

## **Dynamic of Arabica Coffee Marketing Organization in Ngada District: Progress upon Implementing of Geographical Indication**

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### **Abstract**

Farmer organization has important role on coffee agribusiness development. Organization was positioned as a driving force on farmer economic activities, especially in strengthening partnership networks. Realizing the importance of organization, the aim of this research was to identify the coffee market structure in the scheme of Geographical Indication; to analyze the dynamic of coffee marketing organization at farmers level; and to analyze added value of wet parchment bean sales at the farmers organization. This research was conducted in Ngada District which includes Bajawa, Golewa and West Golewa Sub-district. Respondents in this study were 100 farmers which determined by using simple random sampling method. The primary data was based on questionnaire and secondary data was from journals, articles, and internal reports. Data were analyzed with descriptive-qualitative approach and Hayami method. The results showed that coffee market structure in Ngada District lead to imperfect competition market (monopsony-oligopsony). The dynamic of farmers organization worked in progress which shown through ease access to market information and networking. Vertically organizational relationship between farmers and other market cooperatives has been established. Added value at UPHs/cooperative in the coffee supply chain was 15,35% of output value.

**Keywords:** organization, supply chain, market, coffee, added value, Geographical Indication

### **INTRODUCTION**

Coffee is one of beverage commodities that has high economic value because of its characteristics and uniqueness in terms of aroma and flavor. Considering the future prospects of coffee market, coffee is one of the commodities that has potentially to be developed in Indonesia. In addition, the potential region for coffee development is also widespread. Despite the fairly large development opportunities, farmers often face problems related to price and market access. Distortion of the market and price

that is impartial to farmers happened due to the farmers institution which does not function optimally. Therefore, this will weaken the bargaining position of the farmers. The other impact is the limited farmers accessibility to market information, capital, and infrastructure, as well as the adoption of technological innovation (Anantanyu, 2011).

In the perspective of market development, the existence of farmer institution is considered essential to strengthen the bargaining position of farmers in the marketing system

which tends to be oligopsony and market-driven. Producers, in this case farmers, are increasingly required to follow the changes of coffee market behavior which entirely depends on consumers demand or buyer market (Mawardi *et al.*, 2006; Ambariyanto & Herawati, 2010). In this condition, the institutional role and function should be run optimally due to its multidimensional role which includes economic, social, and regional development aspects. In local economic development, the existence of farmers institution is needed as forum of the organization. It is intended to stimulate the economic activity and to build the partnerships with the private sector through local resource management (Bakely *cit.* Cahyono & Tjokropandojo, 2013).

To strengthen the farmers position in the marketing system, Indonesian Coffee and Cocoa Research Institute has designed a model known as the Partnership Mediated Model (*Model Kemitraan Bermediasi*/MOTRAMED) to improve the quality of coffee and to increase marketing efficiency. One of the areas that is used as a pilot project for coffee commodity development and MOTRAMED dissemination is Ngada District, East Nusa Tenggara. Prior to the dissemination of MOTRAMED, the market condition in Ngada is dominated were by collectors and exporters, because the information in the market is dominated more by collectors than the farmers, so that the advantages both in terms of price and the added value will be obtained by collectors. This condition occurs because of the long marketing chain in which resulted in inefficient marketing system (Mawardi *et al.*, 2006). Drajat (2011), found that the advantages of market information control are obtained by collectors and exporters, that is likely as a result of the weak performance of supply chain and farmer institution.

Based on these problems, MOTRAMED dissemination is aimed to shorten the coffee marketing chain by strengthening the farmer institution, especially the institutional marketing. MOTRAMED is an institutional model that has uniqueness because there are mediator who provide training and assisting to improve the coffee quality, establish business partnerships between farmers and exporters, and give consideration during the process of price negotiation in order to achieve the agreement between the two parties. Farmers are encouraged to process their coffee collectively and to sell the coffee directly to exporters. Furthermore, farmers organizations established Geographical Indication Protection Community (*Masyarakat Perlindungan Indikasi Geografis* or MPIG) in 2009 and proposed for Geographical Indications (*Indikasi Geografis*) protection under the name of “*Kopi Arabika Flores Bajawa*” or “*Flores Bajawa Arabica Coffee*” in 2011. The MPIG is awarded Geographical Indication Rights of *Kopi Arabika Flores Bajawa* in 2012. Through the Geographical Indications (GIs) scheme, the flow of coffee products including green bean, roasted bean, and ground coffee is under the protection of GI in the marketing system (MPIG *Kopi Arabika Flores Bajawa*, 2011).

After the implementation of GIs, there are several changes mainly from post harvest aspect and marketing organization. Changing on post harvest aspect was reflected by dividing the Processing Unit (UPHs) into several sub-units UPH. This causes the monitoring of coffee quality becomes less conducive. On the other hand, farmers also process their coffee individually and supply these coffee to UPHs or cooperative in form of wet parchment beans. There are many farmers supply their coffee in form of red cherries. In terms of marketing organization, UPHs or cooperative encountered problem related to the proportion of coffee production which supplied by farmers. Farmers not only supply

their coffee to cooperative, but also sell it to other buyers. It occurs because farmers assume that the cooperative can not purchase the entire coffee production of them. Thus, this study aims to identify the coffee market structure in the scheme of Geographical Indications, analyze the dynamics of coffee marketing organization at farmer level, and analyze the added value of wet parchment bean sales at farmer organization level.

## MATERIALS AND METHODS

This study was conducted in Ngada District, Nusa Tenggara Timur Province started during harvest season since June until July 2016. The location was purposively determined with the consideration that Ngada was a coffee production region which became the target location in introducing MOTRAMED. In 2013, the total area of Arabica coffee plantation was 5,637 ha. The plantation area which classified in productive/mature plant (*Tanaman Menghasilkan/TM*) was 3,802 ha (Ditjenbun, 2015). There were also cooperatives which perform the coffee processing and marketing in groups in which it was already registered under the Geographical Indications scheme. In this study, a survey was conducted in three sub-districts, namely Bajawa, Golewa, and West Golewa. All of them were included in the region of Geographical Indications of Flores Bajawa Arabica Coffee. The total area of it was 982 ha.

The data collection was conducted by survey method through direct observation in the field and interviews with respondents. Direct observation was carried out to determine the institutional conditions of farmers and the coffee marketing patterns that occur in the field. While on the other hand, the interviews were conducted by using questionnaires and intended to gain information on the aspects of processing, institution, and marketing patterns. The collected data were

in the form of primary and secondary data. Primary data in this study included the information about the upstream coffee processing, income, the role of the coffee commodity, marketing chain, farmers knowledge on Geographical Indications, and the dynamics of farmers organization. Then, the secondary data were in form of reports and articles related to MOTRAMED implementation assistance in Ngada District.

The selection of the respondents was carried out by probability sampling approach with simple random sampling method. The use of this method was based on the respondents characteristics who are relatively homogeneous so that each element of the population had an equal opportunity to be elected as respondents (Abubakar *et al.*, 2013; Munizu, 2010; Sukotjo & Radix, 2010). In addition, simple random sampling method was used when the research analysis tends to be descriptive qualitative. Respondents in this study were the farmers who were the member of Flores Bajawa Arabica Coffee MPIG with the total members of 1,372 farmers. The number of respondents was 100 farmers (or 7.3% of the total members of MPIG) which consisted of farmers, farmer group administrators, and cooperative management.

This study had prioritized the qualitative approach with descriptive data interpretation. The qualitative-descriptive approach was focused on market structure and economics institution of the farmers especially the institutional marketing of the farmers (Listiyati *et al.*, 2014). The descriptive data in this study were the characteristics of farmers group, coffee processing and marketing activities within the farmers organization, as well as the interaction of the parties involved in Geographical Indications scheme. In this research, there was also an added-value analysis of wet parchment bean at the level of farmer organizations. By referring to the research

of Hayami *et al.* (1987) and Hasibuan *et al.* (2015), the analysis of the added-value used was implemented by Hayami method.

## RESULTS AND DISCUSSION

### Coffee Market Structure at Farmer Level

Principally, the marketing assessment leads to the mechanism of price formation and the activity flow of products/goods from producers to consumers. Within the scope of the organization, both of which are inseparable from the role of marketing institutions formed at the farmer group level. According to Mawardi *et al.* (2005), Arabica coffee marketing in Ngada before the dissemination of MOTRAMED occurred in a relatively long marketing chain. At first, farmers sold their coffee to a collector at village level and then that collector sold the products to the processor. With this kind of trading pattern, the market structures faced by farmers are verging an oligopsony market. The pricing in oligopsony market structure is dominated by traders because the price is very influenced by traders supply and demand. In addition to price determination, collectors or traders also command the supply of coffee bean from farmers, however, there is a kind of competition between traders in getting the supply of coffee beans. In these conditions, it appears that traders have a stronger bargaining position than the farmers. This market condition also occurs in marketing organization for tobacco. The research from Ambariyanto & Herawati (2010) revealed that traditional institutional systems and market structures of oligopsony have caused the traders to dominate the price formation.

In strengthening the bargaining position of farmers, it had been carried out by disseminating technology package of MOTRAMED in 2005 for improving the coffee quality and

increasing coffee marketing efficiency in Ngada. In this effort, an institutional empowering was undertaken in terms of products processing and marketing subsystem. Farmers were encouraged to conduct coffee processing in groups by building a processing unit (UPHs). The improvement of marketing system was attempted by changing the marketing pattern at farmer level. The farmers who formerly sold their coffee in individual basis to several collectors were amended to sell directly to exporters. To shorten the marketing chain, a processing unit was designed as an institution of production and marketing of products which produced by the members. There were 14 processing units which were formed and through this processing unit, farmers were able to do a direct marketing to exporters. The trading pattern showed that the structure of the coffee market was shifted into a monopsony market because there was only one buyer/exporter in the marketing system. In this market, exporter had a more dominant role in determining the price even though the farmers bargaining position also became stronger through primary cooperatives. This was due to the exporter which acted as the sole buyer of coffee products on a large scale. Thus, the market interaction was only affected by exporter supply and demand (compared with Supriatna & Dradjat, 2008). Although farmers had faced a monopsony market structure, the conditions on the field survey showed that the price received by farmers was higher than that of the oligopsony market condition prior to MOTRAMED implementation. The price increment was due to the improved quality of the coffee produced by farmers as well as the shorter marketing chain that was distributed directly to the exporter.

In developing the business and market share, a primary cooperative was formed and functioned as a marketing agency. In this case, there were 5 primary cooperatives which

were formed. Through the Geographical Indications scheme, these primary cooperatives were merged to establish a secondary cooperative of MPIG Arabika Flores Bajawa (AFB). Thus, there was a change in coffee trading pattern at the farmer level. Farmers do their coffee business directly to exporters through secondary cooperatives. Whilst a secondary cooperative was established, the farmers still had an opportunity to do the business with other buyers. There were farmers who sold the coffee to the processor or coffee shop. This situation showed that farmers address different market structures over time. At any given time, the market structure tended to be monopsony market because there was only one buyer or exporter. On the other hand, the market lead to be more on oligopsony market structure due to the inclusion of other buyers (industrial processors or coffee shops) to the region of coffee production. This resulted in a relatively competitive market system. The farmers received a higher price whilst the market structure lead to an imperfect market competition (monopsony-oligopsony). As mentioned farmers opinions, they (81%) revealed that the coffee prices were higher after being registered in Geographical Indications. The most of farmers (75%) assumed that Geographical Indications were able to bring advantages in terms of ease of coffee marketing. On these cases, oligopsony market gave both advantages and disadvantages to the farmers. This market would be increasing farm-gate prices as a result of competing between buyers. However, it would deliver disadvantages to the farmers relating to buyer pricing power. The buyer had more power to determine farm-gate prices on coffee trading. It occurred while a number of farmers were ample and farmers sold their coffee individually. In long-term condition, oligopsony market attenuated farmer marketing organization which had been built through

MOTRAMED implementation. Collective action on coffee sales was conducted by farmers formerly, however, offering a higher price from the other buyers could encourage farmers to do selling by themselves. It can be overcome by providing market assurance through partnership building between farmers and exporter/buyer. It is actualized by proposing sale and purchase agreement between two parties.

Field survey result showed that there were some buyers who enter to the region of coffee production (Ngada). As a result, the entrance of buyers led to competition of acquiring coffee bean supplies from farmers. Regarding sales volume, there was a difference capacity between monopsony and oligopsony market. The sales volume of monopsony market tended to be higher than that of the oligopsony market, since the coffee supply was intended only to one buyer. The condition of the coffee market at the research site was in line with the research of Supriatna & Dradjat (2008) on the cocoa market in Kolaka and the research of Agustian & Mayrowani (2008) on the potato market in Bandung. Both of those studies mentioned the weakness of oligopsony market which is the price formation at farmer level is controlled by the buyers who have monopsonist power.

### **Dynamics of Marketing Organization**

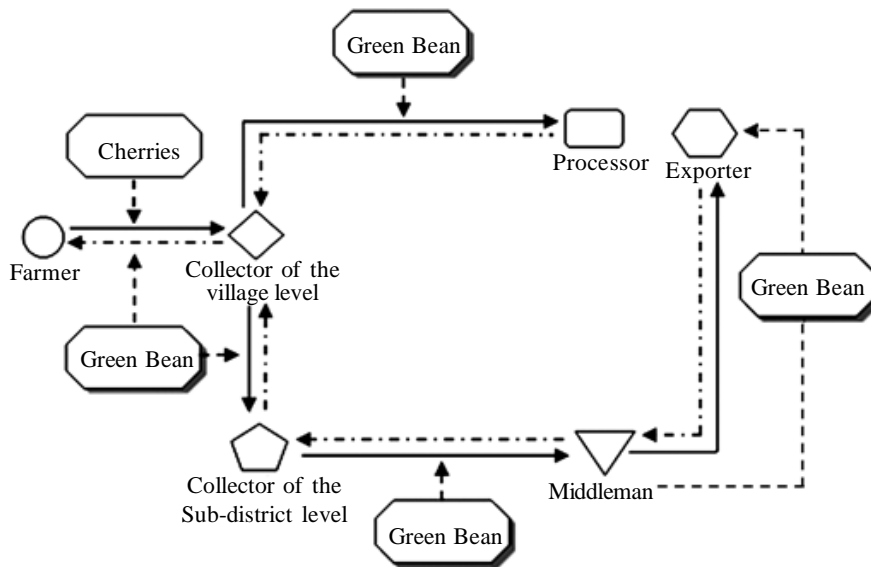
The survey results on coffee farmers organization in Ngada indicated a progress especially in increasing the bargaining position of farmers in the coffee supply chain system. Farmers organization had been developed actively after the dissemination of MOTRAMED. Prior to the introduction of MOTRAMED, farmers organization did not perform its role and function optimally. Most of farmers had not conducted collective action on post-harvest handling, coffee processing and marketing as a result of poor horizontal

bonding within the organization. In addition, farmers had no vertical bonding with other marketing organization such as the farmers group, cooperatives, and traders. Farmers had more option to sell their coffee to collectors who offered a higher price. They also had a custom of storing coffee as their savings. This person began to sell his coffee when the market price was rising (Mawardi *et al.*, 2005). Their behavior gave an effect on poor bargaining position of farmers due to dominating the role of traders in supply chain performance. Its control was caused the poor organizational farmers in which the role and function within the organization were not running yet and the coordination between farmers and marketing organizations had not been well-established. Another factor of this issue was the lack of coordination among farmers in terms of knowledge and information on coffee farming, processing technology, price, and market networks. The information and technology were still accessed independently so that the relationships between farmers with other organizations were still weak. This contributed to alleviate on the dynamics of farmers organization due to the lack of horizontal or vertical interaction within of it.

In this institutional system, coffee products from farmers were distributed to the collector at the village level. Farmers sold their coffee to a collector in form of cherries and green bean. The quality of the coffee was classified in diverse quality. The collectors of village level delivered the products to processors and collectors at the sub-district level. Furthermore, the coffee will be marketed to wholesalers and then was supplied to exporters. Collectors usually were elaboration of wholesalers or exporters. In general, onward processing (drying and sorting) will be conducting by wholesalers or exporters regarding the processing facilities owned by those two institutions were relatively adequate.

According to the flow of information, the exporter was the main source of pricing and market information. Coffee prices in the international market are used as the reference to determine the price of coffee at farmer level. The information of market and price were passed on to the collectors who are the elaboration of the exporter. Poor institutional marketing at farmer level caused price and market information became non-transparent. Traders usually provide an incomplete information of price and market to create individual profits (Hasibuan *et al.*, 2015). Based on the research of Ambariyanto & Herawati (2010), these conditions indicated an asymmetric information in the institutional system of coffee marketing. The non-transparent information will disadvantage the farmers so that the price received will be lower. The flow of coffee products and information from farmers to exporters is presented in Figure 1.

In introducing MOTRAMED, the horizontal bonding of institutional marketing system at farmer level had been strengthened such as the collective action on processing and marketing. The institutional empowering related to processing and marketing collectively was carried out by building the processing unit. The development of processing unit was intended to facilitate an aid, quality control, processing and marketing system, as well as strengthening of partnership network. The purpose of the institutional strengthening is in line with the research of Saptana *et al.* (2013). Therefore, the coffee supply chain had been developed and only had involved three institutions. Those were farmers/farmer groups (UPHs), mediator, and exporter. In this model, farmers were the supplier of raw materials so that the flow of coffee products from farmers was distributed to the UPHs in form of red cherries. The UPHs did coffee processing and marketing with each other to the exporter. The coffee should meet the requirements (quantity and quality) to be sold



Note :

- > The flow of coffee products
- - - - -> The flow of information
- · · · ·> Type of coffee products

Figure 1. Pattern of coffee supply chain prior to introduction of MOTRAMED

and must be agreed by both parties (Mawardi *et al.*, 2006). Relating to that trading pattern, the coffee supply chain became shorter so as could be increasing the marketing efficiency.

Short supply chain provided a distinct advantage for farmers in regard to the information of market and price. The information of quality standards and prices was directly obtained from the exporter and delivered to the farmer groups (UPHs). Furthermore, the information was conveyed to the farmers of its member. This model required disclosure of information about prices and quality standards. These transparency occurred while the farmer groups had negotiated directly with exporters to agree on the price and coffee quality. Thus, it can be said that marketing organization at farmer level had progressed and well-established because the flow of coffee products and information could be

delivered to the involved institutions. The effectiveness of the delivery of information was inseparable from the role of mediator (Indonesian Coffee and Cocoa Research Institute) and facilitators (related agencies) in facilitating the transfer of technology and business partnership building. The pattern of coffee supply chain after the dissemination of MOTRAMED is shown in Figure 2.

It was shown that the dynamics of marketing organization at farmer level developed in accordance with the dissemination of MOTRAMED. Institutional development was also revealed through the transformation of processing unit into primary cooperatives. To expand the coverage region and develop the businesses, primary cooperatives merged into secondary cooperatives. It happened after the implementation of Geographical Indications. Secondary cooperative was positioned as principal organization

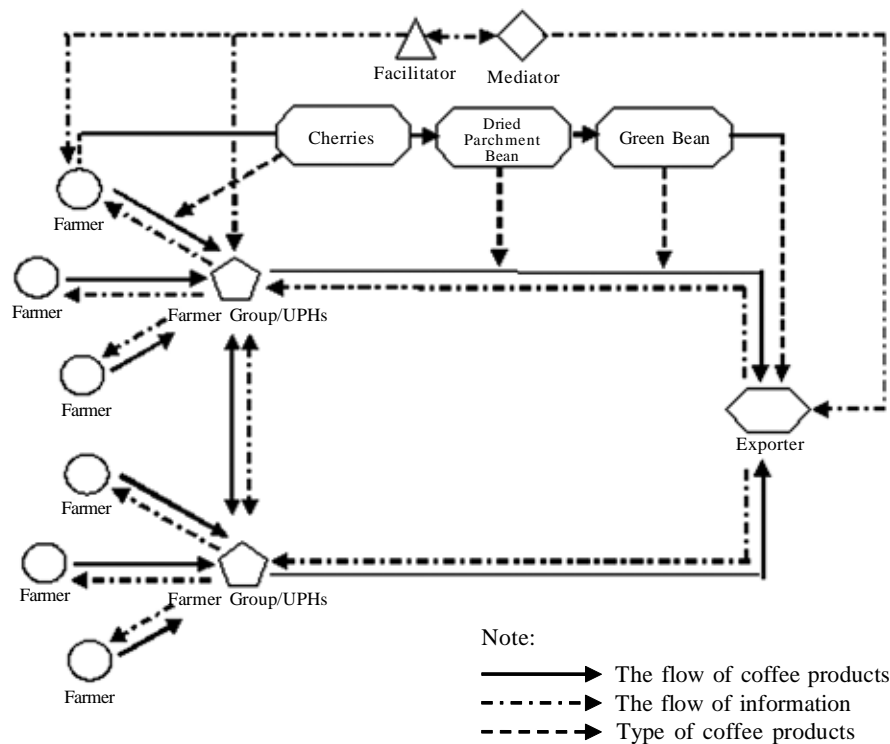


Figure 2. Pattern of coffee supply chain after the dissemination of MOTRAMED

in marketing institutions. The impact of this cooperative empowerment was related to the establishment of horizontal and vertical communication and interaction between marketing chains. The other impact was increased market opportunity in selling coffee to other buyers. Hellin *et al.* (2007) mentioned that the institutional empowerment and collective marketing is a key factor to extend the access of farmer market network. Collective marketing will improve farmers capacity in terms of processing and marketing (Devaux *et al.*, 2009). This collective action had been performed by farmers in the research location. Development of the coffee supply chain after the implementation of Geographical Indications is shown in Figure 3. The role and activities of the coffee supply chain in each chain are as explained in this paper.

**a. Farmers**

Farmers were the supplier of coffee that will be sold to exporter through secondary cooperatives of MPIG Arabika Flores Bajawa. The coffee products were conformed to the processing methods and quality standards set by the exporter. Secondary cooperative did a coordination meeting to discuss the processing methods, quality standards, and form of coffee products which were sold. The meeting conclusion was farmers should agree that the Arabica coffee products marketed through a secondary cooperative had to use a bag with the logo of Geographical Indications of Arabika Flores Bajawa. The marketing system which implemented was one door marketing (supply monopoly) through secondary cooperatives. It was intended to find obvious on the traceability

of coffee products. The price of GI-labelled packaging should be paid by farmers which amounted to IDR 1,500 per bag. However, the bags were not sold directly so that farmers must do an ordering based on their need. Those information was delivered to the other members.

The pattern of coffee supply chain conducting by farmers was divided into four, namely (i) the farmers delivered red cherries to the processing unit (UPHs); (ii) farmers did the coffee processing particularly pulping and fermentation in the UPHs and sold the wet parchment bean to the UPHs; (iii) farmers individually undertook the coffee processing in accordance with the specified SOP of secondary cooperative and sold the wet parchment bean to the primary cooperatives; and (iv) farmers marketed all of coffee products (red cherries, wet parchment bean and green bean) to a collectors or wholesalers. The information on pricing and marketing was acquired from the UPHs and primary cooperatives. Moreover, price, market, and technology information were received through the assisting activities facilitated by facilitator and mediator.

#### **b. Processing Unit (UPHs)**

The processing unit could be regarded as an institutional production at farmer level as it provided a shared processing facilities for the members. UPHs also supplied the coffee products produced by farmers. Mostly, UPHs purchased the coffee products from their members in form of red cherries and wet parchment beans. The products would be distributed to primary cooperatives. Currently, the institutional processing units were divided into core UPH and sub-unit UPH. The sub-unit UPH was a farmer group which was a new members of the MPIG and incorporated in the core of UPH. Furthermore,

sub-unit UPH supplied coffee to the core UPH. The processing units received the information of price, market, and technology from primary cooperatives.

#### **c. Primary Cooperatives**

Primary cooperatives established several processing units based on the coverage of coffee region. Primary cooperatives had a steady position on the marketing organization in the research location. They supplied coffee products from the members of the processing unit. Primary cooperatives could sell coffee to the secondary cooperative and other buyers. The coffee products which were supplied to a secondary cooperative were wet parchment beans with the processing methods that had been agreed. Primary cooperatives were obliged to supply coffee to the secondary cooperatives with predetermined quality standards. Whilst the partnership with other buyers depended on the market demand. The information source of price was received from secondary cooperatives and other buyers (exporters, processors, and coffee shops). The flow of its information was also obtained from mediator and facilitator through assisting activities. Eventually, the information flow was presented to their members through the processing unit.

#### **d. Secondary Cooperative**

Primary cooperatives had merged into secondary cooperative namely the Secondary Cooperative of MPIG Arabika Flores Bajawa. It conducted a marketing function in establishing partnership with exporters. Secondary cooperative was also farmer representative to negotiate on pricing with exporters. In the negotiation process, secondary cooperative was assisted by a facilitator (Agriculture, Estate Crop, and Livestock Agency in Ngada District).

Pursuing the flow of coffee products, secondary cooperative took in coffee supply from primary cooperatives. In 2016, secondary cooperatives sold wet parchment beans to exporters. The exporter provided price information, processing methods, forms of product sales, and the targeted purchase to the secondary cooperative. The secondary cooperative had conveyed the information to primary cooperatives, UPHs and also farmers who were the members of the processing unit through the coordination meeting.

**e. Mediator**

Mediator had an important role in the marketing organization, particularly in providing market assurance to farmers' groups (cooperatives). Mediator also served training and assisting to farmers. The other role of mediator was organizing with other related institutions for communicating market information and accelerating the transfer of technology of farmers.

**f. Facilitator**

The role of the facilitator was accentuated in providing the processing facilities required by farmers and training programs to improve the farmers capability. Moreover, facilitator played a role in providing market information to the cooperatives.

**g. Exporter**

Exporters supplied the coffee from secondary cooperative in form of wet parchment beans. Exporters provided price information, purchasing capacity, and quality standard to secondary cooperative through negotiation process. In this arrangement, the exporter also delivered an updating market price to secondary cooperative.

**h. Other Buyers**

Other buyers referred to in this study were collectors, wholesalers, and coffee shops. Although there had been an agreement to do marketing through secondary cooperative, however, farmers had been selling their coffee products to other buyers. The coffee products which had been sold by farmers including red cherries, wet parchment beans, and green beans. It is adjusted to the buyer demand. Farmers sold their coffee to other buyers due to offering a higher price. Thus, farmers not only got information from the secondary cooperative, but also obtain such information from other buyers.

The analysis results showed that added-value of wet parchment bean sales at UPHs or cooperative was negative, which was IDR -916. The ratio of added-value of coffee was a negative sign with the percentage of -15.35%. It meant that the cost of production was exceeding a revenue at the UPHs/cooperatives. In this case, UPHs/cooperatives would get a loss if the coffee was sold in form of wet parchment beans at IDR 11,938. As coffee supply chain shown in Figure 3, it was known that profit rate received by the UPHs/cooperatives was IDR -916 or at -15.35% of the output value. It indicated that the economic circumstances of UPHs/cooperatives were so unfavorable, although marketing margin achieved by them was IDR 1,219. The processing units or cooperatives could improve their financial performance when the price of wet parchment beans increased. As mentioned, the performance of supply chain had not run optimally since the coffee price had not been distributed to the farmers to the maximum. Accordingly, farmers required to be assisted in negotiating the price with the buyer in order to increase the added-value of coffee. The UPHs profit rate in utilizing the production factor was

negative which amounted to -75.20%. Hence, it was advisable that the UPHs or cooperatives should sell the products in form of green beans, roasted beans, or ground coffee as listed in the Requirements Book

of Geographical Indications for achieving the added-value. The calculation of added-value of wet parchment bean at the UPHs or cooperatives was presented in Table 1.

Table 1. The added value at the UPHs/cooperatives on coffee supply chain of wet parchment bean in Ngada District

Variable	Value
Output, Input, and Price	
Output (liter)	1
Raw material (kg)	2
Labor (HOK/liter)	0.001
Conversion factor	0.5
Labor coefficient	0.0004
Output price (Rp/liter)	11,938
Average wage labor (Rp/liter)	43.5
Income and Profit	
Raw material price (kg)	4,750
Other input price (Rp/liter)	2,135
Output value (Rp)	5,969
Added value (Rp)	-916
Added value ratio (%)	-15.35
Labor rewards (Rp)	0.019
Labor proportion (%)	-0.002
Profit (Rp)	-916
Profit rate (%)	-15.35
Benefit of Production Factors Owner	
Margin (Rp)	1,219
Labor income rate (%)	0.002
Other input contribution (%)	1.75
UPHs profit rate (%)	-75.20

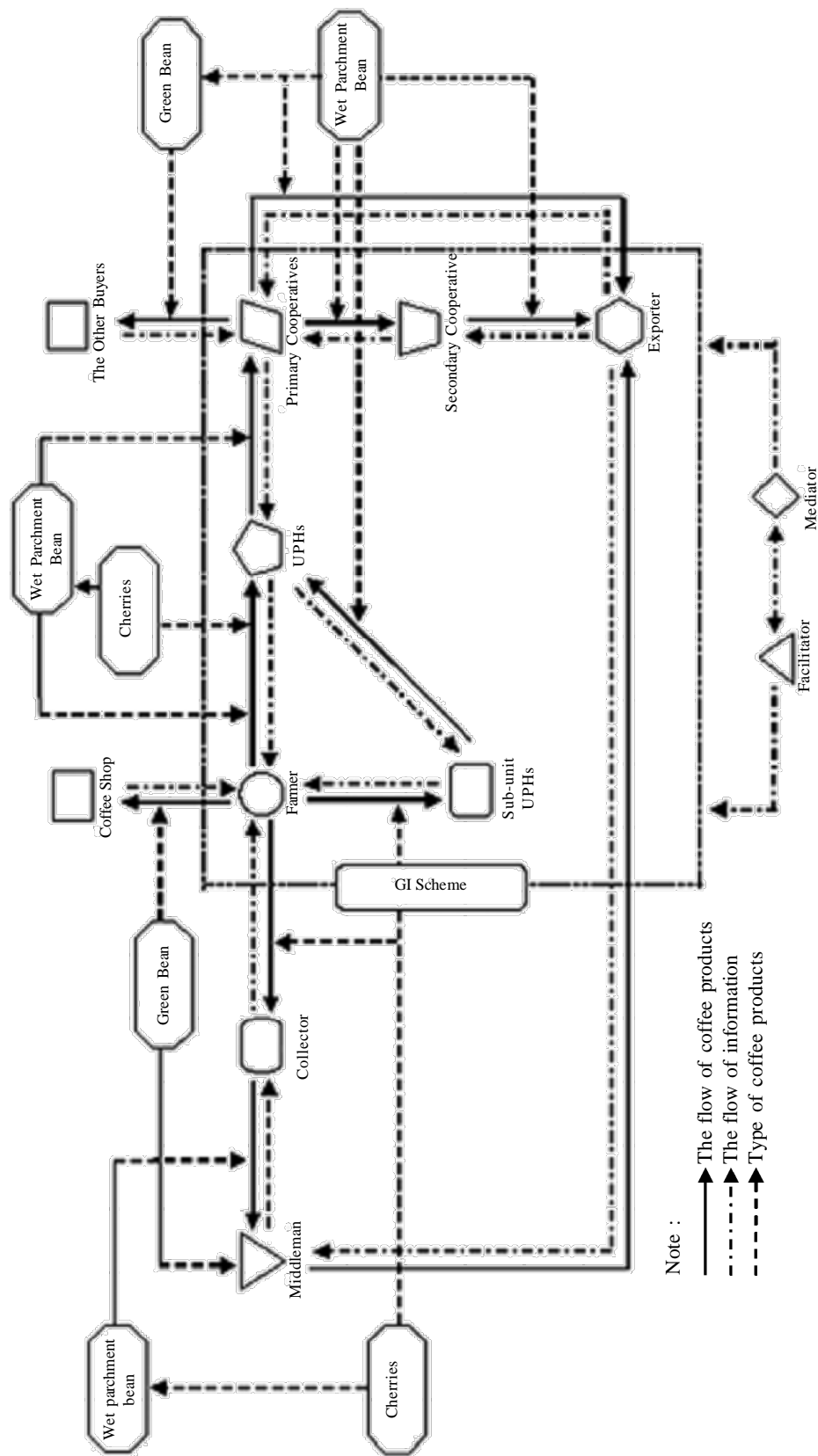


Figure 3. The development of coffee supply chain pattern in Geographical Indication Scheme

## CONCLUSION

The structure of coffee market in Ngada lead to an imperfect competition market (monopsony-oligopsony). In these market condition, the power of pricing was sturdily determined by the buyers. The dynamics of marketing organization at farmer level had progressed through an open access system of market information. The implementation of MOTRAMED and Geographical Indication was able to change farmers behavior in producing high quality coffee in order to achieve a reasonable prices. The other positive impact was the change of marketing pattern through a collective action on marketing and enlargement of marketing networks owned by farmers. Establishment of a vertical interaction was found amongst marketing organization, notably institutional relationship between farmers and other marketers. The added-value at the UPHs/cooperatives in coffee supply chain system was -15.35% of the output value (per kg of cherries) if the coffee was sold in form of wet parchment beans.

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