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OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 19.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Septina Elida

Riau Islamic University
Jl. Kaharuddin Nasution No. 113, Marpoyan,
Pekanbaru Riau, Indonesia
Faculty of Agriculture

Putri Anggun Yulita

Riau Islamic University
Jl. Kaharuddin Nasution No. 113, Marpoyan,
Pekanbaru Riau, Indonesia
Faculty of Agriculture

Wahyu Hamidi

University of Riau
Jl. Binawidya Km 12.5, 28291,
Pekanbaru Riau, Indonesia
Faculty of Economics

MARKETING ANALYSIS OF RED CHILLI (*Capsicum annum*) IN SEBERIDA DISTRICT, INDRAGIRI HULU REGENCY, RIAU PROVINCE

Abstract: Red chili is a horticultural commodity with significant economic potential for national and export commodity. This study analyzed the marketing pattern of red chili in Seberida District and its operational efficiency in terms of the farmer's share and marketing margin. This survey involved 40 respondents comprising of farmers, collectors, and retailers. Descriptive qualitative and quantitative analyses are included in this study. The results showed that there were three marketing channels for red chili. Channel I is farmers selling red chili directly to consumers, Channel II is farmers selling through collectors and retailers, and Channel III is farmers selling the chili to consumers through retailers. In Channel I, the distribution margin between farmers and consumers showed no difference. In Channel II, the difference was IDR 8000/kg. In Channel III, it was IDR 4,000/kg. The total marketing costs in Channel I was IDR 1,931/kg, in Channel II was IDR 3,708.59/kg, and in Channel III was IDR 979.86/kg. This study concludes that the marketing of red chili in Seberida District is efficient with farmers' share in marketing Channel I being larger than other channels.

Key words: Red Chili, Efficiency, Marketing.

Language: English

Citation: Elida, S., Yulita, P. A., & Hamidi, W. (2022). Marketing analysis of red chilli (*Capsicum annum*) in Seberida District, indragiri hulu regency, Riau province. *ISJ Theoretical & Applied Science*, 02 (106), 383-389.

Soi: <http://s-o-i.org/1.1/TAS-02-106-40> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.40>

Scopus ASCC: 2000.

Introduction

Red chili (*Capsicum annum* L.) is a horticultural commodity with a high economic value. Chili is considered as a spice that cannot be substituted; it is used as a vitamin and mineral-rich culinary spice as well as an ingredient in traditional

medicines (Prayitno et al., 2013; Saptana et al., 2010). Chili is a popular cooking spice in Indonesia, and it can be found in almost all Indonesian dishes.

Chili plants have long been cultivated in almost all parts of Indonesia. The price of chili, which often fluctuates ranging from IDR 40,000 to IDR

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200,000/kg, contributes a significant amount to the inflation rate in various regions in Indonesia as well as at national level. Chili also has a promising economic potential as a national and export commodity. For this reason, the cultivation of chili plants requires attention from the government since it plays a substantial role in various aspects such as

social and economic aspects.

Siberida District is the main producer of the red chili in Indragiri Hulu Regency. The red chili plantation is spread in almost all villages in Siberida District with varying harvested areas. Figure 1 shows the harvested area and production of red chili in Siberida District from 2016 to 2020.

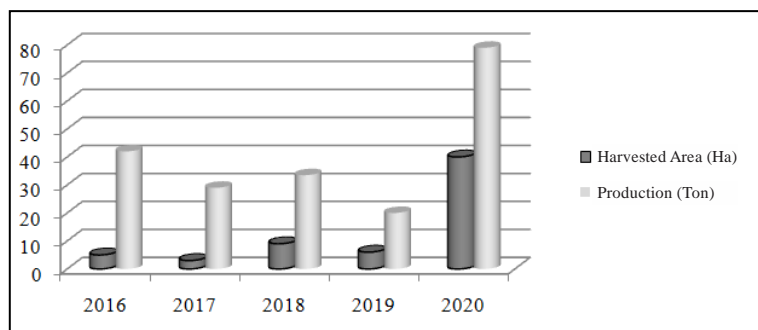


Figure 1 - Harvested Area and Red Chili Production in Siberida District

Figure 1 depicts that from 2016 to 2020, the harvested area and red chili production in Siberida District fluctuated. 2020 had the most harvested area of 40 hectares. It produced red chili of 1.98 tons/hectare. This productivity was lower than the productivity of chili in Indragiri Hulu Regency, which was 2.08 tons/hectare. The difference can be due to seasonal factors. A lot of water can induce root rot in red chili plants during the rainy season. Meanwhile, in the dry season or low rainfall, the plants dry up. In addition, pests and plant diseases affect red chili since it is susceptible to disease. In addition, red chili production is influenced by several production factors including land area, seeds, labor, and pesticides (Adhiana, 2021).

The demand for red chili on the domestic and international markets is expected to rise in the future, in line with the rising population and industrial development that use chili as a raw material. From producer to consumer, an item can pass through several hands (Kotler, 1997). Farmers need one or more intermediaries to get their products to consumers. In general, agricultural locations are in mountainous areas. Thus, intermediary is needed to market agricultural products, especially red chili. These intermediaries include collectors, wholesalers, and retailers. The involvement of intermediary traders will cause the prices received by farmers and those paid by consumers to be much different. This is due to the functions of intermediaries, including the exchange and facilitating functions. These functions raise the marketing costs. Intermediaries typically charge both customers and producers for marketing costs. So far, red chili farmers have not taken into account the efficiency of their business due to their limited knowledge of marketing channels. This study seeks to examine the marketing pattern of red chili in

Siberida District and its operational efficiency in terms of farmer's share and marketing margin.

Method

Method, Place, and Time of Study

The method used in this research is a survey method. This survey was carried out in Siberida District, Indragiri Hulu Regency. The selection of this research location is based on the consideration that this area is the center of red chili production in Indragiri Hulu Regency. This research was conducted from January to June 2021.

The population in this study is the stakeholders in red chili farming in Siberida District. They include red chili farmers, collectors, and retailers. There were 32 red chili farmers in Siberida District. The farmers were taken by the census that all farmers were taken as samples. Meanwhile, the traders were taken purposively involving three collectors and five retailers because they continuously buy and sell red chilies. The total number of respondents in this study were 45 respondents.

Data Analysis

The data analysis in this study includes qualitative and quantitative data. Qualitative data is used to analyze the marketing channels formed in the process of distributing red chilies to the consumer. This marketing channel describes the pattern of marketing channels. While the quantitative data is used to analyze the operational efficiency of marketing based on margins and farmer's share.

1. Marketing Margin

Margin is the difference between the price level at the consumer and the price level at the producer. According to Sudiyono (2001), the following formula can be used to calculate the margin:

$$M_p = P_r - P_f \quad (1)$$

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Description:

M_p = Marketing Margin (Rp/Kg)

P_r = Consumer Price (Rp/Kg)

P_f = Producer Price (Rp/Kg)

2. Marketing Cost

Marketing costs are costs incurred for marketing purposes. The marketing costs can be calculated using this formula (Soekartawi, 1993):

$$MC = C1 + C2 + C3 + C4 + C5 + C6 \quad (2)$$

Description:

$C1$ = Transportation Cost (Rp/Kg)

$C2$ = Loading and Unloading Charge (Rp/Kg)

$C3$ = Packaging Cost (Rp/Kg)

$C4$ = Packaging Sacks (Rp/Kg)

$C5$ = Rent Expense (Rp/Kg)

$C6$ = Market Retribution Cost (Rp/Kg)

3. Market Efficiency

Market efficiency is calculated based on the general formula of Soekartawi (2002):

$$ME = \frac{Tmc}{Tpc} \times 100\% \quad (3)$$

Description:

E_p = Market Efficiency of Red Chili (%)

Tmc = Total Marketing Cost (Rp/Kg)

Tpc = Total Production Cost (Rp/Kg)

According to Roesmawaty (2011), the categories of market efficiency (ME) are 0–33% (efficient), 34–67% (less efficient), and 68–100% (Inefficient).

4. Farmer's Share

Farmer's share can be calculated by dividing each margin detail by the price at the consumer level. Farmer's Share is calculated with the formula as follows (Soekartawi, 2002):

$$F_s = \frac{F_p}{C_p} \times 100\% \quad (4)$$

Description:

F_s = Farmer's Share (%)

F_p = Farmer Price (Rp/Kg)

C_p = Consumer Price (Rp/Kg)

According to Prayitno (2013), $C_p \% P_f > 70\%$ is categorized as efficient. Meanwhile, $C_p \% P_f < 70\%$ is categorized inefficient. According to Downey and Erickson (1992), $FS > 40\%$ is categorized as efficient while $FS < 40\%$ is categorized inefficient.

Results And Discussion

Respondents Identity

The number of respondents in this study was 40 people. They consist of 32 red chili farmers, three collectors, and five retailers. All respondents are from Siberida District. They are included in the productive age of farmers (47 years), collectors (39 years), and retailers (45 years).

Productive age is expected to show optimal farming as well as the potential to develop their business. Red chili farmers and traders are generally male, while retailers are generally female. The formal education of farmers and traders is still low at the junior high school level. However, knowledge for farming and trading can be obtained in informal education. They have seven years of experience as a red chili farmer, six years of being collectors, and eleven years of being retailers. Their dependent family members ranged from four to five people.

Marketing Channel

A marketing Channel is a series of products flow from farmers to consumers in the marketing process. The marketing of Red chili in Siberida District involved collectors and retailers. The marketing channel for red chili in Siberida District starts with farmers selling their products to the market. In addition, farmers sell red chilies to collectors and retailers. Based on the research, there are three marketing channels for red chili in Siberida District, namely (1) Farmers-consumers, (2). Farmers-Collectors-Retailers-consumers, and (3) Farmers-Retailers-consumers.

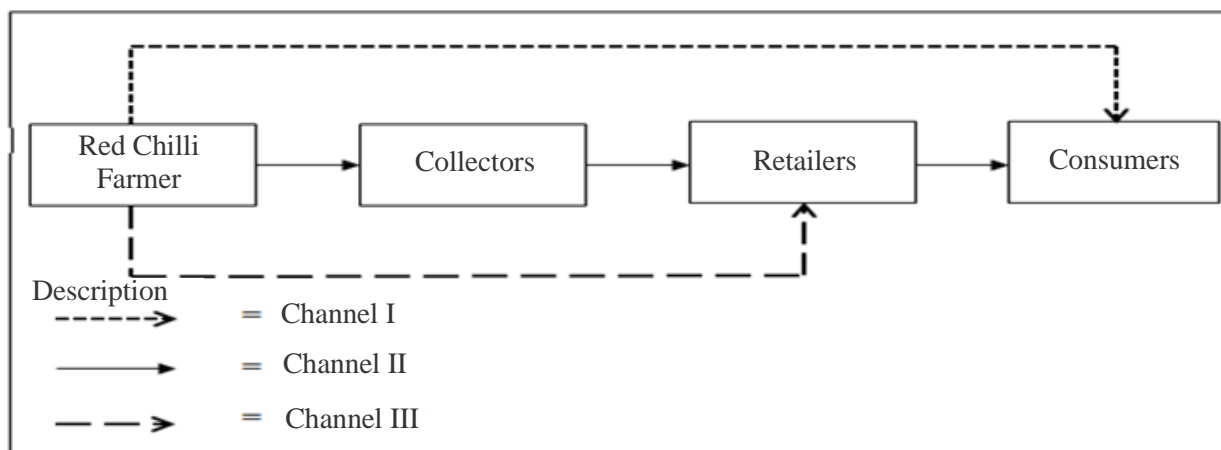


Figure 2 - Red Chili Marketing Pattern in Seberida Subdistrict, Indragiri Hulu Regency, 2021

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Channel I

Channel I shows the flow of red chili from farmers to consumers. The channel used in Channel I is a zero-level channel, meaning that the red chili farmers directly sell fresh red chili to consumers. Consumers buy red chilies directly to farmers due to the location, most of which are far from the market. So for people whose settlements are close to farmers' land, they directly buy from farmers. In addition, consumers choose to directly buy red chilies from farmers because the selling price set by farmers is cheaper than the in the market.

The distribution carried out by red chili farmers is selling fresh red chilies to consumers who live in areas close to farmers' lands or those who come directly to the place where farmers cultivate red chili. The average number of red chilies sold by farmers to consumers in one harvest is nine kg. The amount of red chili purchased by consumers is adjusting the stock. Consumers who buy red chilies bring red chilies by motorbike. Fresh red chilies are stored in plastic.

Channel II

Channel II involved red chili farmers, collectors, and retailers. In this channel, farmers sell red chilies to collectors. Collectors resell red chilies to retailers which are then sold to consumers in stalls and traveling merchants. Collectors distribute fresh red chilies to retailers in traditional markets, one of which is the Soegih market in Seberida District.

The distribution of red chili is subject to the agreements made through phone calls or face-to-face talk. The price of fresh red chilies is entirely determined by the collectors. Collectors' vehicles, such as motorcycles, are used to distribute fresh red chilies from collectors to retailers. The stall retailer buys fresh red chili from the market and then sells it at their stalls. Traveling merchants buy fresh red chilies at the market and sell them by traveling around on motorbikes carrying fresh red chilies.

The risk is taken by the collectors themselves. When the prices fluctuate or in the rainy season, it will be difficult for traders to collect fresh red chilies from farmers due to the damaged roads during the rainy season. In the delivery, collectors must be careful so the red chilies are not damaged or rotten to avoid losses.

Retailers sell to consumers. The risk is also

entirely taken by the retailer. Because red chilies are easy to rot, businesses face the danger of fluctuating prices and red chilies not being sold out.

Channel III

In Channel III, red chilies from farmers are sold to retailers in the market. Then, the retailers sell them to consumers. Farmers harvest red chilies from the land and then sort them to choose those with good quality. The number of fresh red chilies purchased by retailers in one harvest is an average of 42 kg. Retailers' purchases of red chili are not always predictable based on available stock and market demand.

Retailers use motorbikes to transport red chilies. Fresh red chilies are stored in sacks. At this stage, the price is set by the retailer. Risk at the retailer level is entirely the responsibility of the retailer. The risks faced by retailers are fluctuating prices, and red chilies that are not sold out because red chilies are easy to rot. Costs, margins, and Farmer's share in marketing red chili in Siberida District are presented in Table 1.

Marketing Costs

In Channel I of the red chili supply chain, farmers do not incur costs. Farmers directly sell red chilies to consumers without an intermediary. The costs incurred by consumers are transportation costs, which are an average of IDR 1,497.22/kg, and the cost of packaging (plastic) of IDR 433.88/kg. The total cost incurred by consumers is IDR 1,931/kg. In Channel II, collectors spend an average of IDR 381.38/kg, loading and unloading charge of IDR 286.93/kg, and packaging sack costs of IDR 82.07/kg. The total cost incurred by the collectors is IDR 750.36/kg. While the costs incurred by retailers include an average of transportation costs of IDR 2,423.33/kg, rental cost of IDR 78.33/kg, market retribution cost of IDR 52.22/kg, and packaging cost of IDR 404.33/kg. The total cost incurred by retailers is IDR 2,958.21/kg. While in Channel III, retailers spend an average of IDR 731/kg for transportation, IDR 75.72/kg for renting a place, market retribution of IDR 50.34/kg, and packaging costs (plastic) of IDR 122.80/kg. The total cost incurred by retailers is IDR 979.86/kg. The most costs incurred are for chili harvest time.

Table 1. Analysis of Cost, Margin, and Farmer's Share for Each Red Chili Marketing Channel In Seberida District, Indragiri Hulu Regency in 2021

Description	Channel I		Channel II		Channel III	
	(Rp/Kg)	Share (%)	(Rp/Kg)	Share (%)	(Rp/Kg)	Share (%)
a. Farmer						
Selling price	36,000	100.00	40,000	83.33	38,000	90.47
Marketing Cost						
1. Transportation	1,497.22	4.15				
2. Packaging/Plastic	433.88	1,20				

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Total Cost	1.931	5,37		
Margin	-			
Profit	34,068	94.63		
Selling price	36,000	100,00		
b. Collectors				
Selling price		40,000		
Marketing Cost				
1. Transportation		381,38	0.80	
2. Loading and Unloading		286,93	0.60	
3. Sack Packaging		82,07	0.17	
Total Cost		750,36	1.57	
Margin		3.000		
Profit		2.249,64	4.68	
Selling price		43,000	100.00	
c. Retailers				
Selling price		43,000		38,000
Marketing Cost				
1. Transportation		2.423,33	5.04	731
2. Rent		78,33	0.16	75,72
3. Retribution		52,22	0.10	50,34
4. Packaging/Plastic		404,33	0.84	122,80
Total Cost		2,958,21	6.16	979,86
Margin		5.000		4.000
Profit		2041,79	4.25	3.020,14
Selling price		48.000	100.00	42.000
				100.00
d. Consumers				
Purchase Price	36,.000	48.,0		42.00
Total Marketing Costs	1.,31	3,708.59		979,86
Total Margin	-	8.000		4.000
Total Profit	34,068	4,291.41		3,020.14

Marketing Margin

According to Pearce and Robinson (2008), marketing margin is the difference between each marketing agency in terms of prices at the farm level

and prices at the consumer level. The marketing margin consists of the costs and profits of each marketing agency.

Table 2. Differences in Red Chili Distribution Margin for Each Marketing Channel In Seberida District, Indragiri Hulu Regency in 2021.

No	Description	Channel I	Channel II	Channel III
1.	Farmer Price (Rp/Kg)	36,000	40,000	38,000
2.	Consumer Price (Rp/Kg)	36,000	48,000	42,000
	Distribution Margin (Rp)	-	8.000	4.000

In Channel I, there is no difference in the price of red chili between farmers and consumers. This is because farmers directly sell red chilies to the consumer. The distribution cost of red chili in the form of operational costs is IDR 1,931/kg. The costs incurred are the costs charged to the consumer. In Channel II, the distribution margin for each kilogram of red chili is IDR 8,000/kg, for traders, it is IDR 3,000/kg. Meanwhile, retailers are IDR 5,000/kg. The distribution cost of red chili in the form of operational costs is IDR 3,708.59/kg. The distribution costs incurred by the collectors are IDR 750.36/kg. Meanwhile, for retailers, distribution costs in the form of operational costs are IDR 2,958.21/kg. These

operational costs are often incurred by traders in every marketing process. In Channel III of the red chili supply chain, the distribution margin for every one kilogram of red chili is IDR 4,000/kg. The distribution cost of red chili in the form of operational costs is IDR 979.86/kg. These operational costs are often incurred by traders in every marketing process. Among the three marketing channels, Channel II has the highest marketing margin of IDR 8,000/kg.

Farmer's Share in the Supply Chain

Farmer's Share is the share received by farmers. Farmer's Share is an indicator to determine the level of marketing efficiency. According to Downey and

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Erickson (1992), if the share received by farmers is > 40%, the farmer's share can be said to be efficient.

Meanwhile, if the share received by farmers is < 40%, the farmer's share can be said to be inefficient.

Table 3. Farmer's Share on Each Marketing Channel of Red Chili in Seberida District, Indragiri Hulu Regency in 2021.

No.	Description	Channel I	Channel II	Channel III
1.	Farmer Price (Rp/Kg)	36,000	40,000	38,000
2.	Consumer Price (Rp/Kg)	36,000	48,000	42,000
Farmer's Share(%)		100.00	83.33	90.47

Marketing Efficiency in the Supply Chain

Marketing efficiency is the maximization of the ratio between outputs and inputs in marketing.

Table 4. Marketing Efficiency of Each Marketing Channel on Red Chili in Seberida District, Indragiri Hulu Regency in 2021

No.	Marketing Channel	Total Product Value (Rp/Kg)	Total Marketing Costs (Rp/Kg)	Marketing Efficiency (%)
1.	Channel I	36,000	1,931	5.36
2.	Channel II	48,000	3,708.59	7.72
3.	Channel III	42,000	979.86	2.33

Table 4 signifies that marketing efficiency in marketing Channels I, II, and III of red chili in Seberida District, Indragiri Hulu Regency is efficient. Among the three marketing channels, Channel II has the highest percentage of efficiency, which is 7.72%. According to Soekartawi (in Roesmawaty, 2011), the decision rule on marketing efficiency is 0-33%. According to Prayitno (2013), the criteria to determine marketing efficiency is if %Fp (FS) > 70%. If %Pf (FS) < 70%, it is considered as inefficient.

retailers-consumers. The distribution margin in Channel I shows no difference in the price of red chili between farmers and consumers. In Channel II, there is a difference at IDR 8000/kg. In Channel III, it is IDR 4,000/kg. The total cost of marketing in Channel I is IDR 1,931/kg. In Channel II, it is IDR 3,708.59/kg, and in Channel III, it is IDR 979.86/kg. Marketing of red chilies in Seberida District is efficient, with farmer's share in marketing Channel I being larger than other channels.

Conclusion And Recommendation

Conclusion

From the findings of this study, some conclusions were drawn. There are three channels in the marketing of red chili. They are Channel I of farmers-consumers, Channel II of farmers-collectors-retailers-consumers, and Channel III of farmers-

Suggestion

It is suggested that farmers optimize the sale of red chilies directly to consumers without going through marketing agencies. Thus, farmers can determine the selling price of red chili and get more profits. Using intermediaries makes farmers get less profit than traders.

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