Beef Marketing Management in Huta Iii Dolok Nagori Village, Simalungun District, Indonesia

Julia Marisa, Sukma Aditya Sitepu

Abstract

This study aims to analyze the beef marketing management in Huta III Dolok Nagori Village, Bosar Maligas District, Simalungun Regency. The research employed a survey method with direct interviews of local cattle farmers, utilizing both quantitative and qualitative data analysis. The results indicate that the farmers are characterized by productive age profiles, varied educational backgrounds, moderate household dependency ratios, significant livestock ownership, and substantial business experience. The implemented marketing strategies encompass cost-based pricing, local promotion initiatives, quality-based product differentiation, and customer relationship management. This study concludes that while traditional marketing strategies remain effective, they need enhancement through innovation, particularly through the utilization of social media and digital platforms to expand market reach and improve competitiveness. The implications of this research suggest that improvements in product quality and customer service, coupled with the adoption of modern technology, can help cattle farmers enhance the sustainability and competitiveness of their beef cattle enterprises in the future.

Keywords: Beef Marketing, Beef Management, Breeder Profile, Livestock Cost Analysis

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Introduction

Animal husbandry is defined as the activity of breeding and cultivating livestock to obtain benefits and products from these activities. The concept of animal husbandry extends beyond mere maintenance; the distinction between maintaining and breeding lies in their established objectives (Amam, 2020). The livestock sector in Indonesia continues to evolve, demonstrating promising prospects. This development is supported by the increasing population and improving living standards, which have raised awareness about the importance of consuming animal protein. Consequently, there is a growing need to enhance the availability of food and animal products. This demand can be met through beef cattle production. Since the early stages of development, the livestock sector has been instrumental in providing significant employment opportunities (Sitepu, S.A., Marisa 2021). This phenomenon may be attributed to the large population residing in rural areas with potential engagement in livestock farming.

A livestock farmer is an individual engaged in activities related to livestock empowerment and serves as an animal breeder (BPS, 2023). According to Indonesian Law No. 6/1967 on Animal Husbandry and Animal Health, livestock refers to domesticated animals whose living conditions, feeding patterns, reproduction, and utilities are regulated and supervised by humans, specifically maintained to produce materials and services essential for human needs.

Livestock marketing is a crucial aspect of the animal husbandry industry that plays a vital role in increasing farmers' income and ensuring business sustainability. In Indonesia, the livestock sector faces significant challenges, including price fluctuations, product quality issues, and limited market access. With the growing demand for livestock products, whether in the form of meat, milk, or eggs, it is essential for farmers to adopt effective marketing strategies.

The advancement of information technology has created new opportunities in livestock marketing. The utilization of digital platforms for product promotion, such as social media and e-commerce applications, can expand market reach and facilitate transactions. However, many farmers have not yet optimally leveraged these technologies, thus limiting market potential.

Simalungun Regency is the third largest regency in North Sumatra after Mandailing Natal and Langkat Regencies, occupying a strategic location within the Lake Toba - Parapat tourism area. The regency comprises 32 districts, with Hatonduhan being the largest district and Haranggaol Horison being the smallest, with an average distance of 30 kilometers to the regency capital. The farthest districts are Silou Kahean at 127 kilometers and Ujung Padang at 113 kilometers. The comparison of beef cattle population from 2018 to 2022 can be seen in Table 1.

Table 1. Comparison of Beef Cattle Population from 2018 to 2022

No.	Name of Regency	2018	2019	2020	2021	2022
1	Langkat Regency	209.869	216.270	218.300	220.992	220.992
2	Deli Serdang Regency	96.811	95.508	114.096	117.541	124.638
3	Simalungun Regency	189.392	159.286	167.400	173.540	176.000
4	Karo Regency	24.220	11.474	11.876	13.763	15.139
5	Asahan Regency	147.941	139.191	140.583	146.500	147.233
6	Nias Regency	8	24	10	10	12
7	Labuhan Batu Regency	29.390	31.702	27.050	27.030	27.352
8	South Tapanuli Regency	3.579	3.225	3.311	3.436	3.566
9	Central Tapanuli Regency	2.764	2.504	2.736	2.958	3.193
10	North Tapanuli Regency	487	494	470	593	620

Source: (Marisa, J., Sitepu 2022).

Simalungun Regency is one of the regions with a substantial cattle population. According to Resna Siboro, Head of Animal Husbandry and Animal Health Division at the

Simalungun Agriculture Office, the recorded cattle population in Simalungun has shown a consistent increase over the years. Based on the provided data, the recorded cattle population in Simalungun was 189,392 heads in 2018, decreased to 159,286 heads in 2019, then increased to 167,400 heads in 2020, further rose to 173,540 heads in 2021, and reached 176,000 heads in 2022. The data indicates that in 2020, the cattle population across all regencies in North Sumatra Province decreased due to the COVID-19 pandemic. Among all regencies in North Sumatra, Langkat Regency maintained the highest cattle population, while Nias Regency recorded the lowest.

Table 2. Comparison of Annual Beef Production (kg/year) from 2018 to 2022.

No	Name of Regency	2018	2019	2020	2021	2022
1	Langkat Regency	1.986.213	1.986.213	1.241.055	1.241.055	906.161
2	Deli Serdang Regency	4.084.966	4.085.297	4.376.778	4.595.593	3.741.755
3	Simalungun Regency	1.379.423	1.406.964	1.440.677	1.526.450	1.803.765
4	Karo Regency	340.717	344.630	355.074	361.956	282.252
5	Asahan Regency	1.273.777	1.273.777	736.786	756.243	973.008
6	Nias Regency	-	-	752	645	-
7	Labuhan Batu Regency	1.590.265	..730.675	581.792	581.792	537.532
8	South Tapanuli Regency	223.483	225.590	241.790	268.144	237.377
9	Central Tapanuli Regency	44.546	46.285	28.702	31.712	53.625
10	North Tapanuli Regency	5.267	5.719	2.042	2.365	2.750

Sumber: (Marisa, J., Sitepu 2022).

Beef production in Simalungun ranks third after Deli Serdang and Langkat Regencies, with production reaching 1,803,765 kg/year in 2022. The lowest beef production was recorded in Nias Regency in 2020 at 645 kg/year, while Asahan Regency experienced a dramatic decline in beef production to 536,991 kg in the same year. Annual beef production has shown consistent growth, paralleling the increasing consumer demand from 2018 to 2022. Notably, even during the COVID-19 pandemic in 2019, beef production continued to increase.

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Research on beef marketing management has become a crucial topic in agribusiness studies, particularly in the context of rural Indonesia. Previous studies have highlighted various aspects of beef marketing, including supply chain analysis, marketing strategies, and the role of farmer cooperatives. Studies on beef supply chain effectiveness in Central Java found that distribution imbalance represents a major challenge (Aji, R.,&Nugroho, T. 2018). Research on marketing strategies implemented by farmers in East Java emphasized the importance of digital marketing innovation to reach broader markets (Saraswati, L., 2019). In a more local context, studies in North Sumatra identified the role of farmer cooperatives in improving market access for small-scale farmers (Harahap, S. 2020). However, limited research has specifically explored beef marketing management in remote villages such as Huta III Dolok Nagori in Simalungun Regency. This study addresses this gap by presenting a comprehensive analysis of local marketing strategies implemented in this village, while identifying specific challenges and opportunities faced by farmers in the region. Thus, this study not only enriches the literature on

beef marketing management in Indonesia but also offers practical insights that can be used to develop more effective marketing strategies in remote rural areas.

Against this background, this study aims to analyze beef marketing management in Huta III Dolok Nagori Village, Bosar Maligas District, Simalungun Regency. This research is expected to provide insights for farmers to enhance their product competitiveness in the market.

Literature Review

Beef marketing management is a significant field of study in agribusiness, particularly in rural areas with substantial livestock production potential. Literature related to this topic encompasses various aspects such as supply chain, marketing strategies, the role of technology, as well as challenges and opportunities in beef marketing across different regions. This section discusses previous relevant research on beef marketing management, aiming to identify knowledge gaps and highlight the unique contributions of this study.

Supply Chain Management in Beef Marketing

Research on beef supply chain effectiveness in Central Java identified distribution imbalance as a major challenge hampering marketing efficiency (Aji, R., & Nugroho, T. 2018). This study emphasized the importance of improved coordination among farmers, traders, and consumers to enhance supply chain performance. In West Sumatra, weaknesses in logistics infrastructure and stock management contributed to beef price instability in local markets (Harahap, S., 2020).

Marketing Strategies

Digital marketing innovation for beef marketing in East Java highlighted the significance of social media and e-commerce platforms in reaching broader markets (Saraswati, L., 2019). This study demonstrated that the adoption of digital technology could enhance the competitiveness of local farmers. Research on beef marketing in Bali revealed that promotion through culinary festivals and collaboration with local restaurants could increase sales and consumer awareness of local beef products (Aji, R., & Nugroho, 2018).

Role of Cooperatives

In North Sumatra, farmers' cooperatives play a crucial role in strengthening the bargaining position of small-scale farmers in the market (Harahap, S. 2020). These cooperatives provide access to resources, market information, and processing facilities that enable farmers to enhance their product quality and value addition (Marisa, J., Sitepu 2022). This study emphasized that the success of cooperatives heavily depends on active member participation and support from local government.

Challenges and Opportunities in Rural Beef Marketing

Research across various rural areas indicates that farmers often face challenges such as limited market access, price fluctuations, and capital constraints (Kusnadi, N. 2017). However, there are also opportunities to be leveraged, such as increasing demand for premium beef and growing consumer awareness of product sustainability and quality. Training and empowerment of farmers through educational programs can help them become more adaptive to market dynamics (Setiawan, B. 2018).

Research Gap

Although extensive research exists on beef marketing management in Indonesia, few studies have specifically explored rural contexts such as Huta III Dolok Nagori Village in Simalungun Regency. This research seeks to address this gap by providing an in-depth analysis of local marketing strategies, as well as unique challenges and opportunities in this region. Thus, this study not only enriches the literature on beef marketing management but also offers practical insights that can be utilized to develop more effective marketing strategies in remote rural areas.

Research Methodology

The research was conducted in Huta III Dolok Village, Bosar Maligas District, Simalungun Regency on May 19, 2024. The sampling technique employed involved interviews, observations, and data analysis of 3 out of 10 cattle farmers in Huta III Dolok Village, Simalungun Regency. Interview sessions were conducted at two locations, with questions focusing on farmers' income during the COVID-19 pandemic and during the outbreak of Foot and Mouth Disease (FMD).

The data analysis method employed for market structure utilized both qualitative and quantitative descriptive approaches. The qualitative analysis examined the number of market participants and market entry-exit barriers, while the quantitative analysis employed Market Share analysis and the Hirschman Herfindahl Index (HHI). Market behavior was analyzed using a qualitative descriptive approach by examining marketing channels, institutions, and functions.

Data Analysis Techniques

To determine the most efficient marketing channel mathematically, the following formula can be applied:

Marketing Efficiency Formula:

$$\mathbf{ME = MC \times 100\% \; TPV}$$

Where:
ME : Marketing Efficiency (%)
MC : Marketing Costs (IDR/head)
TPV : Total Product Value (IDR/head)

If ME is between 0-5%, the marketing channel is considered efficient; if ME is greater than 5%, the marketing channel is considered less efficient.

Marketing Channel Margin Formula:

$$\mathbf{TM = M1 + M2 + ... + Mn}$$

Where:
TM : Total Marketing Channel Margin
M1 : Market Marketing Margin (first-level marketing)
M2 : Agent Marketing Margin (second-level marketing)
M3 : Special Event Marketing Margin (third-level marketing)

The marketing margin can be mathematically calculated using the formula:

$$\mathbf{MM = RP - FP}$$

Where:
MM = Marketing Margin

FP = Farm-level Price
RP = Retail Price

Results

Respondent Identity

A livestock farmer is defined as an individual engaged in animal empowerment activities that generate products, while also serving as an animal breeder to maintain proper livestock cycles and development. The cultivation of these livestock aims to obtain benefits and yields from these activities.

Respondent Age

The respondents in this study ranged in age from 36 to 75 years, with an average age of 44 years. Table 3 shows that the majority of respondents fall within the productive age category (25-45 years), which positively influences their ability to manage livestock enterprises. Farmers of productive age tend to be more adaptive to technology and innovations in animal husbandry (Jamil, A., 2018).

Table 3. Average Age Group Distribution of Respondents in Huta III Dolok Nagori Boluk Village, Bosar Maligas District, Simalungun Regency.

No	Age Group (Years)	Number of Respondents (People)	Percentage (%)
1	36	1	33,3
2	44	1	33,3
3	75	1	33,3
	Total	3	100

Table 3 indicates that the majority of respondents fall within the productive working age group, predominantly ranging from 30 to 45 years of age. However, elderly respondents also proved to be valuable contributors to the study. This age distribution suggests that the age factor among farmers in Huta III Dolok Village, Bosar Maligas District, Simalungun Regency does not present a barrier to the future development of beef cattle farming enterprises.

Respondent Education Level

Education in cattle farming provides significant benefits in improving farmers' productivity and income. Livestock education equips farmers with the necessary knowledge and skills for proper cattle management, ranging from appropriate breed selection to livestock product marketing. Based on observations, the community of Huta III Dolok Village, Bosar Maligas District, Simalungun Regency has demonstrated positive development in their receptiveness to criticism and suggestions regarding development-related issues presented to them. Beyond proper cattle management, farmers also need adequate knowledge in marketing. With proper education, farmers can understand various effective marketing strategies to increase sales of their cattle or livestock products. The farmers' education level in the surveyed area serves as a crucial support for developing ruminant livestock agribusiness, particularly in beef cattle enterprises. Therefore, the classification of respondent farmers.

Tabel 4. Education Level respondents in Huta III Dolok Village Nagori Boluk Kec. Bosar Maligas Kab. Simalungun

No	Education Level	Number of Respondents (People)	Percentage (%)
1	No Formal Education	1	33,3

2	Junior High School	1	33,3
3	Senior High School	1	33.3
Total		3	100

Farmer education is a crucial factor in improving livestock management productivity and effectiveness. Table 4 shows that respondents' education levels vary, with the majority having only achieved junior or senior high school education. Although some respondents had no formal education, they maintained substantial livestock farming experience. Formal education plays a role in understanding cultivation techniques and marketing strategies, although field experience is also highly valuable (Rahayu, D., 2017).

Number of Family Dependents

The number of family dependents represents the potential labor force available within the farmer's family. This factor influences both income and expenditure patterns of livestock-farming families. While a larger number of dependents may increase the farmer's burden in terms of consumption, family members also represent an important asset in supporting farming activities through their contribution to family labor, thus potentially reducing the production costs borne by the farmer. The number of family dependents among respondent farmers in Huta III Dolok Village, Bosar Maligas District, Simalungun Regency is presented in the following Table.

Table 5. Number of Dependents in Livestock Farmers' Families

No	Number of Dependents	Total	Percentage (%)
1	1- 5	2	75
2	6-12	1	25
Total		3	100

Table 5 shows that among respondent families, one farmer (25%) had 6-12 dependents, while two farmers (75%) had 1-5 dependents. This situation indicates that respondent farmers generally have moderate family sizes, which does not present a significant barrier to livestock business development. Family participation in livestock operations can reduce labor costs and improve efficiency (Setiadi, A. 2019).

Number of Livestock Owned by Respondents

The number of livestock represents the extent of a farmer's assets and directly influences their income. A larger herd size correlates with higher potential income for the farmer. The following data presents the livestock numbers in Huta III Dolok Village, Bosar Maligas District, Simalungun Regency.

Table 6. Distribution of Livestock Numbers per Farmer

No	Number of Livestock (Head)	Number of Farmers (Person)	Percentage (%)
1	10	1	33,3
2	25	1	33,3
3	40	1	33,3
Total	75	3	99,9

The number of livestock owned by respondents ranges from 10 to 40 head. Large-scale livestock ownership indicates significant economic potential but requires sound management practices. Farmers with larger herds tend to generate higher income, although they face greater challenges in terms of maintenance and marketing (Suryana, T.2020).

Respondents' Experience in Livestock Farming

Experience in livestock farming significantly influences business success. The longer individuals manage their livestock operations, the more experience they acquire. Farmers with longer operational histories possess more extensive experience compared to newcomers, and these experienced farmers typically demonstrate greater receptivity to new innovations.

Table 7. Respondents' Experience in Livestock Farming

No	Experience (Years)	Number of Farmers (Person)	Percentage (%)
1	1 – 10	2	75
2	11 – 25	1	25
	Total	3	100

Table 7 indicates that among respondents, one farmer (25%) has 11-25 years of livestock farming experience, while two farmers (75%) have 1-10 years of experience. This data suggests that experience represents a significant potential for livestock business development in Huta III Dolok Village, Bosar Maligas District, Simalungun Regency. This experience is particularly valuable in livestock management, especially in addressing challenges and implementing new innovations. Long-term experience in livestock farming contributes to business stability and sustainability, as well as the capacity to adopt new technologies (Wiryono, D., 2018).

Marketing Strategy

Marketing strategy is a key aspect in beef cattle management in Huta III Dolok Nagori Village, Bosar Maligas District, Simalungun Regency. This significantly influences farmers' income (Sitepu, S.A., 2019). This research found that farmers in this village adopt various strategies to market their beef cattle, reflecting their efforts to achieve marketing efficiency and effectiveness.

Marketing Channels

Based on field observations, there are three main marketing channels utilized by farmers in Huta III Dolok Village (see Figure 1).

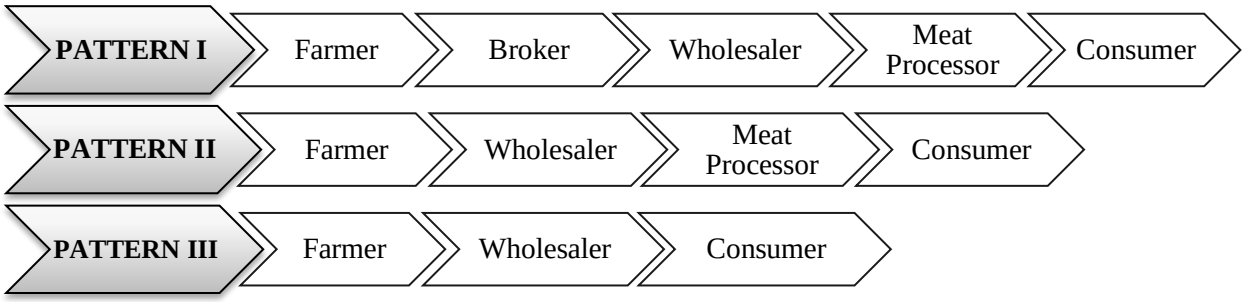

Figure 1. Primary Marketing Channels Used by Farmers in Huta III Dolok Village

First Channel: Farmers sell cattle to brokers, who then sell to wholesalers. These wholesalers subsequently sell the cattle to butchers, who ultimately sell the beef directly to consumers. In this channel, wholesalers play a significant role in facilitating cattle distribution from farmers to end consumers. This strategy allows farmers to focus on production without direct involvement in complex marketing activities.

Second Channel: Farmers sell cattle directly to wholesalers without intermediaries. This strategy is often employed by farmers seeking rapid sales and avoiding volatile market price risks. The wholesalers then sell the cattle to butchers and consumers. Although this strategy

reduces profit margins for farmers as they relinquish most price control to wholesalers, it provides advantages in terms of transaction ease and speed.

Third Channel: Farmers sell cattle directly to butchers, who then sell beef directly to consumers in local markets. This channel enables farmers to obtain better prices by eliminating brokers and wholesalers from the supply chain. However, this channel requires farmers to possess good marketing knowledge and skills to negotiate effectively with butchers and consumers.

Comparison with Previous Research

This study reveals that marketing channel diversification can provide significant economic benefits for farmers. This aligns with previous research indicating that farmers utilizing various marketing channels tend to be more successful in reaching broader markets and increasing profit margins (Jamil, A., Sari, 2018). Conversely, other studies show that dependence on a single marketing channel can limit farmers' ability to maximize their income (Koesmara, 2020).

The study also highlights the importance of education and experience in managing marketing strategies. Farmers with better education and experience tend to be more innovative in adopting diverse marketing strategies. Formal education plays a role in understanding cultivation techniques and marketing strategies, while field experience helps farmers address practical challenges (Rahayu, 2017).

Challenges and Opportunities

A primary challenge in beef cattle marketing in Huta III Dolok Village is price fluctuation and limited access to accurate market information. Farmers often face difficulties in determining optimal timing for cattle sales to obtain the best prices. Additionally, limited access to larger and more profitable markets poses a significant barrier. However, this research also identifies several opportunities for farmers to leverage. For instance, the use of information and communication technology can help farmers obtain better market information and improve price negotiations. Furthermore, cooperation with cooperatives or farmer associations can enhance farmers' bargaining power and expand their access to broader markets.

Marketing Strategy Recommendations

Based on the research findings, several marketing strategy recommendations for beef cattle farmers in Huta III Dolok Village include:

1. Marketing Channel Diversification Farmers should not rely on a single marketing channel but explore various channels to reach broader markets and reduce price fluctuation risks.
2. Enhanced Market Information Access The use of information and communication technology can help farmers obtain more accurate and real-time information on prices and market demand.
3. Cooperation with Cooperatives or Farmer Associations Joining cooperatives or farmer associations can improve bargaining power and expand market access for farmers.
4. Training and Education Government and relevant institutions should provide training and education to farmers regarding cultivation techniques, business management, and effective marketing strategies.

By adopting more innovative and diversified marketing strategies, beef cattle farmers in Huta III Dolok Village can increase their income and ensure long-term business sustainability.

Marketing Margin

Marketing margin is calculated as the difference between buyer-level prices and farmer-level prices. The magnitude of marketing margins varies between different marketing

institutions (Koesmara, 2020), while marketing margin represents the costs paid and income received by each link involved in the supply chain process (Emhar, 2019).

Table 8. Marketing Margins

No	Description	Price (IDR/Head)	Marketing Margin (IDR)
1	Farmer		
	Selling Price	6.000.000	
2	Broker		100.000
	Buying Price	7.000.000	
3	Wholesaler		2.000.000
	Buying Price	9.000.000	
4	Meat Processor		2.000.000
	Buying Price	11.000.000	

Farmers with direct market access who sell their products without intermediaries tend to obtain higher profit margins (Koesmara, 2020). This finding aligns with our results, where the third marketing channel demonstrates higher profit potential for farmers. However, this study also emphasizes that the success of marketing strategies heavily depends on farmers' ability to understand market dynamics and establish effective marketing networks.

Marketing margins vary significantly depending on the channel used, with wholesalers often gaining higher profits due to their control over the supply chain (Emhar, 2019). This corresponds with our findings where wholesalers in the first and second channels obtain substantially higher marketing margins compared to farmers.

Conclusion

This research found that farmers in Huta III Dolok Nagori Village, Bosar Maligas District, Simalungun Regency are characterized by productive age profiles, varied educational backgrounds, moderate household dependencies, significant livestock ownership, and extensive business experience. The marketing strategies implemented include cost-based pricing, local promotion, quality-based product differentiation, and customer relationship management. This study also indicates that while traditional marketing strategies remain effective, they need enhancement through innovation via social media and digital platforms to expand market reach and improve competitiveness. Marketing channel diversification and better market understanding are key to increasing farmers' profits. These findings provide important insights for both farmers and policymakers in developing more effective and sustainable marketing strategies for the beef cattle sector. It is recommended that farmers utilize digital technology and continue to improve product quality and customer service. Innovation in production and marketing processes will enhance the competitiveness and sustainability of beef cattle farming enterprises in the future.

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