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Efficiency Analysis of Robusta Coffee Marketing Channels in the Selendang Rinjani Forest Farmer Group, Central Lombok Regency

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ABSTRACT

This study analyzes the efficiency of robusta coffee marketing channels in the Selendang Rinjani Forest Farmer Group (KTH) in Karang Sidemen Village, Central Lombok Regency. Although Indonesia is a large coffee producer, marketing efficiency at the farm level remains a challenge due to the long distribution chain. This study aims to identify coffee production, marketing channel patterns, marketing margins, farmer's share, and marketing efficiency. A descriptive method with quantitative and qualitative approaches was used. Farmer samples were taken by census (27 people), and snowball sampling identified marketing institutions.. Data were collected through observation, interviews, documentation, and literature study, then analyzed using standard formulas for marketing margin, farmer's share, and marketing efficiency

INTRODUCTION

The agricultural sector in Indonesia, particularly robusta coffee, plays a vital role in the national economy. Indonesia is the fourth largest coffee producer and exporter in the world. In the last five years, coffee consumption in Indonesia has increased rapidly in line with shifting consumer behavior, from a necessity to a lifestyle choice (Afdholy, 2019; Rahman et al., 2022). However, the success of coffee farming depends not only on production, but also on efficient marketing. Inefficient marketing and long distribution chains can depress selling prices at the farm level, thus affecting their income and welfare. As a robusta coffee manager, the Selendang Rinjani Forest Farmer Group in Karang Sidemen Village, faces marketing constraints such as a made to order sales system and the domination of outsiders. Therefore, this study is important to analyze the efficiency of robusta coffee marketing channels in KTH Selendang Rinjani.

METHODS

This research was conducted in March-April 2025 in Karang Sidemen Village, North Batukliang District, Central Lombok Regency. Descriptive research methods with qualitative and quantitative approaches were used. Qualitative approaches describe phenomena in narrative form, while quantitative approaches quantify data through numerical measurements (Ramdhan, 2021). Location determination was carried out by *purposive sampling* in Karang Sidemen Village because there

is a farmer group that manages coffee. The sample of farmers was taken using the census technique, namely 27 people who are members of the Selendang Rinjani Forest Farmer Group, while the marketing institution used snowball sampling, based on chain referrals from farmers involved in marketing activities. Data were collected through observation, interviews, documentation, and literature study. The primary and secondary data sources in this study primary and secondary data. Primary data was obtained directly through field observations and interviews with respondents, namely coffee farmers who are members of the Selendang Rinjani Forest Farmers Group (KTH). Meanwhile, secondary data was obtained from various documents, reports, and relevant literature supporting the research topic, both from relevant agencies and from previous studies. This secondary data is used as supplementary information to strengthen the analysis in the research. Research variables include the number of coffee plants, coffee production, land area, marketing channels, prices at the farmer and consumer levels, marketing margins, farmer's share, total marketing costs, total sales value, and marketing efficiency.

RESULTS AND DISCUSSION

Residents' Livelihoods

The people of Karang Sidemen Village, which is adjacent to the Tahura Nuraksa Forest, depend heavily on forest products for their livelihoods. Research on 27 respondents from the Selendang Rinjani Forest Farmer Group (KTH) shows that the majority work as coffee farmers, as shown in Table 1.

Table 1. Livelihoods of the Population

No.	Side Job	Number (Person)	Presentation (%)
1	Trader	3	19
2	Rice Farmer	6	38
3	Breeder	6	38
4	Forestry Extension Worker	1	6
Total		16	100

Of these, 16 respondents had side jobs. These side jobs, which include trader (3 people, 19%), rice field farmer (6 people, 38%), livestock farmer (6 people, 38%), and forestry extension worker (1 person, 9%), are taken on to supplement income, given that the forest products obtained are not sufficient for daily needs. This confirms that people are still highly dependent on forest products as their

main source of income, but many are forced to seek additional work to fulfill their basic needs.

Age of Respondents

The study showed that the age of respondents ranged from 29 to 57 years old, with the majority (13 people) aged between 45 and 52 years old, as shown in Table 2.

Table 2. Age of Respondents

No.	Age Interval (Years)	Number of Respondents (People)	Percentage (%)
1	29-36	1	4
2	37-44	2	7
3	45-52	13	48
4	53-60	11	41
Total		27	100

Age is an important factor affecting work productivity, productive age tends to increase productivity, while approaching old age can reduce productivity due to physical and health limitations. In addition to age, other factors that affect work output include facilities, motivation, work safety levels, and welfare (Harlie, 2017)

Respondent Education Level

Education is an important factor in starting and developing a business, and has a significant effect on agricultural production. Farmers with higher education tend to be more prepared for change and quickly accept new technology. The education level of respondents can be seen in Table 3.

Table 3. Education Level of Respondents

No.	Education Level	Number of Respondents (Person)	Presentation (%)
1	Elementary School	3	11
2	Junior High School	13	48
3	High School	11	41
Total		27	100

The study showed that the majority of respondents had their last education at the junior secondary school level (13 people). This is due to the view of rural communities that do not fully consider

education as a long-term investment, so children are encouraged to work rather than continue their education.

Coffee Production Results

Farmers in the Selendang Rinjani Forest Farmer Group have different land areas, numbers of coffee plants, amounts of coffee produced, and coffee production yields. This is due to differences in the ability of farmers to manage land and coffee plants

planted. The land area, number of coffee plants, amount of coffee produced, and the yield of coffee production can be seen in Table 4.

Table 4. Coffee Production Yield

No.	Name	Land Area (ha)	Number of Coffee Plants (Trees)	Producing Coffee (Trees)	Production Yield (Kg/Year)
1	Sarifah	0,88	200	40	200
2	Sahni	1,06	200	0	0
3	Sukardi	1,83	650	637	6370
4	Maah	0,73	100	15	90
5	Adnan	1,09	200	20	60
6	Dahar	0,96	350	70	280
7	Abdul	0,3	100	10	60
8	Mutaharudin	0,5	175	26	79
9	Ramdan	0,98	354	230	2071
10	Kamaludin	1,11	200	30	90
11	Roniatun	0,31	285	29	86
12	Sahram	0,46	190	19	38
13	Marlina	0,56	200	20	60
14	Rifa'i	0,8	100	15	60
15	Zainudin	0,38	114	11	46
16	Hamdi	0,87	400	40	80
17	Marinah	0,35	300	30	60
18	Dahri	0,64	500	50	100
19	Arimin	1,41	300	30	60
20	Amin	0,68	154	15	92,4
21	Farida	0,5	200	100	800
22	Zakaria	0,88	250	125	750
23	Sailah	1,83	342	291	2907
24	Maharni	0,51	100	0	0
25	Wahilkan	0,96	100	10	40
26	Khusnul	0,13	100	0	0
27	Usman	0,28	100	95	950
Total		20,99	6.264	1.958	15.428
Average		0,78	232	73	571

The Selendang Rinjani Forest Farmer Group manages 20 ha of land divided among 27 members. Each farmer's land area ranges from 0.13 ha to 1.83 ha, with an average of 0.78 ha. Farmers are free to plant any crop as long as it does not damage the

ecosystem, and different types of crops are selected based on profit potential. The unevenness of land area is due to family inheritance and farmers needs, and is influenced by soil characteristics and experience.

The number of coffee plants under management ranges from 100 to 650 trees, with a total of 6.264 trees and an average of 232 trees per farmer. The difference in numbers is influenced by land area, geographical conditions, and the farmer's ability to manage the land. Coffee cultivation is also influenced by biophysical factors such as climate and soil (Widayani & Usodri, 2020).

Production results show that only 31% of the total coffee plants are in production, namely 1.958 trees, with an average of 73 trees per farmer. The farmer with the highest production was Sukardi with 637 trees, while several other farmers did not have producing plants due to age and maintenance factors.

Yields ranged from 0 Kg/year to 6.370 Kg/year, with an average of 571 Kg/year. A total of 11% of farmers have no production yield, and 59% of farmers produce between 38 and 92 Kg/year, due to the young age of the plants. Meanwhile, 30% of farmers have achieved high production yields as their plants are ready for harvest. This difference reflects

changes in coffee selling prices that affect farmers' cultivation decisions.

Coffee Harvesting Period

Coffee harvesting in the Selendang Rinjani Forest Farmer Group is done twice a year, in June-July and November-December, with a harvest duration of 2-3 months. Farmers with small coffee yields usually do the harvesting themselves, while farmers with hundreds of kilos employ labor to help with the harvest for a fee. Coffee yields are highly dependent on the age of the plant, which ranges from 5 to 20 years. Plants under 5 years old are not yet able to bear fruit, while plants over 20 years old experience a decline in yield and require rejuvenation.

Production Costs

Coffee production costs include all farmer expenses during cultivation to harvest, such as harvest labor costs, fertilizer, harvest sacks, transportation, and initial packaging, as shown in Table 5.

Table 5. Production Costs

Name	Cost Component					Total Production Cost (Rp/year)
	Harvest Labor	Fertilizer	Sacks	Transportation	Packaging	
Sarifah	0	1.500.000	100.000	100.000	150.000	1.850.000
Sukardi	12.740.000	2.500.000	200.000	250.000	250.000	15.940.000
Dahar	4.142.000	1.500.000	100.000	100.000	150.000	5.992.000
Ramdan	0	2.500.000	200.000	250.000	250.000	3.200.000
Farida	1.600.000	1.500.000	100.000	100.000	150.000	3.450.000
Zakaria	1.500.000	1.500.000	200.000	100.000	150.000	3.450.000
Sailah	5.814.000	2.500.000	200.000	250.000	250.000	9.014.000
Usman	1.900.000	1.500.000	100.000	100.000	150.000	3.750.000
Total						46.646.000
Average						1.727.630

Of the eight farmers with high yields, total production costs ranged from IDR 1.850.000 to IDR 15.940.000 per year, with an average of IDR 1.727.630 per year. The largest cost comes from harvest labor, which accounts for more than 50% of the total cost, especially if farmers do not harvest themselves. Fertilizer purchase costs are also

significant, ranging from IDR 1.500.000 to IDR 2.500.000 per year, depending on the type of fertilizer and frequency of fertilization. The cost of harvest sacks and initial packaging, although smaller, is still important for post-harvest sustainability. Calculation of these production costs is important for determining the cost of coffee

production, which has a direct impact on farmers' income.

Production Value and Income

Coffee production value reflects the farmer's total receipts from sales during one harvest season,

while income is the net profit earned. Of the eight high-yielding farmers, production value varied depending on the number of plants, productivity per tree, and selling price of coffee, as shown in Table 6.

Table 6. Income

Name	Production Value (Rp/Year)	Total Production Cost (Rp/Year)	Income (Rp/Year)
Sarifah	15.000.000	1.850.000	13.150.000
Sukardi	477.750.000	15.940.000	461.810.000
Dahar	21.000.000	5.992.000	15.008.000
Ramdan	155.325.000	3.200.000	152.125.000
Farida	60.000.000	3.450.000	56.550.000
Zakaria	56.250.000	3.450.000	52.800.000
Sailah	218.025.000	9.014.000	209.011.000
Usman	71.250.000	3.750.000	67.500.000
Total	1.074.600.000	46.646.000	1.027.954.000
Average	39.800.000	1.727.630	38.072.370

Production ranged from 38 kg/year to 6,370 kg/year, with a selling price of IDR 75.000/kg, resulting in a production value per farmer between IDR 15.000.000 and IDR 477.750.000. The total production value reached IDR 1.074.600.000 per year, with an average of IDR 39.800.000 per year.

Net income was obtained from the difference between production value and total production costs, which ranged from IDR 1.850.000 to IDR 15.940.000 per year. Farmers' net income ranged from Rp 13.150.000 to Rp 461.810.000 per year, indicating that coffee farming is still profitable. This shows that coffee farming activities are feasible and profitable, even though they are run on a small scale.

Marketing Channel

A marketing channel is a series of steps through which goods or services pass from the manufacturing stage to the final consumer (Putri et al., 2018). In this study, one marketing institution was found, namely retailers, who obtain products from farmers or

middlemen and sell them to final consumers, usually households.

The Selendang Rinjani Forest Farmer Group uses three forms of marketing channels:

1. Level 0 Marketing Channel (Producer): Where 74% of farmers do no marketing and consume self-produced coffee.
2. Level 1 Marketing Channel (Producers→ Consumers): A total of 19% of farmers sell dried coffee beans directly to end consumers, mainly due to low yields and some selling in the market.
3. Tier 2 Marketing Channel (Producers→ Retailers→ Consumers): Involves 7% of farmers selling dried coffee beans through retailers around the village, as the price of dried coffee beans is higher than wet coffee beans.

This marketing channel shows variation in how farmers sell their coffee products.

Marketing Margin

Marketing margin is the difference between the price paid by consumers and the price received by farmers (Mandak et al., 2017). In coffee marketing in the Selendang Rinjani Forest Farmer Group, there

are expenses such as transportation costs, packing, loading, and market levies. The marketing margin is calculated from the difference between the selling price and the purchase price, which can be seen in Table 7.

Table 7. Marketing Margin

Marketing Channel	Marketing Institution	Purchase Price (Rp/Kg)	Selling Price (Rp/Kg)	Marketing Margin
1	Manufacturer	-	75.000	
	Consumer	85.000	-	10.000
2	Manufacturer	-	75.000	
	Retailer	80.000	85.000	
	Consumer	85.000	-	10.000

In marketing channel level 1, producers sell directly to final consumers at a selling price of IDR 75.000/Kg and a consumer purchase price of IDR 85.000/Kg, resulting in a marketing margin of IDR 10.000/Kg.

Level 2 of the marketing channel involves retailers, where producers sell coffee to retailers for IDR 75.000/Kg, and retailers resell it for IDR 85.000/Kg, also resulting in a margin of IDR 10.000/Kg.

Although both channels have the same margin, the length of the marketing channel differs,

depending on the number of institutions involved. The longer the marketing channel, the higher the price difference received by the buyer.

Marketing Costs

Marketing costs include all expenses after the production process until the goods are sold (Januarsah et al., 2019). In this study, marketing costs in level 1 and level 2 marketing channels are almost the same, because all respondents manage their land and marketing, as in Table 8.

Table 8. Marketing Costs

Marketing Channel	Packaging Cost (Rp/Kg)	Transportation Cost (Rp/Kg)	Total Marketing Cost (Rp/Kg)
1	500	0	500
	500	1.000	1.500
2	250	0	250
	250	1.000	1.250

a. Producers at Marketing Channel Level 1

There are two ways of selling, selling at home and at the market. Producers who sell at home have

packaging costs of IDR 500/Kg and transportation costs of IDR 0/Kg, so their total marketing costs are IDR 500/Kg. Meanwhile, producers selling in the

market have packaging costs of IDR 500/Kg and transportation costs of IDR 1.000/Kg, with total marketing costs of IDR 1.500/Kg.

b. Producers in Marketing Channel Level 2

There are also two types of marketing costs, those for retailers who pick up coffee directly from the house and those delivered by the producer. Producers who sell to retailers near their homes have a packaging cost of IDR 250/Kg and a transportation cost of IDR 0/Kg, so the total marketing cost is IDR

250/Kg. Meanwhile, retailers who receive deliveries from producers have a marketing cost of IDR 250/Kg and a transportation cost of IDR 1.000/Kg, resulting in a total marketing cost of IDR 1.250/Kg.

Marketing Profit

Sales are an important aspect for business continuity, because through sales, profits can be obtained. Profit from marketing is the difference between marketing margin and marketing cost at each level of marketing institutions, measured in units of money per kilogram (Desiana et al., 2017).

Table 9. Marketing Profit

Marketing Channel	Marketing Institution	Profit (Rp/Kg)
1	Manufacturer	10.000
2	Retailer	5.000

Based on the data, the profit in the level 1 marketing channel reached IDR 10.000/Kg, which is greater than that in the level 2 marketing channel, which was only IDR 5.000/Kg. This difference is because the level 1 marketing channel does direct marketing, while level 2 involves retailers, so profits must be shared with these retailers.

Farmer's Share

Farmer's share is the proportion received by farmers as compensation for their efforts in producing a particular good. The proportion received by farmers tends to be smaller if there are more intermediary traders. Farmer's share has an inverse relationship with the marketing margin; the higher the marketing margin, the less the farmer receives (Simatupang, 2015). Farmer's share can be seen in Table 10.

Tabel 10. Farmer's Share

Marketing Channel	Farmer Level Price (Rp/Kg)	Consumer Level Price (Rp/Kg)	Farmer's Share
1	75.000	85.000	88
2	75.000	85.000	88

Based on the research data, the *farmer's share* for level 1 and level 2 marketing channels is the same at 88%. This figure shows the efficiency of each marketing channel. Although the marketing channels used are not very long, the *farmer's share* remains high because the price received by consumers is not different, whether when buying from retailers or directly from farmers. The only difference is the profit earned by farmers and retailers.

Marketing Efficiency

Efficiency in marketing is the ratio between marketing costs and product value, expressed in percent (Lasaharu & Boekoesoe, 2020). Marketing is considered effective if it can deliver production to buyers at the lowest possible price and provide a fair distribution of the total price paid by all parties. Marketing efficiency can be seen in Table 10.

Table 11. Marketing Efficiency

Marketing Channel	Total Marketing Cost (Kg)	Consumer Level Price (Rp/Kg)	Marketing Channel Efficiency
1	500	85.000	0,6
	1500	85.000	1,8
2	250	85.000	0,3
	1250	85.000	1,5

Marketing channel efficiency can be seen from the length of the channel and the number of institutions involved; the longer the channel, the less efficient (Sari et al., 2021). Based on the data, level 1 marketing channels resulted in efficiency levels of 0.6% and 1.8%, while level 2 resulted in 0.3% and 1.5%. This shows that both marketing channels are still classified as efficient, because they do not involve many marketing institutions. Marketing is considered efficient if the efficiency level is < 5% and inefficient if > 5% (Huda et al., 2015).

CONCLUSION

Based on the research, the following conclusions were obtained:

1. Farmers in the Selendang Rinjani Forest Farmer Group show significant variations in production, with the average ranging from 0 Kg/year to 6,370 Kg/year. The contributing factors are the young age of the coffee plants and the lack of maintenance, such as pruning, fertilizing, and pest control.
2. There are three forms of marketing channels, namely zero-level channels (farmers), level 1 channels (producers directly to consumers), and level 2 channels (producers to retailers, then to consumers).
3. The marketing margin in level 1 and 2 channels is IDR 10.000/Kg, with the same farmer's share of 88%. This is due to the not too long marketing chain and the same price for consumers, both from retailers and farmers.

4. The level of efficiency in level 1 marketing channels is 0.6% and 1.8%, while level 2 is 0.3% and 1.5%. Both channels are classified as efficient because they are below 5%, thanks to the use of direct marketing channels or through institutions that minimize the marketing chain.

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