



Marketing Efficiency of Organic Rice in East Lampung Regency

(Case Study in Multi Baliwo Farmers Group, Purwokencono Village, Sekampung Udik District)

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Abstract. Organic rice has a large market potential in the community, this is based on the increasing demand for organic food products. However, the basic problem experienced by organic rice farmers is limited market information for organic rice products and marketing channels. The purpose of this study was to identify marketing channels for organic rice products and to analyze the marketing efficiency of organic rice in East Lampung Regency. The location of the research is located in Purwokencono Village, Sekampung Udik District, East Lampung Regency which has been cultivating organic rice since 2010 and has obtained organic certification Inofice. The data analysis method used marketing margin and farmer's share for organic rice marketing. Total respondents were 16 farmers, 1 farmer groups namely Multi Baliwo, 2 collecting traders namely Yabima and community group, and 1 retailer. Research results show that marketing channels formed by marketing organic rice in East Lampung Regency are 3 (three) channels, namely channel I (farmers – farmer group – yabima – retail - consumer), channel II (farmers – farmer group – yabima – consumer), and chanel III (farmers – community group - consumer). The results of organic rice marketing efficiency can be shown that marketing channel II is categorized as efficient because it has the lowest marketing efficiency value of 22.52%.

Keywords: marketing channels · organic rice · marketing efficiency

1 Introduction

Sustainable development is a central issue in the development of community welfare. The United Nations, starting in 2015, has even established a development program titled the welfare of the world community with the Sustainable Development Goals (SDGs) program [1]. One of the efforts emphasized in this program is the existence of sustainable and environmentally friendly agriculture, namely organic farming. One of the strategic commodities in supporting the development of the economic sector and the fulfillment of national food needs is rice. The need for rice as a staple food commodity continues to increase. Research result [2] this is in line with the increase in population and the increase in consumption per capita, so that optimizing rice productivity is one of the

efforts to increase national grain production. Awareness of the importance of health and environmental sustainability encourages people to return to organic farming systems because the products are free of chemical fertilizers and pesticide residues. Besides being environmentally friendly, the cost for organic farming is lower because the fertilizers and pesticides used come from nature around the farmers [3].

Lampung Province as one of the rice producers that contributes to the national rice production surplus always experiences an increase in production every year. Rice production in Lampung Province reached 2.65 million tons of dry milled grain, increased by 486.20 thousand tons or 22.47 percent compared to 2019 which was 2.16 million tons of dry milled grain [4]. The rice harvested area in 2020 is 545.15 thousand hectares, an increase of 81.05 thousand hectares or 17.46 percent compared to 2019 which was 464.10 thousand hectares. The development of organic rice on a large scale is very potential and can be implemented through agricultural extensification programs and market development [5].

East Lampung Regency is one of the organic rice production areas that has implemented an organic farming system for rice plants since 2010. One of the farmer groups that cultivates organic rice is the Multi Baliwo Farmer Group. This farmer group consists of 34 farmers and the number of farmers who have implemented organic farming systems is 16 farmers. Multi baliwo farmer groups have received INOFICE organic certificates from 2018 to 2021. Organic rice production performance is going well so far, the certified organic rice plant area is 10.7 hectares and capable of producing a production of 28 tons of organic dry milled grain. Organic rice milling is carried out independently by farmer groups and is able to produce 16,600 kg of organic rice.

The bargaining position of agricultural products is quite weak because agricultural products are seasonal and do not last long. Organic rice plants cultivated by farmers are seasonal which causes limited income during the harvest season that occurs. Furthermore, limited market information and marketing channels cause organic rice to be marketed locally at a selling price that is still low and almost the same as the price of conventional rice. If farmers do not immediately sell their organic rice products, it will have an impact on damage to organic rice products. The impact on the acceptance of organic rice farmers is less than optimal. The selling price of organic rice at the farmer level when managed by a farmer group is Rp. 13,000/kg, while for non-organic rice Rp. 8,000/kg. The price margin should be an opportunity for farmers to increase their farm income. Marketing activities can run efficiently if farmers get the most benefit from organic rice value chain activities and have clear marketing channels. Based on the background of the research above, the objectives of this study are:

1. Describe the marketing channels for organic rice from the farmer level to the final consumer of the Multi Baliwo Farmer Group, Sekampung Udik District, East Lampung Regency.
2. Analyzing marketing efficiency in each organic rice marketing channel in the Multi Baliwo Farmer Group, Sekampung Udik District, East Lampung Regency.

2 Proposed Method

The research method used in this study is descriptive and mathematical analysis. The descriptive method is a method used to describe or analyze a research result but is not used to make broader conclusions [6]. The research was conducted in East Lampung Regency as one of the centers for organic rice farming, then the Multi Baliwo Farmers group, Purwokencono Village, Sekampung Udik Subdistrict, was selected using the case study method, considering that this group has the largest planting area of organic rice in East Lampung Regency and has been certified organic INOFICE. Further more, that it is expected to represent the upstream and downstream areas of organic farming.

2.1 Sampling Method

Data collection methods were carried out through observation, surveys, in-depth interviews and focus group discussions, with the respondents consisting of 16 organic rice farmers using proportional random sampling technique. Determination of marketing agencies using the snowball method (snowball sampling). The snowball method is a sample selection technique by first determining one key information (key person), then selecting the next sample depending on the first informant, and so on until the information obtained is sufficient [7]. Total respondents were 16 producer farmers, 1 farmer groups, 2 collecting traders, and 1 retailer.

2.2 Data Analysis Method

Analysis of the marketing channel of organic rice products in Multi Baliwo farmer groups was carried out using descriptive analysis based on the results of tracing the organic rice starting from farmers, farmer groups, traders, retailers and consumers. Marketing channel is a set of organizations involved in the process of distributing organic rice products ready for consumption or use by consumers.

Marketing Margin. Marketing margin is the difference between farmers' prices and consumer prices. The marketing margin also includes all costs incurred by marketing channel, starting from the farmer to the marketing agencies involved. The organic rice marketing margin is calculated based on the reduction of the selling price and the purchase price at each institution involved in marketing organic rice or the sum of the marketing costs incurred and the profits earned by the marketing agency [8]. Marketing margin can be formulated as follows [9]:

$$M = Pr - Pf$$

$$M = C + \pi$$

$$Pr - Pf = C + \pi$$

Marketing institution profits:

$$\Pi = Pr - Pf - C$$

Total marketing margin:

$$MT = \Sigma M$$

Information:

M = Marketing Margin

Pr = Price at consumer level (Rp/kg)

Pf = Price at producer level (Rp/kg)

C = Cost institution

Π = Marketing institution profits i

MT = Total Margin

Farmer's Share. Farmer share can be calculated based on the percentage of the total price received by farmers divided by the price formed by consumers. Farmer share calculations are obtained from comparisons between farmer prices and consumer prices measured in percent units (%). The farmer's share formulation is as follows [10]:

$$Fs = \frac{P_f}{P_r} \times 100\%$$

Description:

Fs = *Farmer's share*

Pf = Farmer price (Rp/kg)

Pr = Customer price (Rp/kg)

Marketing efficiency is the ratio between marketing costs compared to the price of the product, so that marketing is said to be efficient and effective if it can provide incentives to actors who can encourage them to make appropriate and efficient decisions [11].

3 Result and Discussion

3.1 Respondent

Age. Working age is the age level of a person who is expected to be able to work and generate his own income. Age is one of the factors that determine the activities of farmers in managing their farming. In general, the higher the age, the work ability will increase to a certain extent. The age of respondent farmers in Purwokencono Village varied from 22 to 80 years. The average age of respondent farmers in Purwokencono Village is 46.75 years, meaning that the age of respondent farmers in Purwokencono Village is of productive age. In Table 1, it can be seen the details of the age level of the respondent farmers in Purwokencono Village, Sekampung Udik District, East Lampung Regency. Based on Table 1, it is known that the largest age group for sample farmers is the age group of more than 50 years, as many as 8 people (50%). Based on this age classification table, it shows that the average age of farmers is more than productive, closer to the elderly. The application of technology may not be easily absorbed by farmers, so it requires an intensive mentoring process.

Table 1. Classification of respondents by age group

Age (year)	Respondent	
	Farmer	Percentage (%)
< 40	4	25
40 – 50	4	25
> 50	8	50
Amount	16	100

Table 2. Classification of respondents based on education level

Education level	Respondent	
	Farmer	Percentage (%)
SD	6	37,5
SMP	3	18,75
SMA	7	43,75
amount	16	100

Education. The level of education is one of the factors that play a very important role in business activities, because it can affect the ability of farmers to manage their business. Formal education plays a very important role in determining the pattern of technology adoption decisions in the businesses it manages. The education classification of respondents can be seen in Table 2.

Table 2 shows the education level of organic rice respondents. The level of formal education of respondents is very diverse, ranging from elementary to high school level. The highest level of education is at the high school level, this shows that most of the respondents received a relatively high education, namely as many as 7 respondents or 43.75 percent. However, some of them have low education, namely only graduated from elementary school as many as 6 farmers (37.5 percent).

Experience. The length of experience of respondents of organic rice farmers in East Lampung Regency in rice farming is one indicator that can affect the success of rice farming carried out as a whole. On average, respondents at the research sites had 8 years of farming experience. The classification of respondents’ business experience can be seen in Table 3.

Table 3 shows that the experience of respondents in farming is still quite new. As many as 50 percent have 10–20 years of business experience and another 50 percent are less than 10 years old, this shows that many new farmers are starting to cultivate rice. Generally, respondents who have been farming for a long time are supported by financial needs because farmers are the main occupations of all respondents. Organic rice

Table 3. Classification of respondents based on business experience

Business experience (year)	Respondent	
	Farmer	Persentase (%)
< 10	8	50
10–20	8	50
> 20	0	0
amount	16	100

farming has only been cultivated for 8 years and generally knows organic rice farming from agricultural extension workers.

3.2 Marketing Channel

Marketing is a process of planning and executing the realization, pricing, promotion, and distribution of goods, services and ideas to create exchange by self-milling. Meanwhile, for non-organic rice, farmers sell in the form of grain, so that the rice mill acts as one of the marketing institutions involved in the non-organic rice trade system. The selling price of organic rice products is generally higher than non-organic rice.

A marketing channel is a set of interdependent organizations that are involved in the process of making a product or service ready for use or consumption [12]. The marketing system for organic rice products tends to be different from non-organic marketing in general. The pattern of organic rice business at the farm level is usually selling in the form of rice, while in non-organic rice most farmers sell in the form of unhulled rice. The efficiency of organic rice marketing reflects the distribution of profits and the profits obtained by each organic rice marketer. In this study the performance of the organic rice market was analyzed through marketing channel analysis, farmer share, marketing margin ratio and profit margin.

Marketing channel for organic rice in East Lampung Regency consist of:

1. Marketing chanel 1: Farmer, Farmer Group, Yabima, Retail, Customer
2. Marketing chanel 2: Farmer, Farmer Group, Yabima, Customer
3. Marketing chanel 3: Farmer, Community group, Customer

In general, the marketing channels in the Multibaliwo Farmer Group, Purwokencono Village, Sekampung Udik District, East Lampung Regency can be seen in Fig. 1.

Organic rice production by farmers in Multi Baliwo farmer group is 17,271 kg with a planting area of 5,125 hectares. The average productivity produced is 3.4 tons/hectare. The total sales of organic rice for all farmer respondents is 11,568 kg (67%), they use as much as 324 kg of seeds (2%), and the remaining 4,946 kg is consumed by farmers (29%).

The first marketing channel, farmers sell organic rice to farmer group (Multi Baliwo). The selling price of organic rice is IDR 12,000. Farmer groups do organic rice milling

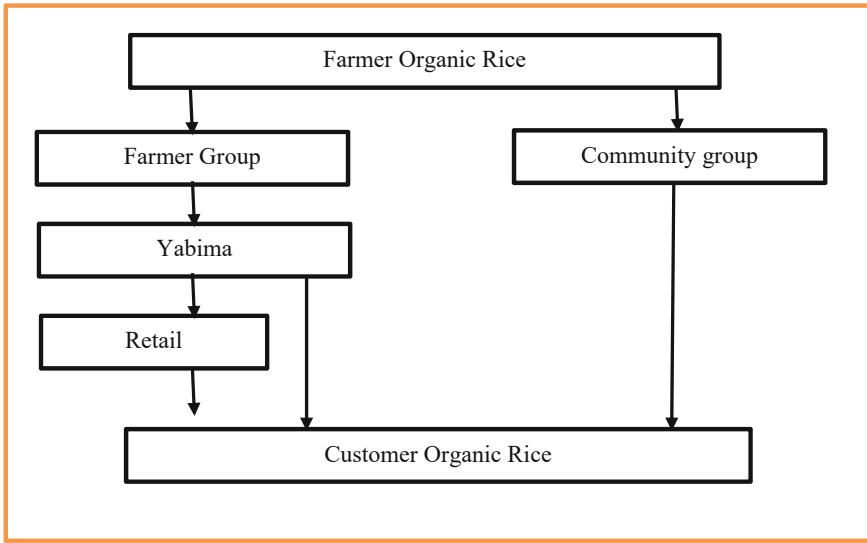


Fig. 1. Marketing channels of organic rice in Multi Baliwo Farmer Group.

and product packaging in sacks. Farmer group sell organic rice products with their own packaging and sold at a price of IDR 13,000 to Yabima. Yabima carries out organic rice sorting activities, packaging using a vacuum sealer machine, and transportation from the Farmers Group in East Lampung Regency to Yabima in Metro City. Yabima sells packaged organic rice products to retail at a price of Rp. 16.000. Retail sell organic rice IDR 20,000 to customer.

The second marketing channel, farmers sell their product to farmer groups (Multi Baliwo) with farmer selling prices of IDR 12,000. Farmer groups do organic rice milling and product packaging in sacks. Farmer group sell organic rice products with their own packaging and sold at a price of IDR 13,000 to Yabima. Furthermore, Yabima sell products at a price of IDR 18,000 to consumers. In addition to channels 1 and 2, farmers also sell their crops on the third channel, which is selling products to community group due to economic pressure. The selling price of rice is low price is IDR 10,000. The community group sell product is IDR 15,000 to consumer.

One of the indicators used to determine the efficiency of a marketing system is the marketing margin [13]. Marketing margin is the difference between the price at the producer level (P_f) and the price at the consumer level (P_r). Marketing margins have an important role in determining the size of producer income, because it directly affects the formation of organic rice prices at the producer level.

Marketing Margins in Marketing Channels I. The first marketing channel consists of farmers, farmer groups, yabima, retail, and consumer. Farmers sell their organic rice product directly to collectors at an average price of IDR 12,000 per kilograms. Farmers pay marketing costs including harvest costs, drying, transportation, and the farmers net profit of IDR 3,941 per kilograms. Based on this, the farmer share in the first marketing channel is 60% (Table 4).

Table 4. Analysis of marketing margins of organic rice at marketing channel I

No	Market institution	Price (IDR)	Share (%)
1	Farmer		60
	Production cost	7,454	
	Harvest cost	330	
	Transportation	50	
	Drying	225	
	Selling Price	12,000	
	Profit	3,941	
2	Farmer Group (Multi Baliwo)		65
	Purchase price	12,000	
	- Packing (sack)	200	
	- Milling	450	
	Total cost	12,650	
	Selling Price	13,000	
	Profit	350	
	Marketing margin	1.000	
3	PP (Yabima)		80
	Purchase price	13.000	
	- Packing	1.000	
	- Sorting	500	
	- depreciation	500	
	Selling price	16.000	
	Profit	1.000	
	Marketing margin	3.000	
4	Retail (Polinelamart)		100
	Purchase price	16.000	
	Marketing cost	1.500	
	Selling price	20.000	
	Profit	2.500	
	Marketing margin	4.000	
5	Consumer purchase price	20.000	
	Total Profit	7.791	
	Total marketing cost	4.755	
	Total marketing margin	8.000	
	FS	60%	

Based on Table 4, it can be seen that the share received by farmers in marketing channel I is 60 percent of the selling price at the consumer level. Then the share received by the farmer groups is 65 percent of the selling price of the farmer groups to consumers. While the share received by Yabima is 80 percent and at the retailer/retail level is 100 percent because in this marketing channel retailers sell organic rice directly to consumers.

Marketing Margins in Marketing Channels II. The second marketing channel consists of farmers, farmer groups, yabima, and consumer. Farmer sell their organic rice to farmer group and collectors at an average price of IDR 12,000 per kilogram. Farmers pay marketing costs including harvest costs, drying, transportation, and the farmers get a net profit of IDR 3,941 per kilograms. Based on this, the farmer share in the second marketing channel is 66.67%. (Table 5).

In marketing channel II, it can be seen that the share received by farmers is 66.67 percent of the selling price to consumers. Meanwhile, the share received by traders is 72.22 percent of the selling price of farmer groups in this channel. Furthermore, Yabima sells products directly to consumers.

Marketing Margins in Marketing Channels III. The third marketing channel consists of farmers, community groups, and consumer. Farmer sell their organic rice to community group at an average price of IDR 10,000 per kilogram. This price is cheaper compared to other marketing channels because the farmers do not deliver the products, but the buyers come to the farmers to buy their products. Farmers pay marketing costs is drying and harvest cost. Community group buys organic rice at a low price because it will resell organic rice using community selling price of IDR 15,000. Based on this, the farmer share in the third marketing channel is 66.67% (Table 6).

Table 6 shows that the marketing margin obtained by community is IDR 4,000 per kg and farmer profit of IDR 2,991. Farmers' profits in channel III are smaller than channel II, that is IDR 3,941.

Marketing Efficiency. Marketing efficiency (Ep) can be calculated by the formula [11] which is the comparison between marketing costs and product prices. The decision rules on marketing efficiency according to [14] are as follows:

- Ep 0 - 33% = Efficient
- Ep 34 - 67% = Less Efficient
- Ep 68 - 100% = Not Efficient

Based on Table 7, it can be explain marketing channel II gives the lowest share marketing efficiency, which is 22,55%, because farmers selling prices are higher and the role of farmer groups in accommodating farmers' harvests and milling. Yabima buys organic rice from farmer groups and packs rice products using a vacuum sealer will be gives added value of organic rice. The Yabima also plays a role in finding customer in the Bandar Lampung or Metro region. Collaboration with Yabima is the key to successful efficiency on maketing channel II.

Table 5. Analysis of marketing margins of organic rice at marketing channel II

No	Market institution	Price (IDR)	Share (%)
1	Farmer		66.67
	Production cost	7,454	
	Harvest cost	330	
	Transportation	50	
	Drying	225	
	Selling Price	12,000	
	Profit	3,941	
2	Farmer Group (Multi Baliwo)		72.22
	Purchase price	12,000	
	- Packing (sack)	200	
	- Milling	450	
	Total cost	12,650	
	Selling Price	13,000	
	Profit	350	
	Marketing margin	1,000	
3	PP (Yabima)		100
	Purchase price	13,000	
	- Packing	1,000	
	- Sorting	500	
	- depreciation	500	
	- labor	800	
	Selling price	18,000	
	Profit	2,200	
	Marketing margin	5,000	
4	Consumer purchase price	18,000	
	Total profit	6,491	
	total marketing costs	4,055	
	Total marketing margin	6,000	
	FS		66.67

Table 6. Analysis of marketing margins of organic rice at marketing channel III

No	Market institution	Price (IDR)	Share (%)
1	Farmer		66,67
	Production cost	7.454	
	Harvest cost	330	
	Drying	225	
	Selling Price	10.000	
	Profit	2.991	
2	Community group		100
	Purchase price	10.000	
	- Packing (sack)	500	
	- Milling	550	
	- Labor	1.700	
	- Transportation	435	
	Total cost	13.185	
	Selling Price	15.000	
	Profit	1.815	
Marketing margin	5.000		
3	Consumer purchase price	15.000	
	Total profit	4.806	
	total marketing costs	3.740	
	Total marketing margin	5.000	
	FS	66,67%	

Table 7. Marketing Channel Efficient

Marketing chanel	Total cost (Rp)	Price (Rp)	Efisiensi (%)
Chanel I	4.755	20.000	23,77
Chanel II	4.055	18.000	22,52
Chanel III	3.740	15.000	24,93

4 Conclusion

The conclusions obtained from the research results that.

- a. The marketing channel for organic rice products identified results obtained that there are 3 (three) channels, namely the first marketing channel (farmers – farmer group – yabima – retail - consumer), second marketing channel (farmers – farmer group – yabima – consumer), and third marketing channel (farmers – community group - consumer).
- b. The results of organic rice marketing efficiency can be shown that marketing channel II is categorized as efficient because it has the lowest marketing efficiency value of 22.52%.

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