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Review of Beef Supply Chain Model in Jakarta and Depok Traditional Markets

Abdulah Rakhman[1], Liaw Bunfa[2] and Elisabeth Vita Mutiarawati[3]

[1,2]Lecturer of Operation Management, Institut Bisnis and Informatika Kwik Kian Gie

[3]Lecturer of English, Institut Bisnis and Informatika Kwik Kian Gie

ABSTRACT

The need for beef is a big concern for people in Jakarta and Depok. It is a commodity product that must be met for the needs of life. The rise in beef prices that tends to vary over a certain period can result in losses for both consumers and producers.

The cause of the increase in beef price that always occurs in certain periods in traditional markets in Jakarta and Depok such as before Ramadhan month until Idul Fitri, Idul Adha, and other big days is the lack of beef supply and substandard the pattern of distribution from producer to traditional market as a place where consumers buy the beef. That problem can be overcome by optimizing the performance of traditional markets in providing beef that consumers need through an efficient and effective supply chain model. It is therefore necessary to research the mapping of meat supply chain model to optimize the performance of traditional markets in Jakarta and Depok.

The objectives of this research are (1) to map the beef supply chain model in traditional markets in Jakarta and Depok, and (2) to analyze the beef supply chain model in traditional markets in Jakarta and Depok.

The research method which is used is survey approach and explanatory research. The results show that the Jakarta beef market supply chain model has similarity in the length of supply chain partners i.e., there are 4 to 5 supply chain partners and have differences in the supply chain partners.

Keywords: Supply Chain Model, Beef, Traditional Markets in Jakarta, Traditional Markets in Depok.

1. INTRODUCTION

1.1. Background

Food security in Indonesia is an element that must be maintained and improved from period to period. Food security is an indicator of the fulfillment of food needs of Indonesian society, the better food security conditions in Indonesia will show an increase in the food availability performance. The stability of food security must be supported by the role of government through planning, organizing, implementing and controlling the distribution of materials from upstream to downstream.

Beef is one of many food ingredients that has an interesting phenomenon in the community .Some problems of it are expensive beef prices, fluctuations in beef prices, local beef cattle .shipping cost which is more expensive than imports, and the imbalance between supply with demand (Supply Chain Indonesia, 2014). The phenomenon that occurs must be addressed quickly considering that beef is a source of animal protein that can create and build intelligence and quality of human resources. According to Ditjennak (2016) per capita consumption of fresh beef per capita per year in 2015 amounted to 0.417 kg, an increase of 60 percent of consumption in 2014 amounted to 0.261 kg. This condition signals that the consumption needs of fresh beef is a basic necessity that must be met well in the market, so the role of government is increasingly needed to maintain the stability of availability and price of fresh beef.

The need of beef for Jakarta area according to Head of Fisheries and Food Security Department of DKI Jakarta Darjamuni (Kompas.com, 25/1/2016) and the Governor of DKI Jakarta Sumarsono (Kompas.com, 29/11/2016) is big. They stated that the meat requirement is averaged at 165 tons per day. The need of beef for the Jakarta area in 2017 according to the Chairman of the Jakarta Beef Committee Simanjorang (Liputan6.com, 19/6/2017) did not change compared with the need for beef in 2016. It is still an average of 165 tons per day. The fulfillment of beef requirement for Jakarta area is mostly fulfilled by imported beef 97% and local beef only 3%. The problem is caused by the lack of stock of cattle in local farms and feedloader companies in Indonesia. Another reason is the high cost of distribution of local cattle which is still too expensive when compared with imported beef and it is proven by the selling price of imported beef per kilogram of Rp. 80.000, - and the price of local beef per kilogram of Rp. 110.000.

The need for beef in Depok area in 2016 according to Head of Technical Implementation Unit of slaughterhouse of Dept. of Agriculture and Fisheries Department of Tapos Depok Alvian (Sindonews.com, 9/6/2016) is at the average of 40 tons per day. Suryahati (Sindonews.com, 9/6/2016) is to bring beef supply from Java, Bali, NTT and Australia, so the need of beef in Depok can be fulfilled well.

The increase in the price of beef has a negative impact on the purchasing power of lower middle-income people. It can lead to a decrease in household welfare. Previously they could meet the needs of meat protein for everyday life then they are unable to fulfill the meat requirement after the price increases. Based on the survey on traditional markets in Jakarta and Depok, there is a lot of increase in the price of beef. It still continues to rise in price before the coming of Ramadan until the time of Idul Fitri. For consumers, the increase of beef price can decrease consumer purchasing power.

The problem of beef price increase can be overcome by increasing the smoothness and stability of the distribution pattern of beef availability in each traditional market in Jakarta and Depok ranging from producer to consumer. The role of application of shorter beef supply chain model is expected to decrease shipping cost of beef in traditional markets in Jakarta and Depok.

Based on the phenomena occurring in traditional markets in Jakarta and Depok, there is still a need for research on "The Study of Supply Chain Model of Traditional Markets in Jakarta and Depok"

1.2. Research Purposes

The objectives of the research are to (1) map the beef supply chain model in traditional markets in Jakarta and Depok, and (2) analyze the beef supply chain model in traditional markets in Jakarta and Depok.

2. LITERATURE REVIEW

2.1. Supply Chain

Supply chain according to Wisner, Tan, and Leong (2012, p.6) is a process that starts from collecting existing resources followed by management into finished products for subsequent distribution and marketed to end customers with regard to cost, quality, availability, after sales service, and reputation factor. The supply chain involves suppliers, manufacturers, and retailers synergistically and cooperate with each other both directly and indirectly.

A supply chain consists of all parties involved, directly or indirectly, in meeting customer demand. Supply chains include not only producers and suppliers, but also carriers, warehouses, retailers, and even customers themselves. From each organization, like a manufacturer, the supply chain covers all the functions involved in receiving and meeting customer demand. This function is comprehensive but not limited to new product development, marketing, operations, distribution, finance, and customer service (Chopra, Meindl, 2013, p.20). There is a close relationship between design and supply chain management (product, information, and funding) (Chopra, Meindl, 2013, p.23).

2.2. Supply Chain Management

Supply chain management is a network of companies that work together to create and deliver a product into the hands of end users (Pujawan and Mahendrawathi, 2010; Rakhman et al, 2016). These companies usually include suppliers, manufacturers, distributors, stores or retailers, as well as support companies such as logistics services. In a supply chain there are usually three kinds of flow that must be managed, namely (1) the flow of goods from upstream and downstream, (2) the flow of money and the like that flows from upstream to downstream, and (3) the flow information that can occur from upstream to downstream or vice versa.

According to Pujawan and Mahendrawathi (2010), supply chain management cannot be separated from the strategic objectives on the supply chain, the strategy cannot be separated from long-term goals. To achieve these long-term goals, it is necessary to have short-term and local environmental decisions that can support the organization or supply chain toward these strategic objectives in order to survive or win the market competition. Companies in order to win the market competition must ensure that supply chain applications are able to provide cheap, qualified, timely, and varied products. In addition, companies in implementing supply chain operations should pay attention to the capabilities of their resources and be able to operate efficiently, create qualified, fast, flexible, and innovative products.

2.3. Transportation

Transportation and distribution is a process of moving products from a production site to a consumer location or a user which is often restricted by a great distance. It requires the ability to deliver products to customers in a timely manner, in appropriate quantities and favorable conditions determines the benefits competing products (Pujawan and Mahendrawathi, 2010).

According to Pujawan and Mahendrawathi (2010) to create competitive advantage, the company is aimed to perform distribution management that can provide high delivery time and efficiency in the distribution network in accordance with the changing of technology and innovation. In addition, transportation and distribution activities become very important and great component activity on the supply chain with the on-line purchases that can deliver products directly to customers.

2.4. Transportation Model

According to Heizer and Render (2012) a good transport model is a transport that can move goods or products from multiple sources to multiple destinations with minimum cost. To achieve optimal transportation conditions, the company should pay attention to the capacity of each source it has and the amount of consumer demand that will be met by taking into account the distance and the cost of delivery.

3. RESEARCH METHODS

3.1. Concept Framework

The conceptual framework of this research uses a framework of the relationship between supply chain concepts on traditional market operational performance through research that will be conducted. This conceptual framework is also based on the research objectives that have been formulated and the theoretical framework that has been presented in the previous literary review.

According to Hair et. al., (2013) concept framework is a formulation or significance of the theoretical framework or theories that support the research. Therefore, the framework of this concept consists of variables and the relationship of variables to one another.

3.2. Operational Definition

The operational definition is to define the variables operationally based on the observed characteristics, allowing researchers to observe or carefully measure an object or phenomenon. The operational definition is determined based on the parameters used in the study. Variables in this study is a model of beef supply chain from producers to consumers. The supply chain of beef can be defined as a business partner involved in the pattern of beef distribution from producers to consumers.

3.2. Research Sites

Research location in this research is traditional markets in Jakarta and Depok.

3.3. Research Design

This research uses explanatory survey and in depth interview to beef traders in traditional markets in Jakarta and Depok.

3.4. Analysis Technique

The analytical technique which is used in this study is a comparative descriptive analysis, which describes the supply chain patterns involved in the distribution of beef contained in the traditional markets of Jakarta and Depok.

4. RESEARCH RESULTS

Results of research in Jakarta traditional markets show that beef supply chains have varied links after surveys in some traditional markets such as Pasar Minggu market, Jatinegara market, Kramatjati market, Rawa Badak market, and Johar Baru market ranging from four to six links from producers to consumers. As for the beef chain in the traditional market in Depok has a supply chain partners of four to five. The results of the beef supply chain model for both traditional markets can be seen in the following figure:

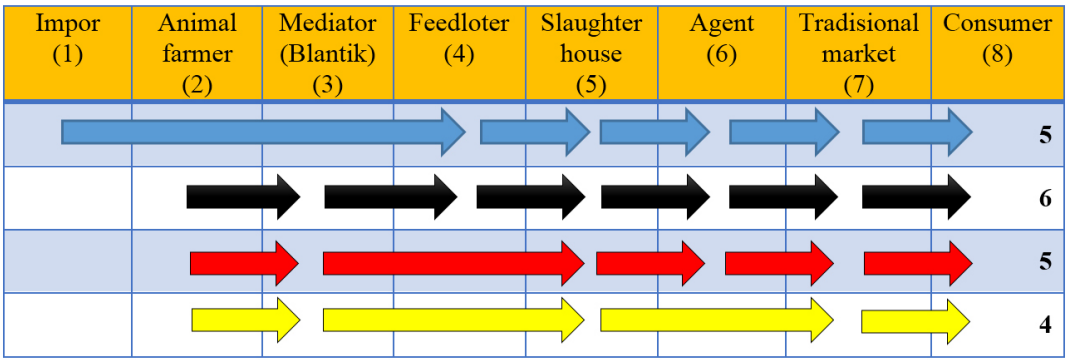

Figure 1: Beef Distribution Pattern from Manufacturer to Consumer in Traditional Markets in Jakarta and Depok
Source: **Survey Results (2017)**

Beef supply chain in Pasar Minggu, Kramatjati, and Johar Baru have long chain of supply as much as from chain of cattle, Pasar Minggu, slaughter house, traditional market, and consumer. Beef traders orders directly to slaughterhouses located in Cilangkap Jakarta. Bookings are made daily from 3 to 5 cows for the needs of one market according to the busier conditions of the market or the maximum demand of one market is about a maximum of 1 ton of beef kg. As for UPB Jatinegara, UPB Rawa Badak, UPB Cempaka Putih, and UPB Gondangdia have a beef supply chain pattern of as many as 5 supply chain partners, ranging from cattle ranchers, mediator, slaughterhouses, beef agents, traditional markets and consumers.

Some beef traders at UPB Rawa Badak order beef through new feedloader into slaughterhouses or complete links from imported cattle from Australia, feedloaders, slaughterhouses, beef agents, traditional markets and consumers. The location of slaughterhouses for traditional markets has basically considered the location closest to their respective market locations such as Pulo Gadung slaughterhouses, Penggilingan slaughterhouses Cakung slaughterhouses, Cilangkap slaughterhouses, and Cisalak slaughterhouses. There are still beef traders who order beef away from the market location, such as beef traders in Rawa Badak market, who order beef through slaughterhouses in Tangerang with the reason of having a long cooperation contract and ease of payment. This means that traders can pay part with the credit payment system within one day after their merchandise sold out so that their capital turnover can be more smoothly.

The short length of the supply chain can affect the selling price. Traditional markets that have four supply chains namely UPB Pasar Minggu, UPB Kramatjati, and UPB Johar Baru. They can sell beef per kilogram of Rp. 115.000 while for the traditional market consisting of five supply chains such as UPB Jatinegara, UPB Rawa Badak, UPB Cempaka Putih, and UPB Gondangdia have the price of beef per kilogram more expensive that is Rp. 120,000 as can be seen more in table 1 below:

Table 1
List of Beef Prices at Traditional Markets Jakarta

S.No.	*Name of Traditional Market*	*Price in August 2017 (Rp. 000)*			
		1	*2*	*3*	*4*
1	Pasar Minggu	115	115	115	115
2	Jatinegara	120	120	120	120
3	Kramatjati	115	115	115	115
4	Rawa Badak	120	120	120	120
5	Johar Baru	115	115	115	115
6	Cempaka Putih	120	120	120	120
7	Gondangdia	120	120	120	120

Source: Pasar Jaya (2017).

Beef traders in Depok area mostly have a five-year supply chain, ranging from cattle ranchers, slaughterhouses, beef agents, traditional markets, and consumers. Traditional markets that have five chains are Gede, Sukatani, Musi, and Depok Jaya markets. While traditional markets that have four supply chain partners are Kemiri Muka, Tugu, and Cisalak markets. Selection of slaughterhouses for traditional markets in Depok area has considered the location of slaughterhouses closest to their markets consisting of Tapos slaughterhouses, and Cisalak slaughterhouses. Nevertheless, there are still cattle traders in the traditional markets who order beef that is farther from their market place, for example some beef traders in Musi market who order beef to beef agents from the slaughterhouses in Bogor. This is done because the merchant has limited capital so they look for a beef agent that can provide loan or payment system can be paid in cash some and the rest of the credit with the tempo of 1 to 2 days after their merchandise sold out.

The impact of the length of supply chain partners of beef can affect the selling price in those markets. The traditional market with five supply chain partners namely Agung market, Sukatani market, Musi market and Depok Jaya market sell beef per kilogram for Rp. 120,000 up to Rp. 130,000. As for the traditional market, the partners of the supply chain are only four partners, such as the Kemiri Muka market can sell the beef for Rp. 115.000 and for the market Cisalak and Tugu market can sell for Rp. 110,000 because the market is located very close to the slaughterhouses located in the Cisalak area. The list of beef selling prices for traditional markets located in Depok area can be seen in Table 2 below:

Traditional beef traders' order both in Jakarta and Depok to suppliers are still done individually in accordance with their capabilities and their respective relationships and there is no role from the traditional market managers. Conditions like this are very easy to disrupt the supply chain of beef in traditional markets which in turn can cause problems of shortage of beef stock and the rise of cattle prices in traditional markets. To address this, it is important that the role of traditional market managers should be enhanced into the supply chain management of nine basic needs by engaging in cooperation with the meat suppliers that can

Table 2
List of Beef Prices at Depok Traditional Markets

S.No.	*Name of Traditional Market*	*Price in August 2017 (Rp. 000)*			
		1	*2*	*3*	*4*
1	Kemiri Muka	115	115	115	110
2	Agung	120	120	120	120
3	Tugu	110	110	110	110
4	Cisalak	110	110	110	110
5	Sukatani	120	120	120	120
6	Musi	120	120	120	120
7	Depok Jaya	130	130	120	120

Source : Disperindag Depok (2017).

be offered to beef traders in their respective traditional markets. In addition, traditional market managers must improve their management performance, not only serve as the pull of market levies, security charges, and market hygiene levies but also think about the rights of each trader in traditional markets such as the function of managers that play a role to stabilize prices and establish relationships with suppliers.

The role of traditional market managers in stabilizing prices is very important in order to balance the amount of demand with the availability of beef supply. To increase the number of beef demand in traditional markets can be pursued by increasing the promotion of beef products sold in the market so that the number of visitors can increase, because the results of field surveys show that the number of traditional market visitors from period to period decreased the number of visitors. For example Kramatjati traditional market, its condition worsened in September 2017. When the researcher visited the market and interview with one of the traders they said that they start trading at 5 am until around 10 noon they are only able to sell 0, 5 kg of beef, whereas the previous period average until 9 am already able to sell as much as 10 kg.

In addition, the role of market managers who cooperate with related parties can propose to cut the supply chain of beef to be shorter by eliminating the role of beef supply chain in both traditional markets of Jakarta and Depok in order to reduce the selling price of beef. Steps that traditional market managers can take are to work with the authorities to break the supply chain and engage in long-term contracts with slaughterhouses under conditions that facilitate traditional market beef traders. Furthermore, the poultry house should do the cooperation contract with the cattle farmer so that the cattle from the breeder can be directly purchased by the slaughterhouse at the proper price, so the cattle rancher can be passionate to increase their production.

5. CONCLUSION

Based on the survey results and discussion of beef supply chain model of traditional markets in Jakarta and Depok it can be drawn some conclusions are:

1. The traditional beef market supply chain model in Jakarta and Depok is to have similarities in the length of its supply chain and to have differences in the supply chain partners involved.
2. The length of supply chain of beef can affect the selling price of beef per kilogram, the longer the supply chain can cause the price of beef per kilogram more expensive.

3. The role of traditional market managers should work together with beef suppliers with long-term contracts.
4. Supply chain model that can be proposed is to be three partners of the supply chain of beef from cattle ranchers into slaughterhouses, then into traditional markets and consumers.

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