IOP Conference Series: Earth and
Environmental Science

PAPER • OPEN ACCESS

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To cite this article: Rico *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **473** 012016

IOP Conf. Series: Earth and Environmental Science **473** (2020) 012016 doi:10.1088/1755-1315/473/1/012016

Determination of the lowest unit price through the value-added approach for Arabica Coffee Commodities in North Toraja Regency

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Abstract. Smallholder plantations in South Sulawesi province produce an average of 12.50% of Indonesia's Arabica coffee, equivalent to 20.10 thousand tons per year. In 2015 Arabica coffee produced by community plantations in the province reached 20.35 thousand. One of the largest Arabica coffee production centers in South Sulawesi province is in North Toraja Regency, in 2017 it gave a production share of 10.37% or a total production of 2.11 thousand tons. However, the current problem in North Toraja Regency is the low purchase value of collectors who come directly to farmers' gardens and appreciate the Arabica coffee of Rp. 18,000 / liter which still has epidermis, if converted to kilograms requires around 2.1 liters, which if the total is only Rp. 36,000 / kg. This study aims to formulate the lowest unit price policy for Arabica coffee in the North Toraja regency which is used as a reference for the average selling price of Arabica coffee (actual price). This research was conducted in North Toraja Regency, South Sulawesi province using purposive informants, which were analyzed descriptively quantitatively. The results showed that the lowest unit price of the coffee commodity can be formulated in the amount of Rp. 28,000 / liter by increasing the price received by farmers by Rp. 10,000, by considering prices at the level of traders and companies so that they continue to provide benefits for each marketing institution. This policy will have an impact on increasing the productivity and welfare of coffee farmers so that the sustainability of coffee commodity farming in Indonesia is increasing.

1. Introduction

Arabica coffee grows in the plains with a minimum altitude of 900 meters above sea level (masl). Arabica coffee exports increased by 9.2% annually. Up to 40% of exported Arabica coffee is better known as single-origin coffee or geographic coffee [1]. Small farms in South Sulawesi Province produce an average of 12.50% of Arabica coffee from Indonesia, which is equivalent to 20.10 thousand tonnes per year. In 2015, Arabica coffee produced by community plantations in the province reached 20.35 thousand people. One of the largest Arabica coffee production centers in South Sulawesi province is in the regency of Toraja North. In 2017, it accounted for 10.37% of production, representing a total production of 2.11 thousand tonnes [2].

With the large amount of Arabica coffee produced in the northern regency of Toraja, Arabica coffee producers in the North Toraja regency have problems with domestic coffee sales prices. Fluctuations in world market prices affecting domestic prices often force farmers to sell their coffee

IOP Conf. Series: Earth and Environmental Science **473** (2020) 012016 doi:10.1088/1755-1315/473/1/012016

below market prices to make ends meet. The price of gambling is all the more caused by the absence of the lowest unit price created by the local government to protect farmers from the behavior of collectors entrusted by large companies.

As the price of coffee in the country is still uneconomic and unprofitable, many farmers do not pay attention to coffee, which would affect the quality of the coffee produced, so that many coffee beans do not respond to coffee. quality standards for export. other plants. Because of these problems, it is necessary to research the effects of the lowest unit price on Arabica coffee, to protect farmers, increase their incomes and encourage Indonesia to become more competitive, to become the largest coffee exporter in the world and to generate foreign exchange. The purpose of this research is to formulate the lowest unit price policy for Arabica coffee in the North Toraja Regency, which serves as a benchmark for the average selling price of Arabica coffee, followed by its impact on farmers in terms of production yield and quality.

2. Methods

This research was conducted in June to July 2019 in the Buntu Pepasan sub-district, North Toraja Regency, South Sulawesi province. The research was conducted at a location that was determined intentionally (purposive) with the consideration that the selected location was the best Arabica coffee production center, using informants purposive analyzed quantitative descriptive. This study aims to formulate the lowest unit price policy for Arabica coffee in Buntu Pepasan Sub-district, North Toraja regency which is used as a reference for the average selling price of Arabica coffee (actual price).

Data analysis in research is the process of systematically searching and compiling data obtained from observations and interviews by organizing data into categories, describing it into units, synthesizing, compiling into patterns, choose what is important and what will be learned and make conclusions so that it is easily understood by yourself and others [3].

The data collected from the field came from key informants, such as DPRD members, North Toraja regent, headman, and field extension officers, then the data was processed and analyzed using the theory of policy formulation stages by William Dunn [4] namely the formulation of the problem, the policy agenda, the selection of alternative policies to solve the problem, and the stages of determining the policy.

3. Result and discussion

3.1. General description of the added value of Arabica coffee

3.1.1. The income of Arabica coffee farmer. Research of the lowest unit price policy based on facts found by researchers at the research site in the Buntu Pepasan sub-district, it is necessary to determine the lowest price because of low income received by farmers to affect the quality and quantity of coffee production. Agricultural receipts are multiplications between production and product prices [5]. Calculation of income of coffee farmers (30 respondents) on the basis of revenues from coffee plantations reduced by other ancillary costs. The production costs of Arabica coffee producers are the cost production facilities, labor, depreciation costs, and tax costs.

Table 1. Arabica coffee farmer income in North Toraja regency.

Variable	Value
Acceptance:	
a. Production (Kg)	1,290
b. Product Price (Rp/Kg)	36,000
Acceptance Value (Rp)	34,200,000
Production Costs	
a. Production Facilities	5,320,000
b. Labour	5,750,000

c. Depreciation Costs	7,458,167
d. PBB Costs	2,775,000
Total Cost	21,303,167
Income (Rp)	12,896,833
R/C Ratio	2.0

Source: Primary data that has been processed, 2019

Based on the data presented in the income 30 farmers' income, acceptance of farmers is Rp 34,200,000 and average production costs per crop are Rp 21,303,167. Comparison between acceptance values of farmers divided by the total production cost obtained from the R / C ratio of 2.00. Price conditions in the study of coffee products with an average of Rp. 18,000 / L or Rp. 36,000 / Kg.

3.1.2. The added value of Arabica coffee. Added value generated by Arabica coffee products is based on actors of the value chain and all of the stakeholders. There are three chains that are formed in the Buntu Pepasan sub-district, North Toraja regency are farmers, collectors, and home industries Staircase / Coffee shop. Value Chain can be formed if all actors in the value chain are active in such a way as to maximize the value that occurs along the chain path.

Figure 1. Arabica coffee value chain in Buntu Pepasan sub-district.

Based on figure 1, it can be seen that the flow of Arabica coffee products from farmers selling to various directions, to the collector and usually also directly to the home industry or coffee shop in the form of coffee beans are still horned. Collector are traders who collect Arabica coffee from various villages in Buntu Pepasan sub-district even to neighboring sub-districts, then collectors sell Arabica coffee beans to the home industry/coffee shop after drying and stripping the chaff of Arabica coffee beans with the help technological machinery, so that Arabica coffee beans are produced in the form of green bean. The home industry has the same function as coffee shop, which is the same value chain that buys Arabica coffee beans in the form of green bean from collectors and is given the treatment of frying coffee beans and grinding in the form of the coffee powder that is ready to be served to consumers or sales in packaging.

Margin is the difference in price at the producer level with the price at the end consumer level. In this case, the margin is calculated from each value chain channel carried out by the value chain actors [6,7] added that marketing margins are part of the costs paid and the revenue received by each link involved in the process of a value chain. The following is the added value obtained from the margin calculation results.

The added value that occurs in every link, there is a difference significant among farmers, collectors, and home industries/coffee shop. At the farmer level, profits are low compared to other actors in the chain, due to rising costs production and family needs above income from Arabica coffee plantations. Farmers sell deep Arabica coffee beans the shape of the chaff coffee for Rp. 18 000 / liter if converted into kilograms of about 2 liters per kilogram so that farmers receive Rp. 36,000 / kg, then sale to collectors and home industries/coffee shop.

At the level of the collector, Arabica coffee beans bought in the form of coffee beans chaff are treated in the form of drying and stripping the chaff using a stripping machine. The collectors sell Arabica coffee after receiving a touch of technology and effort dry out to increase the sales value of coffee beans in the form of green beans by Rp 70.000,- / kg, which will be sold to the domestic industry/coffee shop. So buy of farmers and the sale of Arabica coffee beans has a difference that is Rp. 34.000,-.

In addition, the domestic/coffee shop industry buys Arabica coffee beans at green beans collectors at Rp. 70,000 / kg and then increase the added value of refining the coffee beans in order to reduce the number of coffee beans. to obtain processed coffee beans and coffee grounds using machines sold to consumers at a price of Rp. 270 000 / kg. At the domestic industry/coffee shop level, operating costs in the form of labor, cost, raw material prices, and other inputs make the selling price of the Arabica coffee powder is high.

3.2. Determination of the lowest unit price policy using the value-added method of Arabica coffee products in the North Toraja regency

North Toraja regency has great potential of Toraja Arabica coffee, because of its high production and productivity. South Sulawesi province is one of the three largest Arabica coffee production centers after the North Sumatra and Aceh provinces. However, this condition will be changed or diminish if farmers don't properly care with their Arabica coffee plantations, due to the low income of farmers from the sale of their gardening products, so a price policy the lowest is favorable to farmers without harming other chains. Coffee is Indonesia superior commodity in the domestic and international markets, the government needs to focus on the development of Arabica coffee plantations, in accordance with Republic of Indonesia Regulation No.128 of 2014, which states that "Coffee is one of the main spices and refineries products developed to meet export needs." The determination of the policy for the lowest unit price of Arabica coffee can use the theoretical approach proposed by the policy expert, William Dunn, which will be developed as follows.

3.2.1. Formulation of the problem. Detecting and formulating problems is a fundamental user of the policy and a fundamental step in the formulation of the policy. So that the results of the problems encountered in the community can be described correctly so that further action can be determined. Based on North Toraja Regulation No. 13 of 2017 concerning the preservation of Genetic Coffee for Toraja Tipika Arabica Coffee, Part Two Purpose of Article 3 The purpose of preserving the genetics of Torika Tipika Arabica coffee is to: *Protect and preserve the genetics of Arabica Torika coffee; To guarantee price certainty; To increase the income and welfare of coffee producers of Tipika Toraja Arabica and Fostering and empowering the coffee farmers' groups Tipika Toraja Arabica.*

On the basis of the above-mentioned regulations, it is assumed that the existence of Arabica coffee producers is necessary because the high-quality product sought can give the name of Indonesia a place in the international market and in particular north of Toraja, also contributing to the increase in regional revenues. Special attention must be paid to coffee growers to be enthusiastic about producing the highest quality Arabica coffee. Therefore, a lower unit price policy for Arabica coffee is needed.

3.2.2. Policy agenda. In essence, problems in the community will be included in the policy agenda because of the many competing issues. The selected problem for determining the policy in its resolution. Specific criteria for issues deemed important, namely those that have a significant impact on the community and that requires a quick response to the problem. Given the agricultural situation in Arabica coffee in North Toraja has a problem with prices. Low farm-level sales prices encourage farmers to pay less attention to the conditions of their plantations, as they are less profitable for farmers where the price of rice 36 000 / kg is still considered low compared to agricultural activities requiring considerable energy and costs.

After conducting research, Arabica coffee producers expect farmers to expect prices to rise by around Rp. 52.000 - Rp. 60.000/kg cannot be the recommended unit price of Arabica coffee to Rp. 28.000 / L or Rp. 56.000 / kg by increasing the price received by farmers Rp 10.000, so that it continues to provide benefits to each marketing institution. Another objective is to increase the income and labor productivity of Arabica coffee producers without harming those who play a role in the Arabica coffee chain. Government attention and local government intervention are needed to include or schedule a policy on the lowest unit price for the welfare of coffee producers Arabica. Another objective is to increase the income and labor productivity of Arabica coffee producers without harming those who play a role in the Arabica coffee chain. Government attention and local government intervention are needed to include or schedule a policy on the lowest unit price for the welfare of coffee producers Arabica. When implementing the price policy agenda, certain aspects of the policy must be determined in advance, namely:

Producer price policy; there are two forms of producer price policy, that is *Shinning Price*: because the company does not have a competitor yet, a product for the upper class. And *Penetration Price;* to break the products of other companies on the market

Wholesale price policy, is done for example by granting discounts, both because of cash payments or bulk purchases.

Retailer Price Policy. Margin Price (on the basis of estimates, if it is already profitable, the products are sold); Lining Price (based on similar items of different brands, at the same price; Competitor Price (low prices, the goal being to become the cheapest shop); Judgement Price (on the basis of estimates, in a box, there are one or two pieces of good stuff; Customary Price (product prices are stable and there is no change. If the raw material increases, the cost of goods increases; Odd Price (odd prices to attract buyers; Combination price.

3.2.3. Alternative choices for problem-solving. Once the problem has been formulated and the agenda has been defined, the next step is to select alternative policies to address the lowest unit price of Arabica coffee at the farm level, in order to maintain the balance between demand and supply of Arabica coffee at the study site. On the basis of the researchers' findings at the research scene, it is planned to plan the prosperity of coffee growers in accordance with the North Toraja Regional Regulation, No. 13 of 2017, has not been heard as it should so that farmers are not enthusiastic about Arabica coffee and the productivity of the land decreases each year. The government, as a policymaker, should adopt policies in favor of Arabica coffee producers, such as setting the lowest unit price of Arabica coffee, without harming those involved in this leading product chain, such as traders and household products and coffee shop industries.

3.2.4. Policy determination stage. In the final stages of the policy formulation process according to the theory advanced by an expert named William Dunn, particularly with regard to the establishment or adoption of policies. At this stage, it is necessary to ensure that policy has binding legal force and cannot be challenged and adapted to the applicable laws. In the lowest policy unit pricing step, four steps must be determined, namely:

3.2.5. Mark up pricing. The increased price is the cost of buying the product from the producer plus number of benefits and costs are not counted, the total is set a selling price. Equilibrium price, the breakeven point determines the volume of sales to be achieved before the company is in a state of equilibrium, that the total cost is identical to the total income and no profit is realized. Pricing based on the image/perception of the consumer. It is based on the perception of the value, rather than on costs are borne by the seller.

3.2.6. Prices based on competitors' prices. Set prices according to prices set by competitors for the same product. The price can be the same, higher or lower. The lowest price policy for Arabica coffee in North Toraja will then be divided into the executive board and stakeholder meetings, including Arabica coffee producers, to listen to complaints and reduce producers' incomes. In the culture sector of the Arabica coffee plantation, it will then be proposed to the regional government, in this case, the North Toraja Regent should discuss the finalization of the project in plenary in order to be determined and approved Regional regulations of DPRD North Toraja and Governor of South Sulawesi Province.

4. Conclusions

Arabica coffee is the main Indonesian good quality export product that able to increase the income of the state. Local governments must protect farmers from commercial instincts for any involvement directly involved in the value chain, i.e. want to buy at the lowest possible price and sell at the highest price. Therefore, it should be noted that the regional government may adopt Regional Regulation on the Lowest Unit Price of Arabica Coffee beans in the North Toraja Regency in order to change the selling price to agricultural level Rp. 18.000 per Liter or Rp. 36.000 per Kilogram, in seed form still with horns for Rp. 28.000 per liter or Rp. 56.00 per kilogram, in the form of coffee beans still in skins of horn to improve the well-being growers, which will increase coffee beans productivity, improve the quality of coffee beans, and increase regional incomes without decreasing others income at the value chains, such as collectors and home industries agreed as inter-island traders furthermore as an exporters even when searches have been made.

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