

COMPARATIVE ANALYSIS OF MARKETING CHANNELS OF CAYENNE PEPPER THROUGH AUCTION MARKET AND OTHER CHANNELS IN TURI DISTRICT, SLEMAN REGENCY

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Abstract: Turi District is one of cayenne pepper production areas in Sleman Regency. The marketing of Cayenne Pepper is interesting to study especially after the chili auction market was established in Sleman Regency in 2018. Therefore, this study aims to compare the marketing of cayenne pepper through the auction market marketing channel with other marketing channels in Sleman Regency based on marketing margin, farmer's share, and profit ratio to marketing cost. The data collection methods were purposive sampling method applied on farmers and snowball sampling method applied on marketing organization. The results showed that the marketing of cayenne pepper in Turi District, Sleman Regency in 2022 has five marketing channels, namely the auction market, collectors, wholesalers and traders. In addition, the marketing agencies involved have carried out the existing marketing functions, that is the exchange function, physical function and facility function. Basically, channel III through large traders has a quantitative indicator value of marketing efficiency that is better than channel I. Meanwhile, for local market destinations channel II has a better efficiency indicator value than channel IV which goes through small collectors.

Keywords: auction market, cayenne pepper, marketing channels, marketing efficiency, marketing functions

Abstrak: Kecamatan Turi merupakan salah satu daerah penghasil cabai rawit di Kabupaten Sleman. Pemasaran cabai rawit menarik untuk dikaji terutama setelah pasar lelang cabai didirikan di Kabupaten Sleman pada tahun 2018. Oleh karena itu, penelitian ini bertujuan untuk membandingkan pemasaran cabai rawit melalui saluran pemasaran pasar lelang dengan saluran pemasaran lainnya di Kabupaten Sleman berdasarkan margin pemasaran, bagian petani, dan rasio keuntungan terhadap biaya pemasaran. Metode pengumpulan data yang digunakan adalah metode purposive sampling yang diterapkan pada petani dan metode snowball sampling yang diterapkan pada organisasi pemasaran. Hasil penelitian menunjukkan bahwa pemasaran cabai rawit di Kecamatan Turi Kabupaten Sleman tahun 2022 memiliki lima saluran pemasaran yaitu pasar lelang, pengumpul, pedagang besar dan pedagang. Selain itu, lembaga pemasaran yang terlibat telah menjalankan fungsi pemasaran yang ada, yaitu fungsi pertukaran, fungsi fisik, dan fungsi fasilitas. Pada dasarnya saluran III melalui pedagang besar memiliki nilai indikator kuantitatif efisiensi pemasaran yang lebih baik dibandingkan saluran I. Sedangkan untuk tujuan pasar lokal saluran II memiliki nilai indikator efisiensi yang lebih baik daripada saluran IV yang melalui pengepul kecil.

Kata kunci: auction market, cabai rawit, marketing channels, efisiensi pemasaran, fungsi marketing

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INTRODUCTION

Horticulture is an agricultural sub-sector consisting of fruits, vegetables, ornamental plants and medicinal plants. One of the leading horticultural commodities in DIY is chili. The types of chilies that have great potential in DIY are large chilies and cayenne peppers. The biggest potential for large chilies is in Kulon Progo Regency with the contribution of large chilies in 2019 reaching 74.37% of all large chili production in DIY. Whereas in cayenne pepper, the area that has the greatest potential is Sleman Regency with a contribution in 2019 reaching 55.16% of DIY's total cayenne pepper production (BPS, 2020).

Cultivation of chili plants in DIY tends to experience development from year to year. This can be seen from the development of harvested area, productivity to the amount of production which tends to continue to experience growth from 2016 to 2019 as shown in Table 1. Based on data from DIY Bappeda (2020) in 2016 the harvested area of chili plants in DIY was 4,448 hectares and continues to grow every year until in 2019 it was

recorded at 5.458 ha. This is followed by the amount of chili production in DIY which increases every year. In 2016, the number of chili production in DIY was recorded at 28,379 tons, in 2017 it increased by 33.5% to 37,902 tons, in 2018 it increased by 17.6% to 44,590 tons while in 2019 it decreased by 3% to 42,972 tons.

The increase in total production is not only due to the increase in harvested area, but also due to productivity which tends to increase. The following in harvested area, productivity chili plants in DIY can be seen in Table 1.

Chili production in Sleman Regency is carried out in all sub-districts including Turi District. In Table 2 it can be seen that chili production in Turi District in 2019 amounted to 1,388.4 quintals or 11.6% of the total production of cayenne pepper in Sleman Regency, with a harvested area of 158 hectares (BPS, 2016). The Following Harvested Area, Production, and Average Chili Production per District in Sleman Regency in 2019 can be seen in Table 2.

Table 1, Harvested Area, Total Production, and Productivity of Chili in the Province of the Special Region of Yogyakarta in 2016-2019

Element	Year			
	2016	2017	2018	2019
Harvested Area (ha)	4,448	4,934	5,152	5,458
Total Production (ton)	28,379	37,902	44,590	42,972
Productivity Expansion (kw/ha)	63,8	76,82	82,52	74,63

Source : Bappeda DIY (2020)

Table 2. Harvested Area, Production, and Average Chili Production per District in Sleman Regency in 2019

Districts	Harvested Area (Ha)	Production (Kwt)	Production Average (Kwt/Ha)	Districts	Harvested Area (Ha)	Production (Kwt)	Production Average (Kwt/Ha)
Moyudan	4	62	15.5	Ngemplak	237	1752.4	7.4
Minggir	22	250.2	11.4	Ngaglik	311	1838.7	5.9
Seyegan	85	589.6	6.9	Sleman	165	966.1	5.9
Godean	7	71.3	10.2	Tempel	97	719.3	7.4
Gamping	23	167.3	7.3	Turi	158	1388.4	8.8
Mlati	25	213.8	8.6	Pakem	283	1598	5.6
Depok	8	39.2	4.9	Cangkringan	112	776.6	6.9
Berbah	3	47.8	15.9	Sleman	1729	11937.8	6.9
Prambanan	52	421.6	8.1	Regency			
Kalasan	137	1035.5	7.6				

Source: BPS Sleman Regency (2020)

Cayenne pepper (*Capsicum frutescens L.*) is a seasonal horticultural crop which is the choice of farmers in many regions, including DIY. The demand for chilies in DIY is quite high and relatively continuous. Based on data from the DIY Bappeda (2020) in 2019 chili consumption was 3.8 kg per capita per year. Cayenne pepper production is carried out in all regions in DIY except the City of Yogyakarta. Based on BPS (2020) Sleman Regency is the largest production center for cayenne pepper in DIY. The production of cayenne pepper in Sleman Regency in 2019 reached 11947.8 quintals or 55.16 percent of the total DIY cayenne pepper production. The following chili consumption in the special Region of Yogyakarta per capita per year can be seen in Table 3.

Table 3. Chili consumption in the Special Region of Yogyakarta per Capita per Year

Year	Chilli Consumption per Capita (kg/capita/year)
2017	2.52
2018	1.65
2019	3.80
2020	2.90

In chili farming, there are differences in the number of plants that are concentrated in the main growing season, this causes uneven supply throughout the year, causing price fluctuations (Swastika et al. 2017). The following price fluctuations of cayenne pepper in the province of the Special Region of Yogyakarta in 2018-2021 can be seen in Figure 1.

In Figure 1 it can be seen that from 2018 to 2021 the price of cayenne pepper in DIY has fluctuated. In 2019, the lowest price was recorded in April, namely IDR12,500/kg, and the highest price was in August, namely IDR71,000/kg. Meanwhile, the lowest price in 2020 at the same time in the period 2018 to 2021 was in September, namely IDR11,700/kg and the highest price in 2020 was in January, namely IDR67,000/kg. In the period from 2018 to 2021 the highest price was recorded in March 2021, reaching IDR107,500/kg. The difference in the value of the highest and lowest prices in the period 2018 to 2021 is IDR95,800 or 818% of the lowest price.

In 2018 the Sleman Regency government inaugurated a chili auction market located in Pakem District. The auction market is a market where cash and carry transactions occur between sellers and buyers of goods/commodities with an auction system. The spot auction

market has the objective of shortening the distribution chain from producer farmers to consumers and improving the transparent price formation mechanism at the farmer level. Producer farmers get better margins in accordance with their contributions and the auction market mechanism can reduce the role of intermediaries who have the potential to cause inefficiencies if they do not carry out marketing functions (Jamhari and Ebban, 2012).

The production potential of cayenne pepper in Sleman Regency needs to be followed by a good marketing system. Marketing is an activity that connects goods from producers to end consumers. Efficient marketing is needed to increase the share received by farmers (farmer's share), increase product-added value, and parties involved in marketing activities and consumers feel satisfied. High marketing margins make chili marketing efficiency interesting to study, especially to find out the price formation process at the farmer level to final consumer.

Cayenne pepper is a seasonal crop that is prone to price fluctuations which is one of the problems for chili farmers. The increase in chili prices is due to reduced supply while demand is constant. The price of cayenne pepper in the province of DIY still fluctuates every year. Price formation for cayenne pepper in DIY has a fairly high marketing margin. There is a significant price difference between prices at the farm level and prices at the consumer level. The price formation for cayenne pepper is influenced by marketing agencies involved in the marketing channel. The following price fluctuations and quite high marketing margins for cayenne pepper in DIY in 2020 can be seen in Table 4.

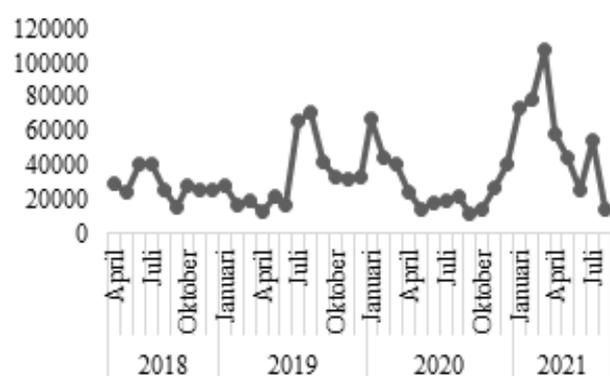


Figure 1. Price fluctuations of cayenne pepper in the Province of the Special Region of Yogyakarta in 2018-2021

Table 4. Prices of producers and consumers of cayenne pepper in the Province of the Special Region of Yogyakarta in 2020 (Rp/Kg)

Month	Producer Price	Producer Costumer	Marketing Margin	Month	Producer Price	Producer Costumer	Marketing Margin
January	24,126	61,902	37,776	July	16,473	18,818	2,345
February	23,200	52,625	29,424	August	15,347	15,417	70
March	21,298	34,966	13,667	September	15,023	15,250	227
April	17,430	30,333	12,903	October	16,483	17,105	622
May	14,736	16,347	1,611	November	18,728	27,821	9,093
June	13,928	18,393	4,465	December	21,625	46,947	25,322

Source: Ministry of Agriculture Price Information System (2021)

According to BPS (2019) chili trade in DIY has a Trade and Transportation Margin (MPP) of 46.72 percent. This value is quite high. The marketing margin for cayenne pepper in DIY in 2020 had the largest margin in January, which reached IDR 37.776/kg with a price at the producer level of IDR 24.126 and a price at the final consumer level reaching IDR 61.902/kg. The amount of marketing margin is affected by the length of the marketing channel because every marketing agency that is passed by a product will incur costs, namely marketing costs. The high marketing margin of cayenne pepper is an interesting thing to study further. Especially after the formation of a chili auction market in Sleman Regency. According to Jamhari and Ebban (2012) the chili auction market can shorten the distribution chain, as well as improve the price formation mechanism which will increase the selling value of chili at the farm level.

According to research conducted by Sofanudin and Budiman (2019) shows that the marketing channel for cayenne pepper in Kanigoro District, Blitar Regency consists of three marketing channels. Cayenne pepper marketing involves three marketing agencies, namely collectors, wholesalers and retailers. Meanwhile, Khotimah's research (2018) shows that the marketing of cayenne pepper in Pagerjuran Village, Boyolali Regency, has two marketing channels. The marketing of cayenne pepper in Pagerjuran Village, Boyolali Regency, involves marketing institutions, namely wholesalers, wholesalers, central dealers (Jakarta) and traders outside the city. Based on the studies above, it shows that cayenne pepper marketing has a variety of marketing channels and marketing agencies involved. In Kurniasih's research (2019) on the marketing of cayenne pepper in Kertajati District, Majalengka Regency, it is known that the marketing functions carried out by farmers are relatively simple, namely the exchange function and the facility function, while the marketing agency performs the marketing function,

namely the exchange function, physical function and facility function.

Khotimah et al.'s research (2018) it can be seen that in the marketing of cayenne pepper in Pagerjuran Village, Boyolali Regency, the most efficient channel is the third channel with farmer's share of 94.9% and the smallest total margin of IDR625/kg (5.1%) consisting of marketing costs IDR206/kg and total profits IDR419/kg. In this channel, farmers sell their produce to collectors and then distribute it to the central distributor. Analysis of marketing efficiency considers various aspects including quantitative indicators such as marketing margins, the value of farmer's share, and the value of the profit to cost ratio.

Based on Rusdiyana's research (2018) it is known that the chili auction market in Kulonprogo has a role consisting of an exchange function, a physical function and a function of providing infrastructure that makes it easier for farmers to market chilies through the auction market. According to research conducted by Tarigan et al. (2021) the marketing system of Carica in Kejajar District consists of 6 marketing channels involving some marketing institutions such as farmers, retailers, village collectors, sub-district collectors, and processing industries. Market conditions at the farmer level are perfect competition. However, it leads to an oligopoly at the seller level because the number of collectors is less than the number of processing industries that buy Carica.

Based on the description, the purpose of this study was to identify marketing channels for cayenne pepper in Turi District, Sleman Regency and identify differences in the efficiency of cayenne pepper marketing through the auction market and other channels based on the marketing margin approach, farmer's share and profit to marketing cost ratio.

METHODS

This research was conducted in Turi District, Sleman Regency, Yogyakarta Special Province. Data collection was carried out from December 2021 to January 2022. This study used primary data and secondary data. Primary data was obtained through direct interviews with cayenne pepper producing farmers and marketing institutions involved in cayenne pepper marketing in Turi District. The direct interview technique was carried out using a list of questions (questionnaire). In addition, field observations were also carried out directly to find out the marketing activities that occurred and the marketing institutions involved. While secondary data were obtained from institutions or agencies related to the commodity of cayenne pepper, including the Central Statistics Agency (BPS), DIY Bappeda, Ministry of Agriculture and other libraries.

Respondents were taken by purposive sampling. The method of taking respondents was done deliberately with the consideration that respondents were divided into 2 categories, namely respondents who did marketing of cayenne pepper through the auction market and respondents who did marketing of chili through channels other than the auction market. Determination of respondents based on information and directions from the Agricultural Extension Agency (BPP) Pakem-Turi District. Based on directions from BPP, four farmer groups were obtained from two villages, namely Wonokerto Village and Donokerto Village. Wonokerto Village and Donokerto Village are production centers for cayenne pepper in Turi District. Apart from these farmer groups, farmer respondents were also obtained from outside the farmer groups. Farmer respondents who did marketing through the auction market were found in two farmer groups, namely the Lestari Farmer Group and the Sidoarum Farmer Group, while farmer respondents who did marketing not through the auction market were mostly found in two farmer groups, namely the Sumbermulya Farmer Group and the Subur Farmer Group. In this study, 103 respondents were obtained from farmer groups consisting of 26 farmers from the Lestari Farmer Group, 20 farmers from the Sidoarum Farmer Group, 23 farmers from the Subur Farmer Group, 17 farmers from the Sumbermulya Farmer Group and 17 farmers outside the farmer group. The determination of respondents to marketing institutions other than the auction market was carried

out through the tracing method (snowball sampling) with information obtained from previous respondents. This is because the information about marketing institutions is not known with certainty by researchers. In this study there were 16 marketing agency respondents consisting of one auction market, six collectors, two wholesalers, and seven retailers. Data processing is done using qualitative and quantitative analysis methods. The marketing channels studied include producers, collectors, retailers, institutional consumers, and household consumers.

Analysis of marketing institutions can be done by observing the parties involved in the marketing channel. The involved parties carry out or develop business activities. Marketing functions can be seen from each function performed by marketing agencies in distributing oyster mushrooms from producers to end consumers. Mathematically, marketing margin can be calculated using the formula:

$$MT = Pr - Pf$$

Information: MT (Total Margin); Pf (Farmer's price); Pr (Price at the consumer level)

Farmer's share is the difference between prices at the retail level for food and fiber products and this marketing margin is the portion of the value paid by the final consumer received by farmers in the form of a percentage (%) (Asa et al. 2021). Mathematically it can be formulated by the following equation:

$$Fs = (Pf/Ps) \times 100\%$$

Information: Fs (Farmer's share); Pf (Farmer's price); Pr (Price at the consumer level)

This research is to find out the cayenne pepper marketing channel in Turi District. It uses the market system, qualitative analysis such as marketing channel, marketing agency, and marketing function. For quantitative analysis such as marketing margins, farmer's share and benefit to cost ratio marketing. So Comparison of marketing efficiency through the auction market with that through other channels and then Recommendations for more efficient marketing channels Research framework in Figure 2.

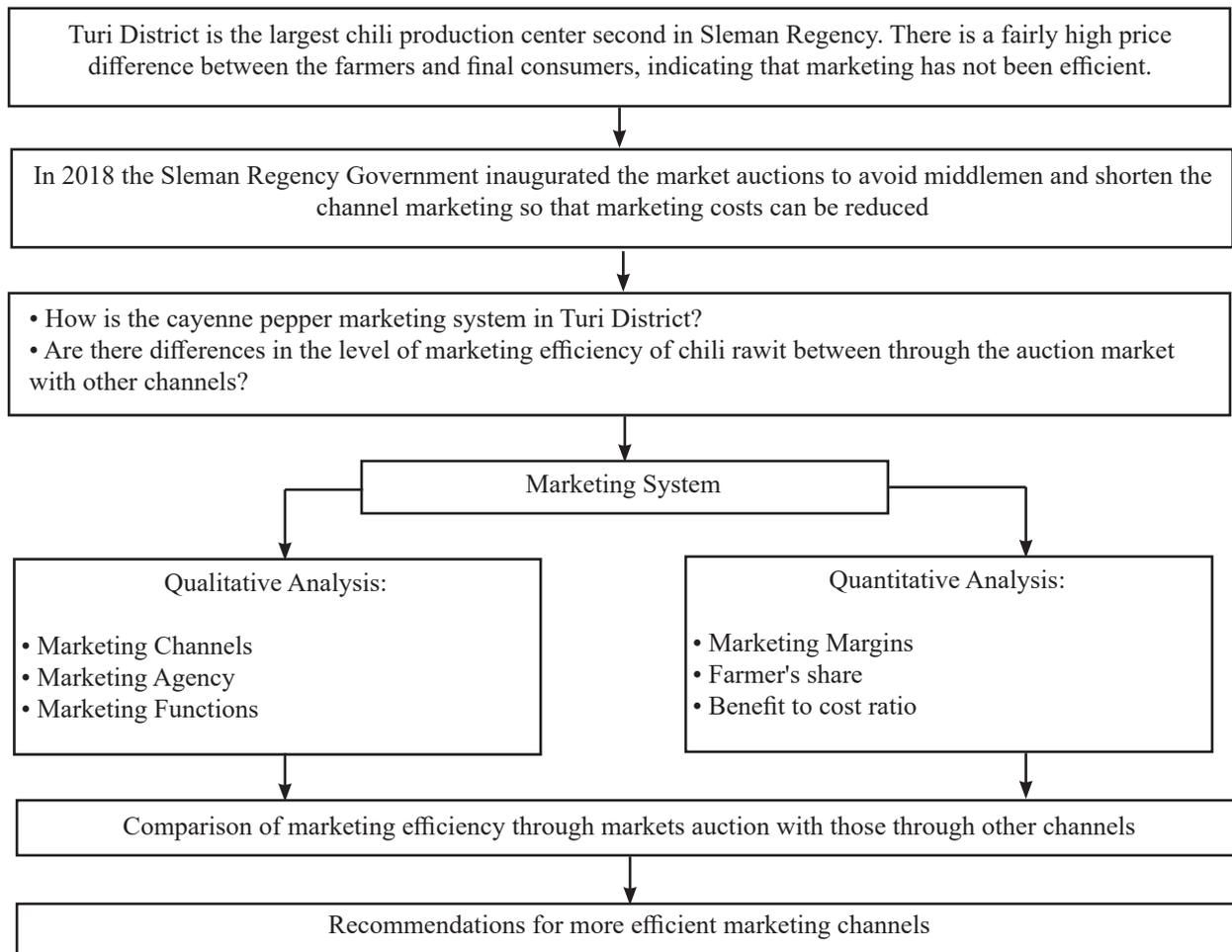


Figure 2. Research framework

RESULTS

Overview General Research Location

This research was conducted in Turi District, Sleman Regency, Special region of Yogyakarta. Sleman Regency has potential in the development of the agricultural sector, especially horticulture. Sleman Regency is one of the horticulture production centers in DIY, especially cayenne pepper. Sleman Regency had a harvest area of cayenne pepper in 2019 reaching 668 ha

with a total production of 5633.4 tons. Turi District is one of the cayenne-producing areas in Sleman Regency with a contribution of 11.6% of the total cayenne production in Sleman Regency in 2019 with a harvested area of 158 hectares. Turi District is one of the sub-districts in Sleman Regency, which is 9 km to the north of the capital of Sleman Regency. The following area by type of land use (ha) per village in Turi District in 2019 can be seen in Table 5.

General Description of the Chili Auction

Market The chili auction market for Sleman Regency is located in Purwobingun Village, Pakem District, Sleman Regency. The Sleman Regency chili auction market was established and managed by the Puncak Merapi Horticulture Farmers Cooperative (PHPM) in 2018 and supported by the Sleman Regency Agriculture and Fisheries Service and Bank Indonesia. The auction market was established with the aim of encouraging profitable efforts for all parties, namely farmers, traders, and consumers in chili marketing in Sleman Regency. The types of chili on the auction market are red bird's eye chilies (RM), ORI's bird's eye chilies, small ori bird's eye chilies (ORI K), cempluk bird's eye chilies, super curly chilies (SP), Elektra curly chilies (ELX), super-sized curly chilies. small (SPx), super curly chili with the smallest size (TX), and super special curly chili (SP Full). The auction market is expected to help stabilize chili prices, strengthen farmers' selling prices, and shorten the distribution chain. The mechanism for selling chilies in the auction market uses an auction

system, namely the price is set based on the highest bidding price submitted by the bidders. Traders who wish to take part in the process need to be registered in the auction market system application. The registration process that needs to be carried out is submitting a photocopy of an identity card (KTP) and signing a memorandum of understanding with the auction market to gain access to the auction application, namely at *Panen.id*. The diPanen.id application has three types, namely diPanen.id for buyers, managers, and gathering points. The following applications at Panen.id can be seen in Figure 3.

Characteristics of Chili Farmer Responses

Farmer respondents in this study were 103 cayenne pepper farmers in Turi District. Respondents came from four farming groups, namely the Lestari farmer

group, the Sidoarum farmer group, the Sumbermulya farmer group, and the farmer group, and there were also farmer respondents who were not members of a farmer group. The majority of farmer respondents have an age range of 41 to 50 years, namely 34% with a high school education level, namely 44.7%. Most chili farmers in Turi District have 2 to 3 dependents. For experience in carrying out farming activities, the respondents of chili farmers in Turi District were mostly in the range of 10 to 20 years, namely 41.7%

Characteristics of Respondents Marketing Institutions

Respondents to marketing institutions in this study totaled 16 marketing institutions for cayenne pepper in Turi District which consisted of an auction market, collectors, wholesalers and retailers.

Table 5. Area by Type of Land Use (Ha) per Village in Turi District in 2019

Village	Paddy Field	Yard Building	Dry Soil	Others	Total
Bangunkerto	34	294.02	324.00	50.98	703
Donokerto	124	323.60	137.25	156.15	741
Wonokerto	70	522.00	866.12	99.88	1558
Girikerto	44	310.00	820.21	132.79	1307
Turi District	272	1449.62	2147.58	439.8	4309

Source : BPS (2020)

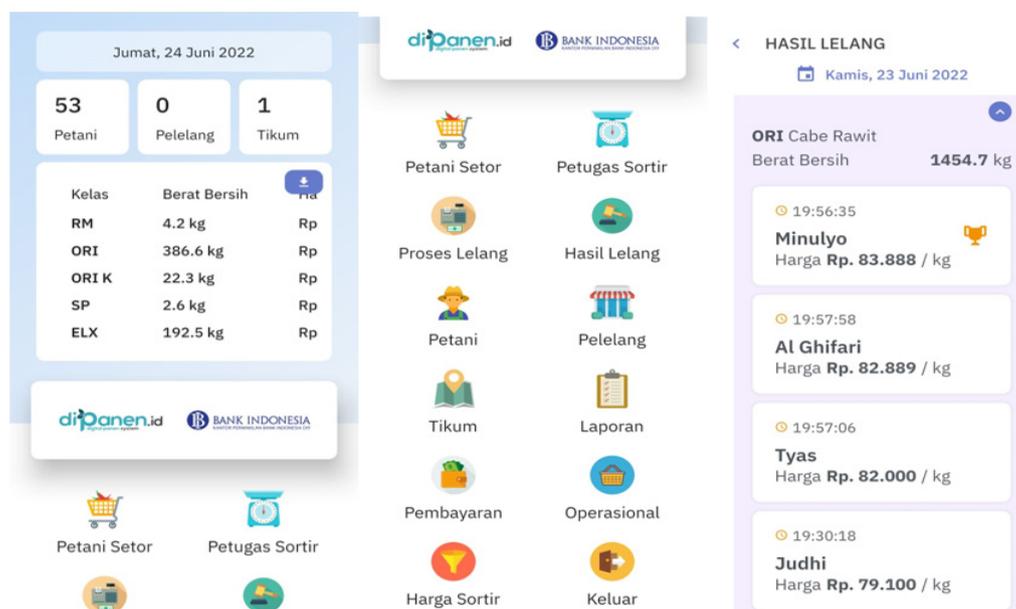


Figure 3. Applications at Panen.id

1. Chili Auction

Market The auction market is located in Purwobinangun Village, Pakem District, Sleman Regency. The types of chili on the auction market are red bird's eye chilies (RM), ORI's bird's eye chilies, small ori bird's eye chilies (ORI K), cempluk bird's eye chilies, super curly chilies (SP), Elektra curly chilies (ELX), super-sized curly chilies. small (SPx), super curly chili with the smallest size (TX), super special curly chili (SP Full). However, this research focuses on the type of ori cayenne pepper because it is the chili that is most widely cultivated by chili farmers in Turi District. The selling price for chilies in the auction market is determined using an auction system, which is based on the highest bid price submitted by the bidders. Auction participants are large wholesalers from various regions who have been registered in the auction market system. There are 40 registered auction participants, but 20 traders who are actively bidding. The auction market has 12 workers consisting of sorting, grading, packaging, and administrative workers. The auction market has 14 gathering points spread across various sub-districts in Sleman Regency to facilitate and reduce transport costs for farmers.

2. Collector Traders

Collector traders are traders who take cayenne pepper directly from chili farmers. In the study, it was found that there were six collecting traders who were the sales goals of chili farmers in Turi District. Farmers collect harvest from 14.00 to 20.00 WIB. Farmers receive payments using a debt system, namely payments made after 20.00 when the price information from the market is known. Large collectors have 6 workers, while small collectors only have 1 to 2 workers. The workforce has the task of sorting, grading, packaging, loading and unloading with a wage of IDR1,800,000/month. There are two types of packaging for large collectors, namely cardboard and crates. Cartons are used for in-land shipping while crates are used for inter-island shipping. Cartons have a capacity of 35 kg and cost IDR14,000 while crates have a capacity of 30 kg and cost IDR22,000. While small collectors use packaging in the form of sacks.

3. Outside Regional

Wholesalers Wholesalers are traders who obtain cayenne pepper from collectors or auction markets and

distribute it to retailers and final consumers outside the region. Wholesalers in this study consisted of traders from the Keramat Jati Main Market and Cibitung Main Market. Delivery of chilies from Turi District is carried out from 22.00 to 23.00 and reaches the Keramat Jati Main Market and Cibitung Main Market from 08.00 to 09.00. The loading and unloading process is carried out by the wholesaler's workforce of 4 to 6 people and is continued with the process of sorting the chilies to separate the chilies that are not in accordance with the standards of the wholesalers, including chilies that are rotten and chilies that are not yet ripe.

4. Retailers

Retailers are traders who sell cayenne pepper directly to end consumers. Retailers in marketing cayenne pepper in Turi District consist of retailers in Sleman Regency and retailers outside the Sleman Regency area, namely retailers in Central Java, Jakarta, and Bogor. Retailers obtain cayenne pepper from the auction market, collectors, wholesalers, or directly from farmers. Retailers sell chilies in small volumes. Retailers in doing business do not only sell chilies, but also sell other vegetable commodities.

Marketing Channel Analysis

Channel I

Involves the chili auction market marketing agencies, wholesalers, and retailers. Farmers sell their crops by bringing them to the auction market themselves. The chili farmers from Turi District who sell their crops to the auction market are mostly members of the Farmer's Group. This is because assistance with chili production facilities such as mulch, fertilizer, seeds, and medicines is channeled to members of farmer groups who are registered to do marketing in the chili auction market. The following marketing channels cayenne pepper in Turi District, Sleman Regency can be seen in Figure 4.

Channel II

In the study it was known that channel II had a sales volume of 516 kg of ori cayenne pepper. The auction market allocates a purchase quota for local retailers, which is a maximum of 30% of the auction market volume. Channel II is not much different from channel I, except that retailers buy cayenne pepper directly from the auction market without going through wholesalers.

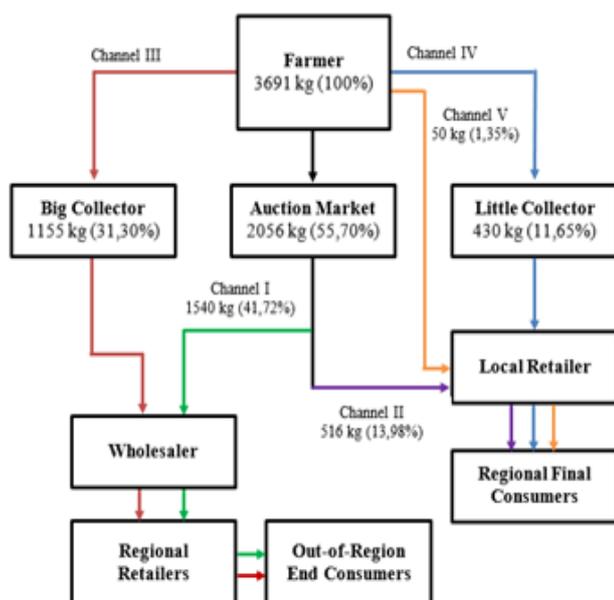


Figure 4. Marketing channels cayenne pepper in Turi District, Sleman Regency

Channel III

Marketing institutions involved in channel III are collectors, wholesalers and retailers. In channel III, farmers sell their crops to large collectors. There are two large collectors in this study who carry out marketing to markets outside the region, namely to the Keramat Jati Main Market and the Cibitung Main Market. The sales volume of cayenne pepper collectors in channel III amounts to 1155 kg.

Channel IV

Channel IV is not much different from channel III except that retailers buy cayenne pepper directly from collectors without going through wholesalers. Collector traders in this channel are small-scale collector traders with a sales volume of 50 to 250 kg per day who also sell other vegetable commodities such as mustard greens and cucumbers. Farmers in channel IV tend to switch to other marketing institutions more easily, especially when yields are in peak periods with large volumes, so farmers in this channel can switch to the auction market (channels I and II) or through large collectors (channel III) due to higher selling price.

Channel V

Channel V is the shortest channel, namely retailers in markets around Turi such as Balerante Market and Turi Market buy cayenne pepper directly from farmers and then sell it directly to end consumers. Retailers in this

channel buy cayenne pepper in small volumes, namely under 30 kg.

Marketing Function Analysis

Creating added value in the marketing function aims to meet and increase customer satisfaction. Marketing of cayenne pepper in Turi District has a marketing function that tends to be the same and repeated between marketing agencies so that the longer the marketing channels or the more marketing agencies involved will increase marketing margins so that the selling price at the end consumer level will be even greater. In the marketing of cayenne pepper in Turi District, there are marketing functions carried out by marketing institutions can be seen in Table 6.

Marketing Functions at the Farmer Level

Cayenne pepper farmers in Turi District carry out three marketing functions, namely exchange functions, physical functions, and facility functions. The exchange function carried out by farmers is sales made to auction market marketing agencies, collectors, and retailers. Chili farmers also carry out physical functions, namely sorting and transportation. Sorting activities are carried out immediately after the harvest is picked from the fields to separate dirt and chilies of poor quality. Sorting activities are also carried out by marketing agencies in all channels, but farmers choose to do their own sorting, in addition to facilitating the sales process at marketing agencies it is also intended to be able to store chilies with poor quality so that they can be consumed by farmer households. Furthermore, the function of facilities carried out by chili farmers is financing activities, risk sharing, and market intelligence. Financing carried out by farmers includes the costs of transportation, wages for harvesting, and sorting labor.

Marketing Function in the Auction

Market The auction market performs a marketing function, namely an exchange function consisting of buying and selling activities; physical function consisting of transportation, packaging, sorting and grading activities; as well as the facility function which consists of standardization, financing, risk management and market intelligence. The auction market buys directly from farmers in the Sleman Regency area. The auction market in carrying out chili marketing activities also has risks that can occur, namely the risk of weight

or quality loss that can occur. The auction market also has a function as market intelligence, namely knowing the number of requests and prices for cayenne pepper in the market.

Marketing Function in Wholesalers

The flow of cayenne pepper in Turi District is marketed through wholesalers outside the area, namely the Keramat Jati Main Market and the Cibitung Main Market. Wholesalers carry out marketing functions, namely exchange functions (purchasing and selling), physical functions (transportation, packaging, sorting, and grading), and facility functions (financing, risk sharing, and market intelligence).

Marketing Functions at Retailers

Retailers in the marketing of cayenne pepper in Turi District are traditional market traders and vegetable stalls. Retailers carry out marketing functions, namely exchange functions, physical functions, and facility functions. The exchange function carried out by retailers is buying and selling. Retailers make purchases from various sources, namely the auction market (channel II), collectors (channel IV), wholesalers (channels I and III) or directly from farmers (channel V).

Marketing Efficiency Analysis

Marketing efficiency analysis is carried out to identify the most efficient channels among the channels formed in the marketing system. Analysis of marketing efficiency is identified using several indicators, including marketing margin, farmer's share and profit to cost ratio. The following marketing margin and farmer's share marketing of cayenne pepper in Turi District can be seen in Table 7.

Table 6. Marketing Functions of Cayenne Pepper in Turi District in 2022

Marketing Agency	Exchange Function		Physical Function				Facility Function		
	Sell	Buy	Transport	Pack	Sorting	Grading	Cost	Risk	Market Intelligence
Channel I									
Farmer	√	-	√	-	√	-	√	√	√
Auction market	√	√	√	√	√	√	√	√	√
Wholesaler	√	√	√	√	√	√	√	√	√
Retail Trader	√	√	√	√	√	√	√	√	√
Channel II									
Farmer	√	-	√	-	√	-	√	√	√
Auction market	√	√	√	√	√	√	√	√	√
Retail Trader	√	√	√	√	√	√	√	√	√
Channel III									
Farmer	√	-	√	-	√	-	√	√	√
Collector Trader	√	√	√	√	√	√	√	√	√
Wholesaler	√	√	√	√	√	√	√	√	√
Retail Trader	√	√	√	√	√	√	√	√	√
Channel IV									
Farmer	√	-	√	-	√	-	√	√	√
Collector Trader	√	√	√	√	√	√	√	√	√
Retail Trader	√	√	√	√	√	√	√	√	√
Channel V									
Farmer	√	-	√	-	√	-	√	√	√
Retail Trader	√	√	√	√	√	√	√	√	√

Table 7. Marketing margin and farmer's share marketing of cayenne pepper in Turi District

Marketing Channel	Farmer Price	Final Consumer Prices	Marketing Margin	Farmer's share
Channel I	37000	48000	11000	77.08%
Channel II	37000	44000	7000	84.09%
Channel III	38000	48000	10000	79.17%
Channel IV	36000	43000	7000	83.72%
Channel V	37000	42000	5000	88.10%

Marketing Margin Analysis

Marketing margin is the difference or difference in the price of cayenne pepper at each marketing institution. Marketing margin is obtained by reducing the selling price with the purchase price at each marketing agency from the farmer level to the final consumer level. the marketing agency that has the highest marketing margin is the retailer. Retailers have a marketing margin of IDR5,000/kg across all channels. Retailers tend to take high margins because sales volume tends to be small and they sell directly to end consumers and have the risk of remaining sales or not being sold out. Wholesalers have a marketing margin of IDR3,500 to IDR4,000/kg which consists of marketing costs of IDR1,210/kg so that the profit earned by wholesalers is IDR2,290 to IDR2,790/kg. Wholesalers take high margins due to the high price risk of cayenne pepper.

Farmer's Share Analysis

Farmer's share is a portion in the form of a percentage received by farmers from the value paid by the final consumer. A high farmer's share value is an indicator of marketing channel efficiency. The farmer's share value has an inverse relationship with the marketing margin. Based on the results of the analysis, it can be seen that the marketing of cayenne pepper in Turi District has a high share of farmers from the price paid by the end consumer. The average farmer's share is more than 80%, this means that more than 80% of the price paid by the final consumer can be enjoyed by chili farmers.

Profit to Cost Ratio Analysis Marketing

Profit to cost ratio is one of the indicators in the analysis of marketing channel efficiency. The following Ratio of Profit to marketing cost of cayenne pepper in Turi District Can be seen in Table 8. Based on these data, the marketing institution that has the highest profit to

cost ratio is the retailer. Retailers have an average profit to cost ratio of 12.92. Retailers tend to take high profits because sales are carried out in units of ounces or per kilogram, so they have a high risk of not running out of sales.

Marketing Operational Efficiency Analysis

Marketing Operational Efficiency Analysis of cayenne pepper marketing in Turi District, Sleman Regency was measured by comparing quantitative indicators between marketing channels including marketing margin, farmer's share, and profit ratio to marketing costs. In the research on cayenne pepper in Turi District, channel V is considered incomparable with other channels because channel V is only run by a few farmers and retailers with a small volume, so that in this study the marketing channels that can be compared are channel I, channel II, channel III and channel IV. Table 9 shows a comparison of the quantitative indicators, namely marketing margins, farmer's share and the ratio of profits to marketing costs in channels I, channels II, channels III, and channels IV in Turi District in 2022. The following Comparison of marketing margin, farmer's share and profit ratio effects on marketing costs of cayenne pepper in Turi District can be seen in Table 9.

The following Indicators of operational efficiency of cayenne pepper marketing channels in Turi District can be seen in Table 10. In determining the efficiency of marketing channels it is necessary to consider various aspects including namely quantitative indicators such as marketing margins, the value of the farmer's share, and the value of the profit to cost ratio. In addition, the determination of marketing efficiency also takes into account the channel pattern formed, the marketing functions performed, the volume of cayenne pepper that can be absorbed by the market, and the price of the chili.

Table 8. Ratio of profit to marketing cost of cayenne pepper in Turi District

Marketing Channel	Profit	Marketing Expenses	Profit to Cost Ratio
Saluran I	8541.17	3247.47	2.62
Saluran II	5884.50	1904.14	3.06
Saluran III	7585.02	3234.98	2.34
Saluran IV	5883.33	1856.67	3.17
Saluran V	4683.33	1056.67	4.43

Table 9. Comparison of marketing margin, farmer's share, and profit ratio effects on marketing costs of cayenne pepper in Turi District

Marketing Channel	Sales Volume (kg)	Marketing Expenses (Rp)	Marketing Margin (Rp)	Farmer's Share	π/c
Channel I	1540	3247.47	11000	77.08%	2.62
Channel II	516	1904.14	7000	84.09%	3.06
Channel III	1155	3234.98	10000	79.17%	2.34
Channel IV	430	1856.67	7000	83.72%	3.17

Table 10. Indicators of operational efficiency of cayenne pepper marketing channels in Turi District

	Operational Efficiency			
	Channel I	Channel II	Channel III	Channel IV
Channel chain length		√		√
Marketing Function	√	√	√	√
Marketing Margin		√		√
Farmer's Share		√		
Ratio π/c				√
Sales Volume	√			

Based on Table 9, it can be seen that the lowest total costs and margins are in channel IV, the highest farmer's share value is in channel II and the highest profit to cost ratio is in channel IV. However, channel II and channel IV have lower sales volume compared to channel I and channel III with a significant difference of 2-3 times. Channels I and III are the channels with the largest volume, the longest channel pattern, and the highest total marketing costs and selling prices.

Managerial Implication

Based on the research results, it was found that the auction market is not a marketing institution that provides the highest purchase price at the farmer level. Large collectors are able to provide a purchase price for cayenne pepper at the farm level which is higher than the auction market with a difference of IDR 1000/kg and take lower profits compared to the auction market. This is reinforced by data when the price of cayenne pepper is high in June 2022.

The majority of farmers in this study do marketing through the auction market. This is because farmers get some convenience in marketing cayenne pepper through the auction market. Farmers who are members of farmer groups who carry out marketing to the auction market receive assistance in the form of production facilities, namely seeds, mulch, fertilizers and medicines, so that they have an impact on farmers' production costs which are relatively lower. In addition, the auction market also provides special sales volume to local retailers around Sleman Regency (channel II), namely 30% of the total sales volume so that the availability of chilies for the local market is still sufficient.

Based on the analysis of marketing efficiency it was concluded that the channel through the auction market tends to be more efficient at local market destinations in Sleman Regency compared to the other channels shown in channel II which has the shortest marketing channel, the lowest marketing margin, the highest farmer's share value and the highest profit to cost ratio equally.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Conclusions that can be drawn from the results of the analysis are that marketing of ori cayenne pepper in Turi District, Sleman Regency in 2022 has five marketing channels. The marketing of cayenne pepper in Turi District involves four marketing institutions, namely the auction market, collector traders, wholesalers, and retailers. Channels I and III are the longest channels involving three institutions with the same final market destination, namely retailers in the Jakarta and Bogor areas. While the shortest channel is in channel V which only involves farmers and retailers. Almost all of the marketing agencies involved carry out the existing marketing functions, namely exchange functions, physical functions and facility functions.

Based on the research results, it is known that marketing through the auction market creates two marketing channels, namely channel I and channel II. For markets outside the region, channel III, through wholesalers, has a better quantitative indicator value for marketing efficiency than channel I. Meanwhile, for local market destinations, channel II has a better efficiency indicator value than channel IV, which goes through small collectors.

Recommendations

The auction market optimizes the application of the auction market more broadly, establishes good relations with bidders, and performs marketing functions efficiently to be able to increase the selling price of cayenne pepper at the farmer level. The auction market can carry out auction market promotions in several regions so that more cayenne pepper farmers and bidder traders carry out marketing through the auction market. Further research is needed on the factors that influence farmers' decisions in marketing cayenne pepper through the auction market, so that the development of the auction market can be more optimal in providing higher selling prices for farmers and more efficient marketing.

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