The Development of Marketing Distribution Channels for Cocoa Farmer Groups in Pohuwato Regency of Gorontalo Province

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ABSTRACT
The research aims to identify and develop models that could be used to enhance cocoa production through the application of agricultural and plantation technologies, and to develop Cocoa’s marketing distribution channels in Pohuwato regency. The objective of this research is to analyze the model of marketing distribution channels and its affect toward community income. This research used a descriptive-quantitative approach, while in order to collect the data, researcher used observation, in-depth-interview, and documentation. The research data was gathered from the informations delivered by farmers, trader, and an employees from relevent agencies. The research result shows that, cocoa distribution in Pohuwato Regency still need to be fixed, the model of marketing distribution need to be develop to a direct or indirect marketing system, and the impact caused by re-systemized of marketing distribution channels could influencing the increase of people’s income.

Keywords—Plantation Technology Models, Cocoa’s Marketing Distribution Channels

1. INTRODUCTION
One of the government's policies to increase community’s income and welfare is the National Campaign for Increasing the Production and Quality of Cocoa, known as Gernas Kakao, which was initi ated by the Directorate General of Plantations of the Ministry of Agriculture of the Republic of Indonesia in 2009. In Pohuwato regency, Gernas Kakao began in 2010, and it changed plantations pattern. Some of the activities in this program are cocoa plants rejuvenation, rehabilitation, and intensification, supported by the central government in the form of assistance costs for cocoa farmers. Gernas Kakao is expected to increase the cocoa production and quality where the program is implemented. However, researches show that this program is not optimal. There are groups of farmers who do not know about and master the right agricultural technology, so cocoa production does not increase. In addition, official marketing channels of cocoa from Pohuwato regency are not available. Cocoa from Pohuwato is only marketed through wholesaler in Central Sulawesi [1].

The data from the Agriculture and Plantation Office of Gorontalo Province shows that at the beginning of Gernas Kakao in 2010 there were 4,680 hectares of cocoa plantation in Gorontalo, around 50% or 2,469 hectares was in Pohuwato regency. This shows that Pohuwato regency is very suitable for cocoa development in Gorontalo compared to five other regencies or cities. In 2012, cocoa plantation and cocoa production in Pohuwato increased from 2,469 to 4,896.35 hectares with a production of 6,270.65 tons. Cocoa productivity in Pohuwato increased significantly, supporting the average standard for cocoa production in the district to 1.27 tons per hectare. This figure exceeds the average cocoa production in Gorontalo, which is 0.8 to 1 ton per hectare. However, compared to the national average cocoa production, which is 2 tons per hectare, cocoa production in Pohuwato is still far behind [2].

There are still many problems about Gernas Kakao. This campaign only focuses on cocoa plants rejuvenation and rehabilitation. Technical aspects of agricultural technology such as cultivation techniques, maintenance, pest control, and post-harvest technology did not receive enough attention. Although counseling and assistance to farmer groups have been carried out, the results have not been optimal because there are only two extension workers and facilitators responsible for one regency. They are agricultural extension workers, not cocoa plantation extension workers, so the knowledge of cocoa farmers in agricultural technology does not increase.

Farmers are unable to apply cocoa plants maintenance techniques. Their plants grow as it is without any intensive care. They are unable to control pests, so the cocoa production decreases. Post-harvest technology is also low, so the next cocoa fruits do not grow well.

Furthermore, cocoa has not been marketed properly. Cocoa farmer groups in Pohuwato do not use official channels regulated by the regional policies and regulations. Local and provincial governments have not issued policies governing
the marketing and the basic price of cocoa at farmer level. The price is very dependent on the price offered by the wholesaler, who come from Central Sulawesi. Thus, regardless of the cocoa production, cocoa farmers' income and welfare do not increase. Based on the background, the focus of this research is as follows.

What agricultural technologies can increase cocoa production in Pohuwato?
What marketing channels are used by cocoa farmers in Pohuwato?
What is the impact of increasing cocoa production and the development of cocoa marketing channels on sales volume and income of cocoa farmers in Pohuwato?

2. LITERATURE REVIEW

2.1. The Concept Production Improvement

The benchmark of farmers' success in their farming efforts is increased production; this also applies to cocoa farmers. The results they get fluctuate in every year depending on the handling and technology they apply. Yield is what is produced, made, or obtained from efforts, thoughts, plants, rice fields, garden, forests etc. that can provide income for those who carry them out [3]. People misinterpret the words "improving" and "improvement". Improving is increasing or adding the ability, thinking power, effort, absorbance, and purchasing power, while improvement is a way, results, or process to improve. Qualitative and quantitative improvement or expansion can be done in various ways. Improvements in agriculture can be done by increasing production through the selection of superior seeds, the use of appropriate fertilizers, integrated pest control, good irrigation, and land processing using tractors. Improvements can also be made through intensification, the efforts to increase production by improving or replacing production equipment, both production factors and work methods [4].

Agricultural output can be increased by:
- Improving agricultural and plantation counseling.
- Improving coordination with related agencies in agricultural extension.
- Increasing agricultural land through new land clearing, especially in remote areas (hinterland) [5].

Increasing production in this study is the efforts of cocoa farmers to increase their production by using appropriate agricultural technology, such as the application of cultivation techniques, maintenance, pest control, and post-harvest technology. Appropriate agricultural technology can increase cocoa production in Pohuwato regency, so the income of cocoa farmers increases.

2.2. The Concept of Agricultural/Plantation Technology Application

Agricultural technology is a technical ability based on exact sciences, namely agricultural engineering [3]. Developments in any field cannot be separated from technological advancements. If technology is not applied in agriculture, production will not increase, as in cocoa, which is an agricultural sector that is always encouraged and developed by the government to support the national economy. Technology is often interpreted as a science related to industry. Agricultural technology is defined as ways of farming, including ways of planting seeds, raising plants, and harvesting. We need to be aware of the effect of new technology on agricultural productivity. The low productivity of food crops is caused by the difficulties of farmers in adopting new technologies. Limited mastery in technology is largely due to the lack of capital and limited farming skills.

Agricultural technologies that can increase production are cultivation, maintenance, pest control, post-harvest technology, improvement of crop quality, crop handling, processing, and security, and marketing of products. Therefore, in general, agricultural technology includes various applications of engineering in formal objects from cultivation to marketing [5].

2.3. The concept of Marketing Distribution Channels

Reference [6] stated that supply chain management is a series of approaches used to effectively integrate suppliers, manufacturers, warehouses, and stores so that goods can be produced and distributed in the right amount, to the right location, and at the right time so that the cost of the whole system can be minimized while trying to satisfy needs and service demands.

Reference [7] explained that supply chain is a system in which an organization distributes produced goods and services to its customers. This chain is also a network of various interconnected organizations that have the same goal, which is as best as possible carry out the procurement or distribution of goods. In a supply chain, usually there are three types of flow that must be managed. First is the flow of goods from upstream to downstream, the second is the flow of money and its equivalent from downstream to upstream, and the third is the flow of information from upstream to downstream or vice versa [8].

Reference [9] American Marketing Association defines distribution channels as the structure of inter-company organizational units, agents, and extra-company dealers, wholesale and retail by which, through the name of a commodity, product or service services are marketed. Distribution channel is an intermediary group that is closely related to each other in distributing products to buyers [10]. Channels are all that are used to channel goods or water [3], while marketing distribution is the distribution or delivery of goods to people or to several places where sellers and buyers
meet (markets) [3]. Marketing distribution channels are described as a number of levels of marketing channels involved. The channel level is the level of marketing intermediaries at which the product is brought to the final buyer. Nowadays producers use intermediaries to bring their products to market. Here the distribution channel is built as an interdependent organizational apparatuses and is involved in the supply of products or services for the use or consumption by consumers and industrial users. Marketing distribution channels in social lives are as follows.

Direct marketing channel is a marketing channel that does not have an intermediary level. Goods are directly delivered from the factory to consumers. An example is Tupperware, which sells its products from home to home. Indirect marketing channels are channels that consist of one or more intermediary levels. In the consumer market, this level is usually filled by retailers, such as televisions, cameras, tires, furniture, and so on.

A marketing channel consisting of 2 levels of intermediaries, namely a middleman (wholesaler) and retailer. This channel is used by small factories that produce food, medicine, and various products (commodities).

A marketing channel consisting of 3 intermediate levels, for example a jobber in the packaging meat industry that emerges between wholesalers and retailers [11].

In the marketing distribution channel of agricultural products, intermediaries determine the price of the commodity to be sold. As in cocoa production, marketing distribution channels use several levels of intermediaries: wholesalers and cocoa farmers as producers. This causes instability in cocoa prices; wholesalers are dominant in determining the basic price of cocoa.

3. RESEARCH METHOD

This descriptive qualitative research uses case studies and experiments to test agricultural technology models and marketing distribution channel models. This study uses primary data from interviews with and observations on informants consisting of farmer groups, extension workers, related agencies, and cocoa farmers in the research site. Secondary data is also used, obtained from research results and related documents and literature [12].

For effectiveness and efficiency, the data was collected through in-depth interviews and observations from the beginning, during, to the end of the study. The results of interviews and observations were supplemented with secondary data from documents/publications/research reports from relevant agencies and other supporting sources.

This research uses Miles & Huberman’s data analysis consisting of:

- data reduction to sharpen the required data,
- data presentation in an organized and systematic way to obtain one complete and integrated component, and
- data interpretation to draw conclusions so that the meaning of the recorded and presented data is obtained.

The acquired data was validated through a) extension of observations, b) improvement in observations and interviews, c) data triangulation, and d) Focus Group Discussion (FGD).

4. RESULT AND DISCUSSION

Application of agricultural technology to increase cocoa production in Pohuwato regency. The application of agricultural technology is needed to increase cocoa production. This is in line with the results of researches that the technology of cocoa farming includes:

4.1. Cocoa cultivation and maintenance

Some farmers groups cultivate cocoa using techniques without appropriate agricultural technology. Cocoa plants are allowed to grow without maintenance, so the production is not optimal. For this reason, farmer groups in Taluditi sub-district must be assisted to obtain counseling and apply agricultural technology so that the quality and quantity of cocoa production and farmers' income increases.

4.2. Pest and disease control

One of the obstacles in increasing cocoa production is pests and diseases, especially fruit pests. Cacao rots during growth. Mature cocoa is sometimes attacked by caterpillar so that production decreases. Therefore, intensive efforts to care for cocoa plants are needed, namely by applying appropriate agricultural technology.

4.3. Cocoa harvesting and fermentation

Harvesting techniques will determine the quality of the cocoa. Cocoa fruits are greatly be influenced by the harvesting techniques. Some farmers cannot harvest well so the crops do not grow fruits in the following season. Another thing that needs attention is fermentation, which needs to be done to improve the quality of harvested cocoa to increase its price. Good fermentation will produce cocoa with good aroma and quality needed by the chocolate factory. Therefore, farmers must be trained to ferment cocoa for high selling prices.

Development of a cocoa marketing distribution channel model to be used in Pohuwato regency. The research team has found a cocoa marketing distribution channel model that can be applied by farmer groups in Pohuwato regency. This model is based on the efforts to improve the production quality and quantity and the systems and organizations to market the cocoa. Marketing distribution channels can be improved by (a) improving the quality and quantity of the cocoa, (b) developing village-owned enterprises to pool and sell the cocoa, and (c) developing online marketing. Based on the
explanation above, it can be concluded that the development of marketing distribution channels is one way to increase the sales volume and income of cocoa farmers. Therefore, the cocoa marketing distribution channel model that supports cocoa marketing in Pohuwato regency needs to be developed.

Increasing production and developing marketing distribution channel models can increase sales volume and income of cocoa farmers in Pohuwato regency. The impact of increasing production and developing a marketing distribution channel model is the increased sales volume and income of cocoa farmers in the Pohuwato regency. This can be seen from the increasing purchasing power and welfare of the people. The behavior and consumption patterns of people in Taluditi improve.

5. CONCLUSION

The conclusions of this study are as follows.

- Improvement and application of agricultural technology can increase cocoa production in Taluditi subdistrict.
- The development of marketing distribution channel model is expected to increase the volume of cocoa sales in Taluditi.
- The impact of the application of agricultural technology and marketing distribution channel models can be felt by cocoa farmer groups in Taluditi through increased production and cocoa farmers’ income.

REFERENCES


