

Relational Behavior in Smallholder Cocoa Marketing Channels

Yuli Hariyati^{1,*}, Rulita Irma Ristamaya¹, Rena Yunit R., Diana Fauziah, Indah Ibanah¹

¹ Department of Agribusiness, Faculty of Agriculture, University of Jember, Indonesia, 68121

Abstract. This research aimed to analyze the behavior in smallholder cocoa marketing agencies in Sempu Village Banyuwangi District. The choice of Jambewangi Village was intentional because there was lots of cocoa farming and known with good quality. Data were taken from 50 farmers of the group member who were chosen randomly. Data were analyzed using descriptive and analytic methods. The results showed that there were two marketing channels with a margin of USD 0.57 and USD 0.66. Channel I was more efficient because it had a small margin and more equal profit share and cost. The characteristic of each channel was different seen from the application of quality variance, pricing and payment system, marketing system.

1 INTRODUCTION

Indonesian cocoa plantation experiences a quite rapid development wherein 2016 it was estimated that the cocoa plantation area in Indonesia was 1.72 million ha. Where most of the 95% area is smallholder plantation, the rest of 0.87% belongs to state plantation and 2.6% is private plantation area. International Cocoa Organization data in 2019 stated that every month there is an increase in cocoa prices in the world market. The highest price occurred the last August 2019 that is USD 2,194.70/ton. Based on the Department of Agriculture Banyuwangi Regency data stated that some locations that are appropriate for cocoa plantations are Sonngon, Sempu, Glenmore, and Pesanggaran Districts.

According to Yuli [1] in the research stated that the marketing of fermented cocoa in Jembrana formed two marketing channels. In the marketing channels, there are lots of marketing agencies involved, where each agency has its characteristics. One of the differences is in the payment system that can be done by cash and non-cash and the payment time is also different. The difference or characteristic of each marketing agency causes a different marketing channel because of each preference. The majority of the marketing agency will appreciate cash payment when selling its product because it will smooth the business [2].

Jambewangi Village has a land area of 127 ha with the production that can reach 64.8 tons. Cocoa production sdaysng in Jambewangi Village is 57.34% meaning that total cocoa production of Sempu District is a half more that is 57.34% coming from the contribution of Jambewangi Village (BPS, 2018). Recently, cocoa farmers are joined in the farmer group of Mitra Hutan Lestari which has 140 people. Cocoa in Jambewangi Village is planted in two places that are in Watu Gedhek

forest land and house yard. Cocoa yields will be dried in the sun directly for then sold to a collector and middleman in the form of a non-fermented dried cocoa seed. Although farmers are joined in the farmer group, the selling process is done individually.

Efficient marketing is marketing that shares information about prices fast and accurately. A good market occurs if the price is mutually determined by both parties. Specification and provision of information such as price changes on one arty will be forwarded to other parties [3]. Market behavior is a behavior pattern and an adjustment of an agency or company within the market to reach the goal. Market behavior reflects the characteristic where each market is nor the same. Market behavior is analyzed by the institutional approach and the functional approach. Cocoa marketing in Jambewangi Village is slightly different from the cocoa market in other regions. In Jambewangi, farmers will come to the trader to sell their cocoa. Farmers can interact in the market once a week or can come to the trader house. The quantity that is sold does not have to be much. Sometimes, farmers only sell less than 1 kg to be cashed in or can be exchanged by the need for spices. Cocoa from Jambewangi can be marketed up to The Wholesaler in Jembrana Regency, Bali. This cocoa is intended to fulfill the export need and the process will be done as the raw material. The research aimed (1) To find out marketing channels and forms of smallholder cocoa marketing margin (2) To find out the characteristic of marketing agencies and (3) To find out the function of smallholder cocoa marketing.

* Corresponding author: yuli.faperta@unej.ac.id

2 METHODOLOGY

The research was done from February until April 2019 in Jambewangi Village Sempu District. Data are obtained by observation and interview. The sampling technique used was simple random sampling and obtained from Solvin calculation of 50 farmers who were used as the sample. Snowball sampling was used to find out cocoa marketing involved.

The marketing margin as computed by the USDA is equal to the difference between the average price paid by consumers for a finished product with an agricultural raw material base and payment received by farmers by equivalent quantities of the product [3]. Mathematically, total marketing margin and the marketing margin of each agency are formulated as follows [4].

$$M = Pr - Pf \quad (1)$$

Notes :

- MP : Margin
- Pr : Price of Retail (U\$)
- Pf : Price on Farmer (U\$)

To know the efficiency of marketing channels can be seen from the percentage of profit distribution and the cost can be analyzed from (Jumiati, 2013)

$$Sci = (Pi / (Pr - Pf)) \times 100\% \quad (2)$$

$$Spi = (Pi / (Pr - Pf)) \times 100\% \quad (3)$$

Notes :

- Sci : Share Cost Marketing Agent i
- Spi : Share Profit Marketing Agent i
- Pr : Price on Retail
- Pf : Price on Farmer

By the criteria as follows:

If the margin distribution on the profit with the marketing cost of each agency involved is equal and quite logic, then the marketing system can be said as efficient. The characteristics and the marketing function will be researched by the descriptive method.

3 RESULTS AND DISCUSSION

3.1. Cocoa Marketing Channels

The marketing of dry cocoa seed in Jambewangi Village involves some market players up to exporter hand who is the farmer as the producer, middleman who is Mrs. Sukarni, the collector who is Mr. Irsyad and the wholesaler who is Mr. Ngurah Suthe.

1. Marketing Channel I

Marketing channel I involves three marketing players who are the farmer as the producer, one middleman, and one wholesaler.



Figure 1. Channel marketing I Smallholder Cocoa in Jambewangi

At this first marketing channel, there are 23 or 46% of farmers from 50 farmers who becomes the respondent to sell their dry cocoa seed to the collector. The choice of marketing channel 1 is by the farmer by selling their cocoa yields to the collector because of the house location or their land which is near to the location of where the collector is. Another reason is the purchase price from the collector is higher than selling to the middleman that the transaction is done in cash so that prospers for the farmer to be used directly to household needs.

2. Marketing Channel II

Marketing channel II involves four marketing players who are the farmer as the producer, one middleman, one collector, and one wholesaler.



Figure 2. Channel marketing II Smallholder Cocoa in Jambewangi

At this second marketing channel, there are 27 farmers of 50 farmers who becomes the respondent to sell their dry cocoa seed to the middleman. The farmers choose to sell their yields to the second channel that is to the middleman by the reason that the transaction location is near to the farmer's house. At the second channel, the farmers involved in the marketing are the farmers in Sidomulyo Backwoods Jambewangi Village. The backwoods is located quite far with the location of the collector so that the farmers sell directly to the middleman. Although the purchase price is under the selling price if directly selling to the collector, the farmers are still ready to sell it because the transaction done is in cash. On the other hand, the farmers also reluctant if they have to sell their dry cocoa seed too far.

3.2. The Marketing Margin of Smallholder Cocoa

The marketing margin is the difference in the price paid to the smallholder cocoa marketing agency and the price accepted by the smallholder cocoa producer in Jambewangi Village. A marketing channel has the marketing margin in which there are costs spent by the marketing agency involved. There are lots of costs spent on the marketing process and the cost spent on the type and amount is also different in each agency. To know the amount of cost and the profit and equal or not the profit earned in a cocoa marketing channel then the analysis of marketing margin at each channel is done in Table 1.

Seen from the analysis result of the marketing margin at the channel I and channel II of each marketing agency have different profit and cost spent. Marketing margin at channel I is smaller than channel II, this can be caused by little marketing agencies involved. At channel I, the margin of USD 0.57/kg is smaller than at channel II that is USD 0.66/kg. Profit share and cost spent on the

marketing agency I is more equal than channel II. At the marketing channel I, the collector spends total cost that is bigger than the wholesaler, but it will get remuneration in the form of big profit as well. At the marketing channel II, the percentage of profit and cost is not equal where the highest cost is spent by the collector, but not balanced by the high profit obtained. Otherwise, the middleman who spends a smaller cost than the collector has a bigger profit on channel II. That statement is also appropriate with the research done by Jumiati et al [5] where if the comparison of profit share and marketing cost of each marketing agency involved in the marketing process is equal and quite logic, then the marketing system can be said as efficient.

Table 1. Distribution of Cocoa Marketing Margin in Jambewangi

No	Marketing Agency	Marketing Channel 1		Marketing Channel 2	
		Value (USD)	%	Value (USD)	%
1	Farmer (Rp/Kg)				
	a. Selling Price	1.573		1.47	
2	Middleman (Rp/Kg)				
	a. Purchase Cost			1.47	
	b. Marketing Cost			0.0092	1.40%
	b.1. Labor			0.0085	1.29%
	b.2. Transportation			0.00071	0.11%
	c. Selling Price			1.78	
	d. Profit			0.30	44.8%
	e. Margin			0.31	
3	Collector (Rp/Kg)				
	a. Purchase Cost	1.573		1.78	
	b. Marketing Cost	0.014	2.46%	0.014	2.11%
	b.1. Labor	0.002	0.35%	0.002	0.30%
	b.2. Transportation	0.012	2.11%	0.012	1.81%
	c. Selling Price	1.92		1.92	
	d. Profit	0.34	59.8%	0.13	19.4%
	e. Margin	0.35		0.14	
4	Wholesaler (Rp/Kg)				
	a. Purchase Cost	1.92		1.92	
	b. Marketing Cost	0.0013	0.22%	0.0013	0.19%
	b.1. Labor	0.0013	0.22%	0.0013	0.19%
	b.2. Transportation	-	-	-	-
	c. Selling Price	2.13		2.13	
	d. Profit	0.21	37.48%	0.21	32.08%
	e. Margin	0.21		0.21	
Total Marketing Cost		0.015		0.024	
Total Profit		0.55		0.64	
Total Margin		0.570		0.021	
Total Percentage			100		100

Source: Data Analysis of 2019

3.2. The Characteristics of Marketing Agencies

The characteristic is a picture of how marketing behavior is formed by every agency. Each agency has different characteristics corresponding to the role and market situation.

Based on the research results, known that the middleman would sell the cocoa after 1 ton until 1.5 tons collected when harvest space was around fifteen days and when the big harvest, the middleman only needed seven until ten days. The collector could collect 2 tons until 2.5 tons of dry cocoa seed which was collected

when the harvest around one until two weeks. If the big harvest had arrived, the collector only needed time around three until five days to be then remarketed. The wholesaler could collect dry cocoa seeds in a huge amount because adjusted to the exporter demand as the next marketing goal. The wholesaler needed 25 tons of dry cocoa seed to then can be taken by the exporter side. The amount was 25 tons collected until seven days when the condition harvest space. However, when the big harvest had arrived, the trader only needed three until four days.

Table 2. Sale Volume and Marketing Agency Quality Variations

Marketing Agency	Sale Volume	Quality Variations
Middleman (Mrs. Sukarmi)	1 – 1.5 tons Big Harvest : 7-10 days Harvest Space is more than 15 days	Notice the quality simply
Collector (Mr. Irsyad/ Mr. Temon)	2 – 2.5 tons Big Harvest : 3 – 7 days Harvest Space : 14 – 30 days	Notice the quality simply
Wholesaler (Mr. Suthe)	25 – 30 tons Harvest Space : around 7 days Big Harvest : 3-4 days	There is a quality classification : Water content of 10% Calculate the seed 1 ounce contains 115 seeds

Sources : Data Analysis of 2019

The middleman and the collector purchased cocoa seed from the farmers who involved the quality of dry cocoa seed. However, when selling to the next agency, the farmers tended to mix the cocoa from the farmers. The activity will harm the farmers because here the trader can do fraud to get high profit. Both selling and purchasing, the marketing agency especially the middleman and the collector should do a separation on cocoa seeds based on the quality such when selling from the farmers.

Table 3. The Characteristic of Marketing Agency Determination System

No	Marketing Agency	Price Determination
1.	Middleman (Mrs. Sukarmi)	Purchase : the price is determined by the collector Sale : the price is set by the collector
2.	Collector (Mr. Irsyad)	Purchase : the price is determined by the collector Sale : the price is set by the wholesaler
3.	Wholesaler (Mr. Suthe)	Purchase : the price is determined by the wholesaler Sale : the price is set by the exporter

Sources : Data Analysis of 2019

The price tends to be set by the marketing agency on the top level who is the exporter and the agency in the lower level tends to follow. In the transaction, the bargaining of dry cocoa seeds rarely occurs because the buyer usually determines the price. The wholesaler tends to be fast in taking price changes occurred because the wholesaler relates directly to the exporter. The selling price of cocoa seeds from the farmers to the middleman or the collector will be set unilaterally by the trader as the buyer by noticing the quality of dry cocoa seeds. So will the middleman who will sell to the collector, then the price will be set by the buyer who is the collector. When the collector sells dry cocoa seeds, the price will be set unilaterally by the wholesaler based on the quality.

2. K. Y. Ogunleye, J.O. Oladeji, *Middle-East*, **2 (1)**, 14–20 (2007)
3. D. M. Pokhrel, G. B. Thapa, *Agric. Syst.*, **94(2)**, 151-164 (2007)
4. D. L. Cramer, C. W. Jensen., D. D. Southgate. *Agricultural Economics and Agribusiness* (Malloy Lithographing, USA, 1997)
5. E. D. Jumiati, D. H. Darwanto, S. Hartono, *Masyuhr, Agrifor*, **12 (1)**, 1 – 10 (2013)

Table 4. The Characteristic of Marketing Agency Payment System

No	Marketing Agency	Payment System			
		Purchase		Sale	
		Cash	Non-Cash	Cash	Non-Cash
1.	Middleman	√		√	
2.	Collector	√		√	
3.	Wholesaler	√			√

Sources : *Data Analysis of 2019*

The payment system in the purchase activity of dry cocoa seeds from the farmer is done in cash by the middleman or the collector. Cash payment is done by the way that the farmers come to the trader's house or the market to sell, but the are several farmers who have wide land will be visited by the trader. The purchase of cocoa seeds from the middleman by the collector is also paid in cash. The collector usually pays directly based on the balance. The transaction done by the wholesaler in the purchase is also done in cash. The trader who comes to the wholesaler place will receipt the sales result directly. The transaction system in cash makes the farmers and the trader comfortable in the marketing channel formed. The non-cash transaction is only available on the purchase of dry cocoa seeds to the exporter through the wholesaler.

4 CONCLUSIONS

1. Cocoa marketing channel in Jambewangi Village is divided onto Marketing Channel I (Farmer – Collector – Wholesaler - Exporter) and Marketing Channel II (Farmer – Middleman – Collector – Wholesaler - Exporter). The-I Marketing channel becomes a more efficient channel because it has equal cost and profit share in each agency. The margin at the marketing channel I is also smaller that is USD 0.570/kg than the marketing channel II that is USD 0,021/kg.
2. All marketing agencies involved in the type of agency that has and dominates cocoa by doing different characteristics.

REFERENCES

1. D. Yuli, *Agriculture and Agricultural Science Procedia* **9 (1)**, 128–133 (2016)