

Rifin, Amzul; Naully, Dahlia

Working Paper

The impact of involvement in the global value chain on coffee farmers in Indonesia: Case study of Margamulya Coffee Producer Cooperative and Mitra Malabar Cooperative, Bandung, Indonesia

ADB Working Paper Series, No. 1143

Provided in Cooperation with:

Asian Development Bank Institute (ADBI), Tokyo

Suggested Citation: Rifin, Amzul; Naully, Dahlia (2020) : The impact of involvement in the global value chain on coffee farmers in Indonesia: Case study of Margamulya Coffee Producer Cooperative and Mitra Malabar Cooperative, Bandung, Indonesia, ADB Working Paper Series, No. 1143, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/238500>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/igo/>



ADB Working Paper Series

THE IMPACT OF INVOLVEMENT IN THE GLOBAL VALUE CHAIN ON COFFEE FARMERS IN INDONESIA: CASE STUDY OF MARGAMULYA COFFEE PRODUCER COOPERATIVE AND MITRA MALABAR COOPERATIVE, BANDUNG, INDONESIA

Amzul Rifin and Dahlia Naully

No. 1143
June 2020

Asian Development Bank Institute

Amzul Rifin is a lecturer at the Department of Agribusiness, Faculty of Economics and Management at Bogor Agricultural University, Indonesia. Dahlia Naully is a member of the Faculty of Agriculture at the University of Muhammadiyah Jakarta, Indonesia.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, ADB, its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

Working papers are subject to formal revision and correction before they are finalized and considered published.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. Some working papers may develop into other forms of publication.

In this report, "\$" refers to United States dollars.

Suggested citation:

Rifin, A. and D. Naully. 2020. The Impact of Involvement in the Global Value Chain on Coffee Farmers in Indonesia: Case Study of Margamulya Coffee Producer Cooperative and Mitra Malabar Cooperative, Bandung, Indonesia. ADBI Working Paper 1143. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/impact-involvement-global-value-chain-coffee-farmers-indonesia>

Please contact the authors for information about this paper.

Email: amzul@apps.ipb.ac.id, dahlianauly77@gmail.com

Asian Development Bank Institute
Kasumigaseki Building, 8th Floor
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

© 2020 Asian Development Bank Institute

Abstract

One of the institutions involved in coffee value chain in Indonesia is the cooperative. We compare the experience of two cooperatives in exporting coffee beans. The Margamulya Coffee Producer Cooperative currently exports coffee beans directly and through an exporter, while the Mitra Malabar Cooperative previously exported its coffee beans but currently focuses on the domestic market. Both cooperatives obtain benefits from exporting, and these benefits are transmitted to their members through the higher price and the services provided to them. Based on the experience of both cooperatives, direct export is more beneficial since a better price is charged and higher value-added coffee is sold rather than from exporting through exporters. In order to conduct direct export, cooperatives must be provided capital assistance so that they can purchase coffee beans from the farmers and build storage facilities.

Keywords: cooperatives, coffee beans, export

JEL Classification: Q13, Q17, O13

Contents

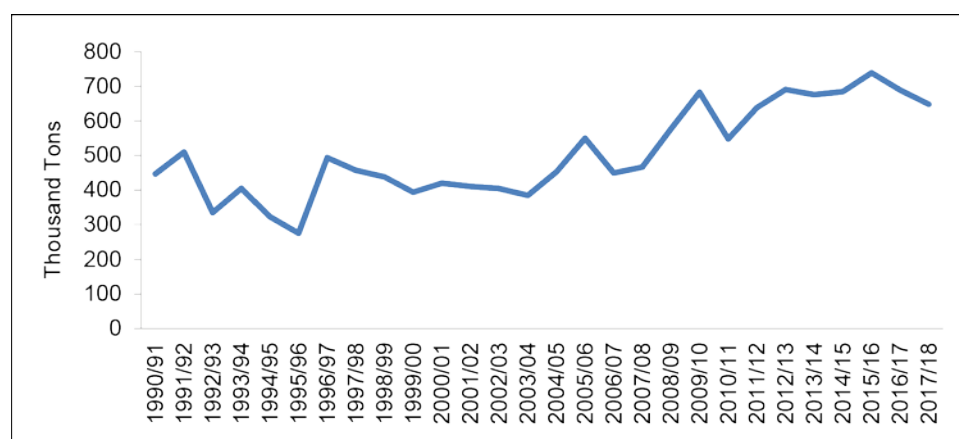
1.	INTRODUCTION.....	1
2.	LITERATURE REVIEW	4
3.	COOPERATIVE POLICIES IN INDONESIA	5
4.	METHODOLOGY.....	7
4.1	Analysis and Discussion	8
4.2	Cooperative History	8
4.3	Exporting	9
4.4	Marketing Channel.....	11
4.5	Service to the Members.....	13
4.6	Future Plans.....	14
5.	CONCLUSION	14
	REFERENCES	15

1. INTRODUCTION

Indonesia is the fourth-largest producer of coffee in the world, contributing 7% of the world's production in 2017/2018 (ICO 2019). There was an increase in annual production of 3.6% between 1990 and 2018 despite its average fluctuation (Figure 1) (ICO 2019). This increase was caused by an average increase in land area of 2.35% between 1980 and 2017, with the land being used for farming (Statistics Indonesia 2018). In recent years, several local governments have intensified efforts in distributing coffee seedlings to farmers, especially in mountainous areas, with a view to replacing horticultural products with coffee and to supporting land conservation.

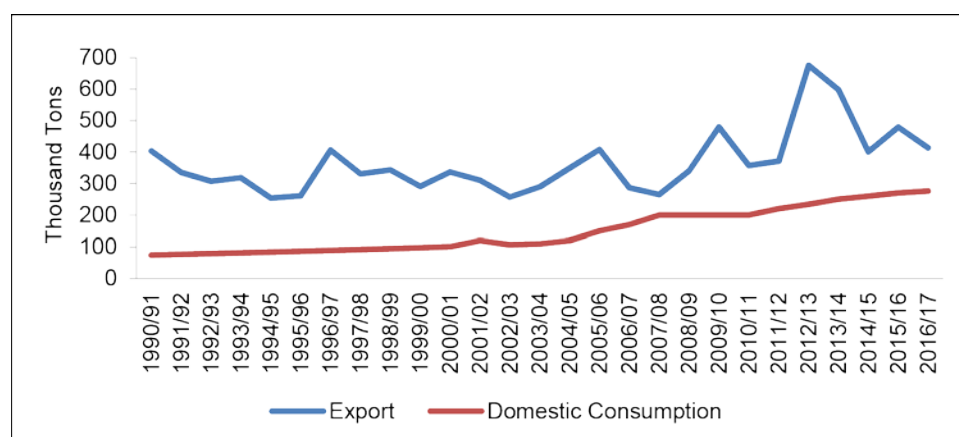
The coffee produced in Indonesia is either consumed domestically or exported. In 2016/2017, 60% of Indonesia's coffee production was exported and 40% was consumed domestically. The percentage of exports is still larger, but the share has decreased significantly. In 1990/1991, the share of exports had reached 84%, reflecting a significant increase in domestic consumption over the years (Figure 2). During the period 1990–2017, the average increase in domestic consumption was 5.4% while exports grew by 3.1% in the same period (Figure 2).

Figure 1: Indonesia's Coffee Production, 1990–2018



Source: ICO 2019.

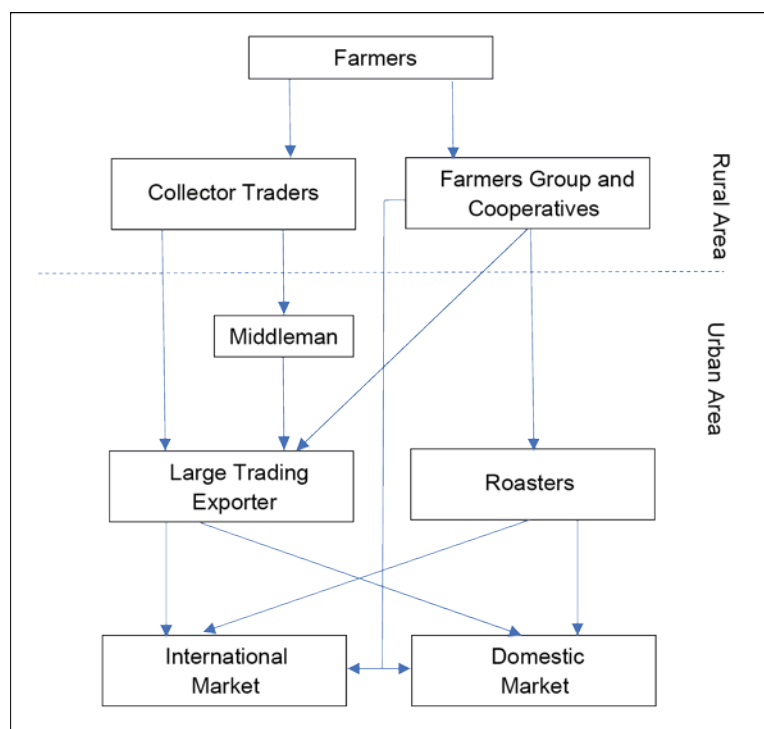
Figure 2: Indonesia's Coffee Export and Domestic Consumption, 1990–2017



Source: ICO 2019.

Coffee producers in Indonesia can be divided into three categories, namely smallholder, government, and private. In 2018, 95% of coffee was produced by smallholders, followed by private and government enterprises with 3% and 2% each, respectively (Ministry of Agriculture 2018). The increase in production in recent years has also been dominated by the smallholder. During the period from 1980 to 2017, smallholder production increased by an average of 2.17% and land area by 1.62% (Ministry of Agriculture 2018). Based on the data, it can be inferred that there is an increase in productivity by the smallholder. In addition, there has been land expansion in recent years, especially in the mountainous area, to enable the planting of coffee in place of previously grown crops. On high-altitude land, most farmers planted arabica, which made up 28% of the country's coffee production. Meanwhile, the lowland area was used to plant robusta, which accounted for 72% of Indonesia's coffee production in 2018.

Figure 3: Coffee Supply Chain in Indonesia



Source: Arifin (2010) (modified).

The coffee supply chain involves several institutions before the product reaches the consumers (Figure 3). Farmers sell their coffee to traders, farmer groups, or in some cases a cooperative. The farmers can sell in the form of red cherry or peeled red cherry. The traders either sell the coffee to a middleman, which is usually located in the urban areas or the capital of the regency, or sell the product directly to a broker and/or exporters. The traders usually sell in the form of green beans. These brokers and exporters are usually located in the capital city of the province. They are normally members of the Association of Indonesian Coffee Exporters (AICE or AEKI), which is also a member of the International Coffee Organization (ICO). The exporters also usually sell in the form of green beans, which are more processed than the green beans received from traders. Exporters do not always sell the coffee to international markets, especially if the quality does not meet the minimum standard of export requirements. Instead, the production is sold to local coffee-processing companies to produce a typical fine-ground coffee with a strong flavor (*kopi kampung*) under locally well-known brands (Arifin 2010).

Besides multinational companies (e.g., Nestle), there are several small and medium-sized enterprises (SMEs) involved in this supply chain (e.g., roasters). These roasters have supplied the international market, although the amount it supplies to large trade exporters is much smaller. These roasters have an advantage compared to the traders because they have direct contact with the farmers through the farmers' group. In addition, there are also cooperatives that have direct contact with the domestic or international market. Usually these cooperatives sell their coffee in the form of roasted coffee, although the quantity is smaller than that of other traders or exporters, especially for the international market.

Coffee farmers have a close relationship with collector traders, who provide cash during the production process without the complicated procedures of money lending. In return, the farmers must sell their products to the traders, leaving the smallholders with limited choices in terms of marketing channels. This creates an interlocking trading system at the village level. These traders encourage farmers to harvest low-quality coffee beans, leaving the value added to be accumulated among the traders. Given their high dependency on traders due to moneylending, coffee farmers are in a weak bargaining position. Due to the monopsonic behavior of the traders and their distortion of price transparency, the market structure of the coffee marketing system at village level has become relatively unfair.

At the global trade level, coffee exporters attempt to obtain a fairer price from their partners overseas. Exporters, affiliated directly with global roasting companies, usually do not have complicated procedures in business negotiations. In the growing global value chain (GVC) initiatives, buyers tend to establish subsidiary trading and roasting companies in coffee-producing regions in developing countries. These companies generally apply certification costs to capture the interest of smallholder farmers who could not afford the extra costs. The small farmers interlock with such supply chain systems as a result of the influence of global buyers even at the farm level in rural areas.

Among the institutions involved in the coffee supply chain are cooperatives, although there are relatively few of these. According to Statistics Indonesia (2014), only 0.78% of Indonesia's coffee farmers sell their majority product to cooperatives and the majority of coffee farmers sell their coffee to traders (88%). In terms of quantity, 2.6% of cherry beans or peeled cherries are sold to cooperatives and 84% are sold to traders (Statistics Indonesia 2014). Despite this small role of cooperatives in the coffee supply chain, there are several advantages to their involvement (Hendar 2010):

1. A cooperative is a member-based organization; in other words, cooperatives gather people with a common economic activity, and together they form an enterprise owned collectively by members.
2. An unforeseen consequence of a cooperative is that every member has the same rights regardless of size. In addition, a cooperative is controlled democratically by its members, and members have equal voting rights (one member, one vote).
3. A cooperative brings together people who have a common economic business activity. Therefore, the business must support the economic activity of its members. The cooperative must provide the products or services that are most needed by its members, including the owners and consumers of the cooperative.

Saragih (2000, 2010a, 2010b) states that the objectives of forming an agricultural cooperative are:

1. To increase the bargaining position of its members

2. To increase competitiveness in pricing through optimal economies of scale
3. To provide products or services to its members
4. To increase market opportunity
5. To improve product and service quality
6. To increase its members' income

The objective of this article is to analyze the impact of cooperative involvement in the global value chain (GVC) for coffee farmers. Although the involvement of cooperatives is relatively small in the coffee supply chain, since the main characteristic of a cooperative is that it provides benefits to its members, the involvement of a cooperative in the supply chain is hopefully of more benefit to its members than to other organizations. The profit received by the cooperative will be distributed to the members, who are the farmers annually, therefore the inclusion of the cooperative in the GVC will benefit farmers more than firms. In addition, as members, the farmers have the right to control the cooperative, especially in terms of purchasing price and the service received by members/farmers. An agricultural cooperative is a firm jointly owned by individuals that support the farmers' farming activities, and the farmers will benefit from the economies of scale in facing competition from more established firms in the coffee global value chain (Bijman 2010).

Two cooperatives in different situations are compared below. The first cooperative, Margamulya Coffee Producer Cooperative (MCPC), currently exports its product, while the second cooperative, Mitra Malabar Cooperative (MMC), previously exported its coffee crop, but currently sells the coffee domestically. Based on the experience of the two cooperatives, this study can suggest policy aimed at increasing the involvement of cooperatives in the coffee supply chain in Indonesia.

2. LITERATURE REVIEW

Several studies have discussed the impact of involvement in the coffee global supply chain on stakeholders. A cooperative's involvement in the global supply chain has underlying consequences. In the case of coffee, such involvement pushes the producers to meet several standards set by international buyers. These standards mainly surround the aspect of sustainability through certification, traceability, and other quality-related factors. The impact is evident on the farmers, farmers' groups, and even the society as a whole.

Astuti et al. (2015) analyzed the impact of coffee certifications on the economic performance of Indonesian players (farmers, traders, exporters, and Indonesian roasters) and how economic rent is distributed among them. The article indicates that the economic rent from the certification is distributed unequally along the coffee value chain, with roasters receiving 95.46% (robusta) and 83.66% (arabica) of the total economic rent (retailers excluded). Economic rent is calculated as the difference between the price of certified coffee and conventional coffee divided by the price of conventional coffee. The highest price difference occurred on the roaster level (IDR 28,000 or \$2.39 per kg for robusta and IDR 32,500 or \$2.77 per kg for arabica), therefore the proportion of economic rent received by roasters was the highest.

Overall, farmers enjoy a small portion of the direct benefit from certification in the form of a higher price per kilogram for their coffee and of possible benefits regarding increased productivity and quality, resulting from training in, and advice on, crop management. The price difference in the farmers' level between certified and conventional coffee was IDR

400 or \$0.03 for robusta and IDR 2,200 or \$0.19 for arabica. In addition, the choice of certification is based on the economic benefit that the farmers receive (Ibnu et al. 2015).

On the farmers' group level, the involvement in the global supply chain has increased the capacity of the farmers' group and the cooperative in order to meet the standards (Arifin 2010). Meanwhile, on the society level, Neilson, Wright, and Aklimawati (2018) found that the geographical indication (GI)¹ of coffee has had limited tangible economic benefit for coffee farmers, who have only gained intangible benefit in terms of promoting a sense of regional pride and cultural identity. In addition, the benefit is only received by key individual farmers who are able to consolidate wealth and their social position (Vicol et al. 2018).

In regard to the involvement of cooperatives, there are several cooperatives actively involved in the coffee supply chain, especially ones related to the international market. Several cooperatives are ultimately involved in two ways (Stiyawan, Fadli, and Effendy 2016). First, the cooperatives are actively involved in connecting the farmers with the global buying channels through exporters. The function of this cooperative is mainly to increase the bargaining power of farmers in dealing with traders and exporters (Yanuar and Feryanto 2013). Other functions include collective marketing, collective input purchasing, risk sharing, market information, decreasing asymmetric information, and processing (Yanuar and Feryanto 2013). Nevertheless, the cooperatives are insufficient to help coffee farmers to increase coffee prices, and coffee farmers act as the price taker rather than the price maker (Putri, Fariyanti, and Kusnadi 2013).

Second, cooperatives help farmers to obtain certification. In addition, these cooperatives play a role in coordinating the coffee value chain (Ita 2015). Several cooperatives in Gayo, in Aceh Province, function as a hub between farmers and a certification institution such as Fairtrade. The cooperative facilitates the certification through inspecting and monitoring the farming management process, which is required by the certification institution. With the certification, farmers receive a premium price for their coffee beans that are sold at the international market. The objective of Fairtrade certification is making trade fair, empowering small producers, and fostering sustainable livelihoods (Fairtrade 2020). Besides certification, these cooperatives also function in agricultural extension, distributing agricultural inputs such as seedlings and fertilizer, processing, and marketing (Hasan 2014; Stiyawan, Fadli, and Effendy 2016).

There are several benefits of the Fairtrade certification, such as more stable prices and better farm management (Fogelberg 2012). However, several research articles have found that noncertified farmers were making a higher income than certified farmers (Almqvist 2011; Fogelberg 2012; Lochner 2018) and the benefits of certification were only received by exporters and collectors (Gunarsson 2009; Andriadi et al. 2019). Meanwhile, in terms of business, these cooperatives in Aceh have been able to make profits and distribute the profits to their members (Agustia, Kusnadi, and Harianto 2016).

3. COOPERATIVE POLICIES IN INDONESIA

Agricultural cooperatives were first established in 1973 and were called the "Village Unit Cooperatives" or Koperasi Unit Desa (KUD). The KUD was given responsibilities for farm

¹ A geographical indication is a sign that indicates the place of origin of goods and/or products, which, due to geographical environment factors, including nature, humans, or a combination thereof, indicates a specific reputation, quality, and certain characteristics of the produced goods and/or products.

credit regulations, agriculture input and incentive distribution, marketing of farm commodities, and other economic drivers associated with the cooperative. The government specifically guaranteed both high-quality marketing and top market price to encourage the growth of farm cooperatives.

The rapid development of the KUD led the government to expand the scope of agricultural cooperatives by issuing Presidential Decree No. 2/1978. This caused the KUD not only to become an institution that supports agricultural production, but also to be a rural economic institution. Under the program they are to provide food, particularly rice, and through the KUD a significant role was played. The KUD functioned to distribute farm credit in the form of fertilizer, seed, and other inputs to farmers, which are outlined by farm lending programs. However, for the development of other agricultural commodities, the KUD's role was still minimal.

In order to strengthen the presence of the KUD, the government issued Presidential Decree No. 4/1984 regarding the development of the KUD. This decree established the KUD as the center of economic activity in rural areas, an integral part of national development. It would be supervised and developed in an integrated manner through an intersectorial program. At the same time, the Presidential Decree confirmed that the KUD was the only cooperative in rural areas. With the exception of those with permits obtained from the Ministry of Cooperatives, all existing cooperatives in rural areas had to be merged into the newly established KUD or be required to disband. Some farmers set up other forms of organization, such as a farmers' association, since setting up a cooperative was not permitted (Baga 2016). The associations include the Cocoa Farmer Association, the Coffee Farmer Association, etc. One of the permitted agricultural cooperatives was a dairy cooperative (Baga 2016). During the New Order period, the KUD acted as an intermediary for the Board of Logistics (Bulog) to buy rice from farmers in support of the government policy for rice price stabilization, which guaranteed both marketing and market price (Suradisastra 2006; Purwaatmoko 2018). The function was abolished in 1999 when Indonesia signed an agreement with the IMF.

The development of the KUD destroyed several cooperatives that had been well established, such as the rubber and copra cooperative (Aziz 1987). In addition, the KUD's involvement in monopolistic practices destroyed the clove agribusiness in Indonesia, causing farmers to no longer have the desire to plant cloves. As a result, many farmers cut down their clove trees (Soedjono 1997).

The issuance of Presidential Decree No. 18/1999 removed the monopoly rights of the KUD as the only cooperative in rural areas. This regulation also forced the KUD to be independent and no longer dependent on government programs, in addition to being prepared for competition with other rural economic institutions or actors. Many KUDs were experiencing difficulties in their new position, although the wide-open opportunities of the domestic and foreign market during the economic crisis could not be properly exploited by them (Widjajani and Hidayati 2014). In fact, between 1997 and 2000 there was a decline in the number of KUD members by 15%, and in 2007 the number fell by 58% compared to the number in 2000 (Baga 2016). The unsatisfactory number of KUD developments attracted negative appraisals among the public towards the members of KUDs (Baga 2016). These negative appraisals were due to the misperceptions about cooperatives among Indonesian people.

Nasution (2007) mentioned three misperceptions about cooperatives in Indonesia. First, cooperatives are undeveloped because the main characteristic of a cooperative is that it is a nonprofit-making organization, with the decision-making mechanism of one man, one vote. This perception is evidently flawed. Many cooperatives in other countries perform better than noncooperative businesses. Second, cooperatives are only efficient

if continuously supported by the government. However, government interference in cooperatives can result in inefficiency and a lower quality of service. Although cooperatives need government assistance, there is no need for much government aid, since the problems faced by cooperatives are structural. Government support should be in the form of programs that support and create favorable conditions, so that the cooperative movement is responsible for its own development (Soedjono 1997). Third, cooperatives in Indonesia are considered to have a traditional nature and character, which makes them difficult to grow and sustain. The failure of cooperatives in Indonesia was due to the abandonment of the true cooperative nature. Cooperatives were established without applying the cooperative principles, resulting in pseudo cooperatives. The cooperatives failed to apply their principles and rules and used the term “cooperative” as a name only.

After the abolishment of the KUD monopoly, several agricultural cooperatives focusing on a single commodity, including coffee, were established. The establishment of the Coffee Institution was mostly the initiative of a private or nongovernment organization (NGO), especially in regions that have been involved in the global value chain and with specialty coffee such as the regions of Gayo (Aceh) and Toraja (South Sulawesi). This cooperative was established as one of the requirements in the coffee certification process. The involvement of government during the New Order regime was minimum. Therefore, the establishment of a cooperative in the coffee sector in these areas was mostly welcomed (Neilson 2008).

4. METHODOLOGY

This article has utilized a case study approach with descriptive analysis. Two cooperatives are compared, namely Margamulya Coffee Producer Cooperative (MCPC) and Mitra Malabar Cooperative (MMC). The selection of the two cooperatives is based on the current export activities. Margamulya Coffee Producer Cooperative (MCPC) is currently conducting export activities while Mitra Malabar Cooperative (MMC) is currently selling coffee beans to domestic markets but previously conducted exports.

The primary data collection was conducted via in-depth interviews with the heads of both cooperatives. For MCPC, an in-depth interview was conducted on 14 December 2019 with Mr Mohamad Aleh, the head of the cooperative. Meanwhile, for MMC, an in-depth interview was conducted on 28 February 2020 with Mr Faqih, the manager of the cooperative. In addition to the primary data, secondary data were also collected from journal articles and from Statistics Indonesia.

The data from the two cooperatives were compared, and they identified the impact of involvement on farmers in the global value chain. Additionally, policy implications were also addressed in order to increase the farmers' welfare with their involvement in the global value chain.

4.1 Analysis and Discussion

The comparison of the two cooperatives is summarized in Table 1.

Table 1: Comparison between Margamulya Coffee Producer Cooperative (MCPC) and Mitra Malabar Cooperative (MMC)

Aspect	Mitra Malabar Cooperative (MMC)	Margamulya Coffee Producer Cooperative (MCPC)
Founded	2012	2014
Founder	Farmer and businessman	Farmer
Members	29 nonfarmers in the city of Bandung	200 farmers who own and operate land in a rural area
Sales	2 tons of green beans and 4.8 tons of roasted beans with a value of IDR 586 million or US\$ 41,020 in 2019 (only coffee)	120 tons of green beans and 40 tons of roasted beans with a value of IDR 11.6 billion or US\$ 812,000 in 2019
Scope	Province level	Regency level
Business	Coffee, coconut, essential oils, premium rice	Coffee
Export	No	Yes
Processing	From unhusked green beans to green and roasted	From cherry to green beans and roasted beans
Supply chain	Buy unhusked green beans from farmers' group	Buy cherry beans from farmers
Service to member	Members serve as facilitators	Agriculture-related services
Future plan	Focus on increasing farmers' productivity	Focus on export

4.2 Cooperative History

Mitra Malabar Cooperative (MMC) was established in 2012 by a businessman named Mr Jayagama and another businessman from the Rahayu Farmers Group named Mr Supriatna Dinuri. Before forming the cooperative, both founders established a firm called PT. Nuga Ramitra, which introduced the coffee brand Coffee Malabar in 2010. The firm also developed a coffee garden by revitalizing displaced land, planting a new coffee garden, and developing Malabar Indonesia's coffee breeding fields. They attempted to develop Malabar civet coffee by cultivating civet husbandry and developing civets.

In 2011, with the help of the Netherlands' NGO PUM, MMC welcomed a coffee expert in order to increase the value added through developing processing facilities from upstream activities to downstream activities. In the same year, the cooperative received two Malabar coffee awards, namely from Puslitkoka (a coffee and cocoa research center) in Jember, East Java, as the third-best coffee flavor, and as the best cultivation of the cilantro cage management in Indonesia (Febrianny, Purwanegara, and Aprianingsih 2019).

In 2015, the cooperative was split between the cooperative and the farmers' group. The cooperative base moved to Bandung, the capital city of West Java, while the farmers' group was focused on the production side of the business. This farmers' group supplied the coffee beans to the cooperative. The cooperative members were made up of 29 people, consisting of mostly volunteers who were concerned with the development of coffee in West Java.

In addition to coffee, MMC currently focuses on coconut, essential oils, and premium rice. Also, MMC accompanies rural villagers on agroforestry activities, which assist villagers in planting several commodities in the mountain area that are mostly owned by the government firm of Perhutani.

The development of Margamulya Coffee Producer Cooperative (MCPC) started when Indonesia experienced a financial crisis in 1997–1998. Mochamad Aleh, the initiator of the cooperative, was removed from his current job as a construction worker in the city. In 2001, he returned to his hometown in Margamulya Village, Pangalengan, Bandung and searched for land to plant coffee. He saw coffee as a prospective commodity while most farmers were planting other horticultural products at that time.

In addition to planting coffee on their own land, farmers planted coffee in the mountain foothills, which belonged to the government-owned enterprise Perhutani. In 2006, Mochamad Aleh received land legally from Perhutani at the village level and signed an agreement with Perhutani by forming the group the Forest Village Community Institution (Lembaga Masyarakat Desa Hutan/LMDH). With this agreement, other farmers began to plant arabica coffee, and the mountain foothills were filled with coffee plants in 2008. In addition, many horticultural farmers shifted to planting coffee.

In 2010, Mochamad Aleh formed a farmers' group called the Margamulya Farmers' Group, and in 2011 he received machinery for coffee processing as a reward for conserving the land on the mountains. Due to the increase in coffee farms and members, the group needed a legal formal buyer, especially when dealing with commercial and international buyers. As a result, in 2014, the Margamulya Coffee Producer Cooperative was formed. The cooperative was officially established through Notarial Deed No. 9 dated 18 March 2014, and was located in Jl. Raya Bandung-Pangalengan Km 36.5 Margamulya Village. Initially, only 20 members were involved. Currently, there are around 200 members farming land covering 250 ha, consisting of 200 ha of Perhutani's land and 50 ha of the farmers' own land. The cooperative served two villages, namely Margamulya Village and Tribaktimulya Village, and which consisted of several farmers' groups.

Currently, MCPC focuses on coffee. Besides being involved with the coffee supply chain, the cooperative also gives training to baristas in order to teach the characteristics of the coffee and how coffee is processed. Mohamad Aleh also shares his experience of developing coffee with others in order to increase the knowledge of the stakeholders regarding coffee.

4.3 Exporting

MCPC received a large demand for exports when it was invited to become involved in trade expos in the foreign market. At the time, buyers from Japan offered to buy coffee from the cooperative at 18 tons per shipment. But the cooperative could not fulfill the demand due to limited capital for buying cherry beans from the farmers. Then, the Japanese buyers offered a cooperation with an exporter called PT. Taman Delta in Semarang, Central Java, Java in order to be able to conduct indirect export. In 2019, MCPC conducted export through PT. Taman Delta with an amount of 60 tons with every shipment of 2 tons transported to Semarang, Central Java. In addition, MCPC exported through PT. Samosir Sumatera in Medan, North Sumatera, for 60 tons of coffee and sent 15 tons with every shipment in 2019. The payment from the exporter was conducted through bank transfer at least three months after the exporter received the coffee beans, utilizing 90-day payment terms, which are business standard in most cases.

The cooperative also sold directly to foreign consumers. In 2019, around 20 tons of green beans were sold directly to foreign consumers using delivery companies in several countries, such as the Netherlands, Singapore, and Norway, among others. Usually, every shipment was less than 100 kg. The cooperative met the foreign buyers during an international expo. The international expo was organized by the Indonesian government and the cooperative was representing West Java Province, therefore all of the cost of participating in the expo was borne by the West Java government. The price of selling to a foreign buyer was usually higher than selling domestically or to an exporter. The price of direct export was around IDR 140,000 per kg or \$10 per kg, excluding shipping cost. The price is higher since is for the grade 1 coffee beans, which has higher value added. The coffee beans would be shipped once the cooperative received the money in advance, including the shipping cost.

Direct exporting is more profitable for the cooperative because of advanced payments, but the amount of available product is limited. Meanwhile, the amount sold to an exporter is more frequent, although the payment is received after three months. If the cooperative conducts direct exporting using containers, it will face several problems:

1. Continuity

For direct exporting, to fill the container each month, the minimum is 18 tons of green beans. In order to fill the container, the cooperative must store many more cherry beans from farmers during the harvesting period from March until August every year. The cooperative will face two problems—the storage capacity and the capital—in buying cherry beans from farmers. The challenge is that farmers prefer to receive cash directly after selling to the cooperative.

2. Quality

Exporting directly requires a better quality of coffee bean. The quality of coffee produced by the cooperative members must be guaranteed and fulfill the qualifications. On the other hand, due to the insufficient supply, the cooperative must purchase from nonmembers, which could result in lower quality and rejection of shipment by foreign buyers. In addition, the cooperative must fulfill the food quality and safety regulations.

The export market contributed 80% of the total sales of MCPC, which made the export market the main market of the cooperative. MCPC has a contract with two exporters and has conducted direct export making a guaranteed market for the cooperative. The guaranteed export market made the member have a guaranteed price from the cooperative with a price of IDR 10,000 per kg of red cherry beans. In addition, the farmers will receive profit/benefit from the cooperative depending on how much the farmers sold their coffee for to the cooperative at the end of the fiscal year.

MMC currently does not conduct export through an exporter. In 2003, however, the cooperative conducted a direct export to Morocco in the amount of 18 tons of green beans, consisting of 9 tons of arabica and 9 tons of robusta. The export was carried out after being involved in a trade expo conducted by the Indonesian Embassy in Morocco. After the expo, the buyer visited Bandung, West Java, Indonesia to check the requirements for the coffee that would be purchased. The coffee export was conducted through the partnership system, which means both sides share the cost. MMC bore the cost from the farmer to the shipping seaport in Jakarta (Tanjung Priok), while the Moroccan side bore the cost from Jakarta's port to the port and buyer in Morocco. The first export was conducted in November 2013 and reached Morocco in January 2014.

The export activity was conducted transparently, meaning both sides acknowledged the purchase terms, selling price, and payment terms, which were paid after the coffee beans had been sold to the consumers. MMC bore 67% of the cost while the Moroccan side bore 33%. The largest cost factor was the purchasing price of the coffee beans from the farmers. MMC cooperated with investors in order to provide the capital and to buy 18 tons of green coffee beans from the farmers at a price of IDR 27,000–IDR 30,000 (\$1.9–\$2.1) per kilogram. From this export cooperation, MMC gave cashback to the farmers in the form of cash or coffee seed. The cashback was 25% of the profit obtained from the export.

In 2014, MMC visited Morocco and received a demand for green coffee beans in the amount of six containers (or around 108 tons). During the negotiation, MMC negotiated the export terms as:

1. Change in purchasing price from the farmers. Previously, the cooperative purchased green coffee beans at a price of IDR 27,000–IDR 30,000 (\$1.9–\$2.1) per kilogram. The cooperative asked for a price of IDR 45,000 (\$3.2) per kilogram since it was sold in Morocco at the equivalent of IDR 80,000 (\$5.7) per kilogram.
2. The price was to be based on the international prices for coffee and the world market.
3. The payment would be made one month after the Moroccan side received the green beans whereas previously the payment terms were four months.

The negotiation failed since the Moroccan side did not agree to comply with the first and second terms. The cooperative explained the failed negotiation to the farmers, and when the Moroccan side visited the farmers to purchase the green coffee beans directly, none of the farmers agreed to sell to them. Since then, the cooperative has stopped exporting because the cooperative felt that the price the farmers received should have been higher. Additionally, in the domestic market the prices were higher than for the exports.

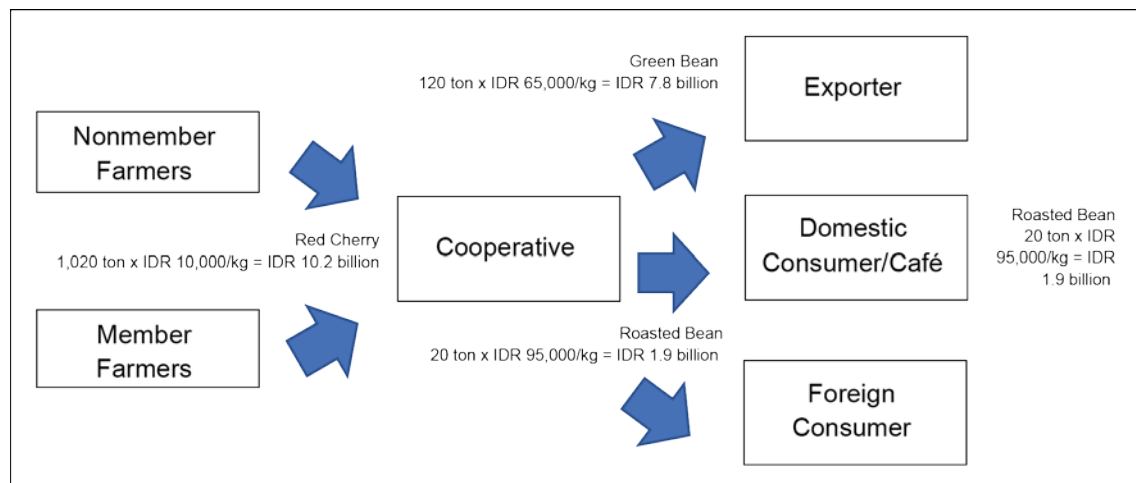
MMC conducted direct coffee export to Morocco in 2013. The benefits of exporting were being able to obtain higher prices and giving cashback to the coffee farmers. This showed that the export market can benefit more than the domestic market when the marketing channel is shorter or conducting direct export rather than through exporters. On the other hand, conducting direct export requires more capital since the amount of export is huge (around 18 tons of green beans or about IDR 540 million or \$37,700 for each shipment) and cannot be handled alone by the cooperative.

4.4 Marketing Channel

The flow of marketing channels in cooperatives can be seen in Figure 5. Coffee harvesting occurs from the month of March until August. Farmers should only harvest the red cherries to ensure the quality of the green beans. Farmers sell the red cherries to cooperatives at a price of IDR 10,000 per kg or around \$0.71 per kg. In 2019, about 1,020 tons of red cherries were purchased by the cooperative from members and nonmembers.

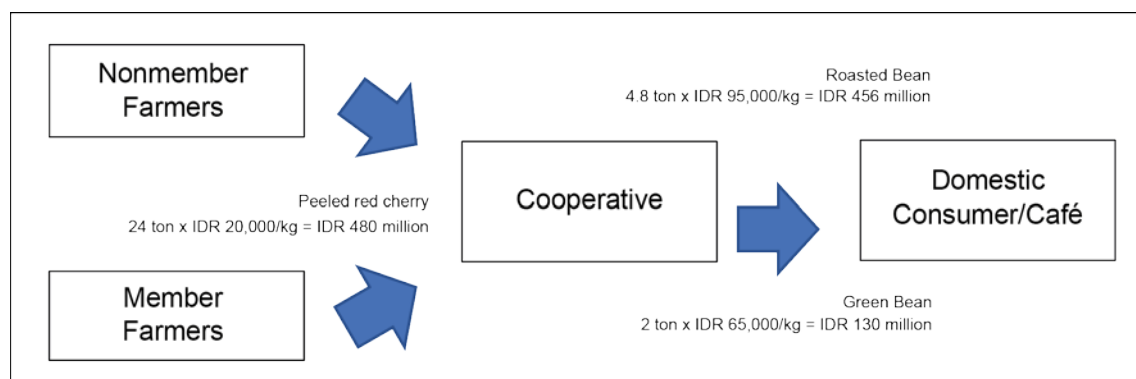
The red cherries will be processed through the cooperatives at that time, becoming gabah (peeled red cherries). The next process is peeling the inner layer of the beans to become green beans. One kg of green beans is derived from 16 kg of red cherries. These green beans can be processed further into roasted beans or ground coffee powder. One kilogram of green beans can be processed into 0.8 kilogram of roasted beans. For exporters, the cooperative sells the green bean form at a price of IDR 65,000 per kg or \$4.64 per kg (Figure 4). The cooperative also sells in the form of roasted beans at a price of IDR 95,000 per kg or \$6.79 per kg.

Figure 4: Marketing Channel of Margamulya Coffee Producer Cooperative (MCPC)



MMC received peeled red cherries (gabah) from member or nonmember farmers in the amount of around 24 tons in 2019. The cooperative processes the peeled red cherries to become roasted beans or green beans (Figure 5). The cooperative has the processor to make roasted and/or green beans. The roasted and green beans are then sold to domestic consumers such as cafés, local shops, and retailers. The cooperative also owns a café called Café Kopi Nusantara in Cibubur, Jakarta. In 2019, the cooperative sold 400 kg of roasted beans per month or 4.8 tons per year and 2 tons of green beans in 2019.

Figure 5: Marketing Channel of Mitra Malabar Cooperative (MMC)



4.5 Service to the Members

MCPC has played its role in connecting farmers with the global value chain in functioning in several aspects (Djuwendah et al. 2017, 2019):

1. Procurement of farming inputs, which includes activities such as performing quality coffee seedling measurements, distributing free coffee seedlings to coffee farmers, aiding distribution of pest repellents to farmers, and providing loans for coffee farming capital
2. Production process, which includes activity such as fostering farmers in coffee farming according to UTZ² certified Standard Operating Procedure (SOP), facilitation and assistance of the transfer of coffee farming technology, Integrated Pest Management (IPM), harvest. and post-harvest
3. Coffee processing (agroindustry), which includes activity such as processing coffee cherries into green beans and roasting beans, and grinding instant coffee (ready to brew), conducting custom work on coffee (*makloon*) ordered by nonmembers, and increasing the quality of the products
4. Product marketing, which includes activity such as buying coffee cherries from farmers, providing price guarantee, conducting market research, and increasing the product distribution network
5. Financial services, which includes activity such as providing recommendations and guarantee of lending money to banks, and providing loans in limited quantities. Farmers receive loans of between IDR 500,000 and IDR 5,000,000 (\$35–\$357) and paid during harvest when the farmers sell the cherries to cooperatives (Karyani et al. 2019)
6. Minimization of farming risk, which includes activity such as providing storage facilities (warehouse), providing an information center regarding quality, price, and the coffee market, in cooperation with the Local Government Office of Cooperatives, SMEs, the Government Office of Industry and Trade, the Indonesian Creative Youth Academy, and coffee exporters
7. Facilitation of human resource development, which includes activity such using as the cooperative as a place of human resource development training, and supervising the transfer of technology and farming skills
8. Research and development of coffee farming business, which includes activity such as building partnerships and business networks with various parties (government, local government offices, associations, entrepreneurs) and performing market research

The cooperative members receive benefits, especially if the cooperatives are involved in the global value chain in several ways. Those ways are:

1. The member receives high-quality coffee seedlings in order to produce high-quality cherry beans
2. The buying market is guaranteed. This means the cooperative will buy all the cherry beans produced by the members at a specified quality
3. The cooperative members receive training for improving the coffee productivity and quality

² One of the largest programs and a label for sustainable farming usually for coffee and cocoa.

4. The cooperative members receive dividend at the end of every year

The MMC members are mostly volunteers, so this gives them a unique ability to create community development, rather than coffee farmers who may lack that ability. Therefore, the cooperatives give their members a network to conduct community development activities specifically for coffee farmers to improve morale and the condition of coffee farming as a whole.

4.6 Future Plans

Currently MCPC is focusing on the export market, either direct or indirect export. The export market is a potential market to be fulfilled, with demand being huge in the international market. In addition, the cooperative is also trying to increase sales in the domestic market and is providing training for baristas, which started their coffee business.

Meanwhile, MMC is focused on increasing the coffee farmers' productivity, which will eventually increase their income. As regards the market, MMC will focus more on the domestic market since currently the domestic price is higher than the export price.

5. CONCLUSION

The objective of this article is to analyze the benefits to farmers of participating in global value chains through cooperatives. Two cooperatives are compared, namely Margamulya Coffee Producer Cooperative (MCPC) and Mitra Malabar Cooperative (MMC), with one cooperative currently conducting export while the other is not.

The results indicate that the export market provides a significant market for Margamulya Coffee Producer Cooperative (MCPC). From the data, we also see that direct exports are more beneficial than indirect exports through exporters since a higher price is charged. When conducting indirect exports, the main products are green beans, while for direct exports, roasted beans are the main products. However, the export market does not always have a higher price, as currently domestic market prices are higher. Due to these price situations, Mitra Malabar Cooperative (MMC) has concentrated on selling to domestic partners rather than entering the international market.

In the future, direct exporting must be targeted by the cooperative since it involves exporting product, which has a higher price than indirect exporting. In addition, direct export can allow the cooperative to have more bargaining power, in order for them to be able to increase the price received by farmers. There are two advantages when the cooperative conducts direct export. First, the cooperative can obtain more profit since it abolished the middleman/exporter in the process. Bank Indonesia (2018) reported that the margin that the exporter obtained was around IDR 7,000 per kg in the case of green beans, which can be transferred to the farmers' selling price. Second, the cooperative can sell in the form of roasted beans rather than green beans, which have a higher price and value added.

In order to conduct direct export, the government should give support to the cooperative to obtain capital in order to purchase red cherries or peeled cherries from the farmers. For one export shipment, assuming 18 tons of green beans, the cooperative needs capital in the amount of IDR 1.08 billion for buying red cherries, assuming the price of red cherries is IDR 10,000 per kg. In addition, the government should also arrange to

collect the 18 tons of green beans per shipment since every cooperative has limited storage and is limited to buying red cherries or peeled cherries from the farmers.

REFERENCES

- Agustia, D., Kusnadi, N., and Harianto. 2016. Kinerja Koperasi Pertanian: Kasus Koperasi di Aceh Tengah dan Bener Meriah. *Jurnal Bisnis Tani* 2(1), p.82–95.
- Almqvist, A.C. 2011. Coffee, A Fair Trade. Thesis. Swedish University of Agricultural Sciences, Sweden.
- Andriadi, Ismail, R., Fikarwin, Badaruddin, Manurung, R., Sitorus, R. 2019. Coffee Marketing Mechanism: Social Relations Between Farmers, Collectors, Certification Cooperatives, and Exporters in Aceh, Indonesia. *Pelita Perkebunan* 35(2), p.156–166.
- Arifin, B. 2010. Global Sustainability Regulation and Coffee Supply Chains in Lampung Province, Indonesia. *Asian Journal of Agriculture and Development* 7(2), p.67–89.
- Astuti, E.A., Offermans, A., Kemp, R., and Corvers, R. 2015. The Impact of Coffee Certification on the Economic Performance of Indonesian Actors. *Asian Journal of Agriculture and Development* 12(2), p.1–16.
- Aziz, MA. 1987. Meninjau Kembali Kebijaksanaan Operasional Pengembangan KUD; in Swasono, Sri Edi (Ed.). 1987. Sistem Ekonomi dan Demokrasi Ekonomi. Jakarta, UI Press.
- Baga, L.M. 2016. Co-operative Entrepreneurs and Agribusiness Development: A Study Towards the Development of Agribusiness Co-operatives in Indonesia. Bogor, IPB Press.
- Bank Indonesia. 2018. Mapping Market Demand, Production and Baseline Survey of Coffee SME's in West Java. Cooperation between Bank Indonesia and Faculty of Economics and Management, Bogor Agricultural University.
- Bijman, J. 2010. Agricultural Cooperatives and Market Orientation: A Challenging Combination. In: Lindgreen, A., Hingley, M., Harness, D. and Custance, P. (Eds) Market Orientation: Transforming Food and Agribusiness Around the Corner. New York: Routledge.
- Djuwendah, E., Karyani, T., Hapsari, H., Rasmikayati, E. and Nursyamsiah. 2017. Role and Impact of Cooperative Coffee Producers Margamulya in the Development of Java Preanger Coffee Farming. *Journal Social Economic of Agriculture*, 6(2), p.1–8.
- Djuwendah, E., Karyani, T., Sadeli, A.H. and Hapsari. 2019. Study on the Roles and Benefits of Cooperative Producers of Coffee Margamulya in Java Preanger Coffee Agribusiness. The 3rd ICSAFS IOP Conference Series: Earth and Environment Science, 334, p.1–8.
- Fairtrade (2020) How Fairtrade Works. <https://www.fairtrade.net/about/how-fairtrade-works>.
- Febrianny, E.R., Purwanegara, M.S, and Aprianingsih, A. 2019. Export Strategy of Cooperative in an Emerging Country: Evidence of Mitra Malabar Cooperative. *Journal of Global Business and Social Entrepreneurship* 5(14), p.30–37.

- Fogelberg, J. 2012. Fairtrade Coffee, Fair Enough? Thesis. Swedish University of Agricultural Sciences, Sweden.
- Gunarsson, E. 2009. Fairtrade Coffee in Indonesia. Thesis. Uppsala University, Sweden.
- Hasan, I. 2014. Analisis Kinerja Koperasi Pertanian dalam Tataniaga Komoditas Ekspor di Kabupaten Aceh Tengah Provinsi Aceh dalam Menghadapi Persaingan Antar Negara ASEAN 2015. *Jurnal Kebangsaan* 3(6), p.1–12.
- Hendar. 2010. *Manajemen Perusahaan Koperasi* (Management of Cooperatives Firm), Penerbit Erlangga (Erlangga Publisher): Jakarta.
- Ibnu, M., Glasbergen, P., Offermans, A. and Arifin, B. 2015. Farmer Preferences for Coffee Certification: A Conjoint Analysis of the Indonesian Smallholders. *Journal of Agriculture Science* 7(6), p.20–35.
- International Coffee Organization (ICO). 2019. http://www.ico.org/new_historical.asp?section=Statistics.
- Ita, YPS. 2015. The Role of Farmer Cooperatives in the Development of Coffee Value Chain East Nusa Tenggara, Indonesia. Thesis. Humboldt University of Berlin, Germany.
- Karyani, T., Djuwendah, E., Kusno, K. and Hermita, A.S. 2019. Value Chain Financing in Coffee Agribusiness (The Case of a Cooperative in Pangalengan, West Java, Indonesia). The 3rd ICSAFS IOP Conference Series: Earth and Environment Science, 334, p.1–8.
- Lochner, K.A. 2018. Kopi, Koperasi and Fairtrade: Perspective from the Gayo Highlands Indonesia. Thesis. University of Sydney, Australia.
- Ministry of Agriculture. 2018. Coffee Outlook 2018. Ministry of Agriculture.
- Nasution, M. 2007. Mewujudkan Demokrasi Ekonomi dengan Koperasi. Jakarta: PIP Publishing.
- Neilson, J. 2008. Global Private Regulation and Value-Chain Restructuring in Indonesian Smallholder Coffee Systems. *World Development* 36(9), p.1607–1622.
- Neilson, J., Wright, J. and Aklimawati, L. 2018. Geographical Indications and Value Capture in the Indonesia Coffee Sector. *Journal of Rural Studies* 59, p.35–48.
- Purwaatmoko S. 2018. Obstacles to Achieving Food Security: The Failure of Rice Sector Policy and Its Impact on Peasant Deprivation in the Era of Political Reform in Indonesia. In: McLellan B. (eds) Sustainable Future for Human Security. Singapore: Springer.
- Putri, M.A., Fariyanti, A. and Kusnadi, N. 2013. Struktur dan Integrasi Pasar Kopi Arabika Gayo di Kabupaten Aceh Tengah dan Bener Meriah (Market Structure and Integration of Arabica Gayo Coffee in Central Aceh and Bener Meriah Regencies). *Buletin RISTRI* 4(1), p.47–54.
- Saragih, B. 2000. Agribisnis Berbasis Peternakan: Kumpulan Pemikiran. Jakarta: Pusat Studi Pembangunan IPB.
- . 2010a. Suara Dari Bogor: Membangun Opini Sistem Agribisnis. Bogor: IPB Press.
- . 2010b. Agribisnis: Paradigma Baru Pembangunan Ekonomi Berbasis Pertanian. Bogor: IPB Press.

- Soedjono. 1997. Koperasi dan Pembangunan Nasional. Jakarta, PIP-Dekopin.
- Statistics Indonesia. 2014. Estate Crops Household Survey. Statistics Indonesia.
- . 2018. Indonesian Coffee Statistics. Statistics Indonesia.
- Stiyawan, E., Fadli and Effendy, E. 2016. Peran Koperasi Kopi terhadap Produksi dan Kesejahteraan Petani Kopi di Kecamatan Bandar, Kabupaten Bener Meriah. *Jurnal Agrifo* 1(1), p.54–62.
- Suradisastra, K. 2006. Agricultural Cooperative in Indonesia. Paper presented at FFTC-NACF International Seminar on Agricultural Cooperatives in Asia: Innovations and Opportunities in the 21st Century. Seoul, Republic of Korea, 11–15 September 2006.
- Vicol, M., Neilson, J., Hartatri, D.F.S. and Cooper, P. 2018. Upgrading for Whom? Relationship Coffee, Value Chain Interventions and Rural Development in Indonesia. *World Development* 110, p.26–37.
- Widjajani, S. and Hidayati, S.N. 2014. Membangun Koperasi Pertanian Berbasis Anggota di Era Globalisasi. *Jurnal Maksipreneur* 4(1), p.98–115.
- Yanuar, R and Feryanto. 2013. Peranan Koperasi Pertanian di Indonesia dalam Rantai Nilai Global Komoditi Kopi. In: Wibowo, R (ed) Bunga Rampai Ekonomi Kopi. Jember: University of Jember Publishing.