



Margin Analysis of Pork Traders' Marketing in The Kawangkoan Traditional Market, Minahasa Regency

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Abstract: The objectives of this study were (1) To determine the pork marketing channels that occur in the Kawangkoan Traditional Market, Kawangkoan District, Minahasa Regency, (2) To analyze marketing margins at each level of pork marketing institutions in the Kawangkoan Traditional Market, Kawangkoan District, Minahasa Regency and (3) To analyze farmer's share of pork marketing in the Kawangkoan Traditional Market, Kawangkoan District, Minahasa Regency. This study was conducted in August 2022 at the Kawangkoan Traditional Market, Kawangkoan District, Minahasa Regency. The data sources used in this study were primary data and secondary data. The sample of respondents in this study consisted of farmers (producers), collectors, retailers and end consumers. The sample of farmers (producers) and consumers was determined using the puIDRosive sampling method. The sample of collectors and retailers was determined using the snowball sampling method. The data analysis model used in this study was descriptive analysis, marketing margin analysis and farmer's share. The results of the study indicate that there were 2 pork marketing channels in the Kawangkoan traditional market, Kawangkoan District, Minahasa Regency. Marketing margins in channels I and II were both IDR 30,000/kg, however, due to the presence of different intermediary institutions, the profit sharing was different. Farmer's share in marketing channels I and II still appears to be quite efficient at 53.85%, meaning that for every IDR 100 paid by consumers, farmers (producers) only receive around IDR 53.85 and the remaining IDR 46.15 was the share for other intermediary institutions (collectors and retailers), including profit margins and marketing costs.

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INTRODUCTION

The livestock sector is a crucial subsector in agricultural development in Indonesia, contributing to the provision of animal-based food, employment, and community income. Pigs are a good source of protein, high in calories, and relatively inexpensive. Pigs are mostly raised as a sideline to the primary business of farming. Pigs are economically significant because they are well-known as beef cattle. Pigs are monogastric meat sources that produce a large number of offspring per litter, allowing them to reproduce quickly and achieve relatively high productivity (Kumanireng, 2017).

North Sulawesi is one of the Indonesian provinces with comparative and cultural advantages in pig husbandry and pork consumption. The people of North Sulawesi, particularly in the Minahasa region, have a strong pork consumption culture. Pork is not only a daily staple but also an important part of various traditional and religious celebrations such as thanksgiving, weddings, funerals, Christmas, New Year, and Easter. Demand for pork in North Sulawesi is high and stable throughout the year, although prices often fluctuate. This indicates low demand elasticity, with consumers continuing to purchase even when prices are rising. Furthermore, the Minahasa people face no religious or cultural barriers to pork consumption, allowing widespread pig farming, from households to medium-sized businesses.

Kawangkoan Market is located in Kawangkoan, Minahasa, North Sulawesi. This market is known as the economic center for several sub-districts in Minahasa Regency. Furthermore, the Kawangkoan Animal Market serves as a benchmark for animal markets in North Sulawesi, serving as a meeting place for cattle and horse traders from various regions. The Kawangkoan traditional market is known as one of the centers of pork trading in the Minahasa region. Pork trading activities at this market involve various actors, from breeders and collectors to retailers. However, the price of pork received by consumers is often much higher than the price received by breeders. This raises questions about the efficiency of the marketing channels and the marketing margins earned by each actor in the distribution chain.

High marketing margins that are disproportionate to farm-level prices indicate a potential imbalance in market structure and profit distribution. If this continues, it could create disincentives for farmers as primary producers, and harm consumers who must pay high prices. Analysis of pork marketing margins in the Kawangkoan traditional market is crucial to determine the efficiency of distribution channels, the margins at each link in the marketing chain, and to formulate policy recommendations that can improve farmer welfare and create a fairer market for all stakeholders.

MATERIAL AND METHOD

This research was conducted in August 2024 at the Kawangkoan Traditional Market in Minahasa Regency. Data collection methods included interviews and questionnaires to describe the operation of the marketing channel. The data sources used in this study were primary and secondary data. Primary data were obtained from observations through face-to-face interviews and questionnaires with pork traders at the Kawangkoan Traditional Market and end consumers. Secondary data were obtained from readily available sources such as scientific journals, books, and government agencies related to this research.

The sample of respondents in this study consisted of farmers (producers), collectors, retailers, and end consumers. The sample of farmers (producers) was determined using a purposive sampling method with specific criteria, namely farmers engaged in pig marketing activities in the Kawangkoan District, Minahasa Regency. Based on the survey results, five farmers were selected who met the criteria. The sample of collectors and retailers was determined using a snowball sampling method. Snowball sampling is a non-probability sampling technique in which initial respondents provide information about other respondents

who meet the research criteria. This technique is useful for reaching populations that are difficult to identify directly, such as hidden or marginalized groups (Etikan et al., 2016; Naderifar et al., 2017).

The samples of collectors and retailers in this study were people involved in marketing pork from breeders (producers) to end consumers in the Kawangkoan traditional market, Kawangkoan District, Minahasa Regency. Based on the survey results, there were 5 collectors and 5 retailers who were designated as respondents. The end consumer sample was determined using a purposive sampling method with certain criteria, namely consumers who purchased pork from retailers who had been designated as respondent samples. Based on the survey results, there were 15 end consumers who were designated as respondents.

Data Analysis

Data obtained from interviews with respondents in the field were then processed, tabulated, and analyzed. The following data analysis models were used:

1. To answer the first objective, descriptive analysis was used.
2. To answer the second objective, the marketing margin formula was used:

$$Mp = Pr - Pf$$

Where

Mp = Marketing margin (IDR)

Pr = Consumer price (IDR)

Pf = Producer price (IDR)

Margins are considered efficient if they are able to deliver products from producers to consumers at the lowest possible cost and provide fair treatment in the distribution of profits among the institutions that operate the margin.

3. To answer the third objective, use the Farmer's share formula:

$$fs = \frac{pf}{pp} \times 100 \%$$

Where:

Fs = Farmer's share

Pf = Price at the farmer (producer) level (IDR/kg)

Pp = Price at the consumer level (IDR/kg)

If the farmer's share is > 50%, marketing is considered efficient. If the farmer's share is < 50%, marketing is not yet efficient (Fahrurrozi, 2018)

RESULT AND DISCUSSION

Condition of Kawangkoan Traditional Market, Minahasa Regency

Kawangkoan Traditional Market is located between Uner Village and Kinali Village, Kawangkoan District, Minahasa Regency. The market is located within a residential area and very close to the Blunté Market. Kawangkoan Traditional Market is open Mondays, Thursdays, and Saturdays from 6:00 AM to 4:00 PM, while the Blunté Market is open only on Thursdays from 6:00 AM to 4:00 PM. Kawangkoan Traditional Market sells staples such as fish, vegetables, pork, chicken, beef, wild boar, and household goods. There are 10 pork vendors in this market, compared to 15 before the ASF outbreak.

Kawangkoan Market continues to innovate in its service, particularly maintaining cleanliness as a key element of service and creating a comfortable environment for vendors and the public, even though it is still categorized as a traditional market. The market management and sanitation staff are committed to maintaining a clean and orderly market, ensuring the market remains clean and organized. Likewise, the synergy between market management and security forces, specifically the Kawangkoan Police, ensures a sense of security and comfort.

Respondent Characteristics

The respondent characteristics observed in this study were age, gender, highest level of education, and length of business. Respondents consisted of 5 livestock breeders (producers), 5 collectors, 5 retailers, and 15 end consumers. Respondent characteristics can be seen in Table 1.

Table 1. Characteristics of Respondents: Livestock Breeders (Producers), Retailers, and Collectors Based on Age, Gender, Highest Level of Education, and Length of Business

No.	Description	Farmer/ Producer (person)	%	Collector (person)	%	Retailer (person)	%	Consumer (person)	%
1	Age (years)								
	30-40	1	20	2	40	3	60	5	33,33
	41-50	3	60	3	60	1	20	4	26,67
	≥ 51	1	20	-	-	1	20	6	40
	Total	5	100	5	100	5	100	15	100
2	Gender								
	Male	5	100	3	60	4	80	5	33,33
	Female	-	-	2	40	1	20	10	66,67
	Total	5	100	5	100	5	100	15	100
3	Education								
	Elementary school	-	-	-	-	1	20	1	6,67
	Junior High School	-	-	2	40	2	40	2	13,33
	Senior High School	2	40	3	60	2	40	7	46,67
	University (Dipl, S1, S2, S3)	3	60	-	-	-	-	5	33,33
	Total	5	100	5	100	5	100	15	100
4	Business time (years)								
	1-5	3	60	2	40	2	40	-	-
	6-10	2	40	1	20	1	20	-	-
	11-15	-	-	2	40	1	20	-	-
	16-20	-	-	-	-	1	20	-	-
	Total	5	100	5	100	5	100	-	-

Based on Table 1 above, the majority of respondents were of productive age, in accordance with the Statistics Indonesia (BPS) (2020) which states that the productive age range is 15-64 years. This indicates that pork marketers in the Kawangkoan traditional market are generally mature individuals with sufficient trading experience, thus establishing marketing networks and a sound understanding of the market.

Gender is an important characteristic in analyzing the role and participation of individual respondents in pork marketing activities in the Kawangkoan traditional market. Gender differences can influence involvement, communication methods with consumers, and decision-making in buying and selling activities. Based on Table 1, the majority of respondents (100%) were farmers (producers), 60% were collectors, and 80% were retailers in this study. This indicates that pork marketers in the Kawangkoan traditional market are predominantly male. This tendency could be due to physical workloads, transporting large quantities of meat, or male dominance in market trading activities. Gender is a relevant factor in analyzing consumption

patterns and preferences for pork products in traditional markets. The majority of pork consumers in the Kawangkoan traditional market, at 66.67% (Table 1), are women. This reflects women's dominant role in household consumption decisions, including the purchase of food items such as pork.

A person's education level is one indicator of success in a pork marketing business. Respondents' highest educational level reflects their ability to receive information, manage their business, and make decisions regarding marketing and consumption activities. Waris et al. (2019) stated that a good education can influence a person's mindset and performance in a business. Based on Table 1, the livestock (producer) respondents generally had a bachelor's degree (60%), indicating that pork farming businesses are starting to be managed by highly educated individuals, who may be more open to innovation and modern managerial approaches. The majority of collector respondents were high school/vocational high school graduates (60%), indicating a secondary education background that is quite common in the traditional trade world. The majority of retailer respondents were junior high school and high school graduates (40%) each, reflecting a more diverse market, not all of whom required higher education. The majority of final consumer respondents (46.67%) were high school graduates, indicating that they are sufficiently educated to consider price, quality, and product safety when purchasing pork.

According to Waris (2019), the length of time in business is the foundation of a person's experience, thus influencing their ability to act when faced with risks. The length of time in business reflects the respondent's level of experience in carrying out activities in the fields of livestock and pork trading. The longer someone has been involved in this business, generally the greater their knowledge of market dynamics, consumer patterns, and marketing strategies. Based on Table 1, the livestock (producer) respondents with the most business experience of 1–5 years (60%), indicating that most are still relatively new to the pork farming business, which could be driven by increasing market demand or local economic drivers. Collectors have two peaks of dominance, namely in the 1–5 year group (40%) and 11–15 year group (40%), with two individuals each. This indicates that some collectors are new, but some have been around for quite some time, indicating regeneration and business sustainability. The majority of retailers were in the 1–5 year category (2 individuals) (40%), while in the 6–10 year category (20%), 11–15 year category (20%), and 16–20 year category (20%), each had one individual who had run a pork trading business in the Kawangkoan traditional market. This indicates the presence of highly experienced retailers who are able to survive in the traditional market in the long term.

Pork Marketing Channels

According to Kotler and Keller (2016), a marketing channel is a series of interdependent organizations involved in the process of providing a product or service for use or consumption by consumers or business users. A marketing channel is the path or route a product takes from the farmer (producer) to the end consumer, through one or more intermediary institutions such as collectors, retailers, and others. This channel serves to facilitate product distribution, accelerate market absorption, and assist in conveying product value to consumers. Pork marketing at the Kawangkoan Traditional Market in Minahasa Regency consists of two marketing channels:

1. Marketing Channel I:

Farmers → Retailers → End Consumers

Farmers sell directly to retailers, and then from retailers to end consumers. This pattern typically occurs if farmers have direct links to retailers or for distribution efficiency reasons. Farmers (producers) sell pigs to retailers with an average live weight of 55-70 kg at a live weight price of IDR 35,000/kg. The retailers then slaughter the pigs and sell them to end consumers for

an average of IDR 45,000/kg. Research by Yeblo et al. (2020) shows that in marketing channel II, producers sell pork at IDR 64,000/kg, and retailers resell the pork at a carcass price of IDR 90,000/kg to end consumers, resulting in a profit margin of IDR 26,000.

2. Marketing Channel II:

Farmers → Collectors → Retailers → Final Consumers

Marketing channel II is the most common, where farmers (producers) sell live pigs to collectors at a price of IDR 35,000/kg, who then sell them to retailers in live weight at the Kawangkoan traditional market at IDR 45,000/kg. These retailers ultimately sell the pork in carcass form to final consumers at IDR 65,000/kg.

Pork Marketing Costs

Marketing costs are all expenses incurred by marketing institutions in the process of moving goods from producers to final consumers, from collection, transportation, storage, packaging, and sales. Marketing costs in this study were borne by the marketing institutions (collectors and retailers) involved, including labor costs, transportation costs, market levies, packaging (plastic), and other costs. Safitri et al. (2022) stated that marketing costs include holding costs, levies, transportation costs, and labor costs.

The results of the study indicate that for marketing channel I, the marketing institutions involved are only retailers, and for marketing channel II, the marketing institutions involved are both collectors and retailers. In marketing channel I, retailers bear all marketing costs, with an average cost of IDR 270,000/day. The marketing costs for Channels I and II can be seen in Table 2.

Based on Table 2, it can be seen that channel 1 is more efficient in terms of marketing costs because it only involves one intermediary (the retailer), resulting in lower total costs. This is consistent with Rombon (2020), Wowiling et al. (2016), Tumbelaka et al. (2018), and Mangantar (2019), who stated that shorter marketing channels, namely channel 1, tend to be more efficient. Retailers are the main actors who bear the costs but also earn higher margins. Low marketing costs are due to the lack of intermediaries and the simplicity of marketing activities.

Marketing channel II involves two intermediary institutions, namely collectors and retailers. Marketing costs in channel II, from farmers to collectors, then to retailers and finally to the end consumer. Collectors buy pigs directly at the pen location from farmers (producers) in the form of live weight and then resell the pigs to retailers who are already regular customers at the Kawangkoan traditional market in the form of live weight. Retailers sell pork to end consumers in the form of carcasses. The average marketing costs incurred by collectors in channel II amount to IDR. 300,000/day, which consists of transportation costs of IDR. 150,000/day used to transport pigs from the pen location of the farmer (producer) and to the Kawangkoan traditional market where the retailers are located. Furthermore, labor costs of IDR. 100,000/person/day are used as wages for transporting and unloading pigs. Other costs not included in the main category IDR. 50,000/day used for communication/coordination costs between marketing institutions, unrecorded retribution costs, and so on. The average marketing costs incurred by retailers in channel II amounted to IDR. 170,000/day consisting of labor costs of IDR. 100,000/person/day. The labor's duties include assisting in the slaughtering process, cleaning and cutting meat into parts according to market demand, arranging meat in stalls or sales areas, weighing and serving buyers directly, cleaning stalls every day after trading, and disposing of waste or leftover meat/bones, as well as maintaining the cleanliness of the sales area. Furthermore, there are retribution costs of IDR. 10,000/day, packaging costs of IDR. 10,000 (plastic bags used to wrap pork cuts purchased by end consumers), and other costs of IDR.

50,000/day. The results of the study indicate that marketing channel II has higher marketing costs on average IDR. 470,000/day compared to marketing channel I IDR. 270,000. This is consistent with Wowiling et al. (2016), Tumbelaka et al. (2018), and Mangantar (2019), who stated that marketing costs in this channel are higher than those in channels involving only retailers. This is due to additional expenses incurred by collectors, such as transportation costs, labor wages, and shrinkage losses. The efficiency of channel II tends to be lower because the profit margin is shared among more intermediaries.

Table 2. Average Marketing Costs of Pork at the Kawangkoan Traditional Market, Minahasa Regency

Marketing channel	Marketing institution	Marketing cost	Total (IDR)	Unit		
I	Farmer	Labor	-	-		
		Transportation	-	-		
		Retribution	-	-		
		Packaging	-	-		
		Etc	-	-		
		Total	-	-		
	Retailers	Labor	100.000	IDR/person/day		
		Transportation	100.000	IDR/day		
		Retribution	10.000	IDR/day		
		Packaging	10.000	IDR/day		
		Etc	50.000	IDR/day		
		Total	270.000			
		II	Farmer	Labor	-	-
				Transportation	-	-
Retribution	-			-		
Packaging	-			-		
Etc	-			-		
Total	-			-		
Collectors	Labor		100.000	IDR/person/day		
	Transportation		150.000	IDR/day		
	Retribution		-	-		
	Packaging		-	-		
	Etc		50.000	IDR/day		
	Total		300.000			
Retailers	Labor		100.000	IDR/person/day		
	Transportation		-	-		
	Retribution		10.000	IDR/day		
	Packaging		10.000	IDR/day		
	Etc		50.000	IDR/day		
	Total		170.000			

Pork Marketing Margin

The marketing margin is the difference between the price paid by the end consumer and the price received by the farmer (producer). This margin indicates the profit or costs captured by marketing institutions (collectors and retailers) in the process of marketing pork products from farmers (producers) to the end consumer. The pork marketing margin at the Kawangkoan traditional market in Minahasa Regency can be seen in Table 3.

Table 3. Pork Marketing Margin at the Kawangkoan Traditional Market, Kawangkoan District, Minahasa Regency

No	Marketing channel	Marketing institution	Average purchase price (IDR/Kg)	Average selling price (IDR/Kg)	Margin (IDR/Kg)
	I	Farmer (Producer)	-	35.000	-
1.	I	Retailers	35.000	65.000	30.000
	I	Consumers	65.000	-	-
	Total				30.000
	II	Farmer (Producer)	-	35.000	-
2.	II	Collectors	35.000	45.000	10.000
	II	Retailers	45.000	65.000	20.000
	II	Consumers	65.000	-	-
	Total				30.000

Based on Table 3, the marketing margins for channels I and II are both IDR 30,000/kg. However, due to the presence of different intermediaries, the profit sharing is different. The marketing margin for channel I is obtained directly by retailers, while the marketing margin for channel II is shared between collectors and retailers. This contrasts with the research of Safitri et al. (2022), which stated that there are four marketing channels. The highest marketing margin is in channel III, at 55.6%, and the lowest is in channel II, at 28.6%. The longer the channel, the higher the margin percentage, but efficiency decreases, and vice versa. The addition of intermediaries to channel II has the potential to reduce efficiency, as it lengthens the distribution chain without providing significant added value to consumers.

Farmer's Share

Farmer's share is the portion received by producers from the producer price relative to the consumer price. Farmer's share in marketing channel I for pork at the Kawangkoan traditional market in Minahasa Regency is presented in Table 4.

Table 4. Farmer's Share in Marketing Channel I

No.	Description	farmer (Producer)	Retailers	Consumer
1.	Purchase price (IDR/Kg)		35.000	65.000
2.	Selling price (IDR/Kg)	35.000	65.000	
3.	Marketing Margin		30.000	
4.	Marketing cost (IDR/Kg)	270.000		
5.	Farmer share		53,85%	

Fahrurrozi (2015) stated that farmer's share is negatively correlated with marketing margin, meaning that the higher the marketing margin, the lower the share of the price received by farmers/breeders as producers.

Table 5. Farmer's Share in Marketing Channel II

No.	Description	farmer (Producer)	Collectors	Retailers	Consumer
1.	Purchase price (IDR/Kg)		35.000	45.000	65.000
2.	Selling price (IDR/Kg)	35.000	45.000	65.000	-
3.	Marketing Margin		10.000	20.000	-
4.	Marketing cost (IDR/Kg)		300.000	170.000	
5	Farmer share		53,85%		

Based on Tables 4 and 5, marketing channels I and II still appear quite efficient, with a farmer's share of 53.85%. This means:

- For every IDR 100 paid by consumers, farmers (producers) only receive approximately IDR 53.85.
- The remaining IDR 46.15 is allocated to other intermediaries (collectors and retailers), including profit margins and marketing costs.

Fahrurrozi (2018) states that if the farmer's share is >50%, marketing is considered efficient. If the farmer's share is <50%, marketing is inefficient. A farmer's share of ≥50% is generally considered quite efficient, as farmers still receive more than half of the final value.

CONCLUSION

There were two pork marketing channels in the Kawangkoan traditional market, Kawangkoan District, Minahasa Regency. The marketing margins in both channels were same, but the intermediary institutions receive greater profits, namely retailers in marketing channel I compared to channel II, while the farmer's share of marketing costs in marketing channels I and II was efficient.

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