

Supply Chain Analysis of Galangal Coffee Agroindustry in Sumenep

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ABSTRACT

Galangal coffee agroindustry in Sumenep is the agroindustry which produce coffee products added galangal that has many benefits for health. Nowadays, people think to live healthy, the nutritional content in food and beverages is important. Galangal coffee is the product that can fulfill the market needs about healthy lifestyle. This study aims to formulate the supply chain management on galangal coffee agroindustry. The paper analyzing the formula by descriptive analysis using supply chain management and marketing efficiency. Based on the analysis, the parties that involved in the supply chain of galangal coffee agroindustry, namely, Galangal farmers, agroindustry, retailers and consumers. The most efficient distribution channel is form galangan farmers, agroindustry and consumers with 62.1% of marketing efficiency.

Key words: supply; chain; galangal; coffee; distribution.

1. INTRODUCTION

Galangal ranks fourth with total production of 62,520,835 kg or about 10.5% of the biopharmaceutical plants total production (BPS Indonesia, 2015). The largest galangal production center is Java Island which contributes 40,095,982 kg of production or about 64.13% of the total galangal production (Dirjen Hortikultura, 2015). Rubaru sub- district is a lengkuas central area in Sumenep district. In 2015 the production of galangal in Rubaru is 178.836 kg, which contributes 50.56% of the total galangal production in Sumenep District (BPS Kabupaten Sumenep, 2015).

The availability of the galangal in Rubaru describes the convenience in the distribution of galangal products to the processing of galangal coffee, as well as indicate the opportunity to develop the galangal coffee business. Galangal coffee is the new product, combining coffee and galangal powder that is processed in agroindustry in Matanair village, Rubaru. The innovation of galangal coffee supports this product to become a superior product, as an effort development of galangal commodity potential and be able to compate (Pramasari and Yuli, 2018). The sustainability of galangal coffee agroindustry are influenced by factors e.g. raw materials, human resources, technology, and marketing aspects (demand and supply).

Related parties that participated in the galangal coffee agroindustry formed an interrelated relationship that is the supply chain of galangal coffee agroindustry. They are providers of raw materials galangal (farmers), raw materials of coffee (market), agroindustry, business partners (retailers), and consumers.

This supply chain shows the level of raw materials supply flow into the agroindustry, related to the fulfillment of raw materials that required by suppliers. In addition, there is a

relationship between producers with partners galang coffee business, that shows the level of marketing flow of galangal coffee products. Supply chain in galangal coffee agroindustry have to run well in order to minimize the problem that could be happen throughout the process of industrial business activities, e.g. the fulfillment of raw materials, as well as the fulfillment of consumer needs.

Galangal coffee agroindustry in Rubaru has been established for a long time. It has been applied marketing management, but it is not optimal. The potential market is not known yet well considering the product is a new product. The other problem that found in this agroindustry is the supply chain, the parties that included in this circle still unknown clearly and the management has not been ran optimally. This problems will inhibit the flow of the production process and marketing of galangal coffee products. The amount of demand and supply of the products are uncertainty that will affect the extent of marketing efficiency galangal coffee.

This research was conducted with the aims to fulfill the capacity that desired by consumer and to prevent overproduction in the company. In this study, the research on supply chain and management of galangal coffee agroindustry are conducted along with the efficiency of product marketing, to know how much efficiency has been achieved as well as certainty in supply of raw materials, distribution and demand of galangal coffee products.

2. REVIEW OF LITERATURE

2.1. *Supply Chain*

Supply chain not only consists of producers and suppliers but has dependence on the flow of logistics, transportation, storage or warehouse, retailers and consumers themselves. There is a link between the supply chain and the flow and transformation of goods and services from the stage of supply of raw materials to final products to consumers. The supply chain also includes product development, marketing, operations, distribution, finance and customer service (Vorst in Hadiguna, 2016).

A supply chain includes all activities associated with the flow and transformation of goods and services from the raw material stage to the end user (customer), as well as the associated information flows. The supply chain also integrated group of process to source, process, and deliver product (Russel and Taylor, 2009).

Supply chain is an integrated activity that includes the flow of information related to three aspects, source, production process, and product delivery process. There are three components in the supply chain:

1. Upstream supply chain, covering various activities of the company with suppliers, availability of raw materials and others materials.
2. Internal supply chain, covering all the process of importing goods to the warehouse until the production process. The main activities are production and inventory control.
3. Downstream supply chain, covering all activities involving the delivery of products to customers. The main activity focused on distribution, warehousing, transportation and service.

In general, the supply chain consists of three stages: (1) procurement; (2) production and (3) distribution. Supply chain management is part of modern management practices that used in many companies to improve their ability to compete. Many industry have been concerned by researchers in the field of supply chain management. The demand for sustainability issues is driving the development of sustainable supply chain management (Hadiguna, 2016).

2.2. *SupplyChain Management*

Supply chain management in agricultural products is management of the entire production process from processing, distribution, marketing, to the end product (Marimin, *et al.*, 2013).

Supply Chain Management is a concept or mechanism to improve the total productivity of a company in the supply chain through optimization of time, location and quantity flow of materials. One of application of supply chain management is manufacturing, the company that required to meet customer satisfaction, develop products on time, spend low on inventory and product delivery, manage industry carefully and flexibly.

Vorst et al. in Hadiguna (2016) defines supply chain management as the integration of planning, implementation, coordination and control of all processes and business activities to efficiently produce and deliver products to meet market needs.

Supply Chain Management (SCM) is approaches that applied to integrated suppliers, entrepreneurs, warehouses and other storage to distributes products with the right quantity, place and time in order to minimize costs and to satisfy customers. SCM aims to make the entire system efficient and effective, minimizing costs from transportation and distribution to inventory of raw materials, process materials, and finished goods (Marimin, *et al.*, 2013). There are several major parties who have an interest in SCM, they are suppliers, manufacturers, distributors, retailers, and customers (Marimin, *et al.*, 2013).

Oliver and Weber was first proposed the term of supply chain management in 1982. Supply chain is the physical network, in the companies SCM involved in supplying the raw materials, producing the goods, or sending it to the end user. Supply Chain Management (SCM) is a method, tool, or management approach. However, it should be emphasized that SCM requires an integrated approach or method based with added by spirit of collaboration (Anggraeni, 2009).

3. METHOD

The research was conducted in Pottre Alomampa, a galangal coffee agroindustry in Rubaru, by purposive sampling (with consideration this area is central of lengkuas commodity and only agroindustry of galangal coffee in Sumenep District).

Data was collected by FGD (Foccus Group Discussion) method and direct interview method to related party such as producer, labor, galangal farmer, and stakeholder related to galangal coffee.

Supply chain management was analyzed by descriptive data analysis. The level of marketing efficiency in galangal coffee agroindustry was conducted by efficiency test of marketing of galangal coffee agroindustry.

This test is done by using the concept of marketing efficiency, where marketing efficiency (%) according to Soekartawi (1989) is a comparison between the total cost (currency) with the total value of marketed products (currency). A supply chain with a higher efficiency level is a supply chain that has a smaller EP value.

4. RESULT AND DISCUSSION

4.1. Supply Chain System

Supply chain in the agroindustry is the existence of interrelated parties that distribute agro- industry products. In the galangal coffee agroindustry, the parties that included in the supply chain are galangal farmers, coffee powder traders, agroindustry, business partners (retailers) of galangal coffee and consumers. All parties are parties who are related to each other from the beginning of galangal farming to galangal coffee products that can enjoyed by consumers.

4.1.1. Galangal Farmers

Lengkuas farmers are the first party in the galangal supply chain that located in the upstream sector as a producer of local galangal commodities in Rubaru District. The farmers who supply the galangal in galangal coffee agroindustry are farmers of *Pokmas* (community group) Al-Ihsan.

Quality and quantity are greatly affect the price of lengkuas commodity, at harvest time price of galangal will drop drastically until at Rp. 3000, - to Rp. 5000, -. While the normal average price of Rp.15000, -. The quality of local galangal is quite high because it has unique characteristics and taste.

4.1.2. Agroindustry

Galangal coffee agroindustry selects the local galangal as raw material cause of the greatness of potency of Galangal in Rubaru sub-district. Agroindustry works together with community groups to increase the production and quality of local galangal, which is then processed into galangal coffee through various process. The production process of galangal coffee begins at the cleansing of the ingredients, size reduction, roasting and processing into jelly, then mixed with coffee and sugar to form a fine texture.

The agroindustry sells galangal coffee at retailers and consumers at the same price, Rp 25.000., for large package (250g), and Rp 2.000., for small package (20g).

4.1.3. Retailers

Retailer is a partner of galangal coffee agroindustry which includes minimarket and souvenir outlets in Sumenep district. This party sells small package of galangal coffee with the price of Rp.3000, - and large package with price Rp. 27.000, -.

4.1.4. Consumers

Consumers of galangal coffee is generally in around Sumenep area with various economic levels, lower to the high. Limited market range is caused by limited production of galangal coffee in agro-industry, production capacity can not meet the product demand. Higher demand comes from outside the Sumenep area, but the agroindustry still has not been able to meet the demand so that the great opportunity is lost.

Based on the description above is known that the parties of supply chain in galangal coffee agroindustry include farmers galangal, agroindustry partners (retailers) and consumers. The flow of the supply chain system can be described as follows in **Figure 1**.

4.2. Marketing Efficiency

Based on the flow patternof galangal coffee supply chain, 2 distribution channels was created:

1. Channel 1: Farmer galangal-agro-industry - retailer-consumer merchant.
2. Channel 2: Farmers galangal-agro-industry - consumers.

Both distribution channels is a supply chain in galangal coffee agroindustry which is then calculated the percentage of marketing efficiency. Marketing efficiency aims to find the efficient of the supply chain pattern in the galangal coffee agroindustry, and as an indicator of supply chain success rate. The percentage of marketing efficiency on galangal coffee agroindustry is explained in **Table 1**.

Table 1. Results of Marketing Efficiency in Galangal Coffee Agroindustry

Distribution channel	EP value (%)
Channel 1	62,9
Channel 2	62,1

Table 1 shows that channel 1 has an efficiency value higher than the channel two with a value of 62.9%. The most efficient marketing channel is the channel with the least efficiency value. It can be concluded that channel 2 is the most efficient channel in galangal coffee agroindustry supply chain system. The distribution channel 1 provides a more optimal advantage in the galangal coffee agroindustry, and provides a equally profit to each galangal coffee supply chain party

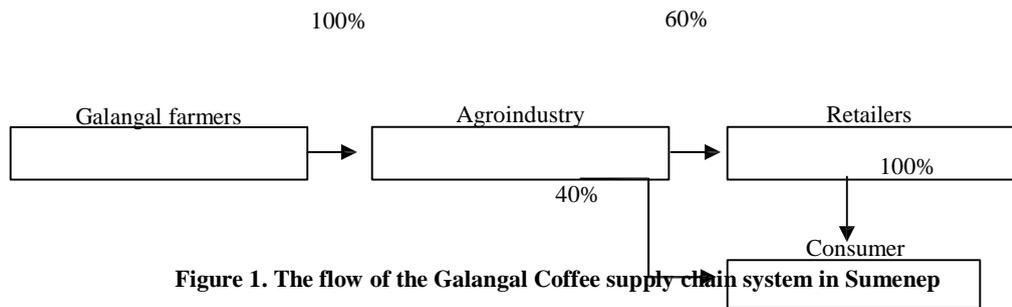


Figure 1. The flow of the Galangal Coffee supply chain system in Sumenep

5. CONCLUSION

Parties which are involved in the supply chain of galangal coffee agroindustry include the galangal farmers, agroindustry, retailers and consumers. The most efficient distribution channel is channel 2 with 62.1% marketing efficiency which are galangal farmers, agroindustry and consumers.

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