



Analysis of the Potential Horticultural Products in Blitar Regency on the Agribusiness Market in Blitar Regency

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Abstract— Blitar Regency has a wholesale market managed by the Wlingi Market Association, but some horticultural products from the farmers are still absorbed by the wholesale market outside Blitar Regency and reabsorbed by the retailers from Blitar Regency. Objectives of the research were to obtain information about the superior products, supply chain, and the inhibiting factors on the development of the horticultural products. Method of the research used descriptive analysis on each member of the links. Location of the research is the wholesale market in Blitar Regency, Wlingi. Variables of the research include types, volumes, and circulation of the horticultural products. Results of the research showed 3 major horticultural commodities that include chili, red pepper, and watermelon. The potential agricultural products in Blitar Regency have inefficient and complex supply chain because they involve many actors from farmers to consumers. The inhibiting factors are as follow: 1. The farmers do not have a collective system for marketing their crops so that information about the products as well as the prices are not integrated, 2. The supply chain patterns are inefficient and complex, so that the prices are costly, and 3. Inadequate location of the wholesale market. It is expected that the approach of supply chain on horticultural commodities in Blitar Regency will provide an overview of potential commodity supply availability as a consideration for supply chain management.

Keywords— *wholesale market, supply chain*

I. INTRODUCTION

Subsector of horticulture has a strategic position in the development of agricultural sector. Contribution of the horticultural subsector on the development of the agricultural sector tends to increase year by year marked by an increase in several macro indicators such as gross domestic product (GDP), export volume, employment absorption, and farmer exchange rate (FER) (Central Bureau of Statistics, 2014). The economic development of a region can be measured through the economic growth, which is at the same time an indicator that provides an overview of the extent to which regional economic activity in a certain period has resulted in increased income for the community as indicated by an increase of income per capita (Saragih, 2015). Basically, the regional economic growth is affected by the comparative advantage of a region, regional specialization, as well as the economic potential owned by

the region (Wulandari, 2010). Therefore, utilization and development of the whole economic potentials become the major priority that must be explored and developed in carrying out the sustainable regional economic development (Syahab, 2013).

Superior commodity is a commodity which contributes income to the related region (Setiawan, 2010). Some criteria that can describe the superiority of a commodity in a region is because the commodity has been well known by local community, managed, and widely developed by local community (Asriani, 2003), as well as make significant contribution to the economy of the local community, and compete with other commodities. Competitiveness of the commodity was known in accordance with indicator of the community income from the business (Agus and Budiyanto, 2005). The commodity has a conformity based on agroecological aspect,

particularly that relates to location of the development. The agroecological condition can be identified using productivity indicator that describes the production efficiencies. The commodity has potential and market-oriented both domestic and export as well as support from the government policies, especially market support and the availability of the supporting factors such as: institutions, technology, capital, means and infrastructures, as well as human resources (Widayanto, 2000; Juarsyah, 2015).

At present, a wholesale market in Blitar Regency is managed by Wlingi market association. There are 120 sellers who have been registered in the association and 80 merchants have not registered. The merchants in the market take the agricultural yields from the farmer groups that are scattered in Blitar Regency as well as from outside the Blitar Regency for resale in large quantities (wholesale) to the market sellers or greengrocers. The horticultural commodities potential can be developed in varying ways besides knowing the potential horticultural products. Objectives of the study were to get information about the superior horticultural products in Blitar Regency and to analyze the supporting and the inhibiting factors that affect the potential development of the superior horticultural products in Blitar Regency.

II. MATERIALS AND METHODS

Location of the research is the wholesale market in Blitar Regency that lies on Jalan Bromo Babadan, Wlingi. The market conditions are considered unrepresentative because it is an impromptu market that locates at the Wlingi terminal and operates from 04.00 p.m. to 04.00 a.m. Such

conditions have triggered the development of the sub terminal agribusiness and location for the horticultural commodity development is in the Animal Market area of Blitar Regency. An area of 13 hectares in the eastern part of the area is potential to be developed to become a horticultural product development of Blitar Regency. Methods of the research were data collection and direct observation that involved the market sellers, market association, association of farmer groups in the potential area for horticultural commodities, and the related agencies.

III. RESULTS

Analysis on the horticultural products in Blitar Regency was conducted on the horticultural commodities with the highest productivity. Central Bureau of Statistics in Blitar Regency (2021) reported that among 8 superior horticultural commodities in Blitar, the commodities of chilies, red peppers, and watermelons, have the highest productivities compared to 5 other commodities (onions, potatoes, cabbages, tomatoes, and honeydews). Results of the analysis on the potential horticultural products on 3 major commodities are described below.

1. Chili (*Capsicum frutescens*)

There are three mechanisms in SCM (Supply Chain Management) of chili commodity in Blitar Regency. Analysis on mechanism of the supply chain flow was conducted to describe the product flow pattern, information flow, and financial flow that relate to the agricultural commodities. Those three mechanisms are depicted in the form of SCM structure for chili commodity in Blitar Regency below.

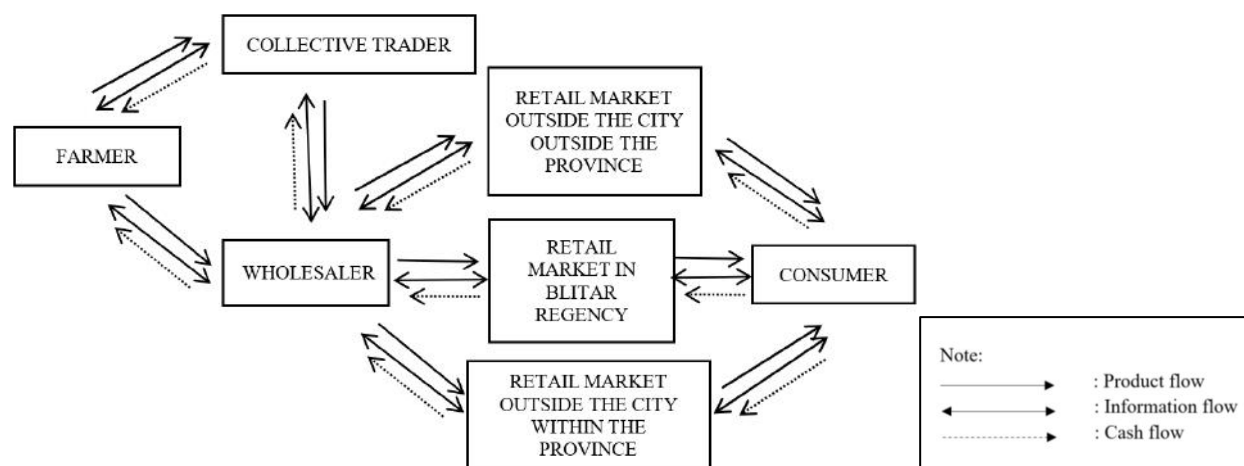


Fig.1. Supply Chain Management for Chili Commodity in Blitar Regency

2. Red Pepper (*Capsicum annum L.*)

Blitar Regency is a producer of red pepper in Indonesia, especially in East Java. The supply chain

analysis was applied to find out the mechanism of flows, distribution channels, and activities of the supply chain members on red pepper. As in the chili commodity, these

three mechanisms of the supply chain flows are illustrated in SCM structure for red pepper in Blitar Regency in Figure 2.

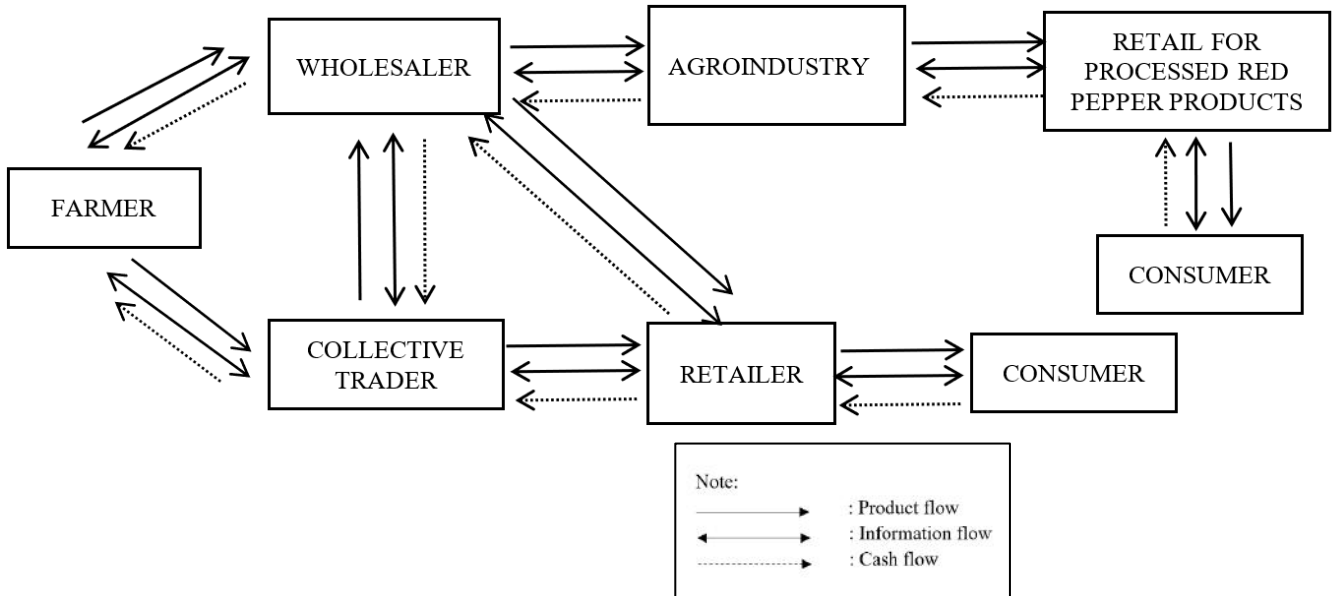


Fig.2. Supply Chain Management for Red Pepper Commodity in Blitar Regency

3. Watermelon (*Citrullus lanatus*)

Watermelon is one of fruits produced by the farmers in Blitar Regency, East Java of Indonesia. Therefore, it is important to perform an analysis of supply chain on

watermelon in Blitar Regency to find out the mechanism of flows, distribution channels, and activities of the supply chain members on watermelon. SCM structure for the watermelon commodity in Blitar Regency is presented in Figure 3.

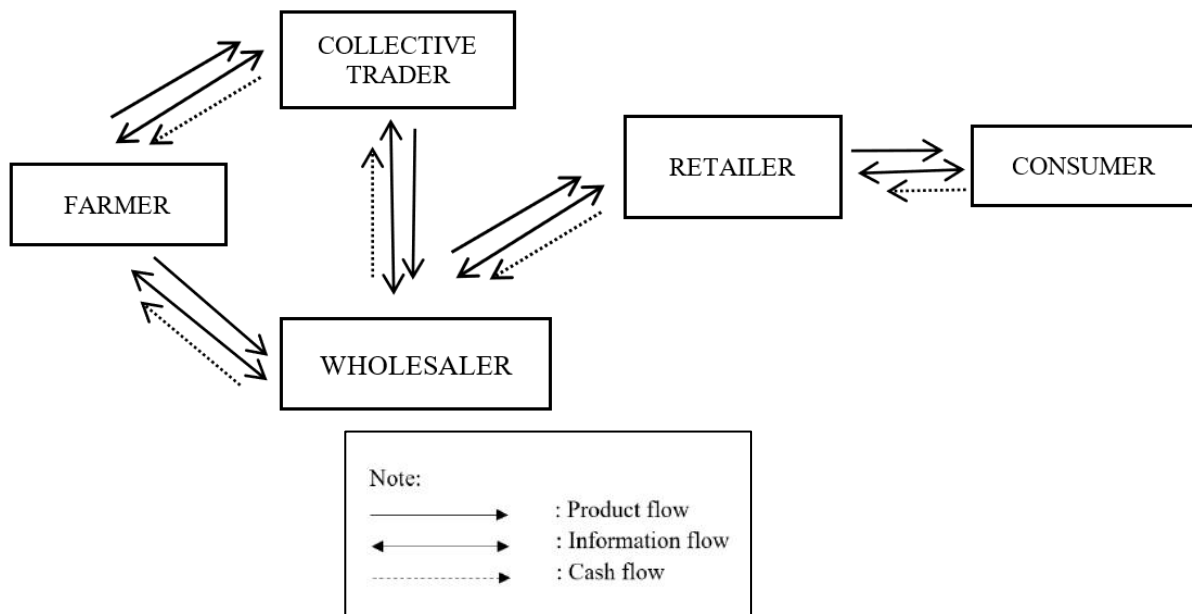


Fig.3. SCM for watermelon commodity in Blitar Regency

IV. DISCUSSIONS

Horticultural products are the basic needs in people's lives in Blitar Regency. The harvest area for chili in Blitar Regency reached 11,024 ha in 2019 and 10,745 ha in 2020 (Central Bureau of Statistics in Blitar Regency, 2021). The chili productions in Blitar Regency were very large that reached 1,503,782 quintals in 2019 and 1,881,377 quintals in 2020. The land area and the production value of the chili have made Blitar Regency to be the largest supplier of chili in East Java Province. Therefore, it is important to carry out a supply chain analysis on chili in Blitar Regency.

It is expected that the supply chain approach of chili commodity in Blitar Regency will be able to describe the availability of chili supply as consideration of the supply chain management for the consumers and the processing industries (Kurniawan, 2014). The supply chain analysis was carried out to determine the flow mechanism, distribution channel, and activities of the supply chain members on chilies. Based on Figure 1, the flow patterns in SCM of chili commodity in Blitar Regency are classified into 3 types, namely product flow, information flow, and financial flow. The product flow describes how the chilies are distributed from the first link (chain), the farmers, to the collective trader or the wholesalers, and subsequently distributed to the next link, and finally to the last link, the consumers. The information flow is existed when an information exchange has taken place between the farmers and the collective traders, the farmers and the wholesalers, as well as the information exchange in other links (chains) in accordance with the Figure 1. The exchange of information can be in the form of availability and supply demand, as well as information that relates to the price of red pepper. The financial flow is not only a transaction of red pepper, but also an example of a case in which the wholesalers and the collective traders could become the capital suppliers (stakeholders) for the red pepper farmers in Blitar Regency.

The links (chains) in Figure 1 are the chili farmers, the collective traders, the wholesalers, retailers, and the consumers. These five links (chains) are described below:

- 1). The chili farmers: the chili farmers play as the main producers in the supply chain of chili commodity in Blitar Regency.
- 2). Collective trader: in distributing the chili in Blitar Regency, the collective traders play as the first marketing intermediary.
- 3). Wholesaler: Wholesaler is a marketing agency that distributes the chili in bulk. The role of the wholesaler is as the collector of the production yields from the farmer as the producer in the scattered production areas and distribute the capital needed by the producers.

4). Retailer: Retailer is a marketing agency that deals directly with the consumers. Retailers become important connectors as because of them the consumers could enjoy the chili. The quantities taken by the retailers ranged 150-350 kg. It is due to the retailers only control the surrounding markets. Moreover, the retailers avoid to take high risks of losing if what they purchased were rotten or were not sold out.

5). Consumer: Consumer is an individual or groups who consume or utilize the chili for their own or group needs. Consumer is the last link of the supply chain. In this link, the products end up to be consumed as raw materials. The entire financing processes come from the consumer payments for the products of chili purchased. So that the information about the needs and desires of the consumers is a directional determinant of the chili farming process.

Furthermore, the harvest area for red pepper in Blitar Regency reached 1,387 ha in 2019 and 1038 ha in 2020 (Central Bureau of Statistics in Blitar Regency, 2021). The red pepper productions in Blitar Regency were very large that reached 177,549 quintals in 2019 and 114,923 quintals in 2020. Red pepper is a potential vegetable commodity that has high economic value and potential to be developed. Red pepper has important position in the dietary menu. Even though it is needed in small quantity, but it is consumed everyday by almost all of the Indonesian peoples. Red pepper is the superior vegetable commodity in the national and regional levels. Superior commodity is a commodity that is deserved to be cultivated to provide profits for the farmers, biophysically, socially, and economically. A commodity is worth developed if the commodity is cultivated in accordance with its agroecology, provide a business opportunity, as well as applicable and acceptable by the local community that could absorb workforces and economically profitable (Susanto and Sirappa, 2007).

Based on the Figure 2, the flow patterns in SCM of red pepper commodity in Blitar Regency are divided into 3 types, namely product, information, and financial flows. The product flow describes the distribution of red pepper from the first link (chain), the farmers to the collective traders or the wholesalers, and then distributed to the next link, and ended up to the last link (last chain), the consumers. The information flow occurred as a result of information exchange between the farmers and the collective traders, the farmers and the wholesalers, as well as information exchange in the other links (chains) in accordance with the figure above. The exchange of information can be in the form of availability and supply demand, as well as information that relates to the price of red pepper. The financial flow is not only a transaction of red pepper, but also an example of a case in which the wholesalers and the collective traders could become the

capital suppliers (stakeholders) for the red pepper farmers in Blitar Regency.

The links (chains) in Figure 2 are the farmers of red pepper, the collective traders, the wholesalers, agroindustry, the retailers, and the consumers. These six links (chains) are described below:

- 1). Farmer: The farmers of red pepper play as the main producers in the supply chain of red pepper commodity in Blitar Regency.
- 2). Collective trader: in distributing the red pepper in Blitar Regency, the collective traders play as the first marketing intermediary.
- 3). Wholesaler: Wholesaler is a marketing agency that distributes red peppers in bulk. The role of the wholesaler is as the collector of the production yields from the farmer as the producer in the scattered production areas and distribute the capital needed by the producers.
- 4). Retailer: Retailer is a marketing agency that deals directly with the consumers. Retailers become important connectors as because of them the consumers could enjoy the red pepper. The quantities taken by the retailers are only 300 kg. It is due to the retailers only control the surrounding markets. Moreover, the retailers avoid to take high risks of losing if what they purchased were rotten or were not sold out.
- 5). Agroindustry: Agroindustry is an activity that utilizes crops as raw materials, designs, and provides tools and services for the activity.
- 6). Consumer: Consumer is an individual or groups who consume or utilize the red pepper for their own or group needs. Consumer is the last link of the supply chain. In this link, the products end up to be consumed as raw materials. It must be remembered that the entire financing processes come from the consumer payments for the products of red pepper purchased. So that the information about the needs and desires of the consumers is a directional determinant of the red pepper farming process.

Furthermore, the harvest area of watermelon in Blitar Regency reached 151 ha in 2019 and 55 ha in 2020 (Central Bureau of Statistics in Blitar Regency, 2021). The watermelon productions in Blitar Regency reached 48,960 quintals in 2019 and 24,375 quintals in 2020. Empirically, an information was obtained that the marketing systems of horticultural commodities in the various SCM- Supply Chain Management have not been efficient as indicated by long marketing channels, the market structure tended to be oligopsonistic, uneven distribution of remuneration for the marketing functions, and price fluctuations in the short-term.

Based on the Figure 3, the flow patterns in SCM for the watermelon commodity in Blitar Regency can be

divided into 3 types, namely the product, information, and financial flows. The product flow describes how the watermelons are distributed from the first link, the farmer to the collective trader or the wholesaler, and then distributed to the subsequent link up to the last link, the consumer. The information flow occurs when there is an exchange of information between the farmer and the collective trader, the farmer and the wholesaler, as well as the information exchange in other links that conform to the Figure above. The information exchange can be in the form of availability and supply demand as well as information that relates to the watermelon price. The financial flow can be in the form of buying and selling transaction of watermelon.

The links in Figure 3 are the watermelon farmers, collective traders, wholesalers, retailers, and consumers. These five links are defined as follow:

- 1). Watermelon Farmer: Watermelon farmer is the link who plays as the major producer in the watermelon commodity supply chain in Blitar Regency.
- 2). Collective Trader: in distributing the watermelon in Blitar Regency, the collective trader plays as the first marketing intermediary to local wholesaler and the retailer.
- 3). Wholesaler: Wholesaler is a marketing agency that distributes watermelons in bulk. The role of the wholesaler is as the collector of the production yields from the farmer as the producer in the scattered production areas.
- 4). Retailer: Retailer is a marketing agency that deals directly with the consumers. Retailers are an important link due to the consumers can enjoy the watermelons because of them. The quantity taken by the retailer is just around 150 kg. It is due to the retailers only control the market in their vicinities. Moreover, the retailers do not want to experience high risk of loss if the fruits they buy were rotten or unsold.
- 5). Consumer: Consumer is individual or group who consume or utilize watermelon for his/her own or group needs. Consumer becomes the last chain in the supply chain. In this chain, the product ends up for consumption as a raw material. It must be remembered that the entire financing process comes from consumer payments for the watermelon that has been purchased.

Based on results of the research on the supply chain management for 3 horticultural commodities in Blitar Regency, there were differences in the number of links in each commodity. The commodity which has many links is the red pepper. The application of Supply Chain Management (SCM) concept in the company will give indirect benefits, such as customer satisfaction, increase income, decrease the cost, the increase asset utilization, increase in profits, and enlarge the company (Jebarus, 2001). SCM does not only have indirect benefits, but also

has direct benefits such as physically converting raw materials into finished products and delivering them to the final consumers, identifying the products with characteristics as what the consumers want (Sucahyowati, 2011). Number of the supply chain links also affects the physical costs, for instance, material costs, storage cost, production cost, transportation costs, and etc.

V. CONCLUSION

Results of the research showed that 3 major horticultural commodities are chili, red pepper, and watermelon. The potential agricultural products in Blitar Regency have inefficient and complex supply chain due to involving many actors from farmers to the consumers. The inhibiting factors are as follow: 1. The farmers do not have collective system in marketing their harvests, so that information on products and prices was not integrated, 2. Ineffecient and complex supply chain pattern so that the price is costly, and 3. Inadequate wholesale market locations. It is expected that the approach of supply chain on horticultural commodities in Blitar Regency will provide an overview of potential commodity supply availability as a consideration for supply chain management.

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