

# Supply Chain Management and Institutions in Chili Commodities As an Effort to Combat Inflation in Bungo Regency

Sasmita Rusnaini<sup>1\*</sup>, Zulkifli<sup>2</sup>, Nanik Istianingsih<sup>3</sup>

<sup>1,2,3</sup>*Institut Administrasi dan Kesehatan Setih Setio  
Muara Bungo, Indonesia*

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## ABSTRACT

Of the 37 provinces in Indonesia, Jambi recorded the highest inflation, reaching 8.55 percent. The Central Statistics Agency (BPS) of Jambi Province reported that there were two regions that contributed the highest national inflation. Both were Jambi City and Bungo Regency. Inflation occurred due to problems with the availability of necessities and their prices on the market which were rising. The facts that formed inflation that influenced the inflation rate in Bungo Regency included the largest contributor of food, namely chili. The main problem in the development of chili agribusiness is the lack of variety, quality, continuity of supply, and quantity that are in accordance with market demand, especially for modern market purposes (supermarkets/hypermarkets), and processing industries, institutional consumers (hotels, restaurants, hospitals). One of the problems is caused by the lack of coordination between agribusiness actors. This causes the institutional structure of chili commodity agribusiness to become fragile and the linkage of supply chain management to become weak. Only certain groups are able to control the stock of chili in the Bungo Regency market. The objectives of this study are 1) to identify the structure of the chili commodity supply chain in Bungo Regency; 2) analyzing the institutional structure of chili farmers in Bungo Regency; 3) formulating strategies to increase the competitiveness of chili commodities in Bungo Regency.

**Keywords:** Supply Chain; Institutional; Chili Commodity.

## I. BACKGROUND

Of the 37 provinces in Indonesia, Jambi recorded the highest inflation, reaching 8.55 percent

(<https://bisnis.tempo.co/read/1624062/inflasi-jambi-tembus-855-persen-jokowi-hati-hati>). The Central Statistics Agency (BPS) of Jambi Province reported that there were two regions that contributed the highest national inflation. Both were Jambi City and Bungo Regency. Inflation occurred due to problems with the availability of necessities and their prices on the market which were rising.

Inflation-forming data that affects the inflation rate in Bungo Regency starts from the food, clothing, housing, equipment and other sectors, but the largest contributor to food is chili. The high price of chili in Bungo Regency is due to the very limited stock of chili while the demand for chili continues to increase. The majority of people in Bungo Regency like food with a spicy taste because of the closeness of the culture of the Bungo Regency community to the Minang Culture.

In addition, geographically Bungo Regency has a relatively limited horticultural land area where there is competition for land needs between agricultural and plantation activities, thus most of the supply of agricultural commodities including chilies comes from other areas. The population density in Bungo Regency triggers a relatively high demand for chili commodities compared to other areas in Jambi Province. This determines the price of chili commodities that occur in the market in general tend to follow the price trend that occurs in the Bungo Regency market. The price component of chili commodities is one of the determinants of inflation in the level of public consumption, so that if there is an unstable price fluctuation, it will affect the inflation rate and people's purchasing power. (Rawit & Pasar, 2022) (Ridwan et al., 2017) (Kusdiartini et al., 2017).

The main problem in developing chili agribusiness is the failure to achieve variety,

quality, continuity of supply and quantity that is in accordance with market demand, especially for modern markets (supermarkets/hypermarkets), processing industries, institutional consumers (hotels, restaurants, hospitals) and export markets.(Unsrat, 2018)(. et al., 2018). One of the causes of this problem is the lack of coordination between agribusiness actors.(Wahyuni, 2020). This causes the institutional structure of the chili commodity agribusiness to become fragile and the linkages in supply chain management to become weak.(Mohammed, 2020)(Grigoli et al., 2022). Only certain groups are able to control the stock of chili in the Bungo Regency market.

The objectives of this study are 1) to identify the supply chain structure of chili commodities in Bungo Regency; 2) to analyze the institutional structure of chili farmers in Bungo Regency; 3) to formulate strategies to increase the competitiveness of chili commodities in Bungo Regency.

## II. METHOD

### Supply Chain Analysis of Chili Commodities

Supply chain is a process that starts from the collection of existing resources followed by management into finished products to be distributed and marketed to end customers by considering costs, quality, availability, after-sales service, and reputation factors. Supply chain involves suppliers, manufacturers, and retailers who synergize and work together with each other directly or indirectly.(Jamison et al., 2020)(Alam et al., 2021)

Agricultural product supply chain management represents the overall management of processing, distribution, marketing activities until the desired product reaches the hands of consumers.(Ridwan et al., 2017). The longer the distribution/marketing channel, the less efficiency is achieved in the marketing channel. This is

because the costs incurred are getting higher and the profits taken by the marketing institution are getting bigger and one of them occurs in the red chili commodity(Grigoli et al., 2022).

A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer's request. The supply chain includes not only manufacturers and suppliers, but also carriers, warehouses, retailers, and even customers themselves. From each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and fulfilling a customer's request(Lowman et al., 2023).

## III. RESULTS AND DISCUSSION

In supporting business development in the large red chili horticulture sector in Bungo Regency, an effort is needed to create economic value from the product. However, throughout 2023 to 2024, the price of red chili and ordinary red chili is very volatile. The fluctuating price of large red chili is caused by inefficient supply chain management. Efficient supply chain management can be achieved if the management and supervision of distribution channel relationships are carried out cooperatively by all parties involved. The form of supply chain regulation really needs special attention. The existence of a large red chili commodity supply chain approach in Bungo Regency is expected to provide an overview of the availability of large red chili supplies as a consideration for managing the large red chili supply chain for consumers and processing industries.

In the supply chain of large red chili commodities in Bungo Regency, there are three mechanisms in the supply chain. Clearly, the results in the form of a structure in the supply chain of large red chili commodities in Bungo Regency are depicted in Figure 3.

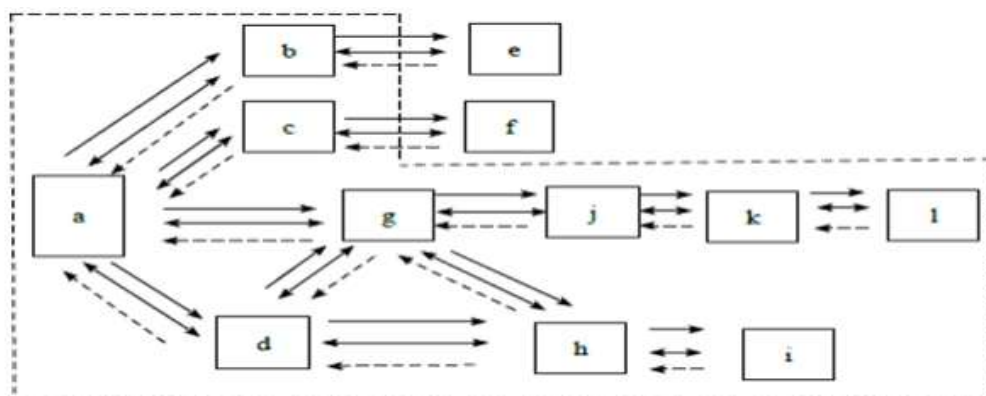


Figure 3. Flow Patterns in the Large Red Chili Supply Chain in Bungo Regency

Information :

- a. Farmer
- b. Partner Cooperative
- c. Trader Intercity Chili
- d. Trader Collector
- e. Distributor
- f. Trader big out of town

- g. Trader market/party
- h. Chili Retailer
- i. Chili Consumers
- j. Agroindustry
- k. Retailer of processed chili products
- l. Consumers of processed products

Meanwhile, the results of chili supply or marketing in Bungo Regency can be seen in Figure 4 below:

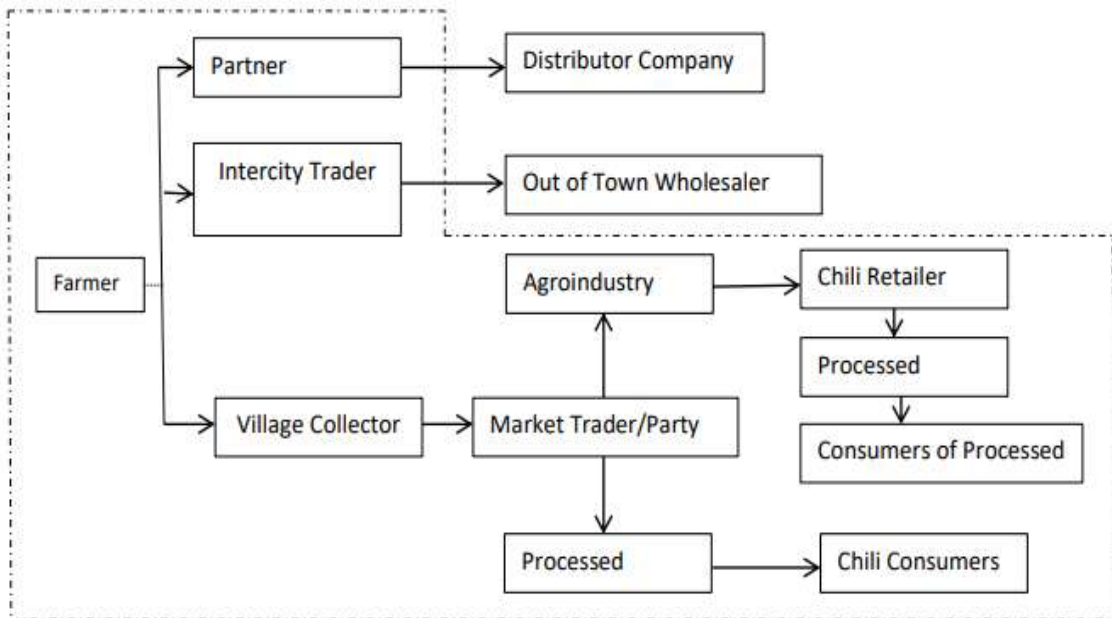


Figure 4. Marketing Channels in the Large Red Chili Commodity Supply Chain

The product flow in the supply chain of large red chili commodities in Bungo Regency can be divided into two, namely the product flow in the form of large red chili fruits and the product flow in the form of processed large red chilies in the form of packaged spices. The supply chain is said to be efficient if in the process of delivering products to consumers at the lowest possible cost and is able to provide a fair distribution of value to all links involved in it. The results of this study indicate that the distribution channels in the supply chain of red chili commodities are efficient when viewed from a fair and proportional shared value according to the contribution of the links involved in it.

The form of contribution of the chain is in the form of division of tasks starting from chili farmers who carry out cultivation, marketing institutions that distribute products in the form of fresh or processed products as well as potential consumers and end consumers who make product requests.

The thing that needs attention is the

formation of an association (institution) that can gather chili processing agro-industry actors so that it can increase the bargaining value of agro-industry actors. The association can cooperate with chili farmers so that both parties will gain mutual benefits. The benefits obtained by the agro-industry association are getting cheaper and more stable raw material prices, while the benefits at the farmer level are in the form of price certainty. This price certainty is very much needed by chili farmers considering the very fluctuating price of chili.

The role of institutions is very necessary in maintaining the stability of red chili prices. Another important thing is to develop partnerships between farmers or farmer groups with the private sector or companies. The institutions referred to in this article are institutions that play a role in increasing the competitiveness of chili commodities, namely the public sector, voluntary sector and private sector.

1. Public sector involving the roles of:
  - a) The TPH Service plays a role in the formation of farmer groups, the establishment of chili

field schools, the provision of infrastructure and facilitating farmers with various associations or companies.

- b) The horticultural agroclinic plays a role in providing services and sources of information on technology and innovation in improving the quality and standard of products.
  - c) STA acts as a marketing institution that enables farmers to connect directly with buyers.
2. Voluntary sector involving the roles of:
- a) Farmer groups act as a medium for joint learning, a medium for technology transfer and group marketing of harvests.
  - b) Chili commodity cooperatives play a role in collecting harvests from farmer groups so that there is guaranteed price at the farmer level and at the end consumer level.
3. Private sector involving the roles of:
- a) Formal financial institutions (BRI, BNI, etc.) act as providers of capital loans.
  - b) Non-formal financial institutions (traders) act as providers of loans in the form of money or agricultural inputs.
  - c) Agricultural input supplier company
  - d) The processing industry acts as a marketing destination for harvested products.
  - e) The market acts as a marketing destination for results.

## DISCUSSION

Red chili is one of the important and economically valuable vegetable commodities in Indonesia. Red chili has a perishable and seasonal nature that depends on the climate which makes chili cannot be planted and harvested all year round. This seasonal nature causes this commodity to be abundant during the harvest season so that the selling price drops, while the price of chili soars when the supply is limited. However, this matter and problem of chili price fluctuations can be minimized by regulating how the value chain (supply chain), creating an institution at the chili farmer level and what is very, very important in ensuring the balance of chili prices at the farmer level and at the consumer level is to create an industrial cluster for this red chili commodity.

To realize vegetable competitiveness, it is necessary to develop a supply chain management that is able to create and distribute added value among actors involved in vegetable agribusiness. Supply chain management is an integration of the main business processes from end users through suppliers that deliver products, services and information that have added value for consumers and other stakeholders. The creation of added value

is an effort to realize business efficiency, while the distribution of added value is a process to realize business justice. Efficiency and justice are prerequisites for realizing competitiveness because the characteristics of farmers have a small business scale and are spread across various production centers. The involvement of small farmers is one of the keywords besides competitiveness and justice in the development of agribusiness and agro-industry supply chains. In the development of vegetable supply chain management that involves farmers to meet global market demand, institutional innovation is needed in the form of rules of the game that are able to reduce the risks and transaction costs that arise due to the limitations of these small farmers. This institutional innovation can be formed due to the interaction between small farmers and the market, as well as the interaction between universities, the private sector and the government.

Apart from the supply chain and chili farmer institutions, another thing that is considered necessary to ensure the balance of chili prices is the creation of a red chili industrial cluster. In economic development, industrial clusters are a comprehensive perspective in increasing the competitiveness of a particular sector in a geographical area by involving all interdependent entities in the value chain such as business actors (upstream and downstream), supporting industries, supporting institutions, and related industries. According to Michael Porter in his book *Clusters and The New Economics of Competition* (1998), Clusters are defined as "geographic concentrations of interconnected companies, suppliers, service providers, companies in related industries, and related institutions (e.g. universities, standards bodies, and trade associations) in certain fields that compete but also cooperate (Porter, 1998). Cluster development contains four determining factors or is known as the diamond model which leads to industrial competitiveness, namely (1) input factors (input condition factor), (2) demand conditions (demand condition), (3) related and supporting industries, and (4) company strategy and competition (context for firm and rivalry strategy). (Porter, 1998) (Chandler & Krajcsák, 2021).

## IV. CONCLUSION

To realize vegetable competitiveness, it is necessary to develop a supply chain management that is able to create and distribute added value among actors involved in vegetable agribusiness. In addition to the supply chain, the role of institutions at the farmer level is very necessary to ensure the

balance of chili prices both at the farmer level and at the end consumer level. Another thing that is considered necessary to ensure the balance of chili prices is the creation of a red chili industrial cluster which is intended to maintain price stability and availability of red chilies at the farmer and end consumer levels. In economic development, industrial clusters are a comprehensive perspective in increasing the competitiveness of a particular sector in a geographical area by involving all interdependent entities in the value chain such as business actors (upstream and downstream), supporting industries, supporting institutions, and related industries.

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