economic activities of shipping, telematics, and the main weapon system (defense equipment) (Coordinating Ministry for Economic Affairs, 2011). In East Java, SMEs actors in East Java reached 6.81 million , and in the January - August 2016 period , the contribution of SMEs to Gross Regional Domestic Product (GRDP) was IDR 900 trillion (54 % of the total GRDP of East Java) (Metrotvnews.com, 2017). Around 650 food and beverage producers from 700 thousand SMEs and SMEs in East Java are supported by workers in their fields (BappedaJatim, 2015). As for 2017, the food and beverage processing industry has the highest contribution to GRDP in East Java in the processing industry sector (East Java Province Central Statistics Agency, 2018). Table 1 below shows that there was an increase in the GRDP of the food and beverage processing industry in East Java, from Rp 101,689, 93 billion in 2014 to Rp 134,374, 70 billion in 2017, or an increase of 32.14% .

Table 1. Gross Regional Domestic Product Up 2010 Constant Price by Industrial in East Java Province (billion rupiah) Year 2014-2017

No	Manufacturing Industry	2014	2015	2016	2017
1	Manufacture of Coal and Refined Petroleum Products	979.61	1,006.74	1,000.10	1,117.80
2	Manufacture of Food Products and Beverages	101,689.93	112,027.54	121,527.60	134,374.70
3	Manufacture of Tobacco Products	89,658.27	94,869.96	102,007.90	104,507.90
4	Manufacture of Textiles; and Wearing Apparel	5,946.15	6,099.66	6,427.10	6,706.20
5	Manufacture of Leather and Related Products and Footwear	4,600.39	4,690.56	4,987.10	5,676.30
6	Manufacture of Wood and of Products of Wood and Cork, and Articles of Straw and Plaiting Materials	23,653.09	23,204.97	22,692.50	23,725.50

7	Manufacture of Paper and Paper Products, Printing and Reproduction of Recorded Media	18,638.29	19,472.81	20,360.00	20,852.80
8	Manufacture of Chemicals and Pharmaceuticals and Botanical Products	33,530.16	35,260.07	34,724.80	36,015.70
9	Manufacture of Rubber, Rubber Products and Plastics Products	19,898.75	20,503.55	19,893.60	20,200.30
10	Manufacture of Other Non-Metallic Mineral Products	16,371.19	17,362.76	17,189.80	19,364.90
11	Manufacturing of Basic Metals	17,729.94	17,468.79	18,264.60	20,358.20
12	Manufacture of Fabricated Metal Products, Computer, and Optical Products, and Electrical Equipment	18,186.05	19,272.99	19,335.30	18,966.30
13	Manufacturing of Machinery and Equipment	709.16	719.02	735.70	692.90
14	Manufacturing of Transport Equipment	4,830.82	4,949.40	5,012.10	4,936.50
15	Manufacturing of Furniture	11,807.29	12,224.83	12,364.80	12,357.80
16	Other Manufacturing, Repair and Installation of Machinery and Equipment	4,087.19	4,139.30	4,218.30	4,277.10

(Source: Central Bureau of Statistics of East Java Province, 2018)

Based on several previous studies, it can be concluded that it is necessary and important to conduct a research related to the halal supply chain in the tofu and tempeh industry in East Java. Beside that, Determine the strategy to be applied to take advantage of the strengths and opportunities it has, as well as the weaknesses and threats faced by the tofu and tempeh industry in the City of Surabaya and Sidoarjo Regency in implementing the halal supply chain .

Literature Review

Halal in Islamic Law (Sharia)

All Muslims must adhere to their respective Islamic teachings and principles or better known as Islamic Law (Sharia) in every part of their lives, including in choosing food to consume. Sharia shows that it is very important for Muslims to consume only halal food (permitted) and avoid activities anything that would lead to the Haram (prohibited), as mentioned in the Qur'an in Surah Al Maidah verse 3:

"It is forbidden for you (to eat) carrion, blood, pork, (animal meat) that was slaughtered in the name of other than Allah, the strangled, the beaten, the fallen, the horned, and the wild beast was attacked, except for the one you had time to slaughter, and (haram) for you) who were slaughtered for idols. And (it is also forbidden) to draw fate with arrows, (to draw fate with arrows) is wickedness. Today the disbelievers have given up hope of (overcoming) your religion, so do not fear them and fear Me. This day I have perfected for you your religion, and have completed My favors upon you, and have approved Islam as a religion for you. So whoever is compelled by hunger to commit a sin, verily Allah is Oft-Forgiving, Most Merciful."

Similarly, in the Al-Quran Surah Al Baqarah verses 168 and 173 it is stated that:

"O mankind, eat what is lawful and good from what is on the earth, and do not follow the steps of the devil; for verily the devil is a real enemy to you."

"Indeed, Allah only forbids you carrion, blood, pork, and animals that (when slaughtered) are called (names) other than Allah. But whoever is forced (to eat) while he does not want it and does not (also) transgress, then there is no sin for him. Verily, Allah is Forgiving, Most Merciful."

For Muslims, based on the two verses above, it is obligatory to eat halal and good food. Halal food products are quite sensitive issues, considering that the technology in producing food products must also involve ingredients, food additives, processing aids that make a simple halal product from a simple to more complex one. Food and drink unclean derived from animals can be aging pork and its derivatives, direction and derivatives, arrion, aging and meat derived from animals not slaughtered according to halal Islamic guidelines. Food and drinks bastard fallow (Khamr) among others liquors of all kinds, alcohol (wine, beer, liquor), narcotics, product food formulations, ingredients, food additives, tool auxiliary processing or growth media containing or contaminated by illicit materials.

Halal food products, not only in the form of final products that must be halal, but all raw materials, food additives, and processing aids used in the production of halal food must meet halal requirements. This includes production facilities (water, buildings, processing equipment, warehouses, etc.), as well as personnel must be free from sources of contamination and all must meet sanitary requirements. Processing equipment should be dedicated only to the production of halal food. In addition no cross contamination that may occur during the material handling, food processing, product storage, distribution, and sales. If the utensils are used for non-halal food, proper cleaning procedures must be implemented so that halal production is separated from non-halal. All equipment used to produce products containing pork and its derivatives cannot be used in halal production lines. Sanitary care should be fully carried out to remove contaminants and "NAJ i s" (dirty).

Halal Assurance System in Indonesia

In Indonesia, the agency or institution that certifies halal products is the Indonesian Ulema Council (MUI) through the Food and Drug Supervisory Agency (BPOM) which is in charge of halal assessment of processed packaged foods, especially to assess aspects of sanitation and the application of hygiene in food manufacturers. food manufacturers to place halal information (logos) on food packaging for processed packaged foods, and the halal is granted immediately after the food product is certified halal by the MUI and the food manufacturer meets the requirements. Another organization is the Institute for Food, Drugs, and Cosmetics Indonesian Ulema Council (LPPOM) which is in charge of researching, assessing, analyzing is and decide whether the products both food and derivative products, pharmaceuticals and cosmetics products are safe to eat well in terms of health and in terms of teaching Islam, namely halal or permissible and good for consumption for Muslims, especially in the territory of Indonesia, in addition to providing recommendations, formulating provisions and guidance to community services. Halal Certification is the process of obtaining a halal certificate through several steps to prove that the materials, production processes and the Halal Guarantee System meet the requirements/ halal standards. Halal certificates are issued by MUI to declare the halal of a product based on the audit process carried out by LPPOM - MUI.

Halal Supply Chain

A significant paradigm shift from modern marketing is that companies are moving away from a consumer-centric to a value-based approach, which elevates the marketing concept to human aspirations, values, and spirituality (Kotler, Kartajaya and Setiawan, 2010). The concept of halal is based on values, namely Islamic values. Halal requires a supply chain approach (Wilson and Liu, 2010; Tieman, 2011). The integrity of the halal food supply chain is an increasing concern (Zailani et al., 2010).

Halal Supply Chain Management (HSCM) can be defined as the management of a halal network with the aim of extending halal integrity from source to consumer point of purchase. To ensure that the product is truly halal at the point of consumer purchase it is important to define what the principles in halal supply chain management are. The basis of halal SCM is determined by three factors, namely: direct contact is haram (forbidden), the risk of contamination, and the perception of Muslim consumers (Tieman, 2011). Further stated in the model, risk is based on product characteristics, such as between dry products and wet products, and between wholesalers and individual products. Perceptions are based on market requirements, such as Islamic schools, local fatwas and local customs.

The halal supply chain model should be adapted from the existing supply chain (food) model that most closely facilitates the Islamic values of the halal supply chain (Tieman, Vorst and Ghazali, 2012).

Research methods

Based on the approach, this research is a qualitative research to describe the situation through descriptive analysis, and emphasize the quality of information. This is a research survey, the research that is done by taking a sample or a part of the population as a whole unit in the population to be studied through the submission of a question to elicit responses or answers of the subjects were observed. The resulting data comes from interviews. The population in this study is the tempe and tofu industry in the East Java, with a total of 23 business actors. The technique sample namely was non-random sampling, namely through sampling saturated. The data analysis technique is analyzing the strengths, weaknesses, opportunities, and threats faced by the tempe and tofu industry in East Java, then the SWOT analysis method is carried out. SWOT analysis is a strategic planning method to evaluate the strengths, weaknesses, opportunities, and threats that characterize all types of industries.

Results

Respondent’s Characteristics

Respondents in this study are owners/managers of tofu and tempeh production companies/MSMEs in Surabaya-Sidoarjo . If in a company being studied there are two or more respondents who provide responses, then the score will be averaged to assess the score of a company/MSME. The total answers that can be used for further analysis are 20 respondents from 20 companies as the unit of analysis.

Based on Table 5.2 which contains the answers of 20 respondents, it is known that the age of the respondents varies between 36 to >65 years. The age of respondents in the age group 46-55 years of occupying the top position (50%). The number of respondents most are educated SM K (50%) , and followed by successive SMA (45%) and junior (5%).

Tables 2. Characteristics of Respondents by Age and Education Level

		Education			Total	
		High School	Smk	Middle School		
Age_Range	36 - 45	Count	5	3	1	9
		% within Age_Range	55.6%	33.3%	11.1%	100.0%
		% within Education	55.6%	30.0%	100.0%	45.0%
	46 - 55	Count	3	7	0	10
		% within Age_Range	30.0%	70.0%	.0%	100.0%
		% within Education	33.3%	70.0%	.0%	50.0%
	> 65	Count	1	0	0	1
		% within Age_Range	100.0%	.0%	.0%	100.0%
		% within Education	11.1%	.0%	.0%	5.0%
Total		Count	9	10	1	20
		% within Age_Range	45.0%	50.0%	5.0%	100.0%
		% within Education	100.0%	100.0%	100.0%	100.0%

(Source: Processed research data, 2019)

Discussion

The SWOT analysis method is the most basic analytical method in conducting strategic analysis, which aims to analyze the strategy based on the company's internal and external factors. The results of this analysis are usually in the form of directions or recommendations to maintain strengths and to increase strengths and to increase the profits of a company or organization in terms of existing opportunities, while reducing weaknesses and avoiding various threats that occur. If used properly, then this analysis will be used to help see the sides of neglected or are not visible from a company or organization.

A SWOT analysis is an instrument to measure strengths and how to see the opportunities that exist in achieving competitive advantage because the business environment is very dynamic. SWOT analysis on SMEs in East Java. SWOT analysis focusing on strengths, weaknesses, opportunities, and threats. The purpose of the SWOT analysis on SMEs for tempe products is to assess the company's internal and external factors.

The research on Industry Tofu and Tempe in Sidoarjo and Surabaya, based on the SWOT analysis assessed by two factors, namely internal factors and external factors. The identification of internal factors necessary to determine the appropriate strategy to optimize the strength in have and minimize the weaknesses that exist in the company. The following is an external and internal table of the Tofu and Tempe Industry in Sidoarjo and Surabaya Regencies.

Tables 3. Internal Factors Industry Tofu and Tempe

No	Internal factors
Power	
1	Products processed products already meet standar of tempe set by the government
2	The relationship between owners and employees is very dynamic
3	Good cooperative relationship with distributors and suppliers
Weakness	
4	Lack of manpower which causes disruption of the production process
5	Conventional financial management
6	Setting working hours that are not optimal so that the amount of production cannot be calculated with certainty
7	Quality control is still weak so that the resulting product is not uniform

Table 4. Factors External Industry Tofu and Tempe

No	External Factors
Opportunity	
1	Government support through People's Business Credit (KUR)
2	The potential of tofu and tempeh products to become products for the needs of the Indonesian people
3	Tofu and tempeh products have been recognized worldwide as one of the local processed products
4	The need for stable tofu and tempeh products
Threat	
5	The number of similar companies
6	The price of soybean raw materials is still not stable, so it affects production costs
7	Unpredictable availability of raw materials

SWOT Matrix

Matrix SWOT this is one way to design a strategy formulation to be taken by the company by way of combining internal factors with the external factors is SO strategy (Strengths-Opportunities), WO strategy (Weaknesses-Opportunities), ST strategy (Strengths-Threats), and strategy WT (Weaknesses-Threats). The SWOT matrix for the Tofu and Tempe Industry is as follows.

SO Strategy

SO strategy there are strategies that shows of a way of view that the company or organization specific to use force (strengths) that they capture a wide range of opportunities that exist (opportunities) (Solihin, 2012: 170). SO Strategy for Tofu and Tempe Industries: Maintaining product quality because tempe and tofu products are community needs and demand for these products is relatively stable; Maintaining a good and harmonious working relationship between owners and employees and between owners and distributors is the

strength of the Tofu and Tempe Industry; It is necessary to increase the quality and quantity of production by utilizing capital sources that strongly support the development of MSMEs through KUR loans provided by the government so that they can be an injection of capital that can develop the tofu and tempeh industry.

ST strategy

ST strategies are strategies that resulted from a way of viewing that particular company or business unit using the power (strengths) that they have to avoid various threats (threats) (Solihin, 2012: 170). Industry Tofu and Tempe: Improve the quality of the product to dap at competing between enterprises with similar companies ; The company needs to do good raw material inventory management because the main raw materials have experienced significant price changes; The company needs to improve product quality by paying attention to the quality of raw materials so that the company can carry out a raw purchasing strategy in relatively cheap conditions.

WO Strategy

WO strategy namely the various strategies that today of a way of view that companies or business units can take advantage of the opportunities that exist in the external environment by means of overcoming any weaknesses (weaknesses) source of internal owned by organization (Solihin, 2012:170). WO strategy for Industry Tofu and Tempe: Utilizing KUR to create capital in order to increase welfare for employees; Utilizing technological advances and collaborating with competent partners to provide assistance in the context of improving financial management that is more measurable, transparent, and accountable.

WT Strategy

WT strategy are various strategies that are just that last (defensive), and aim for me minimize all the weaknesses and threats (Solihin, 2012: 170). WT Strategy for the Tofu and Tempe Industry: The company needs to redesign the working hours of employees to be more optimal to increase the quantity and quality of production; The company uses good quality raw materials to produce good products as well; There needs to be good quality control so that production results remain in accordance with the standards and quality expected by consumers.

Conclusion

Government support in ensuring the availability of a halal supply chain is very important and urgent, if it is based on the fact that the Indonesian nation has a majority Muslim population, but does not have a guarantee of a halal supply chain. The role and support of the government that has a very significant impact on the supply chain, but in the low category, especially for tofu and tempeh SMEs in East Java areas The level of decentralization of tofu and tempe is in the low category. This means that SMEs centralized where all decisions and policies more dominant by the leaders/ owners of the company. Practical advice, it is necessary to have socialization and concern about halal food is also a special concern, because the Muslim population in Indonesia seems to be less aware of consuming food. Advertising services for halal products in various print and electronic mass media, regulatory products that support halal products, increasing the role of the MUI, as well as concern for all components of society who care about halal products need to be carried out massively, seriously, and structured.

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