# Analysis of Pork Marketing in the Market Traditional Karo Regency

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**Abstract.** Meat is one of animal protein sources and is widely consumed by the community, especially in the Karo Regency area. This research aims to identify the characteristics of marketing agencies, marketing channels, marketing margin, farmer share, and pork marketing efficiency in the traditional market of Karo Regency. The method used in data collection is the withdrawal of samples of dilution traders using purposive sampling methods, while samples of breeders and other marketing agencies by tracing methods, data collection is done by interview techniques using questionnaires. Data analysis includes marketing costs, marketing margins, and farmer shares of each marketing channel. The results of this study show that there are two marketing channels namely level I marketing channels consisting of merchants and breeders while level II marketing channels consist of breeders, agents, and retailers. The smallest marketing margin is obtained by the first marketing channel. The largest farmer share was acquired by the first channel. This channel only uses retailer merchants as intermediaries. In this study, both marketing channels are already efficient.

**Keywords**: meat, margin, marketing analysis, pork, traditional markets

## 1. Introduction

In general, the development of the pig population in Indonesia is growing quite sharply and the tendency has increased. This increase is in line with the increase in population growth so that the need for pork is certain to increase. Pig cattle are one of the meat-producing livestock commodities, besides that pig cattle also have beneficial properties and abilities that have a fairly fast growth rate and have a high number of litter sizes [1].

Meat is one of the livestock products of high-quality animal protein sources and is widely consumed by the community, especially in the Karo Regency area. The average meat production in Indonesia in 2019 is 490,400 tons of beef, pork 224,000 tons, chicken meat breed 3,495,700 tons, and chicken meat village 298,700 tons [2]. Meat is one of the livestock products of high-quality animal protein sources and is widely consumed by the community, especially in the Karo Regency area. The average meat production in Indonesia in 2019 is 490,400 tons of beef, pork 224,000 tons, chicken meat breed 3,495,700 tons, and chicken meat village 298,700 tons [2].

The demand for pork is increasing along with the increase in the number of people who can consume it, especially areas that are majority non-Muslim, then the area certainly also experienced

an increase in demand for pork. In addition, pork is favored because of its high energy content the large levels of body fat [3]. Furthermore, demand for pork is influenced by income levels, population, socio-cultural, religious, and community tastes. Demand in urban areas tends to be higher, due to the number of denser populations with higher incomes than in the countryside [4].

The success of market development is focused on marketing efficiency, namely reducing marketing costs and optimizing the role of existing organizations. The problem faced is how to create a marketing system and handling livestock that is in line with the improvement of the welfare of market participants involved. The short length of the marketing channel will affect the profits of market participants or institutions involved.

Retailers in the traditional market of Karo Regency are part of the trading system that has an important role in marketing activities. The role of retailer traders in Karo Regency, especially pork marketing activities, has been going on for quite a long time and can meet the demand for pork both in the amount, shape, and time desired by consumers. So that the retailer's merchants determine the selling price of pork.

The production and utilization of pork are high in the social and cultural Karo tribe, one of the sources of animal protein for the community, and a source of livelihood. Therefore the Author conducted a study "Analysis of Pork Marketing in Karo Regency Traditional Market".

## 2. Research Methods

This research was conducted at three traditional market locations in Karo Regency and determined purposively. The traditional market chosen as a research location is the traditional Berastagi market located in Berastagi District, Kabanjahe traditional market is in Kabanjahe District, and Tigapanah traditional market in Tigapanah District.

In this study, the samples used were all the components involved from the pork production process to consumers in the traditional market of Karo Regency consisting of breeders, collecting merchants, cutting merchants, and retailers.

### 2.1. Sampling Techniques

The technique used in this study uses purposive sampling methods, namely pork traders located in Berastagi traditional market, Kabanjahe traditional market, and Tigapanah traditional market.

Sampling methods at the level of marketing agencies using snowball sampling methods, aim to find out the pork marketing chain in the traditional market of Karo Regency. This method is done by interviewing respondents involved in the marketing chain to gather the required information.

## 2.2. Data Collection Methods

The data collection methods used in this study are primary data and secondary data. Primary data is obtained directly on the ground by conducting interviews with respondents while secondary data is obtained from the Central Bureau of Statistics of Karo Regency and data from other agencies related to research.

## 2.3. Data Analysis

The form of marketing channels is obtained based on survey data on marketing lines that start from breeders to retailers in the field presented in the form of descriptions and tabulation of numbers. Data processing is done by descriptive methods. Qualitative analysis is used to determine the characteristics of marketing agencies, and pork marketing channels. Marketing channels involve agents, merchant collectors, and retailers.

1. Marketing Margin Analysis

Marketing margins are formulated as follows:

$$MP = Pr - Pf$$

Information:

MP = Marketing Margin (Rupiah)

Pr = Price at the consumer level (Rupiah)

Pf = Price at producer level (Rupiah)

Marketing is said to be efficient if it is able to deliver products from the hands of producers to consumers at the lowest cost and fair treatment in the distribution of profits among marketing institutions [5].

2. Farmer Share's Analysis

Marketing can be said to be efficient if the value of the farmer's share > 50%. Farmer's share value is contrary to the marketing margin, the higher the marketing margin, the lower farmer's share. To calculate farmer share's used the formula:

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

Note:

Fs = Farmer's share / marketing efficiency (%)

Pf = Price received by the breeder (IDR)

Pr = Price paid by consumers (IDR) [6]

3. Marketing Efficiency

Marketing can be said to be efficient if it can convey production results to consumers at the cheapest cost and is able to conduct a fair share of profits from the overall price paid by consumers to all parties who participate in production and administrative activities [7]. That marketing systems are said to be efficient if the value of marketing efficiency is < 1 [8].

$$\text{Marketing Efficiency} = \frac{\text{Total Marketing' Costs}}{\text{Total Product Prices}} x100\%$$

## 3. Result And Discussion

In conveying pork commodities from producers to consumers, there will be several marketing agencies. In this study, there were 14 retailer respondents who were in the traditional market of Karo Regency. Each retailer from the three traditional markets involved has characteristics that affect the marketing activities carried out. Characteristics of retailers which include gender, age, education level, and trading experience. Stated that age affects productivity [9]. Education is one of the most important factors for traders in the speed and accuracy of making decisions regarding their business [10].

### 3.1. Marketing Institute

Marketing is a process by which livestock products can reach consumers through marketing agencies. The product marketing process is an activity carried out by marketing agencies. The commodity observed is pork. Karo regency is one of the producers of pork. Based on the results of research that has been done, the location of pork sales is located in three traditional markets in Karo Regency, namely Berastagi District, Kabanjahe District, and Tigapanah District and there are two marketing institutions, namely agents and retailer traders.

Breeders are producers of pork that market or sell pork to agents and retailers. The number of breeder respondents in Karo Regency there were 23 respondents from seven sub-districts, namely Tigapanah District, Berastagi District, Merdeka District, Simpang Empat District, Namanteran Subdistrict, Umbrella District, and Dolat Rakyat District. In this study, it is illustrated that each breeder already has his subscription.
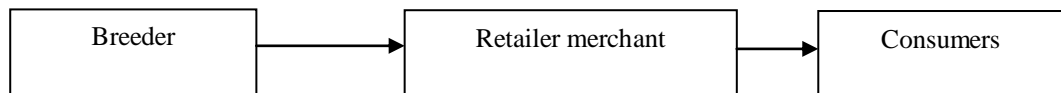
An agency is a marketing agency that buys pork from breeders and sells pork to retailers. Agents ofthis study two respondents buy from breeders directly.

Retailers are merchants who buy pork from breeders and agents. In this study, the retailers selected as samples were traders who were in Berastagi traditional market, Kabanjahe Traditional Market, and Tigapanah Traditional Market in Karo Regency area.

## 3.2. Marketing Channels

In marketing activities there are marketing institutions that are intermediary institutions that connect producers to consumers in delivering production results:
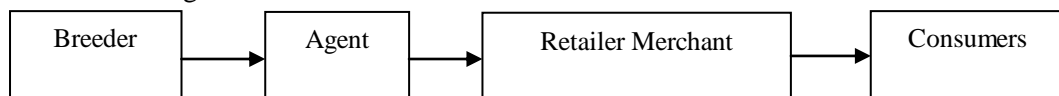
Level I Marketing Channels

| Breeder | → | Retailer merchant | → | Consumers |

**Figure 1.** Level I Marketing Channel Scheme

Based on the picture above is a type of marketing that includes a level one marketing channel because this channel only uses one intermediary agency, namely the retailer merchant. The pork breeders on this channel come from Karo Regency and are taken directly by retailers by car.

Level II Marketing Channels

| Breeder | → | Agent | → | Retailer Merchant | → | Consumers |

**Figure 2**. Level II Marketing Channel Scheme

Based on the picture above the level II marketing channel is a level II marketing channel because of the marketing of pork from breeders to consumers through two marketing agencies, namely agents and merchants of breeder retailers from Karo Regency and selling pork to agents then agents selling pork back to retailers by transporting pork to the market using car pick up.

## 3.3. Marketing Margin

Marketing margin is the difference in the price received by pig farmers with the price paid by consumers who buy pork. The marketing margin of a commodity consists of marketing costs incurred so that each marketing institution is accepted by pig farmers and marketing agencies. In finding the expenses of every marketer, it is necessary to analyze marketing margins on every marketing channel.

**Table 1.** Pork marketing costs incurred by each marketing agency on level I marketing channels.

marketing costs at level channels I

| No | Description | Number of Pig (kg/month) | Market Costs (IDR/month) | Average Costs (IDR/kg) |
|---|---|---|---|---|
| 1 | Breeder | 18240* | | |
| | | | - | - |
| 2 | Merchant Retail | 15560** | | |
| | a. Workforce | | 3.516.000 | |
| | b. Rent Shop | | 882.000 | |
| | c. Hygiene | | 54.000 | |
| | d. Plastic | | 292.000 | |
| | e. Gas | | 467.200 | |
| | f. Feed | | 416.000 | |
| | g. Transportation | | 808.000 | |
| | Total | | 6.435.200 | 413,57 |
| | Total Market Cost | | 6.435.200 | 413,57 |

Source of processed data survey results (2021);
Description *: Amount of pork sold (living condition) ;     **: Amount of meat sold.

According to "Table 1", the marketing costs of retailers incurred amounting to IDR 6,435,200,- per month, each consisting of labor costs of IDR. 3,516,000,- per month, store rental costs IDR. 882,000,- per month, cleaning costs of IDR. 54,000,- per month, plastic costs IDR. 292,000,- per month, gas costs IDR. 467,200,- per month, feed costs IDR. 416,000,- per month, Transportation costs IDR. 808,000,- per month and the amount of pork obtained is IDR15,560 kg so that the average cost per kg is IDR. 413.57,- per kg.

**Table 2.** Pork marketing costs are incurred by each marketing agency on level II marketing channels.

| No | Description | Number of Pigs (kg/month) | Market Costs (IDR/bulan) | Average Cost (IDR/Kg) |
|---|---|---|---|---|
| 1 | Breeder | 29880* | | |
| 2 | Agent | 29880** | | |
| | a. Petrol | | 2.400.000 | |
| | b. Consumption | | 1.600.000 | |
| 3 | Retailer Merchant | 24768*** | | |
| | a. Workforce | | 5.193.332 | |
| | b. Rent Shop | | 1.200.000 | |
| | c. Hygiene | | 56.664 | |
| | d. Plastic | | 287.108 | |
| | e. Gas | | 816.000 | |
| | f. Feed | | 400.000 | |
| | Total | | 7.953.104 | 321,10 |
| | Total Market Costs | | 11.953.104 | 454,97 |

Source: Survey results of processed data (2021)
Description: *: Number of pigs sold (life)
        **: Number of pigs sold (living)
        *** : Amount of meat sold

Based on "Table 2" costs incurred by agents consist of gasoline costs of Rp. 2,400,000,- per month and consumption costs of Rp. 1,600,000, - per month and with the amount of pork marketed as much as 29,880 kg per month then the average cost per kg is Rp. 133.87,- per month. The marketing costs of retailer merchants include labor costs of Rp. 5,193,332, - per month, Shop rental costs of Rp. 1,200,000,- per month, cleaning costs of Rp. 56,664,- per month, plastic costs of Rp. 287,108,- per month, gas costs of Rp. 816,000,- per month, feed costs of Rp. 400,000,- per month and the amount of pork marketed as much as 24,768 kg per month then the average cost per kg is Rp.321.10, - per month.

**Table 3.** Marketing margins

| Description | Market Channels | |
| --- | --- | --- |
| | 1 | 2 |
| | Value (IDR/kg) | Value (IDR/kg) |
| **Breeder** | | |
| Purchase Price | 53.400* | 54.167* |
| Market Costs | | |
| **Agent** | | |
| Purchase Price | | 50.000* |
| Market Cost | | 133,870 |
| Selling Price | | 55.000* |
| Margin | | 5.000 |
| **Merchant Retail** | | |
| Purchase Price | 53.400* | 53.333* |
| Market Cost | 413,57 | 321,100 |
| Selling Price | 100.000 | 107.222 |
| Margin | 46.600** | 53.889** |
| Total Market Costs | 413,570 | 454,970 |
| Total Margin | 46.600 | 58.889 |

Source: Survey results of processed data (2021)

Description *: Amount of pork sold (living condition) ;      **: Amount of meat sold.

Based on "Table 3", the two pork marketing channels in Karo Regency the largest marketing costs are borne by marketing channel II amounting to Rp. 454,970, - this is because the marketing chain through two marketing agencies, and the amount traded is very large. While the cost is borne by marketing channel I amounted to Rp. 413,570, which is the shortest marketing chain.

The largest marketing margin is in marketing channel II which is Rp. 58,889, - because it is the longest chain of marketing channels I. The smallest marketing margin is in marketing channel I which is Rp. 46,600, - because on this channel breeders directly sell pork to retailers. That the more intermediary traders involved in marketing channels, the greater the marketing margins formed [11].

## 3.4. Farmer's share

Farmer's share is a price comparison that breeders receive with prices paid by consumers. Farmer's share in a marketing activity can be used as a basis or benchmark for marketing efficiency. The higher the percentage rate of farmer's share received by farmers, the more efficient the marketing activities carried out, and conversely the lower the percentage rate of farmers' share received by farmers, the lower the efficiency level of marketing.

**Table 4.** Farmer's share analysis on pork marketing channels in Karo County.

| Market Channels | Price at the Breeder Level (IDR/Kg) | Price at the Consumer Level (IDR/Kg) | Farmer's Share (%) |
| --- | --- | --- | --- |
| 1 | 53400 | 100000 | 53.40% |
| 2 | 54167 | 107222 | 50.52% |

Source: Survey results of processed data (2021)

Based on "Table 4" that farmer's share on marketing channel I am 53.40% while marketing channel II gets the lowest farmer's share value of 50.52%. Stated that the shorter the marketing chain, the greater the value of the farmer's share and more efficiency [12].

## 3.5. Pork Marketing Efficiency

**Table 5.** Marketing efficiency analysis on the marketing channels of chicken eggs in Karo Regency

| Marketing Institute | Cost (IDR/kg) | Product Value (IDR/kg) | Efficiency Value (IDR/kg) |
| --- | --- | --- | --- |
| **Channels I** | | | |
| Retailer Merchant | 413.570 | 100000 | 0.0041 |
| **Channels II** | | | |
| Agent | 133.870 | 55000 | 0.0024 |
| Retailer Merchant | 321.100 | 107222 | 0.0030 |

Source: Survey results of processed data (2021)

Based on the formula marketing systems can be said to be efficient if the value of marketing efficiency is <1 which means efficient [8]. By looking at the analysis in Table 17, that the efficient value of all marketing institutions in the traditional market of Karo Regency is already efficient, namely <1. Stated that marketing efficiency is influenced by the length and shortness of marketing lines. The shorter the marketing path, the more efficient the marketing activities [13].

## 4. Conclusion

Pork marketing in Karo Regency Traditional Market consists of two marketing channels, level I marketing channels and level II marketing channels consisting of breeders, agents, and retailers.The smallest marketing margin on a channel I am Rp. 46,600,- per kg, Farmer's Share channel I occupy the highest value of 53.40%, it's marketing efficiency that level I and level II marketing channels are already efficient with a value of <1.

**REFERENCES**

[1] Bunter and Bennett. 2004. Animal Science and Industry. Fourth printing. PrenticeHall, Inc. New Jersey.

[2] Directorate General of Livestock and Animal Health. (2019). Livestock Sub Sector http://www.pertanian.go.id/ap_pages/mod/datanak.

[3] Yemima, Herlinae and Redianto. 2015. Analysis of Price, Age and Consumer Income Factors on Demand for Pork in the Kuala Kurun Traditional Market, Gunung Mas Regency. Journal of Tropical Animal Science 4 [2] December 2015.

[4] Susanto, E. 2011. Identification of Pork in Sausage Through Myofibril Protein Characterization. Publication. Animal Husbandry Study Program, Faculty of Animal Husbandry, Lamongan Islamic University.

[5] Masyrofie. 1994. Diktat of Marketing of Agricultural Products, Department of Agricultural Socio-Economics,UniversitasBrawijaya. Poor.

[6] Bisuk, P. 2009. Analysis of International Trade System and Elasticity of Transmission of CPO Herga on the price of FFB (Fresh Fruit Bunches) of Palm Oil (Case Study: Menanti Village, Sosa District, Padang Lawas Regency). Essay. USU. Medan.76.

[7] Rahardi, 2000. Agricultural Trade System. http://sibatakrantau.blogspot.com. (Accessed on August 15, 2014).

[8] Downey, W. David and Erickson, Steven P. 1992. Agribusiness Management. Jakarta.

[9] Prawironusumo, S. 2000. Farming Science, BPIE Yogyakarta.

[10] Azwar, S. 2011. Reliability and Validity. Yogyakarta: Student Library.

[11] Amalia, J, AHD Utami and BA Nugroho 2013. Marketing Analysis of Broiler Chicken Business. Small Scale and Large Scale at the Partnership Pattern of PT Sinar Sarana Sentosa Malang. Thesis Brawijaya University Malang.

[12] Maria, H., and Setiyowati. 2019. Marketing Chain of Super Kampung Chicken in East Lampung Regency. Faculty of Agriculture. TulangBawang University, Lampung. Bandar Lampung. Volume 3, No1.

[13] Tjahjono HK and Ardi H. 2008. Study of Management Students' Intentions at the University of Muhammadiyah Yogyakarta to Become Entrepreneurs. Business Management Utility. 16(1): pp. 46-63.