Marketing Chain Analysis of Big Red Chilli (Capsicum Annum L) in Kedawung District, Sragen Regency

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Abstract

This study investigates the marketing of large red chilies in Kedawung District, Sragen Regency, Central Java, where farmers often face fluctuating prices, forcing them to sell at the prevailing market rates. Conducted in December 2021, the research focuses on understanding the marketing channels for these chilies amidst unstable prices. Using a descriptive analytical method, the study involved 10 farmers, 10 marketing agencies, and 10 consumers to identify and analyze the marketing channels. The study reveals three main marketing channels with varying structures and margins. Channel I, directly linking farmers to consumers via collectors, has a marketing margin of IDR 2000/Kg and a farmer's share of 88.3%. Channel II, which includes retailers, has a margin of IDR 7000/Kg and a 69% farmer's share. Channel III, involving wholesalers and retailers, shows the highest margin of IDR 9000/Kg with a 62.5% farmer's share. Despite the price fluctuations, all channels are deemed efficient based on the farmer's share data.

Keywords: big red chili, channel, efficiency, margin, marketing

Introduction

Indonesia, as an agrarian country, has a significant portion of its population engaged in the agricultural sector. Horticulture, a vital sub-sector of agriculture, plays a crucial role in the country's Gross Domestic Product (GDP), contributing 13.41% according to BPS (2018). Among horticultural commodities, chili peppers, particularly large red chilies, are prioritized for development due to their importance in Indonesian cuisine and economy. Indonesia is one of the world's largest consumers of chilies, making this crop a key component of the national food supply (Pusdatin, 2017).

Chili is a horticultural plant that is quite important and is widely cultivated on the island of Java. Chilies are generally used for household needs and the food industry. Chili consists of several types, but the types of chilies that are most widely cultivated by farmers are mwit chilies, paprika, ornamental chilies and large chilies (Soekartawi, 2012). Red chili is a strategic commodity which is included in the horticulture or vegetable group which is widely cultivated in Indonesia (Kurniawan, Suwandi, and Rizal, 2014). Indonesian people are among the biggest chili fans in the world. This is because red chilies are used every day by people as a chili sauce, cooking spice, and as an appetite enhancer (Sayekti, et al., 2015). Therefore, chilies have become one of the important products in Indonesian food.

However, as a seasonal product, large red chilies are prone to price fluctuations, posing challenges for farmers who often have to sell at the prevailing market prices. Marketing efficiency is critical in this context, as it can impact farmers' bargaining power. Kedawung District, a major chili-producing area in Sragen Regency, has seen increasing demand for chilies, driven by population

growth and the expansion of the food processing industry. Despite this high demand, chili production remains relatively low, presenting significant opportunities for cultivation (Asmarantaka, 2012). Based on data from the Central Bureau of Statistics in Sragen Regency for 2021, it is known that the productivity of chili farming in 2018-2020 experienced an increase and decrease. From 2018-2020, chili productivity in Central Java averaged 72.41 Kw/Ha, while in Sragen Regency the average was 86.01 Kw/Ha. In this way, Sragen Regency is one of the contributors to the chili harvest in Central Java. Chili production in Sragen district in 2020 shows that Kedawung sub-district produces the most chilies compared to other sub-districts, because the harvest area is the largest and farmers' understanding of chili cultivation is good (Agriculture Department Sragen Regency, 2021).

The demand for chilies in Sragen Regency is increasing along with the rate of population growth and the expansion of the processed food agro-industry in Sragen Regency. The increasing public demand for chilies means that the development prospects are quite good and must be balanced with a sustainable increase in production. An efficient marketing system will occur if the difference between the price paid by consumers and the price received by producers is distributed proportionally between marketing institutions. Where the producers and marketing institutions involved aim to get maximum profits, while consumers try to get low prices for the products they buy (Sudiyono, 2012).

Distribution is an important point in this understanding. where goods or services produced by producers can reach the hands of final consumers, there is a need for connecting channels, namely marketing institutions (Muqtadir, 2018). An efficient marketing system will occur if the difference between the price paid by consumers and the price received by producers is distributed proportionally between marketing institutions. Where the producers and marketing institutions involved aim to get maximum profits, while consumers try to get low prices for the products they buy. The high price difference occurs because the price used is the price prevailing on the market, so farmers do not play a role in determining the selling price of chilies. Seeing this reality, the role of marketing becomes very important for the sustainability of the chili farming business so that a reasonable price can be received by producers.

In general, to distribute products to consumers, producers need marketing intermediaries. Marketing channels are a path followed in transferring direct or indirect ownership of a product and the product will move from the producer to the final consumer or industrial user (Sudiyono, 2012). Some of these marketing channels are long and some are short. Efficient marketing is an important factor in increasing the profits of chili farmers, especially in the Kedawung sub-district, so that no party is harmed, in this case the farmers and final consumers are meant.

This research seeks to explore the marketing channels, margins, and efficiency of large red chili distribution in Kedawung District, aiming to provide insights that can benefit both policymakers and stakeholders in the agricultural sector.

Method

This research is descriptive in nature, aiming to illustrate the distribution patterns and marketing margins obtained by each participant in the chili commodity trade. The study utilizes both primary and secondary data. Primary data was collected directly from farmers and marketing agents involved in the distribution chain, while secondary data was sourced from the Department of Agriculture, the Central Bureau of Statistics, the Agricultural Extension Office of Sragen Regency, and other relevant institutions.

The research location was selected purposively, focusing on Kedawung District in Sragen Regency. This area was chosen deliberately due to its status as a major chili production center within the region. Data collection techniques included observation, interviews, documentation, and questionnaires.

The data analysis techniques employed in this study involve descriptive analysis, which was used to examine the marketing channel patterns, analyze costs and marketing margins, and evaluate the distribution channels for large red chilies.

a. Marketing cost. Costs are expressed as the price of exchanges or sacrifices made to obtain benefits. Marketing costs are all costs which cover the time the product is produced and stored in the warehouse until the product is converted back into cash.

$Bp = Bp1 + Bp2 + Bp3 + \ldots\ldots + Bpn$

Bp = Marketing cost of big red chili (IDR/kg)

Bp1, Bp2, Bp3, Bpn = Marketing costs per big red chili marketing (IDR/kg)

b. Marketing profit. Marketing profit is the difference between what is marketed to producers and the price given by consumers minus marketing costs. Profit is something to consider when marketing. Each institution wants to make a profit, so what each institution pays is different

$Kp = Kp1 + Kp2 + Kp3 + \ldots\ldots + Kpn$

Kp = Marketing profit of big red chili (IDR/kg)

Kp1, Kp2, Kp3, Kpn = Marketing profit per big red chili marketing (IDR/kg)

c. Marketing margin. Marketing margin is the difference between the price paid by the final consumer and the price received by the company. In this case, the marketing margin of collecting traders is the difference between the price paid to farmers and the price sold to retailers and consumers in marketing channels with the same commodity.

$MP = Pr - Pf$

$MP = KP + BP$

MP = Marketing margin

Pr = Price at consumer level (IDR)

Pf = Price at producen level (IDR)

KP = marketing profit

Bp = Marketing cost

d. Percentage of marketing margin

$Mp = \frac{Pr-Pf}{Pr} \times 100\%$

Mp = marketing margin of big red chili

Pr = Price at consumer level (IDR)

Pf = Price at producen level (IDR)

e. Farmer's share. Farmer's share is a percentage comparison between the share of the price paid by farmers and the share of the price paid by final consumers.

$F = (1 - \frac{Mp}{Pr} \times 100\%)$

F = farmer's share

Mp = marketing margin of big red chili

Pr = Price at consumer level (IDR)

f. The greater the marketing margin value, the smaller the farmer's share value, conversely the smaller the marketing margin value, the greater the farmer's share value. The greater the share or farmer's share received by chili farmers, the more efficient the marketing will be.

Result And Discussion

Kedawung District is one of the districts in Sragen Regency, covering an area of 49.78 km², with its capital located in Kedawung Village. The district consists of 10 villages: Bendungan, Celep, Jenggrik, Karangpelem, Kedawung, Mojodoyong, Mojokerto, Pengkok, Wonokerso, and Wonorejo.

This study involved 10 farmer respondents, 10 marketing institutions, and 10 consumers, focusing on the marketing channels of large red chilies in Kedawung District, Sragen Regency. The research identified three main marketing channels for large red chilies in the district:
1. Channel I: Farmers → Collectors → Consumers
2. Channel II: Farmers → Collectors → Retailers → Consumers
3. Channel III: Farmers → Collectors → Wholesalers → Retailers → Consumers

Marketing distribution of red chilies, in channel I, involves a marketing agency before the red chilies reach consumers, where producers sell to collectors and then resell to consumers. Marketing Channel II, producers sell to collectors, then to retailers and sell to consumers. This distribution system includes assisting producers in marketing red chilies, especially during large-scale harvesting or when production is abundant. Apart from selling in local markets, collectors distribute them to retailers, both local retailers and retailers outside the area, for further sale to consumers. This pattern occurs by middlemen going to producers and then taking them home to sell to retailers. In general, these two intermediaries have transportation facilities and special locations. Marketing channel III distribution involves three marketing agencies before the red chilies reach the hands of consumers. First, the producers sell to collectors, then the collectors sell to wholesalers, then the wholesalers bring the red chilies directly to Sragen, precisely at the Bunder market, and then the retailers at the Bunder market sell to consumers. This form of channel is widely used by producers and is called traditional distribution channels. Here, producers only serve sales in large quantities to collectors and wholesalers.

Table 1. Marketing Cost, Marketing Profit, Marketing Margin, Percentage of Marketing Margin and Farmer's share of Channel I, Channel II, and Channel III in Kedawung District, Sragen Regency

Channel	Marketing Cost	Marketing Profit	Marketing Margin	Percentage of Marketing Margin (%)	Farmer's share (%)
Channel I	750	1,250	2,000	11.76	88.3
Channel II	2,850	4,150	7,000	31.81	69
Channel III	3,200	5,800	9,000	37.5	62.5

Source : Primary Data Analysis, 2021

Marketing margin is the difference between the price paid by the final consumer and the price received by the company. In this case, the marketing margin of collecting traders is the difference in the price paid to farmers with the price sold to retailers and consumers in marketing channels with the same commodity (Mandak, 2017). The price level that must be paid by consumers and that will be accepted by producers is very dependent on the form and structure of the prevailing market, whether competitive markets (many sellers and buyers), monopsony markets (single buyer), oligopsony markets (few buyers), monopoly markets (single seller), or oligopoly market (few sellers) (Hanafie, 2010). In marketing channel I, it is known that the average costs, profits and marketing margins for large red chilies are seen from the price at the level of farmers who sell large red chilies at IDR. 15,000 per kilogram with a profit of IDR. 12,897.62/Kg with costs for labor, inputs, risks and depreciation. At the collector level, you can see the costs incurred for labor, transportation, packaging and shrinkage because at the collector level they carry out sorting, namely separating leaves and chilies that are still

attached, with an estimated cost of IDR. 750 per kilogram. Then collectors sell large red chilies for IDR. 17,000 per kilogram. So the price purchased by consumers is IDR. 17,000/Kg. Total marketing costs of IDR 750/Kg. Total marketing profit IDR. 1,250/Kg, and a marketing margin percentage of 11.76%. The farmer's share value is 88.3% so it can be concluded that marketing channel I is efficient because the farmer's share is more than 50%.

In marketing channel II, farmers sell large red chilies at a price of IDR. 15,000/Kg and uses production costs of IDR. 1,987.84/Kg, resulting in a profit of IDR 13,012.16/Kg. then at the collector level who buys large red chilies at a price of IDR. 15,000/Kg, you have to pay several costs, including labor, transportation, packaging and risk costs of IDR 750/kg and sell to small traders or retailers at a price of IDR. 17,000/Kg in Kedawung District, Sragen Regency. At the small trader level, they incur costs for transportation and plastic bag costs amounting to IDR. 2,100/Kg and the profit obtained is IDR. 2,900/Kg with a selling price of IDR. 22,000. so the price at the consumer level is IDR. 22,000/Kg. Total marketing costs of IDR. 2,850/Kg, marketing profit of IDR. 4,150/Kg, and the marketing margin percentage is 41.17%, and the Farmer's share percentage is 59%, so it can be said that the marketing channel for the big red chili II is efficient because the farmers' revenue is 59% and meets the efficient requirements, namely more than 50%.

In marketing channel III, farmers sell large red chilies at a price of IDR. 15,000/Kg and uses production costs of IDR. 2,425.3/Kg, resulting in a profit of IDR. 12,574.7/Kg. then at the collector level who buys large red chilies at a price of IDR. 15,000/Kg, you have to incur several costs, including labor, transportation, packaging and risk costs of IDR 750/kg and sell to wholesalers. Then the wholesaler buys at a price of IDR. 17,000/Kg, you have to pay IDR. 350/Kg for labor and plastic bags and sell to small traders or retailers at a price of IDR. 19,000/Kg in Kedawung District, Sragen Regency. At the small trader level, they incur costs for transportation and plastic bag costs amounting to IDR. 2,100/Kg and the profit obtained is IDR. 2,900/Kg with a selling price of IDR. 24,000. so that the price at the consumer level is IDR. 24,000/Kg. The costs used in marketing channel III are as follows, the total marketing costs are IDR. 3,200/Kg, marketing profit of IDR. 5,800/Kg, and the marketing margin percentage is 37.5%, and the Farmer's share percentage is 62.5%, so it can be said that the marketing channel for the big red chili III is efficient because the farmers' income is 62.5% and meets the efficient requirements, namely more than 50%.

The analysis of these marketing channels revealed the total marketing margins for each channel. In Channel I, the total marketing margin was IDR 2000/Kg. Channel II had a total margin of IDR 7000/Kg, while Channel III showed the highest margin at IDR 9000/Kg. Economic marketing efficiency is one way to determine the efficiency of marketing channels, namely by using factor indicators of the share received by producer farmers or what is usually called Farmer's share. The size of the Farmer's share is influenced by the size of the marketing margin. The lower the marketing margin, the greater the share received by farmers, thus the channel can be said to be efficient.

The total marketing margin III has a margin of IDR 9,000/Kg from II and I margins of IDR 7,000/Kg and IDR 2,000/Kg. Even though the marketing margin II value is lower, the farmer's share value is 69%, and in marketing channel III the farmer's share value is 62.5%, and in marketing channel I the farmer's share value is the highest, namely 88.3%. Based on the research results, marketing channels I, II, III have a Framer's share value that exceeds 50% so that marketing channels I, II, III are said to be efficient. However, in channel I the marketing margin is IDR 2,000/Kg, in marketing channel II the marketing margin is IDR 7,000/Kg and in marketing channel III the marketing margin is IDR 9,000/Kg. This shows that short channels are more efficient than long marketing channels. Marketing channel efficiency can not only be seen from the marketing efficiency value, but can also be seen from the length and shortness of the marketing channel. The longer the marketing channel, the greater the difference between the price paid by consumers and the price received by producers.

In addition to the marketing channels and margins, the study also calculated the farmer's share, which is an indicator of marketing efficiency. The farmer's share for Channel I was 88.3%, indicating high efficiency. In Channel II, the farmer's share was 69%, while Channel III had a farmer's share of 62.5%. Despite the differences in margins and distribution complexity, all channels were found to be efficient based on the farmer's share data.

Conclusion

Based on the research conducted on the analysis of large red chili marketing channels in Kedawung District, Sragen Regency, the following conclusions can be drawn:

The cultivation of large red chilies in Kedawung District is profitable, as the average selling price from farmers is IDR 15,000/Kg, with a break-even point (BEP) of IDR 2,608.61/Kg. The study identified three marketing channels for large red chilies in this area:

1. Marketing Channel I: Farmers → Collectors → Consumers
2. Marketing Channel II: Farmers → Collectors → Retailers → Consumers
3. Marketing Channel III: Farmers → Collectors → Wholesalers → Retailers → Consumers

The total marketing margin across these channels is as follows: IDR 2,000/Kg for Channel I, IDR 7,000/Kg for Channel II, and IDR 9,000/Kg for Channel III. The farmer's share, indicating the efficiency of each channel, is 88.3% for Channel I, 69% for Channel II, and 62.5% for Channel III, all of which are considered efficient.

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