



Marketing Analysis of Sheep in People's Farms, Stabat District, Langkat Regency

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Abstract. This study aims to determine marketing channels, marketing costs, analysis of marketing margins and marketing efficiency of sheep in the people's farms of Stabat District. This research was conducted in Stabat District, Langkat Regency in October-November 2021. This study took 3 villages as the research sample locations, namely Sidomulyo, Paya Mabar and Dendang villages, while the samples were collectors and retailers by snowball sampling. Data was collected by interview technique using a questionnaire. Data analysis includes market behavior and marketing margins. The results showed that there were three marketing channels, namely (I). Breeders – consumers. (II). Breeders – traders – consumers. (III). Breeders – collectors – retailers – consumers. The selling price is determined together with the estimation system by the collecting traders and is paid in cash. The biggest marketing margin is in channel III with a margin value of Rp. 444,000. The conclusion of this study is that the marketing of sheep on smallholder farms in Stabat District, Langkat Regency has been efficient.

Keywords: marketing channels, marketing efficiency, marketing margin, sheep, smallholder farms

Received [30 May 2022] | Revised [10 October 2022] | Accepted [14 October 2022]

1. Introduction

The socio-economic survey stated that raising sheep is a side activity to increase income. Sheep have become one of the business choices for meat providers so that they can be used as mainstay livestock. North Sumatra Province has great potential in the livestock sector, especially in sheep [1]. It can be seen from Table 1 below.

Table 1. Sheep Population (heads) in North Sumatra Province 2017-2021

Year	Sheep	
	Total Population	Percentage Growth (%)
2017	689,643	2.70
2018	696,838	1.03
2019	729,146	4.43
2020	737,688	1.16
2021	746,591	1.19

The increase in sheep population growth in 2017 to 2018 and 2018 to 2019 is quite significant, while in 2019 to 2020 and from 2020 to 2021 it is lower but still in the increasing category. This shows that every year the sheep population has increased and has the potential to be developed.

Stabat sub-district is the first largest sheep-producing area with an average population of 65,049 heads, followed by Hinai sub-district with an average population of 61,248 heads and Sawit Seberang sub-district with an average population of 59,613 heads. The increase in the number of sheep can be influenced by many factors, one of which is consumer tastes.

The high demand for lamb is caused by better meat quality, more tender meat which is characterized by a chewy consistency when pressed with a finger, a decent price for quality meat, the meat has a distinctive aroma and does not smell bad [2]. This is what causes consumers to prefer lamb to meet their needs compared to other livestock. The importance of identification of marketing channels and marketing efficiency is very relevant to the marketing analysis of sheep. This analysis is very much needed to find out good and appropriate marketing activities for marketing sheep on the people's farm of Stabat District. Based on this, the authors are interested in conducting a study entitled "Marketing Analysis of Sheep in People's Livestock, Stabat District, Langkat Regency".

2. Materials and Methods

The research was carried out in Stabat District, Langkat Regency, North Sumatra Province from October to November 2021.

2.1. Method of collecting data

The data used in this study are primary data and secondary data. Primary data was collected from the results of observations and interviews through a questionnaire that had been provided and asked the respondents, then secondary data was obtained from institutions related to the research.

2.2. Data analysis method

The data obtained in this study were processed qualitatively and quantitatively, and displayed in the form of descriptions and tabulations of numbers. Data processing is

carried out by descriptive method. Qualitative analysis is used to determine marketing channels, marketing costs and profits in marketing sheep in Stabat District.

2.2.1. Marketing Channel Analysis and Market Behavior

Marketing channel analysis was carried out in order to find out the channels that were passed in the marketing process of sheep in Stabat District from traders to consumers. Market behavior is analyzed with 2 indicators, namely pricing and marketing costs.

2.2.2. Margin Analysis and Farmer's share

Qualitative analysis was used to determine the characteristics of marketing institutions and marketing channels for sheep.

Marketing efficiency:

$$3. \quad Ep = \frac{\text{Total Biaya Pemasaran}}{\text{Total Harga Produk}} \times 100\%$$

Information :

Ep = Marketing Efficiency

If EP > 1 is not efficient

If EP < 1 efficient

The benchmark used to measure marketing efficiency is to look at the comparisons *share* the advantages of the marketing agencies involved in the marketing process compared to the marketing costs of the marketing agencies involved with the following criteria

a. Marketing margin

Marketing consists of marketing costs and profits, so the greater the marketing costs or the greater the profits, the greater the marketing margin and the marketing system becomes inefficient. The marketing margin only shows the price difference regardless of the amount traded [3].

With the formula:

$$MP = Pr - Pf$$

Information :

MP : *Margin* marketing

pr : Price at consumer level (/head)

Pf : Price at farmer level (/head)

b. Farmer's Share

It is said to be efficient if the farmer's share is >50%. The value of farmer's share has a negative relationship with marketing margin, meaning that the higher the marketing margin, the lower the farmer's share.

Farmer's share calculation formula [3].

$$F = \left(\frac{Pf}{Pr} \right) \times 100\%$$

Information:

F= The share received by the farmer (farmer's share)

Pf= Price at sheep breeder level

Pr = Price at the level of the final consumer

2.2.3. Test the Differences of Each Marketing Margin

Differences in marketing margins in each marketing channel were analyzed by independent t-test difference *sample t-test*. The t-test difference test aims to determine whether two unrelated samples have different mean values if the significance value is 0.05 [4].

3. Results and Discussion

Marketing is a general activity carried out by farmers and each marketing agency that aims to get the maximum profit when marketing certain commodity products or products. The results showed that there were three marketing institutions involved in the marketing of sheep on smallholder farms in Stabat District, namely breeders, collectors and retailers. Marketing institutions are classified according to their authority on the commodity being marketed, the form of business which includes intermediary agents, collectors, exporters, importers and others.

3.1. Analysis of Sheep Marketing Channels in Stabat District

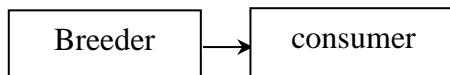
Marketing channels are channels used by producers in distributing their products to final consumers with the help of intermediary traders. Marketing channel is a distribution channel consisting of a collection of traders who carry out all activities or functions that are useful when delivering products from producers to consumers [5].

In marketing activities for sheep in Stabat District, Langkat Regency, there are three marketing channels that connect producers to consumers to convey production results. There are three marketing channels for consumer products, namely zero-level channels, one-level channels, and two-level channels [6].

Table 2. Types of Marketing Channels and Number of Respondents

No	Marketing channel	Number of Breeders	Percentage (%)
1	Channel I	6	8.7
2	Channel II	55	79.7
3	Channel III	8	11.6
Amount		69	100

1. Marketing Channel I



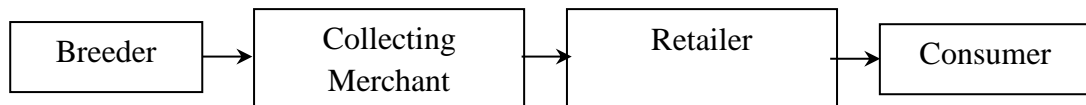
In channel one there are no labor costs, transportation costs, parking fees or other costs incurred by the breeder, because these costs are borne by the buyer because the cattle are taken directly from the farmer. Direct marketing is marketing without intermediary traders who are directed directly to the final consumer [7].

2. Marketing Channel II



In the second marketing channel there are 55 farmers or 79.7%. Breeders have their own reasons for preferring to sell sheep to collectors, among others, the process is easier, the animal market is quite far from where they live, less marketing costs are incurred, and the factors of habit and trust of farmers in collecting traders [8].

3. Marketing Channel III



The third marketing channel is used less by 11.6% or 8 people. This is due to the need for a large enough business capital to become a retailer in Stabat District, due to the lack of public interest in buying lamb at the Stabat District Traditional Market.

3.2. Market Behavior Analysis of Sheep in Stabat District

Market behavior includes trading strategies, selling, buying, and pricing activities. Market behavior is an effort made for decision making in dealing with various market structures and observing the behavior of marketing institutions. The criteria used to determine market behavior is the process of determining the price in which there will be an agreement between sales and purchases [9].

The purpose of marketing analysis is to see marketing efficiency, where the higher the price obtained by producers/breeders, the more efficient the marketing [10]. The average cost of profit and marketing margin of sheep in Stabat District, Langkat Regency can be seen in table 3.

Table 3. Prices received and paid to Sheep Farmers at People's Farms, Stabat District, Langkat Regency.

No	Cost Description	Rp/head
1	Breeder	
	- Selling price	1,660,000
2	Consumer	
	- Purchase price	1,660,000
3	<i>Farmer's share</i>	100%

Marketing channel I is the most efficient marketing channel because it has a high farmer's share value of 100%. The principle in the marketing efficiency of a product is that if the results obtained by producers are <50%, then marketing is not efficient, but if the results obtained by producers are >50% then the channel is said to be efficient.

Table 4. Average marketing costs of each trader in marketing channel II in Stabat District, Langkat Regency

No	Cost Description	Rp/head
1	Breeder	
	a. Selling Price (1 sheep)	1,500,000
2	Collecting Merchant	
	a. Purchase price	1,500,000
	b. Marketing Fee	

	- Transportation (Transportation)	10,000
	- Market Levy	15,000
	The amount of costs	25,000
c.	Selling Price of Sheep	1,731,000
d.	Marketing Margin	231,000
e.	Profit	206,000
3	a. Total Marketing Cost	25,000
	b. Total Marketing Margin	231,000
	c. Total Profit	206,000
	d. <i>Farmer's share</i>	86.6%

From the marketing activities that get the least results are blantik because all marketing costs are borne by that party [11]. The price of sheep paid by the agent is Rp. 1,500,000/head because the condition of the sheep is still in the breeder. In channel II the marketing costs incurred by the agent are Rp. 25,000 and the agent receives a profit of Rp. 206.000/head. The marketing margin on this channel is Rp. 231,000/head. The selling price of sheep at the level of collectors is Rp. 1.731.000/head.

Table 5. Average marketing costs of each trader in marketing channel III in Stabat District, Langkat Regency

No	Cost Description	Rp/head
1	Breeder	
	a. Selling Price (1 sheep)	1,500,000
2	Collecting Merchant	
	a. Purchase price	1,500,000
	b. Marketing Fee	
	- Transportation (Transportation)	10,000
	- Market Levy	15,000
	The amount of costs	25,000
	c. Selling Price of Sheep	1,700,000
	d. Marketing Margin	200,000
	e. Profit	175,000
3	Retailer	
	a. Purchase price	1,700,000
	b. Marketing Fee	
	- Rent	10,000
	- Cleanliness	5,000
	- Labor	15,000
	- Plastic	10,000
	The amount of costs	40,000
	c. Selling Price of Sheep	1,944,000
	d. Marketing Margin	244,000
	e. Profit	204,000
4	f. Total Marketing Cost	65,000
	g. Total Marketing Margin	444,000
	h. Total Profit	379,000
	i. <i>Farmer's share</i>	77.1%

The total cost of marketing in marketing channel III is Rp. 65,000/head with a total marketing profit of Rp. 379,000/head. The amount of costs and total profits are influenced by the number of traders who join the channel. In table 8 the total marketing margin is Rp. 444,000/head. The value of the marketing margin is influenced by the marketing chain which results in a lot of merchant involvement. The amount of marketing costs is influenced by elements of costs that are non-competitive in the marketing system, causing inefficient [12].

3.3. Marketing Margin

MarginMarketing is the difference between the price paid by the final consumer for the product and the price obtained by farmers or ranchers as producers. Marketing margin is the difference between the price paid by the final consumer and the price received by the farmer [12].

Marketing channel I, this channel has no marketing costs, consumers buy directly from farmers or the margin is zero. Marketing channel II, the marketing margin obtained is Rp.231,000, which is the marketing cost plus the profit. Marketing channel III has the highest marketing cost of Rp. 444,000 where there is a longer link due to a longer link, due to the involvement of retailers and collectors. This also applies to marketing channel III which has a total marketing cost of Rp. 444,000.

3.4.Farmer's Share

The marketing margin on the second marketing channel is Rp. 231,000/head. Farmer's share on channel II is 86.6%. Seeing the value of farmer's share >50%, marketing channel II is said to be efficient. To measure marketing efficiency, if the share received by producers is <50%, marketing is not yet efficient and if the portion received by producers is >50%, then marketing is said to be efficient. Farmer's share has a negative relationship with marketing margin, meaning that the higher the marketing margin, the lower the farmer's share.

Marketing channel III shows the lowest value of farmer's share of 77.1%. this is because the long chain resulted in the involvement of many marketing agencies.

3.5.Sheep Marketing Efficiency

Table 6. Comparison of Total Costs, Margins, and Marketing Profits for Each Sheep Trader in Stabat District, Langkat Regency

No	Marketing channel	Total Cost (Rp/head)	Total Margin (Rp/head)	Total Profit (Rp/head)	Marketing Efficiency
1	Channel I	0	0	0	0
2	Channel II	25,000	231,000	206,000	1
3	Channel III	65,000	444,000	379,000	3

Channel I is direct farmers to consumers with marketing costs of Rp. 0.00 The efficiency of channel I marketing is 0, this is still efficient because efficiency is said to be <1 . Marketing channel II, namely breeders, traders, then to consumers with a marketing cost of Rp. 25,000 with a farmer's share of 87%. Channel II marketing efficiency is 1%. Marketing channel III is from farmers to collectors, to retailers and then to consumers with a marketing cost of Rp. 65,000 and farmer's share 77%. The third marketing efficiency is 3%.

3.6. Test the Differentiation of Each Marketing Margin

The marketing margins for each marketing channel were analyzed by means of a different t-test independent sample t-test to see the differences between each marketing channel. The t-test difference test is useful as a differentiating tool between two unrelated samples with different averages if the significance value is 0.05. The results of the t-test difference test show the results, namely channels (1 and 3) significance values of 0.01 and 0.01 which means that there is a difference between channels 1 and 3. While in channels (1 and 2) the significance values are 3.36 and 0.26 and channels (2 and 3) the significance value is 0.76 and 0.14 which means that the three channels have a significance value of > 0.05 , which means that there is no difference between each marketing channel. The efficiency received by farmers will be influenced by the length of the marketing channel chain, so the price paid by consumers will be even greater [12].

4. Conclusion

1. There are three marketing channels for sheep in Stabat District, Langkat Regency, namely,
 - a. Channel I : Breeders – Consumers
 - b. Channel II : Breeders – Collectors – Consumers
 - c. Channel III : Breeders – Collectors – Retailers – Consumer

2. The marketing of sheep on the people's farm of Stabat District in determining the price is determined together with an estimation system by collectors and cash payments.
3. The biggest marketing margin is in the longest marketing channel, namely channel III of Rp. 444,000.
4. The most efficient marketing channel is marketing channel II.

REFERENCES

- [1] Central Statistics Agency (BPS) of North Sumatra Province in 2022.
- [2] Suryadi. Social Aspects of Goat and Sheep Production. Sebelas Maret University Press. Surakarta. 2016.
- [3] Rasyaf, M. Management of Broiler Farms. PT. Gramedia Pustaka Utama, Jakarta. 2001.
- [4] Sudiyono, A. Agricultural Marketing. Muhammadiyah University Press. Poor. 2002.
- [5] Ghozali, I. Application of Multivariate Analysis with SPSS program. Diponegoro University Publishing Agency, Semarang. 2005.
- [6] Dharmasta and Sukotjo. Concepts and Strategies of Channel Quantitative Analysis BPPE Marketing. Yogyakarta. 1998.
- [7] Wulansih, S. Marketing Analysis of Sheep in People's Livestock, Srumbung District, Magelang Regency. Thesis. Sebelas Maret University. Surakarta. 2013.
- [8] Hartati, D. Marketing Analysis of Sacrificial Cattle in Langkat Regency, North Sumatra. Thesis. University of Northern Sumatra. 2020.
- [9] Salim, HP Marketing Margin Analysis: One Approach in the Food Distribution System. In: Proceedings of Business Prospects and Marketing of Several Agricultural Commodities. Monograph Series No. 24. Center for Agricultural Socio-Economic Research and Development, Bogor. 2004.
- [10] Kariyasa, K. and K. Faisal. Marketing Dynamics and Prospects of Cattle Livestock Development in Indonesia. Plant-Livestock Farming System and Institutions. Agricultural Research and Development Agency. Agriculture department. 2004.
- [11] Andhika, R., Hasnudi, and N, Ginting. The Effect of Trading Chain on Beef Marketing Efficiency in Karo Regency. Journal of Integrative Animal Husbandry Vol. 3 No.2 : 224-234. North Sumatra. 2014.
- [12] Amalia, J, A., HD Utami and BA Nugroho. Marketing Analysis of Small-Scale and Large-Scale Broiler Chicken Business on the Partnership Pattern of PT Sinar Sarana Sentosa Malang. Brawijaya University. Poor. 2013.