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# MARKETING ANALYSIS OF CASSAVA (Manihot esculenta) THROUGH SCP (Structure Conduct Performance) APPROACH IN BANDAR SUB-DISTRICT, SIMALUNGUN REGENCY

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***Abstract***

*This study aims to analyze the cassava marketing system through the SCP (Structure Conduct Performance) approach in Bandar District, Simalungun Regency. The location of the research was determined using the random sampling method. The sample in this study consisted of 37 farmers determined using the Slovin formula, 5 collectors and 5 retailers determined by snowball sampling. The data analysis methods used are qualitative (descriptive) and quantitative analysis. The results show that the results of the study show that the analysis of the market structure formed in the marketing of cassava in Bandar District, Simalungun Regency at the farmer level leads to a loose oligopoly market. Meanwhile, at the channel level, marketing institutions show a tight oligopoly market. Market behavior analysis on cassava has a low bargaining position so that farmers do not have the power to determine the price of cassava and only act as a price taker. The results of the market performance analysis showed two patterns of marketing channels, the marketing margin in channel I, the value of the marketing margin was Rp. 1,380/Kg and in the second marketing channel was Rp. 1,700/Kg. The value of the farmer's share in the first marketing channel was 54.00% and the value of the second marketing channel was 43.33%. The value of cassava marketing efficiency in marketing channel I is 14.00% and marketing channel II is 16.80%, both channels can be said to be efficient because the value is less than 50%.*

***Keywords:*** *Structure, Behavior, Performance, Cassava.*

## INTRODUCTION

The agricultural sector is one of the sectors that is quite strategic for national development. One of the roles of the agricultural sector in spurring economic growth can be seen more broadly, especially in the context of distributing the results of economic development to the community, especially in rural areas. The agricultural sector is required to be able to play a role in the development of the national economy through the formation of gross domestic product, the provision of food and industrial raw materials, the acquisition of foreign exchange, the provision of
employment, the increase of community income and poverty alleviation (Rokenren in Adhitya, 2022).

Food crops are any type of plant that can produce carbohydrates and proteins, therefore food crops are the main source of staple food for most of the Indonesian population. One of the food crops is cassava or cassava (*Manihot esculenta*). Cassava (*Manihot esculenta*) is an agricultural commodity that is widely grown by farmers in Indonesia. Cassava cultivation is very easy, namely it can grow on dry or less fertile land and the resistance to pests and diseases is relatively high. Cassava as a plant used as food, non-food and as a source of income for farmers. Advantages compared to other food crops, including being able to grow on dry and less fertile land, relatively high resistance to diseases, and the harvest period is not timed so that it can be used as a living barn (Zakaria *et al.*, 2020).

One of the sub-districts in Simalungun Regency is Bandar District, where most of the people make a living as a farmer who grows cassava, which can be seen by the increase in demand for cassava production every year. Although cassava tends to experience price fluctuations that are influenced by market demand and supply, it has an important and potential role for the future in agricultural development (Sari *et al.*, 2020).

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Marketing is the transfer of products from producers to consumers. To improve the welfare of farmers, marketing is one of the internal subsystems of the agro-industrial system. With appropriate marketing, it will get a price that is in accordance with the costs borne by the farmer. This makes marketing one of the most important elements in an agricultural activity, because this is where farmers finally get their income at the appropriate price through production from their agricultural business (Hasma and Husaini, 2021). Market structure, behavior, and performance are approaches taken to solve problems, especially in the marketing of agricultural products (Sinaga *et al.,* 2014). The SCP approach is an approach that is carried out to determine the influence of market structure on market behavior, which will ultimately affect the appearance or performance of the market. In addition, this approach is also carried out to supervise the competition that occurs in the market.

The problem faced by cassava farmers in Bandar District is the price of cassava which often fluctuates or the price fluctuates and is unstable. The fluctuating price is caused by the characteristics of cassava that is not durable and has a large volume, so that farmers have to sell it immediately, and as a result, the bargaining position of farmers becomes low to determine the price. The low bargaining position of farmers causes the price received by farmers to be low. The perishable nature of cassava will also affect the marketing channels formed (Anindita and Baladina, 2017).

Cassava prices that fluctuate at the farmer level are one of the main obstacles to marketing. The uncertainty in the prices received by farmers shows that the market structure, market behavior, and market performance have not supported the development of cassava that is profitable for farmers. In the marketing of an agricultural commodity, it is found that there are many long marketing chains so that there are also many marketing institutions in the marketing chain, so it can cause too large profits taken by marketing actors so that they can increase costs and then will affect marketing margins so that farmers are disadvantaged (Andaresti, 2021). Based on the explanation above, the author is interested in conducting a research entitled "Marketing Analysis of Cassava (*Manihot esculenta*) Through the SCP (*Structure Conduct Performance*) Approach in Bandar District, Simalungun Regency".

## RESEARCH METHODS

### Research Location and Time

This research was conducted in Bandar District, Simalungun Regency, during the period of March to April 2024. The location was selected purposively based on the consideration that Bandar District is one of the main cassava-producing centers in Simalungun Regency, making it relevant for the objectives of the study..

### Data Source Type

This research utilized a survey method and employed both primary and secondary data. Primary data were collected directly from respondents through field observations and interviews, while secondary data were obtained from relevant literature and institutions. The study adopted a quantitative descriptive approach using the Structure-Conduct-Performance (SCP) analysis framework. Quantitative descriptive research involves analyzing data collected from a sample using appropriate statistical techniques to describe and explain observed phenomena. Farmer sampling was conducted using the simple random sampling technique, in which each member of the population has an equal chance of being selected, regardless of the population strata (Sugiyono, 2017). The sample size used in this study consisted of more than 100 respondents, which was deemed appropriate for the research objectives. To determine the respondents of cassava farmers in this study, it was calculated using the Slovin formula as follows:

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$$n = \frac{N}{1 + Ne^2}$$

Information:
n : Number of Sample
N : Total Population
e : Percent of inaccuracy due to error 15% (0.15)

The withdrawal of the sample is prioritized only in villages that have cassava land, the population of farmers involved in cassava marketing research through the SCP (Structure Conduct Performance) approach in Bandar District, Simalungun Regency is 212 farmers of which 15% of respondents are taken, so the sample (people) taken is 37 farmers. Marketing agency respondents were recruited using the snowball sampling method. The snowball sampling method is carried out by searching for information by tracing each marketing institution involved in cassava marketing to find out the location of the marketing institution. From these results, 5 collectors and 5 retailers were obtained.

**Data Analysis**

**Market Structure Analysis**

1. Market *Share*

The market share formula, according to Anggraeni and Baladina (2017) is as follows:

$$Msi = \frac{Si}{Stotal} \times 100\%$$

Msi: Market share of a marketing agency (%)
Si: Number of sales of marketing agencies i (Kg/Month)
Stotal: Total sales of all marketing agencies (Kg/Month)

2. Concentration Ratio (CR4)

The calculation of the ratio concentration will use the Concentration Ratio for the Biggest Four (CR4) analysis to determine the degree of concentration of the 4 largest market shares (Nurhasanah, 2019). The formula for calculating market concentration is as follows:

$$CR4 = S1 + S2 + S3 + S4$$

CR4 = Concentration Ratio For The Biggest Four
S1 = Cassava marketing agency sales 1
S2 = Cassava marketing agency sales 2
S3 = Cassava marketing agency sales 3
S4 = Cassava marketing agency sales 4

3. Product Differentiation Level

The analysis of the level of product differentiation in this study was carried out by descriptive analysis to see whether cassava production in the market is the same or slightly different. Product differentiation relates to the nature of the product being traded, packaging, brand as well as where the product comes from. Traders or buyers will buy at a higher price for better product quality, packaging and naming of the product and where the product is produced.

4. Barriers to Market Entry and Exit

The barriers to entering and exiting the market in this study are analyzed descriptively which will provide an overview of the level of difficulty and things that hinder traders from entering and exiting the market. The easier it is for farmers to exit and enter the market, the more likely it is to show a perfect competitive market, on the other hand, if it is more difficult for competitors to exit and enter the market, it tends to show an imperfect competitive market (Suryawati, 2019).

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**Market Behavior Analysis**

Market behavior analysis is the behavior of sales and purchases, strategies or responses made by market participants individually or in groups, in negotiations or competitive relationships and negotiating or bargaining with other participants to determine prices to achieve marketing goals in a certain structure (Asmarantaka, 2014). The analysis of cassava market behavior can be explained descriptively by explaining the practice of determining cassava prices and the form of relationship that occurs between farmers as sellers and marketing institutions as buyers involved in cassava marketing in Bandar District.

**Market Performance Analysis**

1. Marketing Margin
   The formula for calculating marketing margin can be seen as follows:

$$Mp = Pr - Pf$$

   Information:
   Mp = Marketing margin (Rp/kg)
   Pr = Price at the end consumer level (Rp/kg)
   Pf = Price at the farmer level (Rp/kg)

2. Farmer's Share
   Farmer's Share is the percentage of the price received by farmers to the price paid by consumers. Farmer's share is negatively related to marketing margins.
   The formula of the farmer's share is as follows:

$$FS = \frac{Pf}{Pr} \times 100\%$$

   Information:
   FS = *Farmer's share* (%)
   Pf = Price at the farmer level (Rp/Kg)
   Pr = Price at the end consumer level (Rp/Kg)

3. Marketing Efficiency
   To calculate marketing efficiency, you can use the following formula:
   Information:

$$EP = \frac{Bi}{Pr} X\ 100\%$$

   EP = Marketing Efficiency (%)
   Bi = Total Cost of Marketing Institution (Rp/kg)
   Pr = Price at the End Consumer level (Rp/kg)

## RESULTS AND DISCUSSION

### *Market Structure Analysis*

1. Market Share Analysis

**Table 1**. Market Share Calculation

| Institution | Market Share | Market Structure |
|---|---|---|
| Farmer | 22,7% | Loose Oligopoly |
| Collector Traders | 91,7% | Strict Oligoli |
| Retail Merchants | 93,3% | Strict Oligoli |

Source : Primary Data, 2024

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Based on the market share of cassava in Bandar District in the Table 1, the results of the analysis at thefarmer level obtained a result of 22.7% which showed that the type of market structure was loose oligipoly, at the level of collector traders the market share value was obtained of 91.7% and at the level of retailer traders the market share was obtained 93.3% which showed that the type of market structure was tight oligipoly.

2. Analysis of Concentration Ratio For the Biggest Four (CR4)

**Table 2**. Results of Concentration Ratio For the Biggest Four (CR4) Calculation at Cassava Marketing Institutions

| Marketing Agency | CR4 % Value | Market Structure |
|---|---|---|
| Collector Traders | 91,7% | Strict Oligoli |
| Retail Merchants | 93,3% | Strict Oligoli |

Source : Primary Data, 2024

Based on the calculation of CR4 on collectors and retailers, it shows a tight oligopoly structure. The tight oligopoly market in CR4 occurs because there are four top traders who purchase cassava quantities above 40%, allowing them to have a dominant power in determining prices both individually and in collaboration with other marketing institutions.

3. Product Differentiation

a) Size

In the cassava sales system, cassava is expressed in kilograms (Kg) on each transaction. Farmers do not differentiate products in the form of cassava sizes. This is because cassava sales at the farmer level are only based on the weight of cassava.

b) Quality

The quality of cassava is also a determinant in the sustainability of farmers to continue to produce as a center for cassava production. The quality of cassava can be seen from the size, skin color, and texture of the cassava. The differentiation of cassava products is carried out by marketing agencies by looking at the perfect physical condition of cassava (not rotten or mushy) to match market demand.

4. Barriers to Market Entry and Exit

From the results of research conducted in Bandar District, every individual or marketing institution does not face an obstacle to entering the cassava market in Bandar District. There is no competition in the cassava market in Bandar District. Every marketing agency or individual is free to sell or buy cassava from and to anyone. Every cassava farmer is also free to sell his crops.

5. Level of Market Knowledge

The market knowledge owned by farmers can be said to be low because of the nature of farmers who do not want to bother and want to immediately benefit from their crops without caring about the profits that will be received by traders and where their crops will be marketed. Cassava traders have easier access to market information, this is because traders are in a position that is directly related to the market and know market conditions directly so that traders are easier to make decisions based on the market information they have.

**Market Behavior Analysis**

1. Pricing at the Farmer Level

The determination of cassava prices that occur between farmers and collectors is determined by collectors based on cassava price information in the market. In reality, farmers

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have a low bargaining position, so farmers do not have the power to determine prices. Farmers sell cassava to collectors at a price of Rp 1,000.00/Kg to Rp 1,400.00/Kg.

2. Pricing at the Collector Level

At the merchant level, the pricing process is determined based on the bargaining process with customers. Collectors make purchases to collect cassava which will then be marketed. The more cassava collected, the greater the market share and market power that will be possessed by collector traders. The selling price of cassava at the collector level ranges from Rp 1,800.00/Kg to Rp 2,100.00/Kg.

3. Pricing at the Retailer Level

At the merchant level, the retailer determines the price of cassava by themselves, adjusted to the purchase cost, coupled with the marketing functions performed by the merchant to create added value of the product. The purchase of cassava by retailers is not as much as that purchased by collectors. The selling price of cassava by retailers to the end consumer is around Rp 3,000.00/Kg.

**Market Performance Analysis**

1. Marketing Margin Analysis

a. Marketing channel group I consists of (Farmers – Retailer – Consumer).

**Table 3**. Calculation of Marketing Margins and Costs on Marketing Channels I

| Marketing Agency | Pricing & Fees (Rp/kg) | Margin (Rp/Kg) | *Farmer's Share* (%) |
|---|---|---|---|
| **Farmer** | | | |
| a. Selling Price | 1.620 | 1.380 | 54,00 |
| **Retail Merchants** | | | |
| a. Purchase Price | 1.620 | | |
| b. Marketing Costs | | | |
| Transportation | 120 | | |
| Packaging | 300 | | |
| c. Total cost | 420 | | |
| d. Advantages | 960 | | |
| e. Selling Price | 3.000 | | |
| **User** | | | |
| a. Purchase Price | 3.000 | | |
| **Total Marketing Costs** | **420** | | |
| **Total Marketing Profit** | **960** | | |
| **Total Marketing Margin** | | **1.380** | |
| **Farmer's Share** | | | **54,00** |

Source: Primary Data, 2024

In the table above, it can be seen that the marketing channel I of cassava produced by farmers and then sold to retailers at a price of Rp 1,620.00/Kg, then the retailer sells to the end consumer at a selling price of Rp 3,000.00/Kg, then the marketing margin in channel I is Rp 1,380.00/Kg. In this marketing channel, it is known that the marketing channel has marketing costs, namely in the form of transportation costs and packaging costs, with the total marketing cost for 1 Kg of cassava which is Rp 420.00/Kg, it can be seen that the net profit from cassava sales obtained by retailers is Rp 960.00/Kg.

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b. Marketing channel group II consists of (Farmers – Collector Traders – Retailers – Consumers).

**Table 4**. Calculation of Marketing Margins and Costs on Marketing Channels II

| Marketing Agency | Pricing & Fees (Rp/kg) | Margin (Rp/Kg) | *Farmer's Share* (%) |
|---|---|---|---|
| **Farmer** | | | |
| a. Selling Price | 1.300 | 700 | 44,33 |
| **Collector Traders** | | | |
| a. Purchase Price | 1.300 | | |
| b. Marketing Costs | | | |
| Transportation | 28,40 | | |
| Workforce | 35,46 | | |
| Packaging | 20 | | |
| c. Total Costs | 83,86 | | |
| d. Advantages | 616,14 | | |
| e. Selling Price | 2.000 | | |
| **Retail Merchants** | 2.000 | 1.000 | |
| a. Purchase Price | | | |
| b. Marketing Costs | | | |
| Transportation | 120 | | |
| Packaging | 300 | | |
| c. Total Costs | 420 | | |
| d. Advantages | 580 | | |
| e. Selling Price | 3.000 | | |
| **User** | | | |
| a. Purchase Price | 3.000 | | |
| **Total Marketing Costs** | **503,86** | | |
| **Total Marketing Profit** | **1.196,14** | | |
| **Total Marketing Margin** | | **1.700** | |
| ***Farmer's Share*** | | | **44,33** |

Source: Primary Data, 2024

In marketing channel II, where farmers sell cassava to collectors at a price of Rp 1,300.00/Kg. The total cost incurred by the collector traders is Rp 83.86/Kg with a net profit of Rp 616.14/Kg. Then the collectors continue to distribute cassava to several retailers in Bandar District at a price of Rp 2,000.00/Kg. The retailers incur marketing costs of Rp 420.00/Kg and the profits obtained amounting to Rp 580.00/Kg, then the retailer sells to the final consumer at a price of Rp 3,000.00/Kg. In this marketing process, it can be seen that the marketing margin of cassava in marketing channel II is Rp 1,700.00/Kg.

2. Farmer's Share

**Table 5**. Cassava Marketing Channel Efficiency Calculation

| Marketing Channels | *Farmer's share* |
|---|---|
| Marketing Channel I | 54,00% |
| Marketing Channel II | 43,33% |

Source: Primary Data, 2024

Based on the table above, it can be seen that the farmer's share received by farmers in the cassava marketing channel I is 54.00%. This channel is the shortest channel than channel II

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where from farmers and continued by traders and retailers then consumers, marketing channel I is said to be more efficient because the *farmer's share*is > than 50%. In marketing channel II where there are two marketing institutions, namely collectors and retailers, in it to reach the final consumer, the percentage *of farmer's share* is 43.33%, this marketing channel II is said to be inefficient because the share received by farmers < from 50%. Based on the results of the study, it can be concluded that the price share received by farmers in group I is more efficient because of the shorter marketing channels. Shorter marketing channels make marketing institutions less involved, so that the price share received by farmers is higher, while the price share in the marketing channel group II is inefficient, because the larger the price share received by farmers, the more inefficient the marketing.

3. Marketing Efficiency

**Table 6**. Cassava Marketing Channel Marketing Efficiency Calculation

| Marketing Channels | Marketing Efficiency |
|---|---|
| Marketing Channel I | 14,00% |
| Marketing Channel II | 16,80% |

Source: Primary Data, 2024

In the table above, it can be seen that the calculation on the level of marketing efficiency in cassava in Bandar District, Simalungun Regency is efficient. Where the marketing efficiency criteria are if the < value of 50% of the marketing channel is said to be efficient and if the marketing channel is > of 50%, then the marketing channel is not efficient. In the marketing channel I, the value is 14.00% and the marketing channel II is 16.80%, which means that it can be said to be efficient. The smaller the percentage obtained, the more efficient marketing activities will be. This happens because the marketing costs on channel I are smaller and only involve one marketing agency. On the contrary, the high percentage of efficiency of marketing channel II is due to the high cost of marketing and many marketing agencies are involved in this marketing channel.

## CONCLUSION AND SUGGESTION

### Conclusion

Based on the results of the research on the analysis of the structure, behavior and performance of the cassava market in Bandar District, Simalungun Regency, it can be concluded that the market structure formed in the cassava market in Bandar District at the farmer level leads to a loose oligopoly market. And at the level of marketing agencies shows a tight oligopoly market. In the behavior of the cassava market in Bandar District, it can be seen that the price determination at the farmer level determines the price, namely the buyer or collector trader, because the farmer has a low bargaining position so that the farmer does not have the power to determine the price of cassava and only acts as a price taker. Furthermore, in the market performance of cassava commodities in Bandar District, there are 2 marketing channels. In marketing channel I, the marketing margin value is Rp 1,380.00/Kg and in marketing channel II is Rp 1,700.00/Kg. The value of farmer's share in marketing channel I is 54.00% and marketing channel II is 43.33%. The value of cassava marketing efficiency in marketing channel I is 14.00% and marketing channel II is 16.80%, both channels can be said to be efficient because the value is less than 50%.

### Suggestion

Based on the conclusion above, the suggestions that can be given are:

1. At the farmer level, there needs to be an effort to improve market information to increase

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prices in the bargaining process at the trader level in existing marketing channels, so that in determining the price of cassava at the farmer level it is not low or is not dominated by collectors.

2. At the marketing institution level, there needs to be an effort to improve market information including prices and marketing locations to help farmers and traders expand and improve market access.

## BIBLIOGRAPHY

Adhitya, B. N., Khatimah, K., & Mudmainah, S. (2022). Analysis of Potato (Solanum tuberosum L.) Marketing Channels in Pandansari Village, Paguyangan District, Brebes Regency. Civilization Journal of Agriculture, 2(2), 1-6.

Andaresti, D. (2021). Analysis of Cassava Marketing Efficiency in Terusan Nyunyai District, Central Lampung Regency.

Anggraeni, M. D., & Baladina, N. (2017). Analysis of the structure, behavior and appearance of the potato market in Sumberbrantas Village, Bumiaji District, Batu City. Journal of Agricultural Economics and Agribusiness, 1(2), 69-79.

Anindita, Ratya and Nur Baladina. (2017). Marketing of Agricultural Products. Andi. Yogyakarta.

Asmarantaka, R. W. 2014. Agribusiness Marketing (Agrimarketing) (Second). Bogor: IPB Press.

Nurhasanah, D. T. (2019, June). Analysis of Structure Conduct and Performance in the Tape Industry in Bondowoso Regency. In Proceedings of the National Seminar & Call For Paper (pp. 278-286).

Sari, A. P., Ismono, R. H., & Adawiyah, R. (2020). Analysis of Income, Perception, and Interest of Farmers in Cassava Farming in Sukadana District, East Lampung Regency. Journal of Agribusiness Sciences, 8(3), 474-481.

Sinaga, V. R., Fariyanti, A., & Tinaprilla, N. (2014, September). Analysis of the structure, behavior, and marketing performance of granola potatoes in Pangalengan District, Bandung Regency, West Java. In Agribusiness Forum: Agribusiness Forum (Vol. 4, No. 2, pp. 101-120).

Sugiyono, 2017. Quantitative, qualitative, and R&D research methods. Bandung: Alfabeta.

Suryawati, S. H., Luhur, E. S., Kurniawan, T., & Arthatiany, F. Y. (2019). Analysis of the structure, behavior and performance of the Indonesian shrimp market. Journal of Marine and Fisheries Socioeconomics, 14(2), 211-223.

Zakaria, W. A., Endaryanto, T., Indah, L. S. M., Sari, I., & Mutolib, A. (2020). Income and welfare of cassava farmer households in Lampung province. Journal of Indonesian Agribusiness, 8(1), 83-93.